## January 2012 Monthly Energy Review





### **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.

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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.

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

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

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

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# Monthly Energy Review January 2012

**U.S. Energy Information Administration** 

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

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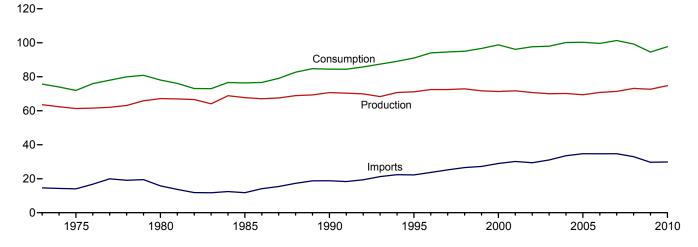
### **Energy Overview**



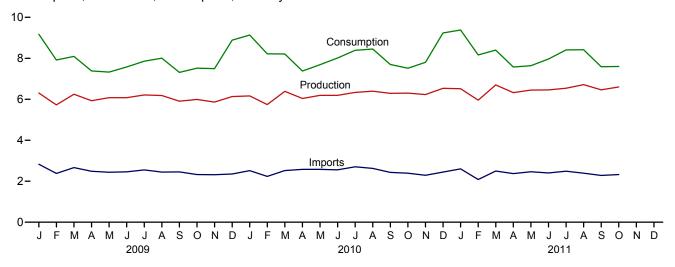
The continental United States at night from orbit. Source: National Oceanic and Atmospheric Administration satellite imagery; mosaic provided by U.S. Geological Survey.

Figure 1.1 Primary Energy Overview (Quadrillion Btu)

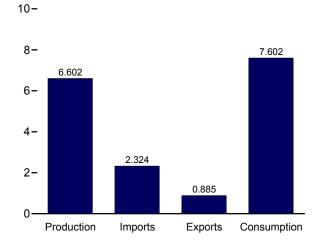
Consumption, Production, and Imports, 1973-2010



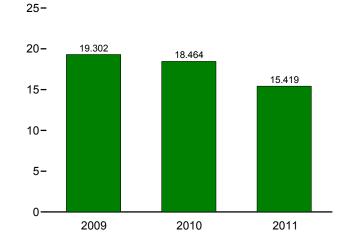
Consumption, Production, and Imports, Monthly



Overview, October 2011



Net Imports, January-October



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

**Table 1.1 Primary Energy Overview** 

(Quadrillion Btu)

		Produ	uction			Trade				Consu	mption	
	Fossil Fuels <sup>a</sup>	Nuclear Electric Power	Renew- able Energy <sup>b</sup>	Total	Imports	Exports	Net Imports <sup>c</sup>	Stock Change and Other <sup>d</sup>	Fossil Fuels <sup>e</sup>	Nuclear Electric Power	Renew- able Energy <sup>b</sup>	Total <sup>f</sup>
1973 Total	58.241	0.910	4.411	63.563	14.613	2.033	12.580	-0.459	70.314	0.910	4.411	75.684
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
1996 Total	58.387	7.087	7.012	72.486	23.702	4.633	19.069	2.468	79.785	7.087	7.014	94.022
1997 Total	58.857	6.597	7.018	72.472	25.215	4.514	20.701	1.429	80.873	6.597	7.016	94.602
1998 Total	59.314	7.068	6.494	72.876	26.581	4.299	22.281	140	81.369	7.068	6.493	95.018
1999 Total	57.614	7.610	6.517	71.742	27.252	3.715	23.537	1.372	82.427	7.610	6.516	96.652
2000 Total	57.366 58.541	7.862 8.029	6.104 5.164	71.332 71.735	28.973 30.157	4.006 3.771	24.967 26.386	2.515 -1.953	84.731 82.902	7.862 8.029	6.106 5.163	98.814 96.168
2001 Total 2002 Total	R 56.837	8.145	5.734	R 70.716	29.408	3.669	25.739	R 1.190	R 83.699	8.145	5.729	R 97.645
2003 Total	56.099	7.959	5.734	70.710	31.061	4.054	27.007	.931	84.014	7.959	5.983	97.978
2004 Total	55.895	8.222	6.070	70.040	33.544	4.434	29.110	R .864	R 85.819	8.222	6.082	R 100.162
2005 Total	55.038	8.161	6.229	69.427	34.709	4.560	30.149	R .705	R 85.794	8.161	6.242	R 100.102
2006 Total	55.968	8.215	6.608	70.792	34.679	4.872	29.806	R959	R 84.702	8.215	6.659	R 99.639
2007 Total	R 56.409	8.455	6.537	R 71.401	34.703	5.482	29.221	R .702	R 86.211	8.455	6.551	R 101.324
2008 Total	57.482	8.427	7.205	73.114	32.992	7.060	25.932	R .231	R 83.549	8.427	7.190	R 99.278
2009 January	R 4.902	.775	.627	R 6.304	2.829	.598	2.231	R .639	R 7.770	.775	.622	R 9.174
February	R 4.510	.672	.545	R 5.726	2.379	.505	1.874	R .315	R 6.699	.672	.537	<sup>R</sup> 7.915
March	<sup>R</sup> 4.919	.703	.624	R 6.246	2.666	.558	2.107	R260	R 6.764	.703	.621	R 8.093
April	R 4.659	.621	.649	R 5.929	2.487	.507	1.980	R527	R 6.102	.621	.653	R 7.383
May	R 4.706	.684	.690	R 6.080	2.437	.537	1.900	651	<sup>R</sup> 5.941	.684	.694	<sup>R</sup> 7.329
June	R 4.667	.729	.683	R 6.079	2.458	.566	1.892	R393	R 6.153	.729	.685	<sup>R</sup> 7.578
July	R 4.803	.763	.643	R 6.209	2.552	.620	1.932	283	R 6.438	.763	.643	R 7.858
August	R 4.810	.756	.615	R 6.181	2.447	.596	1.851	R026	R 6.620	.756	.615	R 8.006
September	R 4.650	.688	.568	R 5.906	2.455	.600	1.855	R448 R153	R 6.048	.688	.567	R 7.313
October November	<sup>R</sup> 4.758 <sup>R</sup> 4.604	.607 .618	.627 .642	<sup>R</sup> 5.992 <sup>R</sup> 5.864	2.327 2.317	.648 .601	1.679 1.716	R086	R 6.273 R 6.230	.607 .618	.627 .637	<sup>R</sup> 7.518 <sup>R</sup> 7.493
December	4.701	.740	.692	6.133	2.353	.629	1.716	R 1.030	R 7.450	.740	.686	R 8.887
Total	R 56.689	8.356	7.603	R 72.648	29.706	6.965	22.741	R842	R 78.488	8.356	7.587	R <b>94.547</b>
2010 January	R 4.737	.758	.670	R 6.166	2.516	.590	1.926	R 1.044	R 7.702	.758	.661	R 9.136
February	R 4.452	.682	.609	R 5.743	2.237	.556	1.681	R .791	R 6.919	.682	.603	R 8.216
March	R 5.032	.676	.680	R 6.388	2.519	.654	1.865	R045	R 6.851	.676	.671	R 8.208
April	R 4.777	.602	.659	R 6.039	2.580	.686	1.894	R553	R 6.112	.602	.656	R 7.380
May	R 4.777	.697	.715	R 6.189	2.578	.704	1.874	R379	R 6.270	.697	.714	R 7.685
June	R 4.724	.714	.751	<sup>R</sup> 6.190	2.556	.684	1.872	R047	R 6.539	.714	.754	<sup>R</sup> 8.015
July	R 4.885	.752	.700	R 6.336	2.705	.716	1.989	R .063	R 6.928	.752	.700	R 8.389
August	R 4.988	.748	.660	R 6.395	2.627	.698	1.929	R .126	R 7.038	.748	.658	R 8.450
September	R 4.939	.725	.623	R 6.287	2.431	.675	1.757	345 R 463	R 6.352	.725	.620	R 7.699
October November	<sup>R</sup> 5.001 <sup>R</sup> 4.897	.656 .655	.644 .680	<sup>R</sup> 6.301 <sup>R</sup> 6.232	2.390 2.289	.714 .760	1.676 1.529	<sup>R</sup> 463 <sup>R</sup> .041	<sup>R</sup> 6.215 <sup>R</sup> 6.471	.656 .655	.641 .674	<sup>R</sup> 7.514 <sup>R</sup> 7.802
December	R 5.040	.770	.723	R 6.534	2.447	.797	1.650	R 1.053	R 7.739	.770	.718	R 9.236
Total	R 58.250	8.434	8.116	R 74.800	29.877	8.234	21.643	R 1.286	R 81.136	8.434	8.069	R 97.729
2011 January	<sup>R</sup> 5.006	.760	.748	<sup>R</sup> 6.515	2.603	.837	1.766	R 1.101	R 7.879	.760	.733	9.381
February	R 4.568	.760	.746	R 5.956	2.003	.637 .755	1.766	R .879	R 6.774	.760	.733 .704	8.361 R 8.163
March	R 5.196	.686	.815	R 6.697	2.496	.874	1.622	R .081	R 6.901	.686	.805	R 8.400
April	R 4.940	.570	.814	R 6.324	2.373	.857	1.517	R267	6.191	.570	.805	7.574
May	<sup>R</sup> 5.019	.596	.833	R 6.448	2.461	.837	1.624	R433	R 6.204	.596	.827	R 7.639
June	R 4.953	.682	.821	R 6.456	2.402	.806	1.596	R087	R 6.452	.682	.820	R 7.965
July	4.993	.756	.790	R 6.538	2.488	.838	1.650	R .219	R 6.856	.756	.780	R 8.408
August	R 5.228	.746	.739	R 6.713	2.390	.898	1.492	R .213	R 6.918	.746	.737	R 8.417
September	R 5.088	.699	.673	R 6.459	R 2.283	.897	R 1.386	R256	R 6.214	.699	.666	R 7.590
October	5.234	.662	.706	6.602	2.324	.885	1.439	439	6.233	.662	.697	7.602
10-Month Total	50.224	6.835	7.650	64.708	23.904	8.485	15.419	1.012	66.622	6.835	7.575	81.139
2010 10-Month Total 2009 10-Month Total	48.313 47.383	7.009 6.999	6.712 6.269	62.034 60.651	25.141 25.036	6.676 5.734	18.464 19.302	.192 -1.786	66.926 64.807	7.009 6.999	6.678 6.264	80.691 78.167

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 for all available data beginning in 1973.

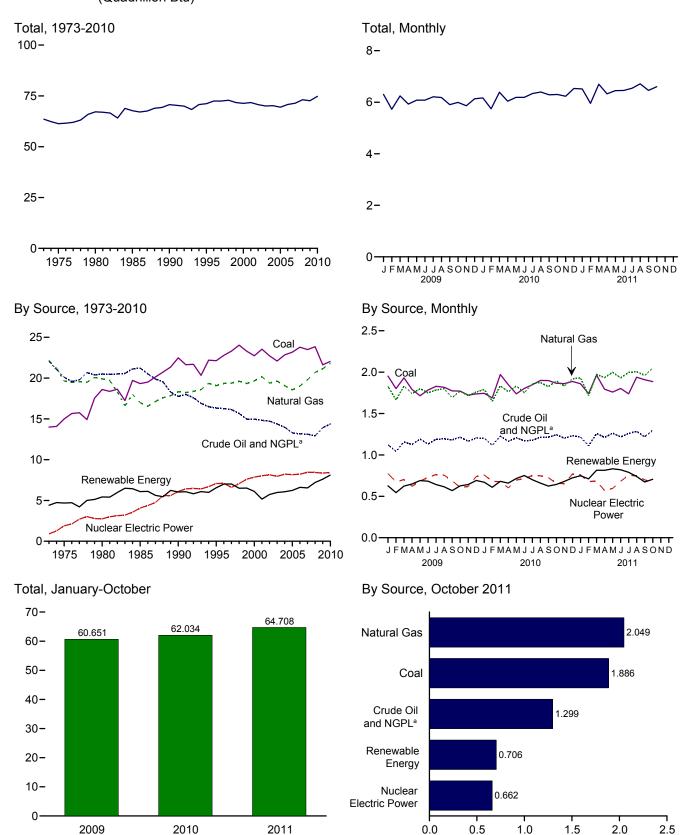
Sources: • Production: Table 1.2. • Trade: Tables 1.4a and 1.4b. • Stock Change and Other: Calculated as consumption minus production and net imports.

• Consumption: Table 1.3.

 <sup>&</sup>lt;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.

R=Revised.

Figure 1.2 Primary Energy Production (Quadrillion Btu)



<sup>&</sup>lt;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)

		Fo	ssil Fuels						Renewabl	e Energy <sup>a</sup>			
	Coal <sup>b</sup>	Natural Gas (Dry)	Crude Oil <sup>c</sup>	NGPLd	Total	Nuclear Electric Power	Hydro- electric Power <sup>e</sup>	Geo- thermal	Solar/ PV	Wind	Bio- mass	Total	Total
1973 Total	13.992	22.187	19.493	2.569	58.241	0.910	2.861	0.020	NA	NA	1.529	4.411	63.563
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		19.082	13.887	2.442	57.540	7.075	3.205	.152	.069	.033	3.099	6.558	71.174
1996 Total	22.790	19.344	13.723	2.530	58.387	7.087	3.590	.163	.070	.033	3.155	7.012	72.486
1997 Total	23.310	19.394	13.658	2.495	58.857	6.597	3.640	.167	.070	.034	3.108	7.018	72.472
1998 Total	24.045	19.613	13.235	2.420	59.314	7.068	3.297	.168	.069	.031	2.929	6.494	72.876
1999 Total	23.295	19.341	12.451	2.528	57.614	7.610	3.268	.171	.068	.046	2.965	6.517	71.742
2000 Total	22.735	19.662	12.358	2.611	57.366	7.862	2.811	.164	.065	.057	3.006	6.104	71.332
2001 Total 2002 Total	23.547 22.732	20.166 R 19.382	12.282 12.163	2.547 2.559	58.541 R 56.837	8.029 8.145	2.242 2.689	.164 .171	.064 .063	.070 .105	2.624 2.705	5.164 5.734	71.735 R 70.716
2002 Total	22.732	19.633	12.103	2.339	56.099	7.959	2.825	.171	.062	.115	2.805	5.982	70.710
2004 Total	22.852	19.074	11.503	2.466	55.895	8.222	2.690	.178	.063	.142	2.998	6.070	70.188
2005 Total	23.185	18.556	10.963	2.334	55.038	8.161	2.703	.181	.063	.178	3.104	6.229	69.427
2006 Total	23.790	19.022	10.801	2.356	55.968	8.215	2.869	.181	.068	.264	3.226	6.608	70.792
2007 Total	23.493	R 19.786	10.721	2.409	R 56.409	8.455	2.446	.186	.076	.341	3.489	6.537	R 71.401
2008 Total	23.851	20.703	10.509	2.419	57.482	8.427	2.511	.192	.089	.546	3.867	7.205	73.114
2009 January	1.953	R 1.827	.927	.196	R 4.902	.775	.229	.017	.008	.058	.315	.627	R 6.304
February	1.802	R 1.665	.854	.189	R 4.510	.672	.174	.016	.007	.057	.291	.545	R 5.726
March	1.932	R 1.831	.940	.216	R 4.919	.703	.213	.017	.008	.069	.316	.624	R 6.246
April	1.791	R 1.741	.918	.209	R 4.659	.621	.252	.016	.008	.073	.300	.649	R 5.929
May	1.715	R 1.800	.967	.224	R 4.706	.684	.289	.017	.009	.061	.315	.690	R 6.080
June	1.785	<sup>R</sup> 1.750 <sup>R</sup> 1.785	.919	.213	<sup>R</sup> 4.667 <sup>R</sup> 4.803	.729	.285	.016	.008 .009	.055	.318	.683	R 6.079
July	1.829 1.818	R 1.785	.971 .974	.218 .220	R 4.810	.763 .756	.228 .191	.017 .017	.009	.048 .053	.340 .345	.643	<sup>R</sup> 6.209 <sup>R</sup> 6.181
August September	1.774	R 1.693	.965	.220	R 4.650	.756	.169	.017	.009	.053	.345	.615 .568	R 5.906
October	1.771	R 1.772	.989	.226	R 4.758	.607	.192	.016	.008	.067	.343	.627	R 5.992
November	1.722	R 1.716	.944	.221	R 4.604	.618	.205	.017	.008	.067	.345	.642	R 5.864
December	1.737	1.760	.980	.224	4.701	.740	.241	.018	.008	.067	.357	.692	6.133
Total	21.627	R 21.139	11.348	2.574	R <b>56.689</b>	8.356	2.669	.200	.098	.721	3.915	7.603	R 72.648
2010 January	1.745	R 1.790	.972	.230	R 4.737	.758	.218	.018	.008	.067	.359	.670	R 6.166
February	1.688	R 1.648	.906	.210	<sup>R</sup> 4.452	.682	.201	.016	.008	.053	.332	.609	<sup>R</sup> 5.743
March	1.971	R 1.835	.990	.236	R 5.032	.676	.204	.018	.009	.084	.366	.680	R 6.388
April	1.849	R 1.763	.938	.227	R 4.777	.602	.186	.017	.009	.095	.352	.659	R 6.039
May	1.738	R 1.832	.969	.238	R 4.777	.697	.245	.018	.010	.085	.358	.715	R 6.189
June	1.804 1.848	<sup>R</sup> 1.751 <sup>R</sup> 1.859	.944 .951	.226 .227	<sup>R</sup> 4.724 <sup>R</sup> 4.885	.714 .752	.291 .239	.017 .017	.010 .010	.079	.355	.751 .700	<sup>R</sup> 6.190 <sup>R</sup> 6.336
July August	1.900	R 1.874	.978	.227	R 4.988	.752	.239	.017	.010	.066 .065	.368 .371	.660	R 6.395
September	1.898	R 1.826	.983	.232	R 4.939	.725	.168	.017	.009	.069	.359	.623	R 6.287
October	1.866	R 1.892	1.002	.242	R 5.001	.656	.173	.017	.009	.077	.368	.644	R 6.301
November	1.862	R 1.833	.966	.235	R 4.897	.655	.191	.017	.009	.095	.369	.680	R 6.232
December	1.888	R 1.920	.990	.242	R 5.040	.770	.226	.018	.009	.088	.382	.723	R 6.534
Total	22.056	R 21.823	11.589	2.781	R 58.250	8.434	2.539	.208	.109	.923	4.337	8.116	R <b>74.800</b>
2011 January	1.859	RE 1.930	E .986	.230	R 5.006	.760	.255	.019	.009	.084	.381	.748	R 6.515
February	1.741	RE 1.718	E .911	.197	R 4.568	.677	.241	.018	.008	.103	.341	.711	R 5.956
March	1.963	RE 1.973	E 1.013	.247	R 5.196	.686	.310	.019	.009	.103	.374	.815	R 6.697
April	1.794	RE 1.934	E .973	.238	R 4.940	.570	.309	.018	.010	.121	.357	.814	R 6.324
May	1.760	<sup>RE</sup> 1.998 <sup>RE</sup> 1.932	E 1.009	.253	R 5.019	.596	.323	.019	.010	.114	.367	.833	R 6.448
June	1.803 <sup>R</sup> 1.738	RE 1.932	E .979 E 1.009	.240 .250	R 4.953 4.993	.682 .756	.315 .308	.018 .018	.010 .010	.106 .072	.371 .381	.821 .790	R 6.456 R 6.538
July August	R 1.738	RE 2.004	E 1.009	.250 .251	4.993 R 5.228	.756 .746	.308	.018	.010	.072	.381	.790	R 6.713
September	R 1.909	RE 1.961	E .982	.236	R 5.088	.699	.210	.018	.010	.067	.368	.673	R 6.459
October	1.886	E 2.049	E 1.040	.259	5.234	.662	.195	.019	.010	.104	.378	.706	6.602
10-Month Total	18.392	E 19.495	€ 9.936	2.401	50.224	6.835	2.722	.185	.097	.946	3.701	7.650	64.708
2010 10-Month Total 2009 10-Month Total	18.306 18.168	18.070 17.663	9.633 9.424	2.304 2.128	48.313 47.383	7.009 6.999	2.122 2.222	.173 .165	.091 .082	.740 .587	3.587 3.213	6.712 6.269	62.034 60.651

<sup>&</sup>lt;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.

C Includes lease condensate.
 d Natural gas plant liquids.
 e Conventional hydroelectric power.

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

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

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

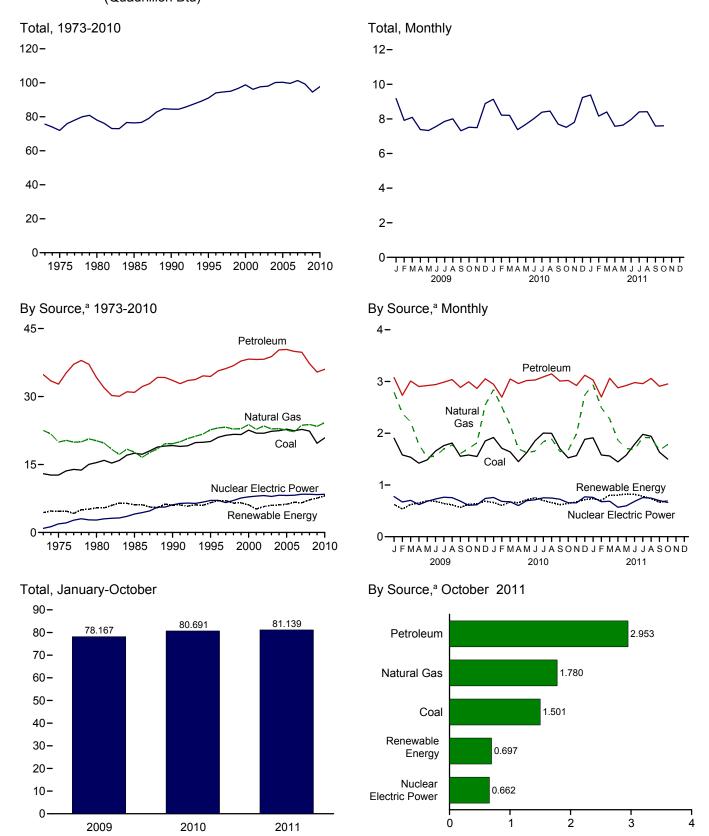
Web Page: See http://www.eia.gov/totalenergy/data/monthly/#summary for all available data beginning in 1973.

Sources: • 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).

Pagenushla Engruy: Table 10.1

<sup>•</sup> Renewable Energy: Table 10.1.

Figure 1.3 Primary Energy Consumption (Quadrillion Btu)



<sup>&</sup>lt;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)

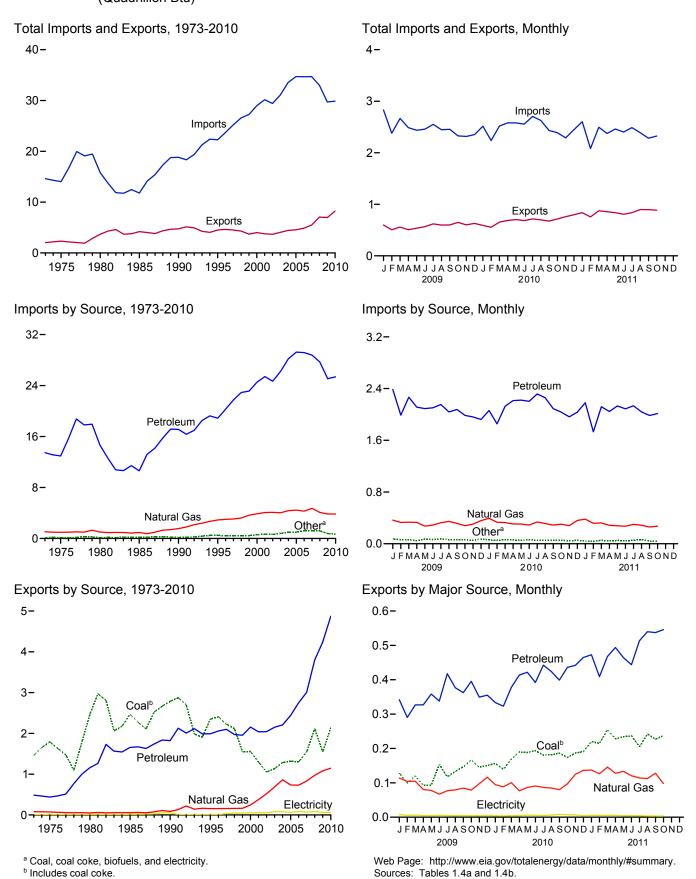
2003 Total         22,321         2,831         38,811         84,014         7,959         2,825         475         .062         .115         2,807         5,883         2,204 Total         22,246         R2,293         4,029         85,819         8,222         2,690         .178         .063         .142         3,0110         6,082         R.           2005 Total         22,747         R 22,265         40,388         R 85,794         8,161         2,703         .181         .063         .142         3,0110         6,022         R.           2007 Total         22,447         R 22,239         39,955         R 84,702         8,151         .089         .181         .063         .143         3,0276         6,659         F           2008 Total         22,345         R 23,663         30,775         R 7,770         .775         .229         .017         .008         .546         3,852         7,190         F           2009 January         1,904         R 2,792         3,075         R 7,770         .775         .229         .017         .008         .058         .310         .622           2009 January         1,552         R 2,386         2,732         R 6,699         .672         .17			Fossil	Fuels					Renewable	Energy <sup>a</sup>			
1975 Total		Coal			Totald	Electric	electric			Wind		Total	Total <sup>f</sup>
1975 Total													
1980 Total													75.684
1985 Total 17,478 17,703 20,925 66,093 4.076 2.970 0.97 (s) (s) 3.016 6.084 1995 Total 1991 Total 19,173 19,603 33.552 66,093 4.076 1995 Total 20,089 22,671 56,041 1995 Total 21,042 23,085 34,072 1995 1995 101 21,053 20,099 27,095 60,041 1995 Total 21,053 24,099 27,086 21,095 20,000 101 22,099 27,086 21,095 20,000 101 22,099 27,086 21,095 20,000 101 22,099 27,086 21,095 20,000 101 22,090 27,086 21,095 20,000 101 22,090 27,086 21,095 20,000 101 22,090 27,086 21,095 20,000 101 22,090 27,096 21,095 20,000 101 22,090 27,096 21,095 20,000 101 22,090 27,096 21,095 20,000 101 22,000 101 201 201 201 201 201 201 201 201													71.965
1995 Total   19.173   19.603   33.552   72.332   6.104   3.046   1.71   0.69   0.29   2.735   6.041   1996 Total   20.089   2.2671   34.438   77.259   7.075   3.250   1.52   0.69   0.33   3.101   6.560   1996 Total   21.002   23.085   35.675   79.785   7.097   3.590   1.63   0.070   0.33   3.157   7.014   1997 Total   21.445   23.223   36.159   80.873   6.597   3.640   1.67   0.070   0.34   3.105   7.016   1998 Total   21.856   22.830   36.816   81.385   7.098   3.228   1.686   0.68   0.08   0.31   22.27   6.493   1.691   1.692   1.69													78.067 76.392
1995 Total 20.089													84.485
1996 fotal 21.002 23.085 8.675 79.785 7.097 3.590 163 .070 .033 3.157 7.014 1997 fotal 21.445 23.223 36.159 80.873 6.597 3.640 1.67 .070 .034 3.105 7.016 1998 fotal 21.656 22.830 86.166 81.589 7.088 3.297 1.686 .089 .031 2.927 6.493 1999 fotal 21.623 22.999 37.838 82.427 7.610 3.288 1.71 .088 .046 2.963 6.516 2000 fotal 22.891 23.824 84.737 7.862 2.811 .164 .085 .057 3.008 6.106 2001 fotal 21.49 22.770 38.188 82.427 7.7610 3.288 1.71 .088 .046 .057 3.008 6.106 2001 fotal 21.49 22.771 38.188 82.82 84.737 7.862 2.811 .164 .085 .057 3.008 6.106 2001 fotal 21.416 22.211 22.831 38.181 84.014 7.959 2.825 1.75 .062 1.15 2.807 5.883 2.004 fotal 22.246 82.223 40.292 85.811 84.014 7.959 2.825 1.75 .062 1.15 2.807 5.883 2.004 fotal 22.424 82.2231 82.2831 84.014 7.959 2.825 1.75 .062 1.15 2.807 5.883 2.005 fotal 22.477 82.239 39.955 84.702 8.8215 2.869 1.81 .068 .264 3.276 6.659 8.200 fotal 22.447 82.239 39.955 84.702 8.215 2.869 1.81 .068 .264 3.276 6.659 8.200 fotal 22.325 82.843 37.280 88.85.794 8.457 2.511 .192 .089 .546 3.852 7.190 8.2008 fotal 22.325 82.843 37.280 88.354 84.72 2.511 .192 .089 .546 3.852 7.190 8.2008 fotal 22.325 82.843 37.280 88.354 84.72 2.511 .192 .089 .546 3.852 7.190 8.2008 fotal 22.355 82.844 84.72 2.511 .192 .089 .546 3.852 7.190 8.2008 fotal 22.356 82.844 84.845 84.72 2.511 .192 .089 .546 3.852 7.190 8.2008 fotal 22.356 82.384 37.280 88.354 84.72 2.511 .192 .089 .546 3.852 7.190 8.2008 fotal 22.356 82.384 84.72 2.511 .192 .089 .546 3.852 7.190 8.2008 fotal 22.356 82.360 8													91.029
1997 Total	1996 Total												94.022
1998 Total	1997 Total	21.445	23.223	36.159	80.873	6.597		.167		.034	3.105	7.016	94.602
2000 Total         22,580         23,824         38,262         84,731         7,862         2,811         1,64         065         .057         3,008         6,106           2001 Total         21,914         22,773         38,186         82,902         8,029         2,242         1,64         0,64         0,70         2,622         5,163           2003 Total         21,904         82,310         38,224         83,869         8,145         2,689         1,715         0,62         1,15         2,807         5,933           2004 Total         22,446         82,923         40,292         86,819         8,222         2,800         1,78         0,63         1,42         3,010         6,022         8,200         1,78         0,63         1,42         3,010         6,022         8,200         1,71         0,063         1,42         3,010         6,022         8,21         2,006         7,000         1,316         6,242         8,22         2,000         1,78         0,063         1,42         3,010         6,659         6,659         6,659         6,659         1,61         1,850         8,27         1,900         1,900         3,14         2,006         3,14         2,006         3,14         2	1998 Total												95.018
2001 Total         21,914         22,773         38,186         8,2902         8,2902         8,224         1,14         064         ,070         2,622         5,163           2002 Total         21,904         R2,351         38,244         R3,699         8,145         2,689         1,171         0.63         .105         2,701         5,729         F           2004 Total         22,466         R2,293         40,292         R8,819         8,222         2,690         1,78         .063         .142         3,010         .602         R           2006 Total         22,447         R2,2565         40,388         R8,8794         8,161         2,703         .181         .063         .178         3,116         6,242         R           2006 Total         22,749         R2,3663         33,974         R8,6211         8,455         2,446         .186         .076         .341         3,502         6,551         R           2008 Total         22,2386         2,388         37,288         8,827         2,511         .192         .089         .344         3,526         6,551         R           2008 Total         22,749         8,366         8,7770         .775         .229 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>96.652</td></td<>													96.652
2003 Total   21,904   23,510   38,224   88,5699   8,145   2,689   1,715   .063   .105   2,701   5,729   8,7200   7014   22,2466   22,923   40,292   88,819   8,222   2,890   .175   .063   .142   3,010   6,082   R   .2005 Total   22,2479   82,565   40,388   88,579   8,222   2,890   .178   .063   .142   3,010   6,082   R   .2005 Total   22,2479   82,565   40,388   88,702   8,215   2,889   .181   .063   .142   3,010   6,082   R   .2007 Total   22,2479   82,563   39,774   86,211   8,455   2,446   .186   .076   .341   .3502   .5551   R   .2008 Total   22,385   82,3843   37,280   83,549   8,427   2,511   .192   .089   .546   .3852   .7190   F   .2008 Total   .2008	2000 Total												98.814
2003 Total         22,321         22,831         38,811         8,014         7,959         28,255         175         .062         .115         2,807         5,983           2004 Total         22,466         R 22,255         40,388         8,222         26,905         1,78         .063         .142         3,010         6,082         R           2006 Total         22,447         R 22,239         39,555         84,702         8,215         2,869         1,81         .068         .264         3,276         6,659         2,600           2007 Total         22,447         R 22,366         39,774         R 86,211         8,455         2,446         .186         .076         .341         3,502         6,551         R           2008 Total         22,385         R 23,843         37,280         R 83,549         8,427         2,299         .017         .008         .058         .310         .622           2009 January         1,904         R 2,792         .3075         R 7,770         .775         .229         .017         .008         .058         .310         .622           4         April         1,422         R 1,779         2,904         R 6,629         .672         .174	2001 Total												96.168 R 97.645
2004 Total   22.466													97.978
2005 Total   22.797			R 22.923										R 100.162
2007 Total   22.447   62.239   39.955   684.702   8.215   2.869   181   0.68   .264   3.276   6.659   6.2007 Total   22.749   63.663   37.74   68.621   8.455   2.446   1.86   0.76   3.41   3.502   6.551   7.2008   7.2008   7.2008   7.2008   7.2008   7.2008   7.2008   7.2008   7.2008   7.2008   7.2008   7.2008   7.2008   7.2008   7.2008   7.2008   7.2008   7.2008   7.2008   7.2009   7.2008   7.2008   7.2008   7.2008   7.2008   7.2008   7.2009   7.2008   7.2	2005 Total	22.797	R 22.565	40.388	R 85.794	8.161	2.703	.181	.063	.178	3.116	6.242	R 100.281
2009   January   1.904	2006 Total		R 22.239										R 99.639
2009   January			K 23.663										R 101.324
February   1.582	2008 Total	22.385	<sup>R</sup> 23.843	37.280	₹ 83.549	8.427	2.511	.192	.089	.546	3.852	7.190	R 99.278
March	<b>2009</b> January												R 9.174
April 1.422													R 7.915
May													R 8.093
June 1.655 R1.560 2.939 R 6.153 729 2.85 016 0.08 0.55 320 6.85   July 1.760 R1.694 2.987 R 6.438 763 228 017 0.09 048 340 643   August 1.811 R1.774 3.038 R 6.620 7.56 1.91 017 0.09 0.83 3.46 6.15   September 1.555 R1.609 2.886 R 6.048 6.88 1.69 0.16 0.08 0.05 3.44 6.27   November 1.550 R1.703 2.994 R 6.273 6.07 192 0.16 0.08 0.05 3.44 6.27   November 1.550 R1.815 2.866 R 6.230 6.18 2.05 0.17 0.08 0.67 3.44 6.27   November 1.852 R 2.549 3.052 R 7.450 7.40 2.41 0.18 0.08 0.067 3.52 6.86   Total 19.692 R 23.416 35.403 R 78.488 8.356 2.669 2.00 0.98 7.21 3.899 7.587 F    2010 January 1.918 R 2.841 2.947 R 7.702 7.58 2.18 0.18 0.08 0.067 3.49 6.61   February 1.710 R 2.507 2.698 R 6.919 682 2.01 0.16 0.08 0.053 3.26 6.03   March 1.639 R 2.160 3.048 R 6.851 6.76 0.24 0.18 0.09 0.84 3.57 6.71   April 1.452 R 1.700 2.960 R 6.112 6.02 1.86 0.17 0.09 0.95 3.48 6.56   May 1.626 R 1.623 3.029 R 6.539 7.14 2.91 0.17 0.10 0.079 3.57 7.54   June 1.853 R 1.656 3.029 R 6.539 7.14 2.91 0.17 0.10 0.079 3.57 7.54   July 2.002 R 1.886 3.089 R 9.928 7.52 2.39 0.17 0.10 0.66 3.68 7.00   August 1.999 R 1.880 3.148 R 7.038 7.48 1.96 0.18 0.01 0.05 3.69 6.58   September 1.701 R 1.644 3.008 R 6.352 7.25 1.68 0.01 0.09 0.09 3.36 6.20   October 1.580 R 1.644 3.008 R 6.352 7.25 1.68 0.01 0.09 0.09 3.36 6.20   October 1.586 R 1.986 2.923 R 6.411 6.55 1.91 0.07 0.09 0.95 3.62 6.641   November 1.588 R 1.986 2.923 R 6.471 6.55 1.91 0.07 0.09 0.95 3.62 6.641   November 1.588 R 1.986 2.923 R 6.471 6.55 1.91 0.07 0.09 0.95 3.62 6.641   November 1.588 R 2.493 2.701 R 6.774 6.77 2.41 0.18 0.08 1.03 3.35 7.74   March 1.580 R 2.493 2.701 R 6.774 6.77 2.41 0.18 0.08 1.03 3.35 7.74   March 1.580 R 2.493 2.701 R 6.774 6.77 2.41 0.18 0.08 1.03 3.35 7.74   March 1.580 R 2.493 2.701 R 6.774 6.77 2.41 0.18 0.08 1.03 3.35 7.04   March 1.580 R 2.493 2.701 R 6.774 6.77 2.41 0.18 0.08 1.03 3.35 7.04   March 1.580 R 2.493 2.701 R 6.774 6.77 2.41 0.18 0.08 1.03 3.35 7.04   March 1.580 R 2.493 2.701 R 6.774 6.77 2.41 0.18 0.08 1.03 3.35 7.04   March 1.580 R 2.493 2													<sup>R</sup> 7.383 <sup>R</sup> 7.329
July													R 7.578
August													R 7.858
September					R 6.620								R 8.006
November			R 1.609		R 6.048		.169		.008		.327		R 7.313
December	October		R 1.703		R 6.273								<sup>R</sup> 7.518
Total         19.692         R 23.416         35.403         R 78.488         8.356         2.669         .200         .098         .721         3.899         7.587         F           2010 January         1.918         R 2.841         2.947         R 7.702         .758         .218         .018         .008         .067         .349         .661           February         1.710         R 2.507         .2688         R 6.919         .682         .201         .016         .008         .053         .326         .603           March         1.639         R 2.160         3.048         R 6.851         .676         .204         .018         .009         .084         .357         .671           April         1.452         R 1.700         2.960         R 6.112         .602         .186         .017         .009         .095         .348         .656           May         1.626         R 1.626         3.029         R 6.539         .714         .291         .017         .010         .085         .356         .714           July         2.002         R 1.836         3.089         R 6.928         .752         .239         .017         .010         .066         .368 <td></td> <td></td> <td>K 1.815</td> <td></td> <td><sup>R</sup> 6.230</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>R 7.493</td>			K 1.815		<sup>R</sup> 6.230								R 7.493
2010   January			R 23.549		R 78 488								<sup>R</sup> 8.887 <sup>R</sup> <b>94.547</b>
February 1.710 R2.507 2.698 R6.919 6.82 2.01 0.16 0.08 0.53 3.26 6.03 March 1.639 R2.160 3.048 R6.851 6.76 2.04 0.18 0.09 0.84 3.57 6.71 April 1.452 R1.700 2.960 R6.112 6.02 1.86 0.17 0.09 0.95 3.48 6.56 May 1.626 R1.622 3.020 R6.270 6.97 2.45 0.18 0.10 0.85 3.56 7.14 June 1.853 R1.656 3.029 R6.539 7.14 2.91 0.17 0.10 0.79 3.57 7.54 July 2.002 R1.836 3.089 R6.928 7.52 2.39 0.17 0.10 0.79 3.57 7.54 July 2.002 R1.836 3.089 R6.928 7.52 2.39 0.17 0.10 0.66 3.68 700 August 1.999 R1.890 3.148 R7.038 7.48 1.96 0.18 0.10 0.65 3.69 6.58 September 1.701 R1.644 3.008 R6.352 7.25 1.68 0.17 0.09 0.69 3.56 6.20 October 1.526 R1.671 3.020 R6.215 6.566 1.73 0.17 0.09 0.09 3.56 6.20 October 1.568 R1.986 2.923 R6.471 6.55 1.91 0.17 0.09 0.95 3.62 6.74 December 1.883 R2.741 3.120 R7.739 7.70 2.26 0.18 0.09 0.88 3.77 7.18 Total 20.877 R24.256 36.010 R81.136 8.434 2.539 2.08 1.09 9.23 4.291 8.069 F													
March         1.639         R 2.160         3.048         R 6.851         6.676         2.04         .018         .009         .084         .357         .671           April         1.452         R 1.700         2.960         R 6.112         .602         .186         .017         .009         .095         .348         .656           May         1.626         R 1.622         3.020         R 6.270         .697         .245         .018         .010         .085         .356         .714           June         1.853         R 1.656         3.029         R 6.539         .714         .291         .017         .010         .079         .357         .754           July         2.002         R 1.836         3.089         R 6.928         .752         .239         .017         .010         .066         .368         .700           August         1.999         R 1.890         3.148         R 7.038         .748         .196         .018         .010         .066         .368         .700           August         1.999         R 1.890         3.148         R 7.038         .748         .196         .018         .010         .066         .368         .700	<b>2010</b> January												R 9.136
April         1.452         k1.700         2.960         k6.112         602         186         .017         .009         .095         .348         .656           May         1.626         k1.622         3.020         k6.270         .697         .245         .018         .010         .085         .356         .714           June         1.853         k1.656         3.029         k6.539         .714         .291         .017         .010         .079         .357         .754           July         2.002         k1.836         3.089         k6.528         .752         .239         .017         .010         .066         .368         .700           August         1.999         k1.890         3.148         k7.038         .748         .196         .018         .010         .066         .368         .700           August         1.999         k1.890         3.148         k7.038         .748         .196         .018         .010         .006         .356         .620           October         1.526         k1.671         3.002         k6.215         .656         .173         .017         .009         .077         .365         .641			<sup>R</sup> 2.507		* 6.919								R 8.216
May         1.626         R1.622         3.020         R6.270         6.97         245         0.18         0.10         0.85         356         .714           June         1.853         R1.656         3.029         R6.539         .714         .291         .017         .010         .069         .357         .754           July         2.002         R1.836         3.089         R6.928         .752         .239         .017         .010         .066         .368         .700           August         1.999         R1.890         3.148         R7.038         .748         .196         .018         .010         .065         .369         .658           September         1.701         R1.644         3.008         R6.352         .725         .168         .017         .009         .069         .356         .620           October         1.526         R1.671         3.020         R6.215         .656         .173         .017         .009         .077         .365         .621           November         1.568         R1.986         2.923         R6.471         .655         .191         .017         .009         .095         .362         .674			R 1 700		" 6.851 R 6 112								R 8.208 R 7.380
June         1.853         R 1.656         3.029         R 6.539         7.14         2.91         0.17         0.10         0.79         357         754           July         2.002         R 1.836         3.089         R 6.928         7.52         2.39         0.17         0.10         0.066         3.68         700           August         1.999         R 1.890         3.148         R 7.038         .748         1.96         0.18         0.010         0.065         .369         .658           September         1.701         R 1.644         3.008         R 6.352         .725         .168         .017         .009         .069         .356         .620           October         1.526         R 1.671         3.020         R 6.215         .656         .173         .017         .009         .077         .365         .641           November         1.568         R 1.986         2.923         R 6.471         .655         .191         .017         .009         .083         .377         .718           Total         20.877         R 24.256         36.010         R 81.136         8.434         2.539         .208         .109         .923         4.291         8.069					R 6 270								R 7.685
July         2.002         R1.836         3.089         R6.928         7.52         2.39         0.17         0.10         0.66         368         700           August         1.999         R1.890         3.148         R7.038         7.48         1.96         0.18         0.10         0.065         3.69         6.58           September         1.701         R1.644         3.008         R6.352         7.25         1.68         0.17         0.09         0.69         .356         620           October         1.526         R1.671         3.020         R6.215         .656         1.73         0.17         0.09         .077         .365         .641           November         1.588         R1.986         2.923         R6.471         .655         .191         .017         .009         .095         .362         .674           November         1.883         R2.741         3.120         R7.739         .770         .226         .018         .009         .088         .377         .718           Total         20.877         R24.256         36.010         R81.136         8.434         2.539         208         .109         .923         4.291         8.069					R 6.539								R 8.015
August       1.999       R1.890       3.148       R7.038       .748       .196       .018       .010       .065       .369       .658         September       1.701       R1.644       3.008       R 6.352       .725       .168       .017       .009       .069       .356       .620         October       1.526       R1.671       3.020       R 6.215       .656       .173       .017       .009       .077       .365       .641         November       1.568       R1.986       2.923       R 6.471       .655       .191       .017       .009       .095       .362       .674         December       1.883       R 2.741       3.120       R 7.739       .770       .226       .018       .009       .088       .377       .718         Total       20.877       R 24.256       36.010       R 81.136       8.434       2.539       .208       .109       .923       4.291       8.699       F         2011 January       1.911       R 2.938       3.030       R 7.879       .760       .255       .019       .009       .084       .365       .733         February       1.580       R 2.493       2.2701       R 6.774 </td <td></td> <td></td> <td>R 1.836</td> <td></td> <td>R 6.928</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>R 8.389</td>			R 1.836		R 6.928								R 8.389
October         1.526         R1.671         3.020         R 6.215         656         1.73         0.17         .009         .077         .365         .641           November         1.568         R 1.986         2.923         R 6.471         .655         .191         .017         .009         .095         .362         .674           December         1.883         R 2.741         3.120         R 7.739         .770         .226         .018         .009         .088         .377         .718           Total         20.877         R 24.256         36.010         R 81.136         8.434         2.539         .208         .109         .923         4.291         8.069         F           2011 January         1.911         R 2.938         3.030         R 7.879         .760         .255         .019         .009         .084         .365         .733           February         1.580         R 2.493         2.701         R 6.774         .677         .241         .018         .008         .103         .335         .704           March         1.561         R 2.275         3.062         R 6.901         .686         .310         .019         .009         .103 <td< td=""><td>August</td><td></td><td>R 1.890</td><td></td><td><sup>R</sup> 7.038</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td><sup>R</sup> 8.450</td></td<>	August		R 1.890		<sup>R</sup> 7.038								<sup>R</sup> 8.450
November         1.568         R 1.986         2.923         R 6.471         .655         .191         .017         .009         .095         .362         .674           December         1.883         R 2.741         3.120         R 7.739         .770         .226         .018         .009         .088         .377         .718           Total         20.877         R 24.256         36.010         R 81.136         8.434         2.539         .208         .109         .923         4.291         8.069         F           2011 January         1.911         R 2.938         3.030         R 7.879         .760         .255         .019         .009         .084         .365         .733           February         1.580         R 2.493         2.701         R 6.774         .677         .241         .018         .008         .103         .335         .704           March         1.561         R 2.275         3.062         R 6.901         .686         .310         .019         .009         .103         .364         .805           April         R 1.447         1.866         2.878         6.191         .570         .309         .018         .010         .101         .			R 1.644										R 7.699
December         1.883         R 2.741         3.120         R 7.739         .770         .226         .018         .009         .088         .377         .718           Total         20.877         R 24.256         36.010         R 81.136         8.434         2.539         .208         .109         .923         4.291         8.069         F           2011 January         1.911         R 2.938         3.030         R 7.879         .760         .255         .019         .009         .084         .365         .733           February         1.580         R 2.493         2.701         R 6.774         .677         .241         .018         .008         .103         .335         .704           March         1.561         R 2.275         3.062         R 6.901         .686         .310         .019         .009         .084         .365         .733           April         R 1.447         1.866         2.878         6.191         .570         .309         .018         .010         .121         .348         .805           May         R 1.577         R 1.702         2.923         R 6.204         .596         .323         .019         .010         .114         .361													<sup>R</sup> 7.514 <sup>R</sup> 7.802
Total         20.877         * 24.256         36.010         * 81.136         8.434         2.539         .208         .109         .923         4.291         8.069         F           2011 January         1.911         * 2.938         3.030         * 7.879         .760         .255         .019         .009         .084         .365         .733           February         1.580         * 2.493         2.701         * 6.774         .677         .241         .018         .008         .103         .335         .704           March         1.561         * 2.275         3.062         * 8.901         .686         .310         .019         .009         .103         .364         .805           April         * 1.447         1.866         2.878         6.191         .570         .309         .018         .010         .101         .121         .348         .805           May         * 1.577         * 1.702         2.923         * 6.204         .596         .323         .019         .010         .114         .361         .827           June         * 1.787         * 1.686         2.979         * 6.452         .682         .315         .018         .010         .106 </td <td></td> <td>R 9.236</td>													R 9.236
February         1.580         R 2.493         2.701         R 6.774         6.677         241         0.18         .008         .103         .335         .704           March         1.561         R 2.275         3.062         R 6.901         .686         .310         .019         .009         .103         .364         .805           April         R 1.447         1.866         2.878         6.191         .570         .309         .018         .010         .121         .348         .805           May         R 1.577         R 1.702         2.923         R 6.204         .596         .323         .019         .010         .114         .361         .827           June         R 1.787         R 1.686         2.979         R 6.452         .682         .315         .018         .010         .106         .370         .820           July         R 1.979         R 1.918         2.959         R 6.856         .756         .308         .018         .010         .072         .371         .780           August         R 1.944         R 1.914         3.059         R 6.918         .746         .257         .019         .011         .072         .380         .737			R <b>24.256</b>										R <b>97.729</b>
February         1.580         R 2.493         2.701         R 6.774         6.677         241         0.18         .008         .103         .335         .704           March         1.561         R 2.275         3.062         R 6.901         .686         .310         .019         .009         .103         .364         .805           April         R 1.447         1.866         2.878         6.191         .570         .309         .018         .010         .121         .348         .805           May         R 1.577         R 1.702         2.923         R 6.204         .596         .323         .019         .010         .114         .361         .827           June         R 1.787         R 1.686         2.979         R 6.452         .682         .315         .018         .010         .106         .370         .820           July         R 1.979         R 1.918         2.959         R 6.856         .756         .308         .018         .010         .072         .371         .780           August         R 1.944         R 1.914         3.059         R 6.918         .746         .257         .019         .011         .072         .380         .737	2011 Januari	1 014		2 000		700	055	040	000	004	205	700	
March     1.561     R2.275     3.062     R6.901     6.86     .310     .019     .009     .103     .364     .805       April     R1.447     1.866     2.878     6.191     .570     .309     .018     .010     .121     .348     .805       May     R1.577     R1.702     2.923     R6.204     .596     .323     .019     .010     .114     .361     .827       June     R1.787     R1.686     2.979     R6.452     .682     .315     .018     .010     .106     .370     .820       July     R1.979     R1.918     2.959     R6.856     .756     .308     .018     .010     .072     .371     .780       August     R1.941     R1.914     3.059     R6.918     .746     .257     .019     .011     .072     .380     .737	February												9.381 <sup>R</sup> 8.163
April       R1.447       1.866       2.878       6.191       .570       .309       .018       .010       .121       .348       .805         May       R1.577       R1.702       2.923       R6.204       .596       .323       .019       .010       .114       .361       .827         June       R1.787       R1.686       2.979       R6.452       .682       .315       .018       .010       .106       .370       .820         July       R1.979       R1.918       2.959       R6.856       .756       .308       .018       .010       .072       .371       .780         August       R1.941       R1.914       3.059       R6.918       .746       .257       .019       .011       .072       .380       .737	March	1.561			R 6.901								R 8.400
May       R 1.577       R 1.702       2.923       R 6.204       .596       .323       .019       .010       .114       .361       .827         June       R 1.787       R 1.686       2.979       R 6.452       .682       .315       .018       .010       .106       .370       .820         July       R 1.979       R 1.918       2.959       R 6.856       .756       .308       .018       .010       .072       .371       .780         August       R 1.941       R 1.914       3.059       R 6.918       .746       .257       .019       .011       .072       .380       .737		R 1.447											7.574
June     R1.787     R1.686     2.979     R6.452     .682     .315     .018     .010     .106     .370     .820       July     R1.979     R1.918     2.959     R6.856     .756     .308     .018     .010     .072     .371     .780       August     R1.941     R1.914     3.059     R6.918     .746     .257     .019     .011     .072     .380     .737		R 1.577	R 1.702	2.923	R 6.204	.596	.323	.019	.010	.114	.361	.827	R 7.639
August	June												R 7.965
August		R 1.979	R 1.918		R 6.856								R 8.408
September 17.033 17.072 2.908 10.214 .699 .210 .018 .010 .067 .362 .666		<sup>™</sup> 1.941	<sup>г</sup> 1.914		^ 6.918								R 8.417
													<sup>R</sup> 7.590 7.602
October													7.602 <b>81.139</b>
2010 10-Month Total 17.426 19.529 29.966 66.926 7.009 2.122 .173 .091 .740 3.552 6.678 2009 10-Month Total 16.290 19.052 29.486 64.807 6.999 2.222 .165 .082 .587 3.207 6.264													80.691 78.167

 <sup>&</sup>lt;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.

Conventional hydroelectric power.
 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 for all available 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.

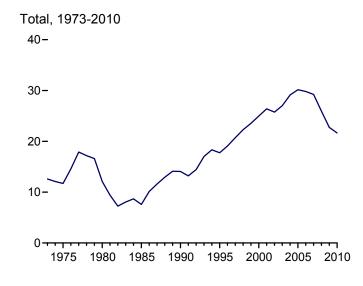
Figure 1.4a Primary Energy Imports and Exports (Quadrillion Btu)

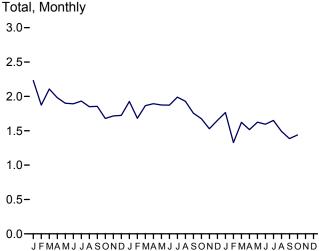


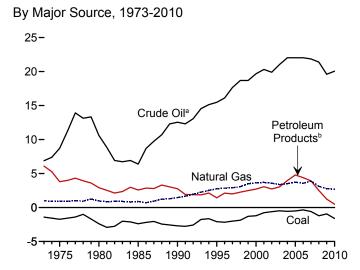
U.S. Energy Information Administration / Monthly Energy Review January 2012

Figure 1.4b Primary Energy Net Imports

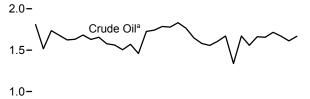
(Quadrillion Btu, Except as noted)



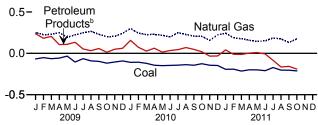


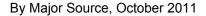


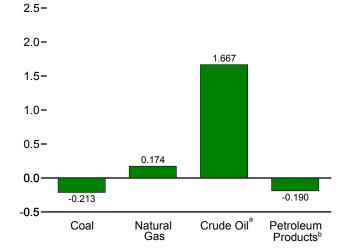




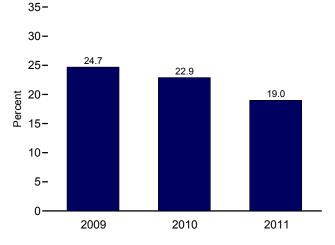
2010







As Share of Consumption, January-October



<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 1.3, 1.4a, and 1.4b.

Table 1.4a Primary Energy Imports by Source

(Quadrillion Btu)

					Imports				
					Petroleum				
	Coal	Coal Coke	Natural Gas	Crude Oil <sup>a</sup>	Petroleum Products <sup>b</sup>	Total	Biofuels <sup>c</sup>	Electricity	Total
1973 Total	0.003	0.027	1.060	6.887	6.578	13.466	NA	0.057	14.613
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
1996 Total	.203	.063	3.002	16.341	3.943	20.284	.001	.148	23.702
1997 Total	.187	.078	3.063	17.876	3.864	21.740	(s)	.147	25.215
1998 Total	.218	.095	3.225	18.916	3.992	22.908	(s)	.135	26.581
1999 Total	.227	.080	3.664	18.935	4.198	23,133	(s)	.147	27.252
2000 Total	.313	.094	3.869	19.783	4.749	24.531	(s)	.166	28.973
2001 Total	.495	.063	4.068	20.348	5.051	25.398	.002	.131	30.157
2002 Total	.422	.080	4.104	19.920	4.754	24.674	.002	.125	29.408
2003 Total	.626	.068	4.042	21.060	5.159	26.219	.002	.104	31.061
2004 Total	.682	.170	4.365	22.082	6.114	28.197	.013	.117	33.544
2005 Total	.762	.088	4.450	22.091	7.157	29.248	.012	.150	34.709
2006 Total	.906	.101	4.291	22.085	7.084	29.169	.066	.146	34.679
2007 Total	.909	.061	4.723	21.914	6.868	28.781	.054	.175	34.703
2008 Total	.855	.089	4.084	21.448	6.237	27.685	.084	.175	32.992
2009 January	.058	.001	.366	1.815	.572	2.387	.003	.015	2.829
February	.046	(s)	.330	1.521	.467	1.989	.001	.013	2.379
March	.054	(s)	.333	1.741	.525	2.266	.002	.010	2.666
April	.033	(s)	.330	1.684	.428	2.112	.001	.011	2.487
May	.057	.001	.272	1.633	.457	2.090	.002	.014	2.437
June	.046	.001	.289	1.641	.462	2.103	.002	.016	2.458
	.050	.001	.325	1.688	.465	2.153	.003	.019	2.552
July									2.552
August	.039	(s)	.345	1.636	.402	2.038	.004	.020	
September	.046	.001	.315	1.662	.413	2.076	.002	.015	2.455
October	.044	(s)	.280	1.590	.395	1.985	.002	.016	2.327
November	.038	.001	.302	1.570	.391	1.961	.002	.013	2.317
December	.054	.002	.358	1.517	.405	1.921	.001	.016	2.353
Total	.566	.009	3.845	19.699	5.383	25.082	.026	.178	29.706
<b>2010</b> January	.042	.001	.394	1.577	.483	2.060	.001	.018	2.516
February	.031	.005	.332	1.469	.384	1.853	(s)	.015	2.237
March	.047	.003	.327	1.734	.393	2.127	.001	.015	2.519
April	.045	.001	.306	1.747	.466	2.214	(s)	.013	2.580
May	.037	.005	.305	1.793	.428	2.221	.001	.010	2.578
June	.044	.005	.289	1.784	.419	2.203	(s)	.014	2.556
July	.035	.003	.337	1.844	.472	2.316	(s)	.015	2.705
August	.043	.003	.313	1.772	.484	2.256	(s)	.012	2.627
September	.040	.002	.289	1.658	.432	2.090	(s)	.010	2.431
October	.044	.001	.302	1.585	.448	2.034	(s)	.009	2.390
November	.037	(s)	.280	1.563	.400	1.963	(s)	.009	2.289
December	.039	(s)	.361	1.614	.420	2.034	(s)	.013	2.447
Total	.484	.030	3.834	20.140	5.231	25.371	.004	.154	29.877
2011 January	.025	.001	.380	1.684	.497	2.181	(s)	.015	2.603
February	.021	.002	.316	1.344	.387	1.731	(s)	.013	2.083
March	.038	.004	.322	1.677	.441	2.118	(s)	.014	2.496
April	.028	.001	.285	1.566	.480	2.045	(s)	.013	2.373
May	.033	.004	.278	1.669	.462	2.131	(s)	.017	2.461
June	.024	.004	.272	1.661	.424	2.086	.001	.015	2.402
July	.030	.003	.300	1.728	.405	2.133	.001	.021	2.488
August	.039	.005	286	1.675	.364	2.039	.002	.019	2 390
September	.021	.003	R .260	1.618	.365	1.983	.003	.014	R 2.283
October	.023	.002	.272	1.676	.337	2.013	.002	.013	2.324
10-Month Total	.283	.029	2.970	16.298	4.161	20.459	.010	.152	23.904
2010 10-Month Total 2009 10-Month Total	.408 .474	.030 .005	3.194 3.184	16.963 16.612	4.411 4.587	21.374 21.199	.004 .024	.131 .149	25.141 25.036

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

Sources: • Coal: Tables 6.1 and A5. • Coal Coke: 1973-1975—U.S. Department of the Interior, Bureau of Mines, Minerals Yearbook, "Coke and Coal Chemicals" chapter. 1976-1980—U.S. Energy Information Administration (EIA), Energy Data Report, "Coke and Coal Chemicals," annual reports. 1981 forward—EIA, Quarterly Coal Report, quarterly reports. • 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 and 10.4 • Electricity: Tables 7.1 and A6. A2. • Biofuels: Tables 10.3 and 10.4. • Electricity: Tables 7.1 and A6.

 <sup>&</sup>lt;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. and the District of Columbia.

Table 1.4b Primary Energy Exports by Source and Total Net Imports

(Quadrillion Btu)

					Exports					Net Imports <sup>a</sup>
					Petroleum					
	Coal	Coal Coke	Natural Gas	Crude Oil <sup>b</sup>	Petroleum Products <sup>C</sup>	Total	Biofuelsd	Electricity	Total	Total
1973 Total	1.425	0.035	0.079	0.004	0.482	0.486	NA	0.009	2.033	12.580
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
985 Total	2.438	.028	.056	.432	1.225	1.657	NA	.017	4.196	7.584
990 Total	2.772	.014	.087	.230	1.594	1.824	NA	.055	4.752	14.065
995 Total	2.318	.034	.156	.200	1.791	1.991	NA	.012	4.511	17.750
996 Total	2.368	.040	.155	.233 .228	1.825 1.872	2.059 2.100	NA NA	.011	4.633 4.514	19.069
997 Total 998 Total	2.193 2.092	.031 .028	.159 .161	.220	1.740	1.972	NA NA	.031 .047	4.299	20.701 22.281
1999 Total	1.525	.020	.164	.250	1.705	1.955	NA NA	.047	3.715	23.537
2000 Total	1.528	.028	.245	.106	2.048	2.154	NA NA	.051	4.006	24.967
2001 Total	1.265	.033	.377	.043	1.996	2.039	(s)	.056	3.771	26.386
002 Total	1.032	.020	.520	.019	2.023	2.042	(s)	.054	3.669	25.739
2003 Total	1.117	.018	.686	.026	2.124	2.151	.001	.082	4.054	27.007
2004 Total	1.253	.033	.862	.057	2.151	2.208	.001	.078	4.434	29.110
2005 Total	1.273	.043	.735	.067	2.374	2.442	.001	.065	4.560	30.149
2006 Total	1.264	.040	.730	.052	2.699	2.751	.004	.083	4.872	29.806
007 Total	1.507	.036	.830	.058	2.949	3.007	.035	.069	5.482	29.221
2008 Total	2.071	.049	.972	.061	3.739	3.800	.086	.083	7.060	25.932
009 January	.126	.003	.114	.007	.335	.342	.006	.008	.598	2.231
February	.098	.001	.104	.005	.286	.290	.006	.005	.505	1.874
March	.118	.002	.105	.005	.321	.327	.001	.006	.558	2.107
April	.090	.003	.081	.005	.322	.327	.001	.005	.507	1.980
May	.091	.002	.078	.009	.349	.358	.002	.005	.537	1.900
June	.151	.002	.067	.010	.328	.338	.002	.006	.566	1.892
July	.115	.003	.077	.006 .006	.412	.418	.003 .002	.005 .005	.620	1.932
August	.130 .144	.003	.079 .085	.006	.371 .355	.377 .362	.002	.005	.596 .600	1.851 1.855
September	.144	.003	.065	.007	.382	.395	.002	.005	.648	1.679
October November	.143	.004	.079	.013	.341	.349	.002	.003	.601	1.716
December	.146	.002	.116	.012	.343	.355	.004	.004	.629	1.724
Total	1.515	.032	1.082	.093	4.147	4.240	.034	.062	6.965	22.741
<b>010</b> January	.151	.006	.094	.006	.327	.332	.003	.004	.590	1.926
February	.138	.001	.089	.009	.312	.321	.003	.003	.556	1.681
March	.169	(s)	.100	.008	.366	.374	.006	.004	.654	1.865
April	.189	.001	.077	.006	.404	.411	.005	.004	.686	1.894
May	.186	.003	.086	.007	.414	.420	.003	.006	.704	1.874
June	.190	.004	.091	.005	.385	.391	.003	.005	.684	1.872
July	.178	.003	.087	.012	.428	.440	.003	.005	.716	1.989
August	.180	.002	.085	.006	.415	.421	.004	.006	.698	1.929
September	.184 .170	.003 .003	.080 .097	.011 .004	.385 .429	.396 .433	.004	.008 .007	.675 .714	1.757 1.676
October November	.170	.003	.097	.004	.429 .433	.433 .439	.004	.007	.714	1.529
December	.186	.005	.136	.007	.452	.459	.007	.005	.797	1.650
Total	2.101	.036	1.147	.088	4.750	4.838	.046	.065	8.234	21.643
011 January	.219	.001	.137	.013	.455	.468	.006	.005	.837	1.766
February	.213	.002	.126	.005	.399	.404	.005	.005	.755	1.328
March	.253	.001	.146	.007	.454	.461	.008	.005	.874	1.622
April	.227	.001	.128	.007	.477	.484	.011	.005	.857	1.517
May	.232	.002	.133	.007	.452	.458	.007	.004	.837	1.624
June	.234	.003	.121	.006	.432	.438	.006	.004	.806	1.596
July	.202	.003	.114	.013	.490	.503	.011	.004	.838	1.650
August	.241	.001	.112	.006	.529	.536	.005	.003	.898	1.492
September	.224	.003	.128	.006	.522	.529	.010	.003	.897	R 1.386
October	.235	.002	.098	.009	.527	.536	.011	.003	.885	1.439
10-Month Total	2.282	.019	1.244	.079	4.737	4.816	.080	.044	8.485	15.419
010 10-Month Total 009 10-Month Total	1.735 1.225	.025 .026	.886 .868	.075 .073	3.865 3.462	3.940 3.535	.036 .027	.054 .053	6.676 5.734	18.464 19.302

Web Page: See http://www.eia.gov/totalenergy/data/monthly/#summary for

Web Page: See http://www.eia.gov/totalenergy/data/monthly/#summary for all available data beginning in 1973.
Sources: • Coal: Tables 6.1 and A5. • Coal Coke: 1973-1975—U.S. Department of the Interior, Bureau of Mines, Minerals Yearbook, "Coke and Coal Chemicals" chapter. 1976-1980—U.S. Energy Information Administration (EIA), Energy Data Report, "Coke and Coal Chemicals," annual reports. 1981 forward—EIA, Quarterly Coal Report, quarterly reports. • Natural Gas: Tables 4.1 and A4. • Crude Oil and Petroleum Products: Tables 3.3b, 10.4, and A2. • Biofuels: Tables 10.3 and 10.4. • Electricity: Tables 7.1 and A6.

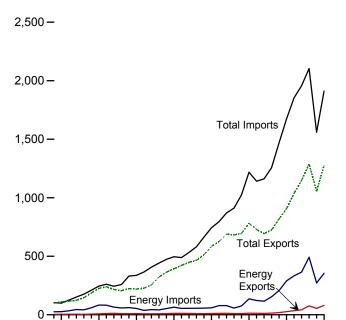
<sup>a Net imports equal imports minus exports.
b Crude oil and lease condensate.
c Petroleum products, unfinished oils, pentanes plus, and gasoline blending components. Does not include biofuels.
d Through 2010, data are for biodiesel only. Beginning in 2011, data are for fuel ethanol (minus denaturant) and biodiesel.</sup> 

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.

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

Imports and Exports, 1974-2010

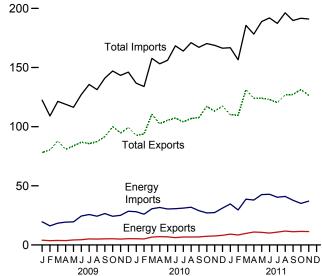


1975 1980 1985 1990 1995 2000

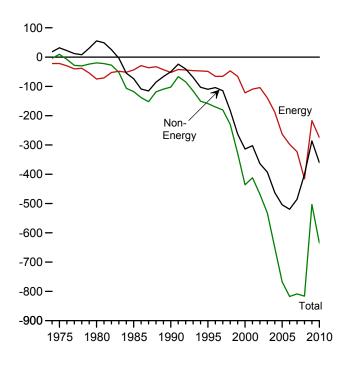
Imports and Exports, Monthly

250 **-**

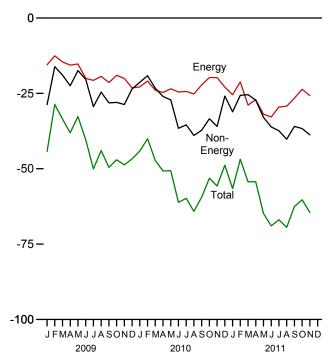
2005 2010



Trade Balance, 1974-2010



### Trade Balance, Monthly



<sup>&</sup>lt;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 Dollarsa)

		Petroleum	b		Energy <sup>c</sup>		Non-	т	otal Merchandis	se
	Exports	Imports	Balance	Exports	Imports	Balance	Energy 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	-32,426 -48,751	-110,050	584,742	743,543	-158,801
1996 Total	7,984	72,022	-64,038	12,181	78,086	-65,905	-104,309	625,075	795,289	-170,214
1997 Total	8,592	71,152	-62,560	12,682	78,277	-65,595	-114,927	689,182	869,704	-180,522
1998 Total	6,574	50,264	-43,690	10,251	57,323	-47,072	-182,686	682,138	911,896	-229,758
1999 Total	7,118	67,173	-60,055	9,880	75,803	-65,923	-262,898	695,797	1,024,618	-328,821
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 January	3,029	16,924	-13,895	4,037	19,559	-15,522	-28,742	78,151	122,415	-44,264
February	2,549	14,006	-11,457	3,589	16,120	-12,531	-16,132	80,349	109,012	-28,663
March	2,878	16,658	-13,780	3,835	18,398	-14,563	-18,948	87,848	121,359	-33,511
April	2,988	17,884	-14,896	3,664	19,275	-15,611	-22,462	80,822	118,896	-38,073
May	3,596	18,179	-14,583	4,227	19,484	-15,257	-17,433	83,651	116,341	-32,690
June	3,625	23,119	-19,494	4,459	24,467	-20,008	-20,336	86,830	127,173	-40,344
July	4,390	24,295	-19,905	5,077	25,754	-20,677	-29.384	85,635	135,696	-50,061
August	4,234	23,026	-18,792	4,947	24,312	-19,365	-24,591	87,315	131,272	-43,956
	4,234	25,259	-20,930	5,152	26,546	-21,394	-28,152	91,458	141,004	-49,546
September				,						
October	4,359	22,826	-18,467	5,230	24,255	-19,025	-27,996	100,005	147,027	-47,021
November	4,140	23,393	-19,253	4,994	25,047	-20,053	-28,665	94,607	143,324	-48,718
December Total	4,391 <b>44,509</b>	26,264 <b>251,833</b>	-21,873 <b>-207,324</b>	5,326 <b>54,536</b>	28,521 <b>271,739</b>	-23,195 <b>-217,203</b>	-23,539 <b>-286,379</b>	99,372 <b>1,056,043</b>	146,106 <b>1,559,625</b>	-46,734 <b>-503,582</b>
<b>2010</b> January	4.083	25,234	-21,151	5,236	28,075	-22,839	-21,285	92,601	136,725	-44,124
Echruany	4,003	23,666	-19,663	5,115	26,018	-20,903	-19,141	93,854	133,898	-40,044
February										
March	5,348	28,549	-23,201	6,667	30,613	-23,946	-23,271	110,511	157,728	-47,217
April	5,680	30,016	-24,336	6,970	31,657	-24,687	-26,034	102,443	153,163	-50,721
May	5,484	28,733	-23,249	6,887	30,369	-23,482	-27,165	105,477	156,124	-50,647
June	4,798	29,011	-24,213	6,170	30,698	-24,528	-36,592	107,202	168,321	-61,120
July	5,505	29,218	-23,713	6,760	31,113	-24,353	-35,451	104,057	163,861	-59,804
August	5,346	30,130	-24,784	6,744	31,907	-25,163	-38,957	106,846	170,966	-64,120
September	5,482	27,479	-21,997	6,802	28,992	-22,190	-37,244	107,644	167,078	-59,434
October	6,084	25,556	-19,472	7,318	27,056	-19,738	-33,397	117,104	170,239	-53,135
November	6,272	25,982	-19,710	7,610	27,363	-19,753	-35,966	113,046	168,765	-55,719
December	6,694	29,892	-23,198	8,182	31,107	-22,925	-25,888	117,480	166,293	-48,813
Total	64,778	333,465	-268,687	80,460	354,968	-274,508	-360,389	1,278,263	1,913,160	-634,897
<b>2011</b> January	7,330	32,982	-25,652	9,153	34,630	-25,477	-31,114	110,155	166,745	-56,591
February	6,682	27,856	-21,174	8,404	29,597	-21,193	-25,654	109,640	156,487	-46,847
March	7,717	37,076	-29,359	9,803	38,682	-28,879	-25,424	131,315	185,618	-54,303
April	8,934	36,347	-27,413	10,908	37,982	-27,074	-27,246	123,901	178,221	-54,320
May	8,680	40,797	-32,117	10,670	42,582	-31,912	-32,940	124,000	188,852	-64,852
June	7.974	41.151	-33,177	10.015	42.824	-32,809	-36.132	122,913	191.854	-68.941
July	9,097	38,626	-29,529	10,873	40,368	-29,495	-37,418	120,376	187,289	-66,913
August	9,766	39,142	-29,376	11,760	41,012	-29,252	-40,187	126,765	196,204	-69,439
September	9,250	36,252	-27,002	11,165	37,754	-26,589	-35,935	127,219	189,744	-62,524
October	9,630	33,631	-24,001	11,470	35,097	-23,627	R -36,667	R 131,323	R 191,616	R -60,294
November	9,630	35,847	-24,001 -26,409	11,470	37,018	-23,627 -25,721	-38,763	126,500	190,985	-64,484
11-Month Total	9,436 <b>94,498</b>	399,707	-26,409 - <b>305,209</b>	115,519	417,548	-25,721 -302,028	-367,480	1,354,107	<b>2,023,616</b>	-64,464 - <b>669,509</b>
2010 11-Month Total	58.085	303,574	-245,489	72,278	323,861	-251,582	-334,503	1,160,783	1,746,867	-586.084

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

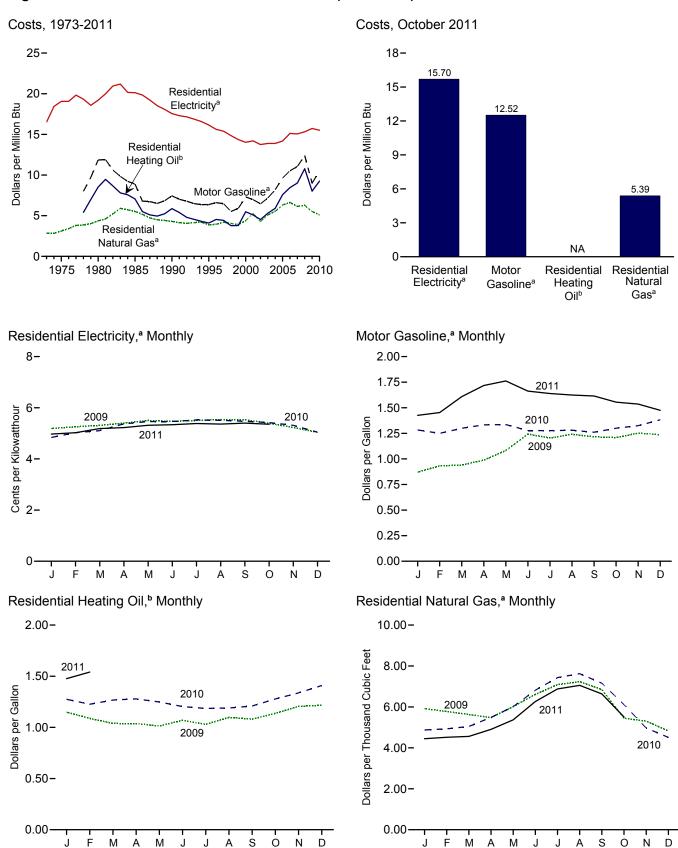
Web Page: See http://www.eia.gov/totalenergy/data/monthly/#summary for all available data beginning in 1974.
Sources: See end of section.

 <sup>&</sup>lt;sup>a</sup> Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.
 <sup>b</sup> Crude oil, petroleum preparations, liquefied propane and butane, and other mineral fuels.
 <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

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



Web Page: http://www.eia.gov/totalenergy/data/monthly/#summary.
Source: Table 1.6.

<sup>a</sup> Includes taxes.

<sup>b</sup> Excludes taxes.

Note: See "Real Dollars" in Glossary.

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

	Consumer Price Index, All Urban Consumers <sup>a</sup>	Motor G	Basoline <sup>b</sup>		dential ng Oil <sup>©</sup>		lential al Gas <sup>b</sup>	Resid Electi	ential ricity <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	Dollars per Million Btu
1973 Average	44.4	NA	NA	NA	NA	2.91	2.85	5.6	16.50
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	152.4 156.9	0.791 0.821	6.37 6.61	0.569 0.630	4.10 4.54	3.98 4.04	3.87 3.94	5.51 5.33	16.15 15.62
1996 Average 1997 Average	160.5	0.804	6.48	0.630	4.42	4.04 4.32	3.94 4.21	5.35 5.25	15.62
1998 Average	163.0	0.684	5.51	0.523	3.77	4.18	4.05	5.07	14.85
1999 Average	166.6	0.733	5.91	0.526	3.79	4.02	3.91	4.90	14.36
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	R 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	<sup>R</sup> 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
<b>2009</b> January	211.143	0.871	7.01	1.149	8.28	5.92	5.77	5.19	15.20
February	212.193	0.933	7.51	1.088	7.85	5.78	5.64	5.25	15.40
March	212.709	0.940	7.57	1.039	7.49	5.63	5.49	5.31	15.57
April	213.240	0.988	7.95	1.037	7.48	5.48	5.34	5.40	15.82
May	213.856	1.082	8.71	1.013	7.31	6.01	5.87 6.45	5.50	16.13
June	215.693 215.351	1.243 1.205	10.00 9.70	1.070 1.030	7.71 7.43	6.61 7.09	6.45	5.47 5.50	16.03 16.13
July August	215.834	1.205	9.70	1.030	7.43 7.91	7.09 7.23	7.06	5.50 5.54	16.13
September	215.969	1.240	9.79	1.096	7.79	6.85	6.69	5.53	16.22
October	216.177	1.209	9.73	1.137	8.20	5.45	5.32	5.39	15.81
November	216.330	1.252	10.08	1.206	8.69	5.31	5.18	5.22	15.31
December	215.949	1.237	9.96	1.217	8.77	R 4.83	R 4.71	5.04	14.78
Average	214.537	1.119	9.01	1.112	8.02	5.66	5.52	5.37	15.72
2010 January	216.687	1.282	10.32	1.275	9.19	R 4.87	R 4.76	4.84	14.19
February	216.741	1.250	10.06	1.226	8.84	R 4.93	R 4.82	5.02	14.73
March	217.631	1.300	10.46	1.267	9.13	<sup>R</sup> 5.05	R 4.93	5.10	14.96
April	218.009	1.333	10.73	1.278	9.22	<sup>R</sup> 5.49	<sup>R</sup> 5.37	5.37	15.74
May	218.178	1.336	10.75	1.248	9.00	<sup>R</sup> 6.01	<sup>R</sup> 5.88	5.46	16.00
June	217.965	1.277	10.28	1.203	8.68	R 6.82	R 6.66	5.46	16.01
July	218.011	1.277	10.27	1.185	8.55	<sup>R</sup> 7.44 <sup>R</sup> 7.63	<sup>R</sup> 7.27 <sup>R</sup> 7.46	5.52	16.19
August	218.312 218.439	1.280 1.261	10.31 10.15	1.190 1.209	8.58 8.72	<sup>R</sup> 7.63	<sup>R</sup> 7.46	5.51 5.47	16.15 16.03
September	218.439	1.300	10.15	1.209	8.72 9.21	R 6.11	<sup>R</sup> 5.98	5.47 5.42	15.89
October November	218.803	1.300	10.46	1.337	9.21	R 4.97	R 4.86	5.42	15.69
December	219.179	1.383	11.13	1.409	10.16	4.51	R 4.41	5.05	14.79
Average	218.056	1.301	10.47	1.283	9.25	R 5.22	R 5.11	5.29	15.51
<b>2011</b> January	220.223	1.425	11.47	1.476	10.64	4.45	R 4.35	4.97	14.57
February	221.309	1.453	11.69	1.540	11.11	4.52	R 4.42	5.02	14.73
March	223.467	1.608	12.95	NA	NA	<sup>R</sup> 4.56	4.46	5.19	15.20
April	224.906	1.718	13.83	NA	NA	<sup>R</sup> 4.90	R 4.79	5.22	15.31
May	225.964	1.762	14.18	NA	NA	5.37	<sup>R</sup> 5.25	5.32	15.58
June	225.722	1.663	13.38	NA	NA	<sup>R</sup> 6.26	<sup>R</sup> 6.12	5.34	15.65
July	225.922	1.639	13.19	NA	NA	<sup>R</sup> 6.88	R 6.72	5.38	15.77
August	226.545	1.624	13.07	NA	NA	R 7.05	R 6.90	5.36	15.72
September	226.889	1.615	13.00	NA	NA	R 6.64	R 6.49	5.40	15.82
October	226.421	1.555	12.52	NA	NA	R 5.51	R 5.39	<sup>R</sup> 5.36	R 15.70
November	226.230	1.536	12.36	NA	NA	NA	NA	NA	NA
December	225.672	1.475	11.87	NA	NA	NA	NA	NA	NA
Average	224.939	1.590	12.80	NA	NA	NA	NA	NA	NA

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

R=Revised. NA=Not available.

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

Columbia.

Web Page: See http://www.eia.gov/totalenergy/data/monthly/#summary for all

available data beginning in 1973.

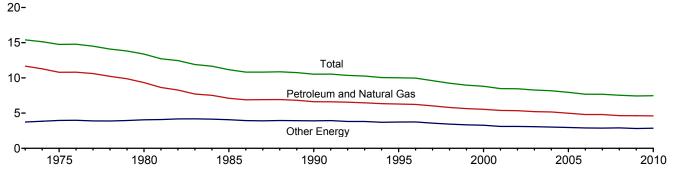
Sources: • Fuel Prices: Tables 9.4 (All Types), 9.8c, 9.9, and 9.11, adjusted by the CPI. • Consumer Price Index, All Urban Consumers: U.S. Department of Labor, Bureau of Labor Statistics, series ID CUUR0000SA0.

• Conversion Factors: Tables A1, A3, A4, and A6.

b Includes taxes.

c Excludes taxes.

Figure 1.7 Primary Energy Consumption per Real Dollar of Gross Domestic Product, 1973-2010 (Thousand Btu per Chained (2005) 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

	Ene	rgy Consumptio	n	Gross  Domestic	Energy Consumption per Real Dollar of GDP				
	Petroleum and Natural Gas	Other Energy <sup>a</sup>	Total	Product (GDP)	Petroleum and Natural Gas	Other Energy <sup>a</sup>	Total		
	(	Quadrillion Btu		Billion Chained (2005) Dollars	Thousand Btu	per Chained (200	5) Dollar		
73 Year	57.350	18.334	75.684	4,912.8	11.67	3.73	15.41		
974 Year	55.186	18.776	73.962	4,885.7	11.30	3.84	15.14		
75 Year	52.680	19.284	71.965	4,875.4	10.81	3.96	14.76		
76 Year	55.523	20.452	75.975	5,136.9	10.81	3.98	14.79		
77 Year	57.054	20.907	73.973 77.961	5,373.1	10.62	3.89	14.73		
78 Year	57.963	21.987	79.950	5,672.8	10.22	3.88	14.09		
		23.070							
79 Year	57.788		80.859	5,850.1	9.88	3.94	13.82		
80 Year	54.440	23.627	78.067	5,834.0	9.33	4.05	13.38		
81 Year	51.680	24.426	76.106	5,982.1	8.64	4.08	12.72		
82 Year	48.588	24.511	73.099	5,865.9	8.28	4.18	12.46		
83 Year	47.273	25.698	72.971	6,130.9	7.71	4.19	11.90		
84 Year	49.447	27.185	76.632	6,571.5	7.52	4.14	11.66		
85 Year	48.628	27.764	76.392	6,843.4	7.11	4.06	11.16		
86 Year	48.790	27.857	76.647	7,080.5	6.89	3.93	10.83		
87 Year	50.504	28.551	79.054	7,307.0	6.91	3.91	10.82		
88 Year	52.671	30.038	82.709	7,607.4	6.92	3.95	10.87		
89 Year	53.811	30.975	84.786	7,879.2	6.83	3.93	10.76		
90 Year	53.155	31.330	84.485	8,027.1	6.62	3.90	10.52		
91 Year	52.879	31.559	84.438	8,008.3	6.60	3.94	10.54		
92 Year	54.239	31.544	85.783	8,280.0	6.55	3.81	10.36		
93 Year	54.973	32.450	87.424	8,516.2	6.46	3.81	10.27		
94 Year	56.289	32.803	89.091	8,863.1	6.35	3.70	10.05		
95 Year	57.110	33.920	91.029	9,086.0	6.29	3.73	10.02		
96 Year	58.760	35.262	94.022	9,425.8	6.23	3.74	9.97		
97 Year	59.382	35.221	94.602	9,845.9	6.03	3.58	9.61		
98 Year	59.646	35.372	95.018	10,274.7	5.81	3.44	9.25		
99 Year	60.747	35.905	96.652	10.770.7	5.64	3.33	8.97		
00 Year	62.086	36.729	98.814	11,216.4	5.54	3.27	8.81		
01 Year	60.958	35.210	96.168	11,337.5	5.38	3.11	8.48		
02 Year	R 61.734	35.911	R 97.645	11,543.1	5.35	3.11	8.46		
03 Year	61.642	36.336	97.978	11,836.4	5.21	3.07	8.28		
04 Year	R 63.215	36.947	R 100.162	12,246.9	5.16	3.02	8.18		
05 Year	R 62.953	37.328	R 100.102	12,623.0	4.99	2.96	7.94		
06 Year	R 62.194	37.445	R 99.639	12,958.5	4.80	2.89	7.69		
07 Year	R 63.437	37.887	R 101.324	13,206.4	R 4.80	2.87	R 7.67		
07 Tear	R 61.123	38.155	R 99.278	13,200.4	4.64	2.90	7.54		
09 Year	R 58.819	35.728	R 94.547	12,703.1	R <b>4.63</b>	2.81	7.34		
09 Year 10 Year	R 60.266	35.728 37.463	R 94.547	12,703.1	R 4.60	2.81	7.44 R <b>7.4</b> 7		

 $<sup>^{\</sup>rm a}$  Coal, coal coke net imports, nuclear electric power, renewable energy, and electricity net imports.

R=Revised.

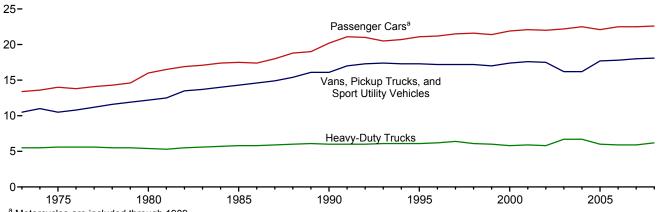
Columbia.

Web Page: http://www.eia.gov/totalenergy/data/monthly/#summary.
Sources: • Energy Consumption: Table 1.3. • Gross Domestic
Product: U.S. Department of Commerce, Bureau of Economic Analysis,
National Income and Product Accounts (December 22, 2011), Table 1.1.6.

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

Figure 1.8 Motor Vehicle Fuel Economy, 1973-2008 (Miles per Gallon)



<sup>&</sup>lt;sup>a</sup> Motorcycles are included through 1989.

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

		Passenger Cars	a		ns, Pickup Truc Sport Utility Veh		Н	eavy-Duty Truck	(S <sup>C</sup>	A	II Motor Vehicle	<b>s</b> d
	Mileage	Fuel	Fuel	Mileage	Fuel	Fuel	Mileage	Fuel	Fuel	Mileage	Fuel	Fuel
	(miles	Consumption	Economy	(miles	Consumption	Economy	(miles	Consumption	Economy	(miles	Consumption	Economy
	per	(gallons	(miles per	per	(gallons	(miles per	per	(gallons	(miles per	per	(gallons	(miles per
	vehicle)	per vehicle)	gallon)	vehicle)	per vehicle)	gallon)	vehicle)	per vehicle)	gallon)	vehicle)	per vehicle)	gallon)
1973	9,884	737	13.4	9,779	931	10.5	15,370	2,775	5.5	10,099	850	11.9
1974	9,221	677	13.6	9,452	862	11.0	14,995	2,708	5.5	9,493	788	12.0
1975	9,309	665	14.0	9,829	934	10.5	15,167	2,722	5.6	9,627	790	12.2
1976	9,418	681	13.8	10,127	934	10.8	15,438	2,764	5.6	9,774	806	12.1
1977	9,517	676	14.1	10,607	947	11.2	16,700	3,002	5.6	9,978	814	12.3
1978	9,500	665	14.3	10,968	948	11.6	18,045	3,263	5.5	10,077	816	12.4
1979	9,062	620	14.6	10,802	905	11.9	18,502	3,380	5.5	9,722	776	12.5
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	a10,157	<sup>a</sup> 533	<sup>a</sup> 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	12,304	547	22.5	10,962	609	18.0	25,152	4,275	5.9	11,920	693	17.2
2008 <sup>P</sup>	11,788	522	22.6	10,951	605	18.1	25,254	4,075	6.2	11,619	667	17.4

a Through 1989, includes motorcycles.

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

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

Sources: • Passenger Cars, 1990-1994: U.S. Department of Transportation, Bureau of Transportation Statistics, National Transportation Statistics 1998, Table 4-13. • All Other Data: • 1973-1994—Federal Highway Administration (FHWA), Highway Statistics Summary to 1995, Table VM-201A. • 1995 forward—FHWA, Highway Statistics, annual reports, Table VM-1.

b Includes a small number of trucks with 2 axles and 4 tires, such as step vans.

c Single-unit trucks with 2 axles and 6 or more tires, and combination trucks.

d Includes buses and motorcycles, which are not shown separately.

Table 1.9 Heating Degree-Days by Census Division

			December					Cumulative hrough Dec		
				Percent	Change				Percent	Change
Census Divisions	Normala	2010	2011	Normal to 2011	2010 to 2011	Normala	2010	2011	Normal to 2011	2010 to 2011
New England Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	1,078	1,129	895	-17	-21	2,462	2,399	1,976	-20	-18
Middle Atlantic New Jersey, New York, Pennsylvania	998	1,109	830	-17	-25	2,191	2,145	1,782	-19	-17
East North Central Illinois, Indiana, Michigan, Ohio, Wisconsin	1,135	1,285	938	-17	-27	2,472	2,488	2,125	-14	-15
West North Central lowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota	1,248	1,311	1,057	-15	-19	2,695	2,587	2,355	-13	-9
South Atlantic Delaware, Florida, Georgia, Maryland and the District of Columbia, North Carolina, South Carolina, Virginia, West Virginia	555	776	436	-21	-44	1,083	1,250	918	-15	-27
East South Central Alabama, Kentucky, Mississippi, Tennessee	715	910	604	-16	-34	1,410	1,506	1,274	-10	-15
West South Central Arkansas, Louisiana, Oklahoma, Texas	520	503	497	-4	-1	905	838	849	-6	1
Mountain Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming	928	797	964	4	21	2,147	1,832	1,995	-7	9
Pacific <sup>b</sup> California, Oregon, Washington	563	509	585	4	15	1,253	1,199	1,222	-2	2
U.S. Average <sup>b</sup>	817	897	713	-13	-21	1,739	1,725	1,518	-13	-12

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

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.  $\bullet$  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.

b Excludes Alaska and Hawaii.

Table 1.10 Cooling Degree-Days by Census Division

			December				ecember			
				Percent	Change				Percent	Change
Census Divisions	Normal <sup>a</sup>	2010	2011	Normal to 2011	2010 to 2011	Normala	2010	2011	Normal to 2011	2010 to 2011
New England Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	0	0	0	NM	NM	417	710	607	46	-15
Middle Atlantic New Jersey, New York, Pennsylvania	0	0	0	NM	NM	656	988	886	35	-10
East North Central Illinois, Indiana, Michigan, Ohio, Wisconsin	0	0	0	NM	NM	709	978	897	27	-8
West North Central lowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota	0	0	0	NM	NM	927	1,090	1,118	21	3
South Atlantic Delaware, Florida, Georgia, Maryland and the District of Columbia, North Carolina, South Carolina, Virginia, West Virginia	33	4	40	NM	NM	1,964	2,315	2.332	19	1
East South Central Alabama, Kentucky, Mississippi, Tennessee	33	0	0	NM	NM	1,547	2,006	1,818	18	-9
West South Central Arkansas, Louisiana, Oklahoma, Texas	10	9	6	NM	NM	2,449	2,757	3,172	30	15
Mountain Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming	0	0	0	NM	NM	1,243	1,340	1,386	12	3
Pacific <sup>b</sup> California, Oregon, Washington	1	0	0	NM	NM	704	678	717	2	6
U.S. Average <sup>b</sup>	7	2	8	NM	NM	1,216	1,461	1,478	22	1

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

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

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

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

for current data.  $\bullet$  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.

b Excludes Alaska and Hawaii.

### **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 prior to 1981, 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," FT410, December issues. 1988 and 1989: "Report on U.S. Merchandise Trade," Final Revisions.

1990-1992: "U.S. Merchandise Trade," Final Report. 1993-2007: "U.S. International Trade in Goods and Services," Annual Revision. 2008 forward: "U.S. International Trade in Goods and Services," FT-900, monthly.

#### **Petroleum Imports**

1974-1987: "U.S. Merchandise Trade," FT900, December issues, 1975-1988.

1988 and 1989: "Report on U.S. Merchandise Trade," Final Revisions.

1990-1993: "U.S. Merchandise Trade," Final Report.

1994-2007: "U.S. International Trade in Goods and Services," Annual Revision.

2008 forward: "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.

1993-2007: "U.S. International Trade in Goods and Services," Annual Revision.

2008 forward: "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.

1992-2007: "U.S. International Trade in Goods and Services," Annual Revision.

2008 forward: "U.S. International Trade in Goods and Services," FT-900, monthly.

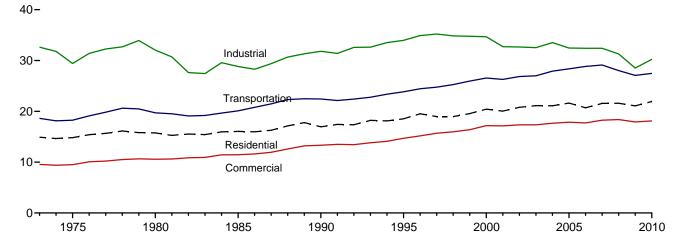
### **Energy Consumption by Sector**



Office buildings, industries, residences, and transport systems, Baltimore, Maryland; east view from the inner harbor. Source: U.S. Department of Energy.

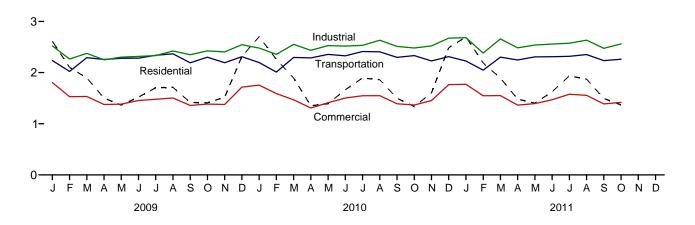
Figure 2.1 Energy Consumption by Sector (Quadrillion Btu)

Total Consumption by End-Use Sector, 1973-2010

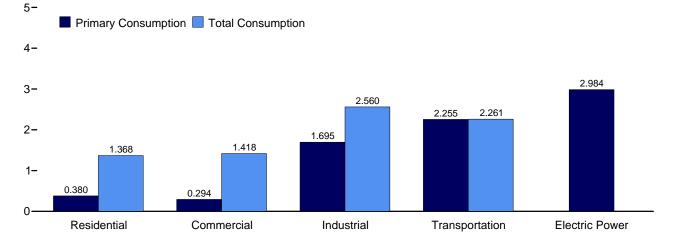


Total Consumption by End-Use Sector, Monthly

4-







Note: Because vertical scales differ, graphs should not be compared.

Web Page: http://www.eia.doe.gov/emeu/mer/consump.html.

Source: Table 2.1.

**Energy Consumption by Sector** Table 2.1

(Trillion Btu)

				End-Use	Sectors				Electric		
	Resid	ential	Comm	ercial <sup>a</sup>	Indus	strial <sup>b</sup>	Transpo	ortation	Power Sector <sup>c,d</sup>		
	Primarye	Total <sup>f</sup>	Primarye	Total <sup>f</sup>	Primarye	Total <sup>f</sup>	Primarye	Total <sup>f</sup>	Primarye	Balancing Item <sup>g</sup>	Primary Total <sup>h</sup>
1973 Total	8,225	14,897	4,423	9,543	24,720	32,623	18,577	18,613	19,731	7	75,684
1975 Total	7,990	14,813	4,059	9,492	21,434	29,413	18,210	18,245	20,270	1	71,965
1980 Total	7,439	15,753	4,105	10,578	22,595	32,039	19,659	19,697	24,269	-1	78,067
1985 Total	7,148	16,041	3,732	11,451	19,443	28,816	20,041	20,088	26,032	-4	76,392
1990 Total	6,557	16,945	3,896	13,320	21,180	31,810	22,366	22,420	30,495	-9	84,485
1995 Total	6,936	18,519	4,101	14,690	22,719	33,971	23,791	23,846	33,479	3	91,029
1996 Total	7,466	19,504	4,273	15,172	23,410	34,904	24,383	24,437	34,485	4	94,022
1997 Total	7,033	18,965	4,295	15,681	23,686	35,200	24,695	24,750	34,886	6	94,602
1998 Total 1999 Total	6,413 6,775	18,955 19,557	4,005 4,053	15,968 16,376	23,177 22,950	34,843 34,764	25,201 25,891	25,256 25,949	36,225 36,976	-3 6	95,018 96,652
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	17,173	21,794	32,720	26,213	26,275	37,215	-6	96,168
2002 Total	R 6,912	R 20,791	R 4,132	R 17,345	R 21,799	R 32,662	R 26,781	R 26,842	38,016	š	R 97,645
2003 Total	7,211	21,110	4,283	17,343	21,503	32,532	26,920	26,994	38,062	-1	97,978
2004 Total	6,993	21,093	4,232	17,659	R 22,412	R 33,520	27,817	27,895	38,713	-6	R 100,162
2005 Total	6,909	21,626	4,051	17,856	R 21,411	<sup>R</sup> <b>32,446</b>	28,272	28,353	39,638	(s)	<sup>R</sup> _100,281
2006 Total	_ 6,178	20,698	3,746	្ត 17,710	<sup>R</sup> 21,536	R 32,401	28,751	28,830	39,428	(s)	R 99,639
2007 Total	<sup>R</sup> 6,618	R 21,551	R 3,922	R 18,255	R 21,378	R 32,402	R 29,029	R 29,117	40,377	<b>₽</b> -1	R 101,324
2008 Total	6,817	21,596	4,073	18,381	<sup>R</sup> 20,484	R 31,293	27,925	28,008	39,978	(s)	<sup>R</sup> 99,278
2009 January	1,151 <sup>R</sup> 933	2,610 2,101	631 523	1,805 1,528	1,717 1,545	R 2,522 2,266	<sup>R</sup> 2,227 <sup>R</sup> 2,016	R 2,236 R 2,023	3,446 2,901	1 -3	<sup>R</sup> 9,174 <sup>R</sup> 7,915
March	774	1,896	R 452	R 1,533	1,598	2,376	R 2,284	R 2,291	2,988	-3 -4	R 8.093
April	538	1,500	325	1,377	1,475	2,250	R 2,250	R 2,257	2,795	-1	R 7,383
May	330	1,364	228	1,383	1,476	2,302	R 2,273	R 2,280	3,022	(s)	R 7,329
June	261	1,521	192	1,456	1,488	2,317	R 2,276	R 2,283	3,359	`ź	R 7,578
July	247	1,704	191	1,478	1,507	2,333	R 2,332	R 2,339	3,578	3	R 7,858
August	245	1,711	194	R 1,503	1,551	R 2,422	R 2,359	R 2,366	3,653	3	R 8,006
September	255	1,416	200	1,357	1,544	2,349	R 2,185	R 2,191	3,130	(s)	R 7,313
October	397	1,409	268	1,385	1,607	R 2,424	R 2,295	R 2,302	2,952	-2	R 7,518
November	<sup>R</sup> 529 962	1,519 2,315	324 534	1,377 1,717	1,594 1,699	2,405 R 2,544	R 2,188 R 2,302	<sup>R</sup> 2,194 <sup>R</sup> 2,310	2,860 3,389	-1 1	<sup>R</sup> 7,493 <sup>R</sup> 8.887
December Total	6,619	R <b>21,064</b>	4,061	17,899	18,801	28,513	R <b>26,988</b>	R <b>27,070</b>	38,077	(s)	R <b>94,547</b>
2010 January	<sup>R</sup> 1,153	R 2,701	<sup>R</sup> 621	<sup>R</sup> 1,756	R 1,686	R 2,479	R 2,189	R 2,196	3,483	R 4	<sup>R</sup> 9,136
February	R 994	R 2,259	<sup>R</sup> 552	R 1,589	<sup>R</sup> 1,594	R 2,358	R 2,003	R 2,010	R 3,073	_ <sup>R</sup> 1	<sup>R</sup> 8,216
March	R 744	<sup>R</sup> 1,893	R 421	R 1,467	<sup>R</sup> 1,747	R 2,552	R 2,290	R 2,297	3,007	R -2	R 8,208
April	R 444	R 1,352	R 279	R 1,308	R 1,625	R 2,436	R 2,281	R 2,287	2,754	-4	R 7,380
May	R 333	R 1,390	R 228	R 1,411	R 1,613	R 2,528	R 2,349	R 2,356	3,163	R -1	R 7,685
June	<sup>R</sup> 273 <sup>R</sup> 245	<sup>R</sup> 1,664 <sup>R</sup> 1,894	<sup>R</sup> 200 <sup>R</sup> 184	<sup>R</sup> 1,503 <sup>R</sup> 1,547	<sup>R</sup> 1,609 <sup>R</sup> 1,619	<sup>R</sup> 2,519 <sup>R</sup> 2,533	<sup>R</sup> 2,320 <sup>R</sup> 2,405	R 2,327	3,610	R 2 R 4	<sup>R</sup> 8,015 <sup>R</sup> 8,389
July	R 237	R 1,860	R 188	R 1,547	R 1,707	R 2,633	R 2,399	<sup>R</sup> 2,412 <sup>R</sup> 2,406	3,933	3	R 8,450
August September	R 242	R 1,498	R 190	R 1,392	R 1,707	R 2,512	R 2,292	R 2,298	3,916 3,305	R -1	R 7,699
October	R 349	R 1,337	R 258	R 1,366	R 1,643	R 2,481	R 2,326	R 2,333	2,941	-3	<sup>R</sup> 7,514
November	R 606	R 1,604	R 366	R 1,453	R 1,669	R 2,521	R 2,221	R 2,227	2,943	R -3	R 7,802
December	R 1,065	R 2,486	<sup>R</sup> 583	R 1,764	R 1,796	R 2,673	R 2,305	R 2,312	3.487	<sup>R</sup> 1	R 9,236
Total	<sup>R</sup> 6,683	R 21,937	R 4,069	R 18,104	R 19,981	R <b>30,225</b>	R <b>27,380</b>	R 27,462	R 39,616	<sup>R</sup> (s)	R 97,729
<b>2011</b> January	R 1,171	R 2,698	R 634	R 1,772	R 1,850	R 2,683	R 2,219	R 2,227	3,505	R 2	9,381
February	R 954	R 2,188	R 531	R 1,547	R 1,614	R 2,382	R 2,041	R 2,047	3,024	R -2	R 8,163
March	R 773	R 1,892	R 448	R 1,550	R 1,799	R 2,659	R 2,295	R 2,302	3,088	R -3	R 8,400
April	R 478 R 328	<sup>R</sup> 1,482 <sup>R</sup> 1,401	297 R 221	<sup>R</sup> 1,365 <sup>R</sup> 1,394	<sup>R</sup> 1,641 <sup>R</sup> 1,652	R 2,485 R 2,539	<sup>R</sup> 2,240 <sup>R</sup> 2,301	R 2,246 R 2,308	2,921 3 130	-3 R -2	7,574 R 7,639
May June	R 259	R 1,628	193	1,469	R 1,658	R 2,559	R 2,301	R 2,311	3,139 3,551		R 7,965
July	238	1,934	R 184	R 1,577	R 1,634	R 2,575	R 2,311	R 2,311	4,036	(s) <sup>R</sup> 5	R 8,408
August	249	1,872	R 201	R 1,555	R 1,710	R 2,635	R 2,346	R 2,352	3,908	R 3	R 8,417
September	263	1,495	R 210	R 1,388	R 1,639	R 2,474	R 2,228	R 2,234	3,251	R -1	R 7,590
October	380	1,368	294	1,418	1,695	2,560	2,255	2,261	2,984	-6	7,602
10-Month Total	5,093	17,957	3,215	15,033	16,891	25,550	22,539	22,607	33,408	-8	81,139
2010 10-Month Total	5,014	17,848	3,120	14,887	16,516	25,031	22,854	22,922	33,185	2	80,691
2009 10-Month Total	5,130	17,232	3,204	14,806	15,508	23,561	22,498	22,567	31,826	(s)	78,167

 <sup>&</sup>lt;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>&</sup>lt;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

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

e See "Primary Energy Consumption" in Glossary.
f Total energy consumption in the end-use sectors consists of primary energy

consumption, electricity retail sales, and electrical system energy losses. See Note 2, "Electrical System Energy Losses," at end of section.

 $<sup>^{\</sup>rm g}$  A balancing item. The sum of primary consumption in the five energy-use sectors equals the sum of total consumption in the four end-use sectors. However, total energy consumption does not equal the sum of the sectoral components due to the use of sector-specific conversion factors for coal and natural gas.

h Primary energy consumption total. See Table 1.3.

<sup>&</sup>quot;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: • See Note, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7. • See Note 1, "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.

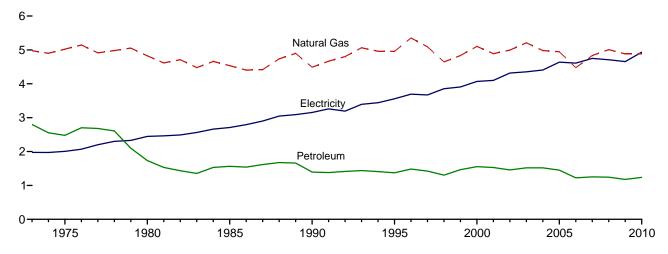
Web Page: See http://www.eia.gov/totalenergy/data/monthly/#consumption for all available data beginning in 1073

all available data beginning in 1973.

Sources: Tables 1.3 and 2.2-2.6.

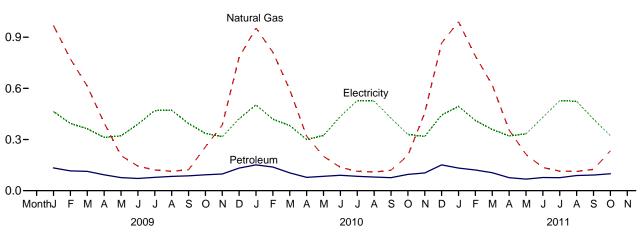
Figure 2.2 Residential Sector Energy Consumption (Quadrillion Btu)



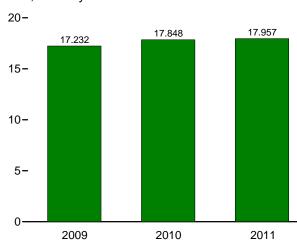


By Major Sources, Monthly

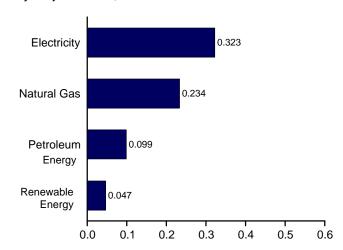




Total, January-October



By Major Source, October 2011



Note: Because vertical scales differ, graphs should not be compared. Web Page: http://www.eia.doe.gov/emeu/mer/consump.html.

Source: Table 2.2.

**Table 2.2 Residential Sector Energy Consumption** 

(Trillion Btu)

				Prima	ry Consum	otiona						
		Fossil	Fuels			Renewal	ole Energy <sup>b</sup>			Electricity	Electrical	
	Coal	Natural Gas <sup>c</sup>	Petro- leum	Total	Geo- thermal	Solar/ PV	Bio- mass	Total	Total Primary	Electricity Retail Sales <sup>d</sup>	System Energy Losses <sup>e</sup>	Total
1973 Total	94	4,977	2,800	7,871	NA	NA	354	354	8,225	1,976	4,696	14,897
	63	5,023	2,479	7,564	NA	NA	425	425	7,990	2,007	4,817	14,813
	31	4,825	1,734	6,589	NA	NA	850	850	7,439	2,448	5.866	15,753
1980 Total 1985 Total 1990 Total	39 31	4,534 4,491	1,565 1,394	6,138 5,916	NA NA 6	NA 56	1,010 580	1,010 641	7,439 7,148 6,557	2,709 3,153	6,184 7,235	16,041 16,945
1995 Total	17	4,954	1,374	6,345	7	64	520	591	6,936	3,557	8,026	18,519
1996 Total	17	5,354	1,484	6,854	7	65	540	612	7,466	3,694	8,344	19,504
1997 Total	16	5,093	1,422	6,531	8	64	430	502	7,033	3,671	8,261	18,965
1998 Total	12	4,646	1,304	5,962	8	64	380	452	6,413	3,856	8,686	18,955
1999 Total	14	4,835	1,465	6,314	9	63	390	461	6,775	3,906	8,875	19,557
2000 Total	11	5,105	1,554	6,670	9	60	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	<sup>R</sup> 4,995	1,457	<sup>R</sup> 6,464	10	57	380	448	<sup>R</sup> 6,912	4,317	9,562	R 20,791
2003 Total	12	5,209	1,519	6,741	13	57	400	470	7,211	4,353	9,546	21,110
2004 Total	11	4,981	1,520	6,513	14	57	410	481	6,993	4,408	9,691	21,093
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	390	472	6,178	4,611	9,909	20,698
2007 Total	8	R 4,835	1,254	R 6,097	22	70	430	522	R 6,618	4,750	10,182	R 21,551
2008 Total	8	5,010	1,243	6,261	26	80	450	556	6,817	4,708	10,071	21,596
2009 January	1	969 773	134 116	1,104 890	3 3	8 7	37 33	47 42	1,151 R 933	464 394	995 774	2,610 2,101
March	1	614	113	<sup>R</sup> 728	3	8	37	47	774	364	758	1,896
April		399	93	492	3	7	35	45	538	312	650	1,500
May	(s)	206	77	283	3	8	37	47	330	321	713	1,364
June	1	144	71	216	3	7	35	45	261	390	869	1,521
July	1	121	78	200	3	8	37	47	247	470	988	1,704
August	1	114	84	198	3	8	37	47	245	472	993	1,711
September	(s)	122	87	210	3	7	35	45	255	394	767	1,416
October	1	256	93	350	3	8	37	47	397	336	676	1.409
November	1	385	98	483	3	7	35	45	R 529	316	674	1,519
December	1	<sup>R</sup> 782	133	915	3	8	37	47	962	422	931	2,315
<b>Total</b>	8	<b>4,883</b>	<b>1,176</b>	<b>6,067</b>	<b>33</b>	<b>89</b>	<b>430</b>	<b>552</b>	<b>6,619</b>	<b>4,656</b>	<b>9,789</b>	R <b>21,064</b>
2010 January February	1	R 953 R 812	151 139	R 1,106 R 952	3	8 7	36 32	47 42	R 1,153 R 994	503 419	1,045 R 846	R 2,701 R 2,259
March	1	R 592	105	R 697	3 3 3	8	36	47	R 744	381	768	R 1,893
April	(s)	R 320	78	R 398		8	35	45	R 444	300	608	R 1,352
May	(s)	R 201	84	R 286		8	36	47	R 333	324	734	R 1,390
June July	1 (s)	R 137 R 114 R 109	90 84 80	R 228 R 198 R 190	3 3 3	8 8 8	35 36 36	45 47 47	R 273 R 245 R 237	435 528 526	956 1,121	R 1,664 R 1,894 R 1,860
August September October	(s)	R 120 R 206	76 96	<sup>R</sup> 196 <sup>R</sup> 302	3	8	35 36	45 47	R 242 R 349	425 330	1,097 831 658	R 1,498 R 1,337
November	1	<sup>R</sup> 456	104	<sup>R</sup> 561	3	8	35	45	R 606	318	680	R 1,604
December	1	<sup>R</sup> 865	151	<sup>R</sup> 1,018	3	8	36	47	R 1,065	444	978	R 2,486
<b>Total</b>	<b>7</b>	<sup>R</sup> <b>4,883</b>	<b>1,239</b>	<sup>R</sup> <b>6,129</b>	<b>37</b>	<b>97</b>	<b>420</b>	<b>554</b>	R <b>6,683</b>	<b>4,933</b>	<b>10,322</b>	R <b>21,937</b>
2011 January	1	<sup>R</sup> 991	132	R 1,124	3	8	36	47	R 1,171	494	1,033	R 2,698
February	1	<sup>R</sup> 790	121	R 912	3	7	32	42	R 954	412	822	R 2,188
March	1	R 620	105	<sup>R</sup> 726	3	8	36	47	R 773	358	760	R 1,892
April	(s)	R 355	76	<sup>R</sup> 432	3	8	35	45	R 478	321	683	R 1,482
May	1	R 213	68	<sup>R</sup> 281	3	8	36	47	R 328	334	740	R 1,401
June	(s)	R 136	77	R 213	3	8	35	45	R 259	430	939	R 1,628
July	(s)	115	76	191	3	8	36	47	238	528	1,168	1,934
August	(s)	113	89	202	3	8	36	47	249	524	1,099	1,872
September	(s)	125	92	R 217	3	8	35	45	263	419	813	1,495
October	1	234	99	333	3	8	36	47	380	323	665	1,368
10-Month Total	<b>6</b>	<b>3,690</b>	<b>937</b>	<b>4,632</b>	<b>31</b>	<b>81</b>	<b>350</b>	<b>461</b>	<b>5,093</b>	<b>4,144</b>	<b>8,720</b>	<b>17,957</b>
2010 10-Month Total	6	3,563	984	4,553	31	81	350	461	5,014	4,171	8,663	17,848
2009 10-Month Total	6	3,718	946	4,671	27	74	358	460	5,130	3,918	8,184	17,232

electricity retail sales. See Note 2, "Electrical System Energy Losses," at end of

section.

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

Notes: • See Note 1, "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.

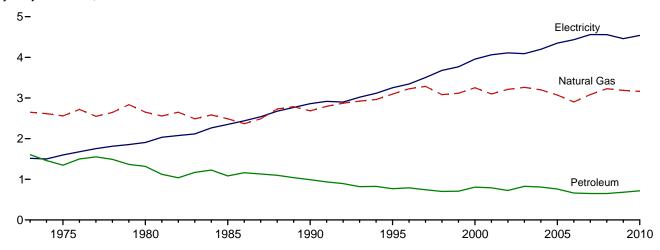
Web Page: See http://www.eia.gov/totalenergy/data/monthly/#consumption for all available data beginning in 1973.

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

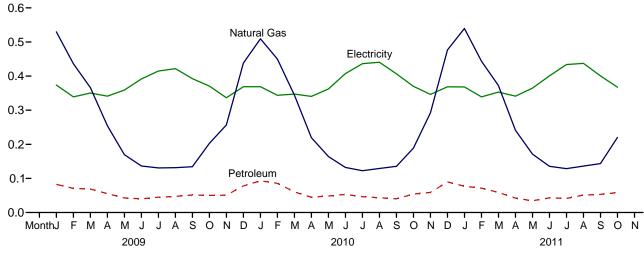
 <sup>&</sup>lt;sup>a</sup> See "Primary Energy Consumption" in Glossary.
 <sup>b</sup> Data are estimates. See Table 10.2a for notes on series components.
 <sup>c</sup> Natural gas only; excludes the estimated portion of supplemental gaseous fuels. See Note 3, "Supplemental Gaseous Fuels," at end of 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

Figure 2.3 Commercial Sector Energy Consumption (Quadrillion Btu)

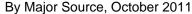




### By Major Sources, Monthly



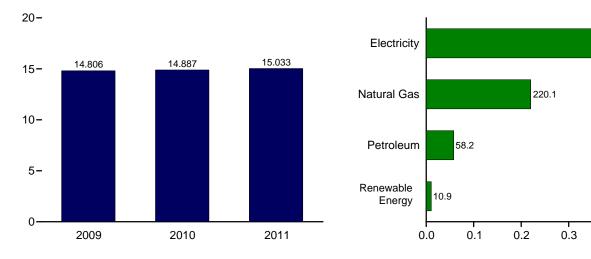
Total, January-October



367.3

0.4

0.5



Note: Because vertical scales differ, graphs should not be compared. Web Page: http://www.eia.doe.gov/emeu/mer/consump.html.

Source: Table 2.3.

**Table 2.3 Commercial Sector Energy Consumption** 

(Trillion Btu)

		<u> </u>			Primary (	Consump	tiona							
		Fossi	l Fuels			R	enewab	le Energy	<b>y</b> b					
	Coal	Natural Gas <sup>c</sup>	Petro- leum <sup>d</sup>	Total	Hydro- electric Power <sup>e</sup>	Geo- thermal	Solar/ PV	Wind	Bio- mass	Total	Total Primary	Elec- tricity Retail Sales <sup>f</sup>	Electrical System Energy Losses	Total
1973 Total 1975 Total 1980 Total 1985 Total 1990 Total 1990 Total 1997 Total 1997 Total 1998 Total 1998 Total 2000 Total 2001 Total 2002 Total 2003 Total 2004 Total 2005 Total 2006 Total 2007 Total 2007 Total 2007 Total	160 147 115 137 124 117 122 129 93 103 92 97 90 82 103 97 65 70 69	2,649 2,558 2,651 2,488 2,682 3,096 3,226 3,285 3,083 3,115 3,252 3,097 R 3,212 3,261 3,201 3,201 3,201 3,202 R 3,085 3,085 3,288	1,607 1,346 1,318 1,083 991 769 743 702 707 807 790 726 827 809 761 663 649 651	4,416 4,051 4,084 3,708 3,798 3,982 4,138 4,157 3,925 4,150 R 4,028 4,170 4,113 3,925 4,170 4,113 3,629 R 3,805 3,948	NA NA NA 1 1 1 1 1 (s) 1 1	NA NA NA 3 5 5 6 7 7 8 8 9 11 12 14 14 14	NA N	NA NA NA 	7 8 21 24 94 113 129 131 118 121 119 92 95 101 105 105 102 102	7 8 21 24 98 118 135 138 127 129 128 101 113 118 119 117 118	4,423 4,059 4,105 3,732 3,896 4,101 4,273 4,295 4,005 4,053 4,278 4,084 R 4,132 4,283 4,232 4,051 3,746 R 3,922 4,073	1,517 1,598 1,906 2,351 2,860 3,252 3,344 3,503 3,766 3,956 4,062 4,110 4,090 4,198 4,351 4,455 4,560 4,558	3,604 3,835 4,567 5,368 6,564 7,338 7,555 7,883 8,557 8,942 8,990 9,104 8,969 9,229 9,455 9,529 9,773 9,749	9,543 9,492 10,578 11,451 13,320 14,690 15,172 15,681 15,968 16,376 17,175 17,345 17,345 17,659 17,856 17,710 R 18,255 18,381
Pebruary	8 7 6 4 4 5 4 4 4 5 6 6 <b>6</b>	530 436 366 R 254 170 136 131 132 134 203 257 438 <b>3,187</b>	82 70 69 55 43 40 45 47 52 50 51 78 <b>682</b>	620 513 R 441 314 217 181 180 183 190 258 313 523 <b>3,932</b>	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	1 1 1 1 1 1 1 1 1 1	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	9 8 9 10 10 10 9 9 9 112	11 10 11 11 11 11 11 11 10 11 11 11	631 523 R 452 325 228 192 191 194 200 268 324 534 <b>4,061</b>	374 339 350 341 359 392 415 422 392 371 337 369 <b>4,460</b>	801 666 731 711 796 872 872 887 765 745 717 814	1,805 1,528 R 1,533 1,377 1,383 1,478 R 1,503 1,357 1,385 1,377 1,717 17,899
2010 January February March April May June July August September October November December Total	7 6 6 4 4 4 4 4 4 5 6 <b>5</b> 8	R 509 R 450 R 344 R 220 R 164 R 132 R 123 R 129 R 135 R 189 R 292 R 477	93 85 60 45 48 53 46 43 40 54 59 90 <b>718</b>	R 610 R 542 R 410 R 268 R 216 R 189 R 173 R 177 R 179 R 247 R 356 R 573 R 3,940	(S) (S) (S) (S) (S) (S) (S) (S) (S) (S)	2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	(S) (S) (S) (S) (S) (S) (S) (S) (S) (S)	9 8 9 9 10 9 9 9 9 9 9 9 9 9	11 10 11 11 12 11 11 11 11 11 10 11	R 621 R 552 R 421 R 279 R 228 R 200 R 184 R 188 R 190 R 258 R 366 R 583 R 4,069	369 344 347 340 362 407 436 441 406 370 346 369 <b>4,539</b>	766 693 699 689 821 895 927 920 795 738 741 812 <b>9,497</b>	R 1,756 R 1,589 R 1,467 R 1,308 R 1,411 R 1,503 R 1,547 R 1,548 R 1,392 R 1,366 R 1,453 R 1,764 R 18,104
Page 10 January February March April May June July August September October 10-Month Total	7 6 6 4 4 4 8 3 8 3 5 46	R 540 R 444 R 372 241 171 135 R 129 R 136 R 143 220 <b>2,531</b>	77 71 59 42 34 43 41 51 53 58 <b>531</b>	R 623 R 521 R 437 287 R 210 182 R 173 R 190 R 200 283 <b>3,108</b>	(S) (S) (S) (S) (S) (S) (S) (S) (S)	2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	R (S) R (S) (S) (S) (S) (S) (S) (S) (S) (S)	99999999999 <b>90</b>	11 10 11 10 11 11 11 11 11 11	R 634 R 531 R 448 297 R 221 193 R 184 R 201 R 210 294 <b>3,215</b>	368 339 353 341 365 401 434 437 401 367 <b>3,806</b>	769 677 749 726 808 875 958 916 777 757 <b>8,013</b>	R 1,772 R 1,547 R 1,550 R 1,365 R 1,394 1,469 R 1,577 R 1,555 R 1,388 1,418 <b>15,033</b>
2010 10-Month Total 2009 10-Month Total	48 51	2,395 2,492	569 554	3,012 3,097	1 1	15 14	(s) (s)	(s) (s)	92 93	108 107	3,120 3,204	3,824 3,755	7,944 7,847	14,887 14,806

electricity retail sales. See Note 2, "Electrical System Energy Losses," at end of

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

The commercial sector includes commercial combined-heat-andpower (CHP) and commercial electricity-only plants. See Note, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7. • See Note 1, "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 for

all available data beginning in 1973.
Sources: Tables 2.6, 3.8a, 4.3, 6.2, 7.6, 10.2a, A4, A5, and A6.

a See "Primary Energy Consumption" in Glossary.
 b Most data are estimates. 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.

are included in "Biomass."

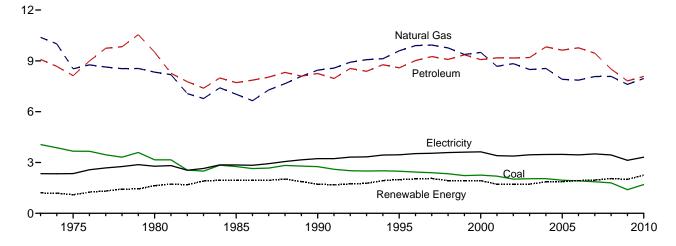
<sup>e</sup> Conventional hydroelectric power.

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

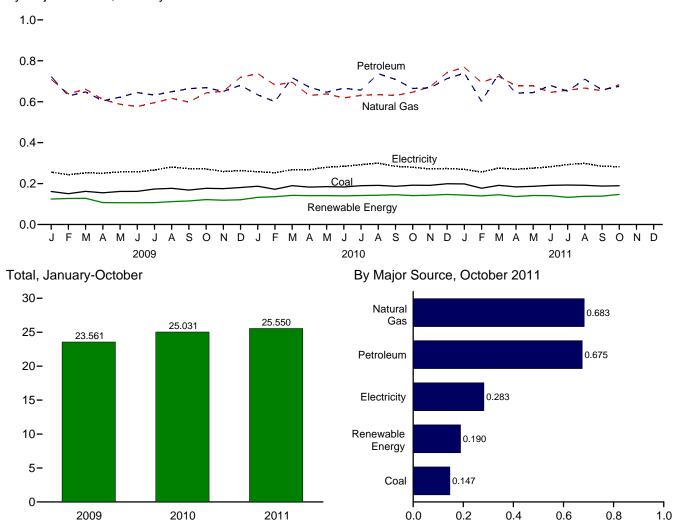
<sup>g</sup> Total losses are calculated as the primary energy consumed by the electric power sector minus the energy content of electricity retail sales. Total losses are allocated to the end-use sectors in proportion to each sector's share of total

Figure 2.4 Industrial Sector Energy Consumption (Quadrillion Btu)

By Major Source, 1973-2010



By Major Sources, Monthly



Note: Because vertical scales differ, graphs should not be compared. Web Page: http://www.eia.doe.gov/emeu/mer/consump.html.

Source: Table 2.4.

Table 2.4 Industrial Sector Energy Consumption

(Trillion Btu)

					Primar	y Consun	nptiona							
		Fossi	I Fuels			·	Renewabl	e Energy <sup>l</sup>	)			Elec-	Electrical	
	Coal	Natural Gas <sup>c</sup>	Petro- leum <sup>d</sup>	Totale	Hydro- electric Power <sup>f</sup>	Geo- thermal	Solar/ PV	Wind	Bio- mass	Total	Total Primary	tricity Retail Sales	System Energy Lossesh	Totale
1973 Total	4,057	10,388	9,083	23,521	35	NA	NA	NA	1,165	1,200	24,720	2,341	5,562	32,623
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 55	2 3	-	0	1,684	1,717	21,180	3,226	7,404	31,810
1995 Total 1996 Total	2,488 2.434	9,592 9,901	8,586 9,019	20,727 21,377	55 61	3	_	0	1,934 1,969	1,992 2,033	22,719 23,410	3,455 3,527	7,796 7,968	33,971 34,904
1997 Total	2,395	9,933	9,255	21,629	58	3	_	Ö	1,996	2,057	23,686	3,542	7,972	35,200
1998 Total	2,335	9,763	9,082	21,248	55	3	_	ő	1,872	1,929	23,177	3,587	8,079	34,843
1999 Total	2,227	9,375	9,356	21,016	49	4	_	ŏ	1,882	1,934	22,950	3,611	8,203	34,764
2000 Total	2,256	9,500	9,075	20,896	42	4	_	Ŏ	1,881	1,928	22,824	3,631	8,208	34,664
2001 Total	2,192	8,676	9,178	20,075	33	5	_	Ŏ	1,681	1,719	21,794	3,400	7,526	32,720
2002 Total	2,019	R 8,832	9,168	R 20,079	39	5	_	0	1,676	1,720	R 21,799	3,379	7,484	R 32,662
2003 Total	2,041	8,488	9,197	19,777	43	3	-	0	1,679	1,726	21,503	3,454	7,575	32,532
2004 Total	2,047	<sup>R</sup> 8,550	9,825	R 20,559	33	4	-	0	1,817	1,853	R 22,412	3,473	7,635	R 33,520
2005 Total	1,954	<sup>R</sup> 7,907	9,633	<sup>R</sup> 19,538	32	4	-	0	1,837	1,873	<sup>R</sup> 21,411	3,477	7,557	<sup>R</sup> 32,446
2006 Total	1,914	<sup>R</sup> 7,861	9,770	R 19,606	29	4	-	0	1,897	1,930	R 21,536	3,451	7,415	R 32,401
2007 Total	1,865	R 8,074	9,451	R 19,414	16	5	-	0	1,944	1,964	R 21,378	3,507	7,517	R 32,402
2008 Total	1,796	R <b>8,083</b>	8,511	R 18,431	17	5	-	0	2,031	2,053	R 20,484	3,444	7,365	R 31,293
2009 January	125	709	724	R 1,556	2	(c)	_	0	159	161	1,717	256	548	R 2,522
February	127	639	628	1,394	1	(s) (s)	_	0	149	151	1,717	243	478	2,266
March	128	661	648	R 1,436	2	(s)	_	0	160	162	1,598	252	526	2,376
April	107	611	605	1,320	2	(s)	_	0	153	155	1,475	251	523	2,250
May	106	588	622	1,314	2	(s)	_	Ŏ	160	162	1,476	257	569	2,302
June	107	576	645	1,326	2	(s)	_	Ö	160	162	1,488	257	572	2,317
July	107	596	632	1,333	1	(s)	_	0	172	173	1,507	266	560	2,333
August	112	616	649	1,374	1	(s)	_	0	175	177	1,551	281	591	R 2,422
September	115	599	663	1,376	1	(s)	_	0	167	168	1,544	273	532	2,349
October	122	643	669	1,430	1	(s)	-	0	175	177	1,607	272	546	R 2,424
November	118	651	650	1,419	1	(s)	-	0	174	175	1,594	259	552	2,405
December	121	719	_ 681	1,518	2	(s)	-	0	179	181	1,699	264	582	R 2,544
Total	1,396	7,609	7,816	R 16,797	18	4	-	0	1,982	2,005	18,801	3,130	6,582	28,513
2010 January	133	R 737	634	R 1.499	2	(s)	(s)	0	185	187	R 1,686	258	535	R 2,479
February	136	R 681	600	R 1.422	2	(s)	(s)	Ŏ	170	172	R 1.594	253	<sup>R</sup> 511	R 2,358
March	143	R 695	717	R 1,557	2	(s)	(s)	0	188	190	R 1,747	267	538	R 2,552
April	141	R 630	671	R 1,443	2	(s)	(s)	0	181	183	R 1,625	268	542	R 2,436
May	141	<sup>R</sup> 638	646	<sup>R</sup> 1,428	2	(s)	(s)	0	183	185	<sup>R</sup> 1,613	280	635	R 2,528
June	140	<sup>R</sup> 619	666	R 1,426	1	(s)	(s)	0	182	183	R 1,609	284	625	R 2,519
July	142	R 631	656	R 1,429	1	(s)	(s)	0	188	190	R 1,619	292	621	R 2,533
August	143	R 635	737	R 1,516	1	(s)	(s)	0	190	191	R 1,707	300	626	R 2,633
September	146	R 630	709	R 1,485	1	(s)	(s)	0	185	187	R 1,671	284	556	R 2,512
October November	141 143	R 647 R 672	665 668	<sup>R</sup> 1,451 <sup>R</sup> 1,478	1 1	(s) (s)	(s) (s)	0	190 190	192 191	<sup>R</sup> 1,643 <sup>R</sup> 1,669	280 272	558 580	<sup>R</sup> 2,481 <sup>R</sup> 2,521
December	143	R 742	713	R 1,597	1	(s)	(s)	0	198	199	R 1,796	274	604	R 2,673
Total	1,696	R 7,959	8,082	R 17,731	16	(S) <b>4</b>	(s)	ŏ	2,230	2,251	R 19,981	3,313	R 6,932	R <b>30,225</b>
	•	•	,	•	_		(-)	-	-	-	-	-		-
<b>2011</b> January	144	<sup>R</sup> 768	740	R 1,652	1	(s)	(s)	(s)	197	198	R 1,850	270	563	R 2,683
February	140	R 694	602	R 1,436	2	(s)	(s)	(s)	175	177	R 1,614	257	512	R 2,382
March	146	R 724	736	R 1,607	2	(s)	(s)	(s)	189	192	R 1,799	276	585	R 2,659
April	R 137	R 678	642	R 1,457	2	(s)	(s)	(s)	182	184	R 1,641	270	574	R 2,485
May	R 142	R 678	644	R 1,466	2	(s)	(s)	(s)	184	187	R 1,652	275	611	R 2,539
June	<sup>R</sup> 141 <sup>R</sup> 133	<sup>R</sup> 645 <sup>R</sup> 656	679	R 1,467	1	(s)	(s)	(s)	189	191	R 1,658	282	617	R 2,557
July	R 133	R 667	652	R 1,441	1 1	(s)	(s)	(s)	191	193	<sup>R</sup> 1,634 <sup>R</sup> 1,710	293	648	R 2,575
August September	R 138	R 654	710 658	<sup>R</sup> 1,518 <sup>R</sup> 1,451	1	(s) (s)	(s) (s)	(s)	190 186	192 188	R 1,639	299 284	626 551	<sup>R</sup> 2,635 <sup>R</sup> 2,474
October	147	683	675	1,505	1	(s)	(S)	(s) (s)	188	190	1,695	283	583	2,560
10-Month Total	1,404	6,847	6,739	15,000	15	3	(s)	(s)	1,873	1,891	16,891	2,789	5,870	25,550
io monthi rotal	., 404	0,041	5,103	. 5,555	.5		(3)	(3)	.,5.5	.,001	. 5,55 1	_,, 03	5,010	20,000
2010 10-Month Total 2009 10-Month Total	1,406 1,156	6,544 6,238	6,701 6,485	14,656 13,859	14 15	3 3	(s) -	0 0	1,843 1,630	1,860 1,649	16,516 15,508	2,767 2,608	5,748 5,446	25,031 23,561

allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Note 2, "Electrical System Energy Losses," at end of

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

Notes: • The industrial sector includes industrial combined-heat-and-power (CHP) and industrial electricity-only plants. See Note, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7. • See Note 1, "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 for all available 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.

This table has been modified to include a column for "Wind."

a See "Primary Energy Consumption" in Glossary.
 b Most data are estimates. 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.

Does not include biofuels that have been blended with petroleum—biofuels

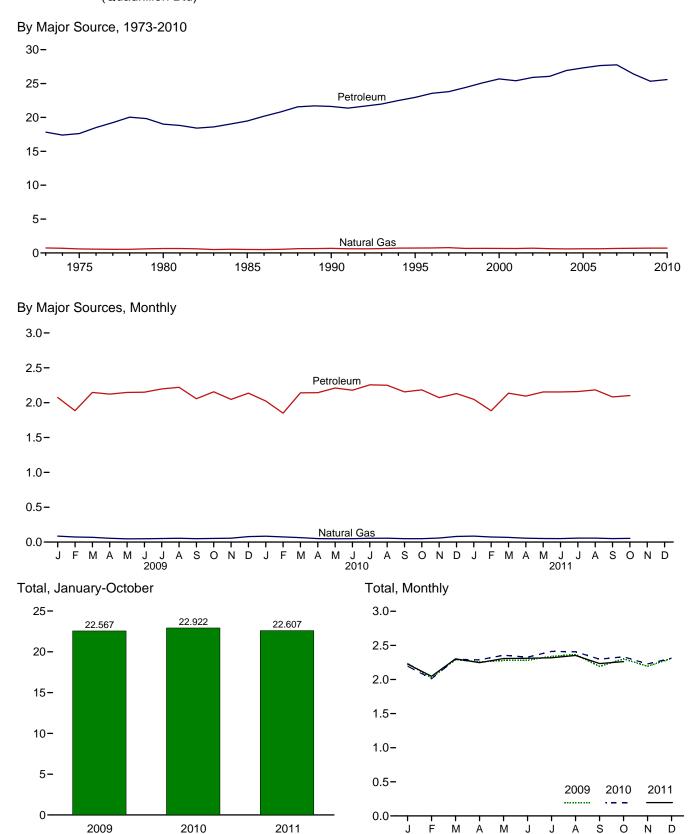
Does not include blorders that have been blefided with perfoleum—blorders are included in "Biomass."
 Place of the blorders of the blo

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

beginning in 1996, other energy service providers.

<sup>n</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

Figure 2.5 Transportation Sector Energy Consumption (Quadrillion Btu)



Note: Because vertical scales differ, graphs should not be compared. Web Page: http://www.eia.doe.gov/emeu/mer/consump.html. Source: Table 2.5.

**Table 2.5 Transportation Sector Energy Consumption** 

(Trillion Btu)

			Primary Cor	nsumptiona					
		Fossi	l Fuels	Г	Renewable Energy <sup>b</sup>	Total	Electricity Retail	Electrical System Energy	
	Coal	Natural Gas <sup>c</sup>	Petroleum <sup>d</sup>	Total	Biomass	Primary	Salese	Lossesf	Total
1973 Total	3	743	17,832	18,577	NA	18,577	11	25	18,613
1975 Total	1 (1)	595	17,615	18,210	NA	18,210	10	24	18,245
1980 Total	( <sup>9</sup> )	650 519	19,009	19,659	NA	19,659	11 14	27	19,697
1985 Total1990 Total	(9)	680	19,472 21,626	19,992 22,306	50 60	20,041 22,366	16	32 37	20,088 22,420
1995 Total	(9)	724	22,955	23,679	112	23,791	17	38	23,846
1996 Total	\g'\	737	23,565	24,302	81	24,383	17	38	24,437
1997 Total	(g)	780	23,813	24,593	102	24,695	17	38	24,750
1998 Total	(g)	666	24,422	25,088	113	25,201	17	38	25,256
1999 Total	(g)	675	25,098	25,774	118	25,891	17	40	25,949
2000 Total	(g)	672	25,682	26,354	135	26,489	18	42	26,548
2001 Total	(g)	658	25,412	26,070	142	26,213	20	43	26,275
2002 Total	(g)	R <b>699</b>	25,913	R 26,612	170	R 26,781	19	42	R <b>26,842</b>
2003 Total	(g)	627	26,063	26,690	230	26,920	23	51	26,994
2004 Total	(g)	602	26,925	27,527	290	27,817	25	54	27,895
2005 Total	(g)	624	27,309	27,933	339	28,272	26	56	28,353
2006 Total	(g)	625 R 663	27,651	28,276 R 28,427	475 602	28,751 R 29.029	25 28	54 60	28,830 R 29,117
2007 Total 2008 Total	(9)	692	27,763 26,407	27,099	826	27,925	26 26	56	28,008
	` ,		·			,			•
2009 January	(g)	R 86	2,075	R 2,160	67	R 2,227	3	6	R 2,236
February	(g) (g)	R 73	1,885	R 1,958	58	R 2,016	2	5	R 2,023
March	(9)	<sup>R</sup> 68 <sup>R</sup> 54	2,146	<sup>R</sup> 2,214 <sup>R</sup> 2,177	70 73	R 2,284	2	5 4	<sup>R</sup> 2,291 <sup>R</sup> 2.257
April	(9)	<sup>N</sup> 54 R 47	2,123 2,147	R 2,177	73 79	<sup>R</sup> 2,250 <sup>R</sup> 2,273	2 2	4 5	R 2,280
May	(9)	R 47	2,147 2,150	R 2,198	79 78	R 2,273	2	5 5	R 2.283
June July	(9)	R 52	2,197	R 2,248	83	R 2,332	2	5	R 2,339
August	(9)	R 54	2,220	R 2,275	85	R 2,359	2	5	R 2.366
September	(gí	R 49	2,056	R 2,105	80	R 2,185	2	4	R 2.191
October	(9)	R 52	2,156	R 2,208	88	R 2,295	2	4	R 2,302
November	(g)	<sup>R</sup> 55	2,047	R 2,102	85	R 2,188	2	4	R 2,194
December	(9)	_R 78	2,137	R 2,215	87	R 2,302	2	5	R 2,310
Total	(g)	R 715	25,339	R 26,054	934	R 26,988	27	56	R <b>27,070</b>
2010 January	(9)	R 84	2,024	R 2,108	81	R 2,189	2	5	R 2,196
February	Ìβĺ	R 74	1,850	R 1,924	79	R 2,003	2	5	R 2,010
March	(g)	<sup>R</sup> 64	2,141	R 2,205	86	R 2,290	2	5	R 2,297
April	(g)	<sup>R</sup> 50	2,143	<sup>R</sup> 2,193	88	<sup>R</sup> 2,281	2	4	<sup>R</sup> 2,287
May	(9)	R 48	2,210	R 2,257	92	R 2,349	2	5	R 2,356
June	(g)	R 49	2,179	R 2,227	93	R 2,320	2	5	R 2,327
July	(g)	R 54	2,256	R 2,310	95	R 2,405	2	5	R 2,412
August	(g) (g)	<sup>R</sup> 56 <sup>R</sup> 48	2,250	R 2,306	93	R 2,399	2	4	R 2,406
September	(9)	R 49	2,154 2,184	R 2,203 R 2,233	89 94	<sup>R</sup> 2,292 <sup>R</sup> 2,326	2 2	4 4	<sup>R</sup> 2,298 <sup>R</sup> 2,333
October November	(9)	R 59	2,104	R 2,131	90	R 2,221	2	4	R 2,227
December	(9)	R 81	2,131	R 2,212	94	R 2,305	2	5	R 2,312
Total	(g)	R 716	25,593	R <b>26,308</b>	1,072	R <b>27,380</b>	26	55	R 27,462
<b>2011</b> January	(9)	<sup>R</sup> 86	2,047	R 2,133	86	R 2,219	2	5	R 2,227
February	(9)	R 73	1,884	R 1,957	84	R 2,041	2	4	R 2,047
March	(9)	R 67	2,136	R 2,203	92	R 2,295	2	5	R 2,302
April	(9)	R 55	2,094	R 2,150	90	R 2,240	2	4	R 2.246
May	(9)	<sup>R</sup> 51	2,154	R 2,205	96	R 2,301	2	5	<sup>R</sup> 2.308
June	(9)	<sup>R</sup> 50	2,154	R 2,204	100	R 2,304	2	5	<sup>R</sup> 2.311
July	(9)	<sup>R</sup> 57	2,159	R 2,216	95	R 2.311	2	5	R 2.318
August	(g)	<sup>R</sup> 57	2,184	R 2,241	105	R 2,346	2	4	R 2,352
September	(g)	R 50	2,083	R 2,133	95	<sup>R</sup> 2,228	2	4	<sup>R</sup> 2,234
October	(9)	53	2,101	2,154	101	2,255	2	4	2,261
10-Month Total	(g)	599	20,997	21,596	944	22,539	22	46	22,607
2010 10-Month Total 2009 10-Month Total	( <sup>9</sup> )	576 581	21,390 21,155	21,966 21,736	888 762	22,854 22,498	22 22	46 46	22,922 22,567

electricity retail sales. See Note 2, "Electrical System Energy Losses," at end of

R=Revised. NA=Not available.

Notes: • See Note 1, "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 for

all available data beginning in 1973.

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

a See "Primary Energy Consumption" in Glossary.
 b Data are estimates. See Table 10.2b for notes on series components.
 c Natural gas only; does not include supplemental gaseous fuels. See Note 3, "Supplemental Gaseous Fuels," at end of Section 4.
 d Does not include biofuels that have been blended with petroleum—biofuels

Does not include biofuels that have been blended with petroleum—biofuels

are included in "Biomass."

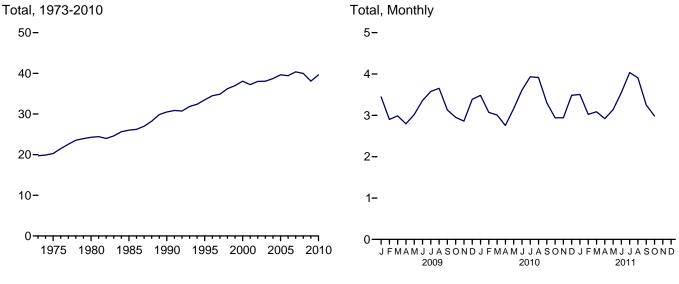
Electricity retail sales to ultimate customers reported by electric utilities and, beginning in 1996, other energy service providers.

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

section.

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

Figure 2.6 Electric Power Sector Energy Consumption (Quadrillion Btu)



By Major Source, 1973-2010

20
16
12
Renewable Energy

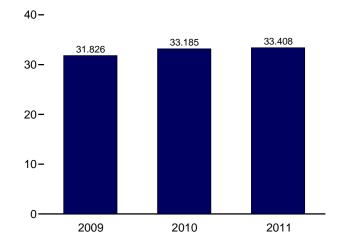
Nuclear Electric Power

Natural Gas

Petroleum

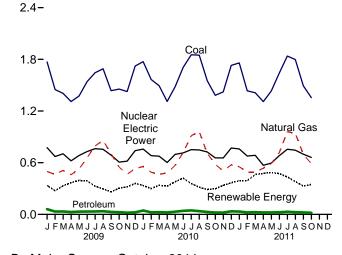
1975 1980 1985 1990 1995 2000 2005 2010

Total, January-October

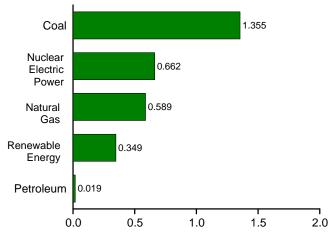


<sup>a</sup>Conventional hydroelectric power. Note: Because vertical scales differ, graphs should not be compared.

By Major Sources, Monthly



By Major Source, October 2011



Web Page: http://www.eia.doe.gov/emeu/mer/consump.html. Source: Table 2.6.

**Electric Power Sector Energy Consumption** Table 2.6

(Trillion Btu)

						Prima	ry Consum	ptiona					
		Fossil	Fuels					Renewabl	e Energy <sup>b</sup>				
	Coal	Natural Gas <sup>c</sup>	Petro- leum	Total	Nuclear Electric Power	Hydro- electric Power <sup>d</sup>	Geo- thermal	Solar/ PV	Wind	Bio- mass	Total	Elec- tricity Net Imports	Total Primary
1973 Total 1975 Total 1980 Total	8,658 8,786 12,123	3,748 3,240 3,778	3,515 3,166 2,634	15,921 15,191 18,534	910 1,900 2,739	2,827 3,122 2,867	20 34 53	NA NA NA	NA NA NA	3 2 4	2,851 3,158 2,925	49 21 71	19,731 20,270 24,269
1985 Total 1990 Total <sup>e</sup> 1995 Total	16,261 17,466	3,135 3,309 4,302	1,090 1,289 755	18,767 20,859 22,523	4,076 6,104 7,075	2,937 3,014 3,149	97 161 138	(s) 4 5	(s) 29 33	14 317 422	3,049 3,524 3,747	140 8 134	26,032 30,495 33,479
1996 Total 1997 Total 1998 Total 1999 Total	18,429 18,905 19,216 19,279	3,862 4,126 4,675 4,902	817 927 1,306 1,211	23,109 23,957 25,197 25,393	7,087 6,597 7,068 7,610	3,528 3,581 3,241 3,218	148 150 151 152	5 5 5 5	33 34 31 46	438 446 444 453	4,153 4,216 3,872 3,874	137 116 88 99	34,485 34,886 36,225 36,976
2000 Total	20,220 19,614 19,783 20,185	5,293 5,458 5,767 5,246	1,144 1,277 961 1,205	26,658 26,348 26,511 26,636	7,862 8,029 8,145 7,959	2,768 2,209 2,650 2,781	144 142 147 148	5 6 6 5	57 70 105 115	453 337 380 397	3,427 2,763 3,288 3,445	115 75 72 22	38,062 37,215 38,016 38,062
2004 Total	20,305 20,737 20,462 20,808 20,513	5,595 6,015 6,375 7,005 6,829	1,212 1,235 648 657 468	27,112 27,986 27,485 28,470	8,222 8,161 8,215 8,455 8,427	2,656 2,670 2,839 2,430 2,494	148 147 145 145 146	6 6 5 6 9	142 178 264 341 546	388 406 412 423 435	3,340 3,406 3,665 3,345	39 85 63 107 112	38,713 39,638 39,428 40,377 39,978
2008 Total 2009 January	1,769	499 464	61 33	<b>27,810</b> 2,329 1,946	775 672	2,494 228 172	13	(s)	58	37	<b>3,630</b> 336	7 8	3,446 2,901
February March April May	1,450 1,404 1,310 1,375	511 461 526	33 34 28 32	1,946 1,949 1,799 1,933	703 621 684	211 250 287	11 13 12 12	(s) 1 1 1	57 69 73 61	34 38 33 34	276 332 369 395	8 4 6 9	2,901 2,988 2,795 3,022
June July August	1,541 1,645 1,691	656 795 858	33 34 37	2,230 2,473 2,587	729 763 756	284 227 190	12 12 12	1 1 1	55 48 53	37 39 39	388 328 296	11 14 15	3,359 3,578 3,653
September October November December	1,436 1,455 1,426 1,723	705 548 467 532	29 26 20 24	2,169 2,029 1,913 2,278	688 607 618 740	168 191 204 240	12 12 12 13	1 (s) (s)	45 67 67 67	36 35 37 40	262 305 320 360	11 11 9 11	3,130 2,952 2,860 3,389
Total	18,225	7,022	390	25,638	8,356	2,650	146	9	721	441	3,967	116	38,077
February  March	1,774 1,567 1,493 1.311	557 489 <sup>R</sup> 466 480	45 23 25 23	R 2,376 2,079 1,983 1.814	758 682 676 602	217 199 202 184	13 11 13 12	(s) (s) 1	67 53 84 95	39 36 39 36	335 300 338 329	14 12 10 9	3,483 R 3,073 3,007 2,754
April May June July	1,483 1,707 1,854	570 R 719 914	31 41 46	R 2,083 R 2,467 2,814	697 714 752	243 290 238	13 12 12	1 2 2	85 79 66	36 39 40	378 421 358	5 9 10	3,163 3,610 3,933
August September October	1,848 1,553 1,382	<sup>R</sup> 961 709 581	37 28 22	2,846 2,290 1,985	748 725 656	195 168 171	13 12 12	2 1 1	65 69 77	41 38 37	315 288 298	6 2 1	3,916 3,305 2,941
November December <b>Total</b>	1,422 1,730 <b>19,123</b>	506 575 <b>7,527</b>	21 36 <b>378</b>	1,949 R 2,340 <b>27,028</b>	655 770 <b>8,434</b>	190 225 <b>2,521</b>	12 13 <b>148</b>	1 (s) <b>12</b>	95 88 <b>923</b>	39 41 <b>459</b>	337 367 <b>4,064</b>	3 9 <b>89</b>	2,943 3,487 R <b>39,616</b>
2011 January February March	1,759 1,435 1,412	553 492 492	33 23 26	2,345 1,949 1,930	760 677 686	254 239 308	14 13 14	(s) 1 1	84 103 103	38 35 38	391 390 463	9 8 8	3,505 3,024 3,088
April	1,309 1,434 1,642 1,838	536 589 718 960	23 22 25 31	1,868 2,045 2,385 2,829	570 596 682 756	307 321 313 307	13 14 13 13	2 2 2 2	121 113 106 72	33 35 38 40	476 486 473 434	7 12 11 16	2,921 3,139 3,551 4,036
August September October	1,798 1,493 1,355	941 699 589	25 22 19	2,764 2,215 1,964	746 699 662	256 209 194	13 13 14	2 2 2	72 67 104	39 37 36	383 327 349	16 10 10	3,908 3,251 2,984
10-Month Total 2010 10-Month Total 2009 10-Month Total	15,474 15,971 15,076	6,570 6,445 6,022	250 322 346	22,294 22,738 21,444	6,835 7,009 6,999	2,706 2,107 2,207	135 123 121	16 11 8	945 740 587	369 380 365	4,172 3,361 3,287	108 77 96	33,408 33,185 31,826

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

a See "Primary Energy Consumption in Glossary.

b See Table 10.2c for notes on series components.
c Natural gas only; excludes the estimated portion of supplemental gaseous fuels. See Note 3, "Supplemental Gaseous Fuels," at end of Section 4.
d Conventional hydroelectric power.
e Through 1988, data are for electric utilities only. Beginning in 1989, data are

for electric utilities and independent power producers.

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

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

output. • The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. • See Note 1, "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 for all available 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**

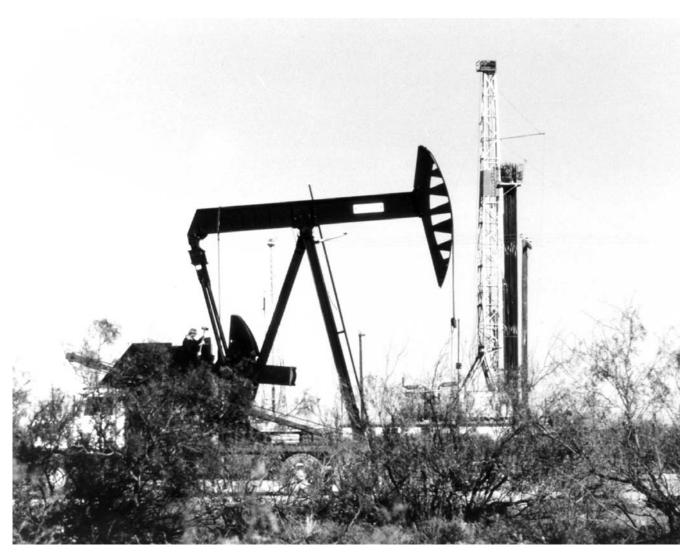
Note 1. Energy Consumption Data and Surveys. Most of the data in this section of the Monthly Energy Review (MER) are developed from a group of energy-related surveys, typically called "supply surveys," conducted by the U.S. Energy Information Administration (EIA). Supply surveys are directed to suppliers 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.

Note 2. 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 theselosses 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 and other energy sources, since there is no generally accepted practice for measuring those thermal conversion rates. 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.

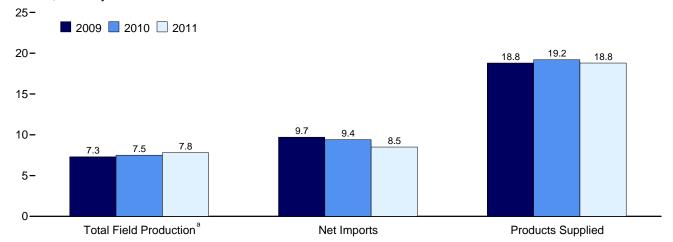
# Petroleum

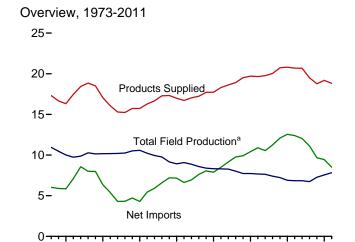


Oil pumping unit and drilling rig, Texas. Source: U.S. Department of Energy.

Figure 3.1 Petroleum Overview (Million Barrels per Day)

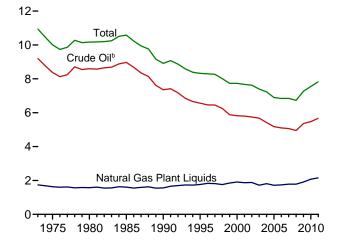




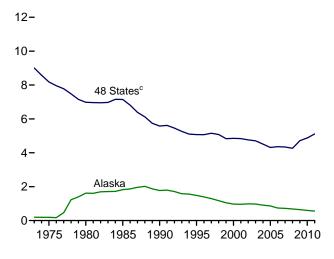


1975 1980 1985 1990 1995 2000 2005 2010

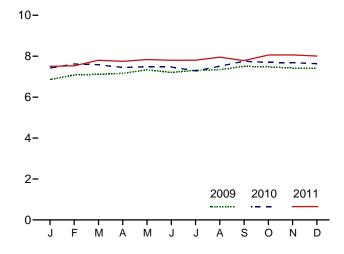
Total Field Production, 1973-2011



Crude Oil<sup>b</sup> Field Production, 1973-2011



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



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

<sup>&</sup>lt;sup>b</sup> Includes lease condensate.

<sup>&</sup>lt;sup>c</sup> United States excluding Alaska and Hawaii. Web Page: http://www.eia.gov/totalenergy/data/monthly/#petroleum. Source: Table 3.1.

Table 3.1 **Petroleum Overview** 

		Fie	ld Produc	tiona		_			Trade				
	48 States <sup>c</sup>	Crude Oil Alaska	Total	NGPL <sup>d,e</sup>	Total	Renew- able Fuels and Oxy- genates <sup>f</sup>	Process- ing Gain <sup>g</sup>	Im- ports <sup>h</sup>	Ex- ports <sup>e</sup>	Net Imports <sup>i</sup>	Stock Change	Adjust- ments <sup>k</sup>	Petroleum Products Supplied
1973 Average 1975 Average 1980 Average 1980 Average 1990 Average 1995 Average 1997 Average 1998 Average 1998 Average 1998 Average 2000 Average 2001 Average 2002 Average 2003 Average 2004 Average 2005 Average 2006 Average 2006 Average 2007 Average 2008 Average 2008 Average	9,010 8,183 6,980 5,582 5,076 5,077 5,156 5,077 4,832 4,851 4,832 4,761 4,706 4,314 4,342 4,268	198 191 1,617 1,825 1,773 1,484 1,393 1,296 1,175 1,050 967 963 984 974 908 864 741 722 683	9,208 8,375 8,597 7,355 6,560 6,452 6,252 5,881 5,822 5,861 5,746 5,619 5,102 4,950	1,738 1,633 1,573 1,609 1,559 1,762 1,830 1,817 1,759 1,850 1,911 1,868 1,719 1,809 1,717 1,739 1,739 1,783	10,946 10,007 10,1581 8,914 8,295 8,269 8,011 7,731 7,633 7,670 6,841 6,847 6,734	NA NA NA NA NA NA NA NA NA NA NA NA	453 460 597 557 683 774 837 850 886 948 903 957 974 1,051 989 994 996	6,256 6,056 6,909 5,067 8,018 8,835 9,478 10,162 11,459 11,459 11,530 12,264 13,145 13,714 13,707 13,468 12,915	231 209 544 781 857 949 981 1,003 945 940 1,040 984 1,027 1,165 1,317 1,433 1,802	6,025 5,846 6,365 4,286 7,161 7,886 8,498 9,158 9,764 9,912 10,419 10,546 11,238 12,097 12,549 12,390 12,036 11,114	135 32 140 -103 107 -246 -151 143 239 -422 -69 325 -105 56 209 145 60 -148	18 41 64 200 338 496 528 487 495 567 532 501 527 478 564 513 522 653 852	17,308 16,322 17,056 15,726 16,988 17,725 18,309 18,620 18,917 19,761 19,761 20,034 20,731 20,802 20,687 20,680 19,498
2009 January February March April May June July August September October November December Average	4,475 4,552 4,518 4,621 4,701 4,711 4,851 4,846 4,895 4,842 4,765 4,796 <b>4,715</b>	679 708 709 653 678 571 551 572 652 658 662 655 <b>645</b>	5,154 5,260 5,227 5,273 5,379 5,281 5,402 5,418 5,547 5,501 5,427 5,451 <b>5,451</b>	1,711 1,824 1,891 1,888 1,954 1,927 1,908 1,920 1,962 1,976 1,959 1,910	6,865 7,083 7,118 7,161 7,333 7,208 7,310 7,337 7,509 7,477 7,423 7,411 <b>7,270</b>	663 686 684 681 714 741 773 783 771 785 833 838 <b>746</b>	950 931 912 982 974 1,038 986 1,003 1,027 961 945 1,030 <b>979</b>	13,127 12,095 12,446 11,962 11,477 11,936 11,183 11,756 10,878 11,105 10,534 11,691	1,922 1,808 1,838 1,900 2,015 1,963 2,348 2,119 2,105 2,223 2,029 1,996 <b>2,024</b>	11,205 10,287 10,609 10,061 9,461 9,973 9,482 9,064 9,651 8,655 9,076 8,538 <b>9,667</b>	933 394 839 445 488 441 180 -525 488 -748 -748 -1,213	290 229 236 231 217 308 256 238 124 177 103 208 <b>218</b>	19,040 18,822 18,719 18,672 18,211 18,828 18,626 18,949 18,594 18,803 18,753 19,237 18,771
2010 January February March April May June July August September October November December Average	4,859 4,750 4,821 4,892 4,743 4,902 5,038 4,952 4,947 4,896	640 635 646 640 569 533 545 538 614 618 606 612 <b>599</b>	5,406 5,578 5,505 5,390 5,495 5,288 5,440 5,652 5,571 5,553 5,507 <b>5,474</b>	2,017 2,043 2,076 2,061 2,091 2,046 1,994 2,071 2,104 2,125 2,136 2,124 <b>2,074</b>	7,423 7,621 7,581 7,451 7,480 7,471 7,281 7,511 7,756 7,689 7,632 <b>7,548</b>	846 874 895 878 893 905 906 911 915 924 967 961 <b>907</b>	961 1,060 1,064 1,069 1,085 1,109 1,123 1,062 1,012 1,051 1,187 1,068	11,300 11,230 11,621 12,526 12,141 12,444 12,675 12,356 11,823 11,142 11,096 11,132 11,793	1,897 2,034 2,149 2,432 2,399 2,304 2,516 2,410 2,345 2,480 2,598 2,644 <b>2,353</b>	9,404 9,197 9,472 10,093 9,742 10,140 10,159 9,946 9,478 8,662 8,498 8,488 <b>9,441</b>	309 -46 77 762 661 373 440 214 -23 -451 -667 -1,068	326 52 163 356 343 308 304 384 205 228 105 386 <b>265</b>	18,652 18,850 19,099 19,044 18,866 19,537 19,662 19,438 18,974 18,977 19,722 19,180
2011 January February March April May June July August September October November December Average	E 5,000 E 5,022 E 4,987 E 5,030 E 5,071 E 5,157 E 5,227 E 5,056 RE 5,218 E 5,281 E 5,257	E 464 E 611 E 611 E 606 E 582 E 553 E 453 E 526 E 585 E 593 E 598 E 598	E 5,483 E 5,612 E 5,633 E 5,594 E 5,610 E 5,754 E 5,641 RE 5,784 E 5,855 E 5,873	2,022 1,920 2,168 2,157 2,222 2,176 2,193 2,201 2,145 R 2,274 RE 2,190 E 2,153 E 2,153	E 7,504 E 7,531 E 7,801 E 7,750 E 7,835 E 7,801 E 7,804 E 7,954 E 7,786 RE 8,058 RE 8,064 E 8,008 E 7,827	957 941 956 941 934 945 936 958 937 R 944 RE 1,011 E 995 E 955	1,067 980 1,027 1,001 1,083 1,101 1,125 1,132 1,132 R 1,106 E 1,072 E 1,071 E 1,075	11,954 10,503 11,593 11,592 11,669 11,794 11,667 11,145 11,209 E 10,838 E 11,343	2,687 2,575 2,660 2,903 2,642 2,607 2,919 3,071 3,158 R 3,104 E 2,859 E 2,880 E 2,840	9,266 7,929 8,933 8,689 9,028 9,187 8,748 8,074 8,051 8,7890 E 8,230 E 7,958 E 8,503	318 -1,069 -126 218 926 96 399 -623 -659 R -359 E -112 E -181 E -90	645 418 405 450 409 340 343 412 230 R 206 RE 206 E 294 E 363	19,121 18,869 19,248 18,613 18,363 19,277 18,555 19,153 18,795 R 18,563 E 18,507 E 18,695 E 18,507

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

distillate fuel oil stocks in the Northeast Heating Oil Reserve. See Table 3.4. Also see Note 4, "Petroleum New Stock Basis," at end of section.

k An adjustment for crude oil, hydrogen, oxygenates, renewable fuels, other hydrocarbons, motor gasoline blendling components, finished motor gasoline, and distillate fuel oil. See U.S. Energy Information Administration (EIA), Petroleum Supply Monthly, Appendix B, "PSM Explanatory Notes," for further information.

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

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

Web Pages: • For all available data beginning in 1973, see http://www.eia.gov/petroleum/.

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. • 1981-2010: EIA, Petroleum Supply Annual, annual reports. • 2011: EIA, Petroleum Supply Monthly, monthly reports; and, for the current two months, Weekly Petroleum Status Report data system and Monthly Energy Review data system calculations. system and Monthly Energy Review data system calculations.

kdjustments:"

Includes lease condensate.

United States excluding Alaska and Hawaii.

Alatural gas plant liquids.

See Note 6, "Petroleum Data Discrepancies," at end of section.

Renewable fuels and oxygenate plant net production.

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

See Table 3.2.

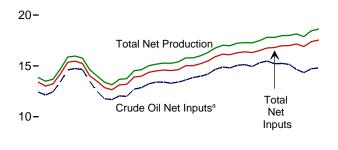
h Includes Strategic Petroleum Reserve imports. See Table 3.3b.

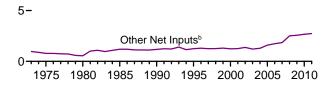
Net imports equal imports minus exports.

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

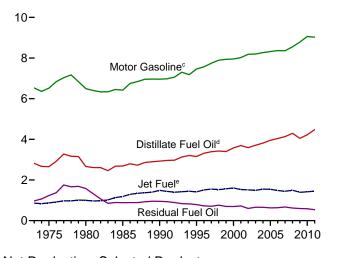
Figure 3.2 Refinery and Blender Net Inputs and Net Production (Million Barrels per Day)

Net Inputs and Net Production, 1973-2011



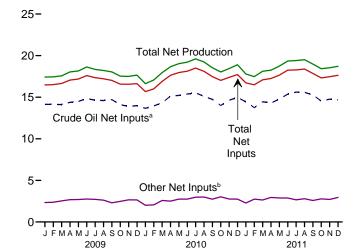


Net Production, Selected Products, 1973-2011

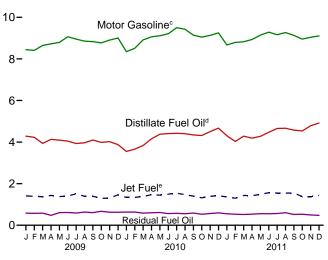


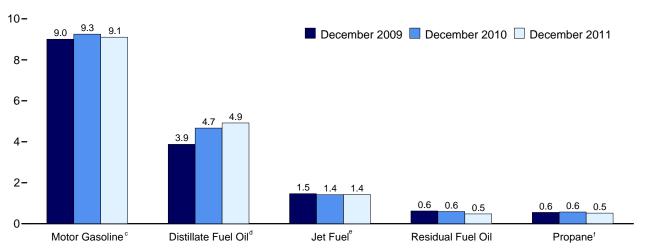
Net Production, Selected Products

#### Net Inputs and Net Production, Monthly



Net Production, Selected Products, Monthly





<sup>&</sup>lt;sup>a</sup> Includes lease condensate.

Web Page: http://www.eia.gov/totalenergy/data/monthly/#petroleum. Source: Table 3.2.

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

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

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

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

f Includes propylene.

Table 3.2 Refinery and Blender Net Inputs and Net Production

	Refinery and Blender Net Inputs <sup>a</sup> Refinery and Blender Net Production <sup>b</sup>											
	Refine	ery and Ble	nder Net I	nputs <sup>a</sup>			Refinery	and Blen	der Net Pro	ductionb		
	Crude		Other		Distillate	Jet	LPC	3°	Motor	Residual	Other	
	Oild	NGPLe	Liquids	Total	Fuel Oil <sup>9</sup>	Fuel <sup>h</sup>	Propane <sup>i</sup>	Total	Gasoline <sup>j</sup>	Fuel Oil	Products <sup>k</sup>	Total
1973 Average	12,431	815	155	13,401	2,820	859	271	375	6,527	971	2,301	13,854
1975 Average	12,442	710	72	13,225	2,653	871	234	311	6,518	1,235	2,097	13,685
1980 Average	13,481	462	81	14,025	2,661	999	269	330	6,492	1,580	2,559	14,622
1985 Average	12,002	509	681	13,192	2,686	1,189	295	391	6,419	882	2,183	13,750
1990 Average	13,409	467	713	14,589	2,925	1,488	404	499	6,959	950	2,452	15,272
1995 Average	13,973	471	775	15,220	3,155	1,416	503	654	7,459	788	2,522	15,994
1996 Average	14,195	450	843	15,487	3,316	1,515	520	662	7,565	726	2,541	16,324
1997 Average	14,662	416 403	832 853	15,909	3,392	1,554	565 550	691 674	7,743	708 762	2,671	16,759
1998 Average	14,889			16,144	3,424	1,526			7,892		2,753	17,030
1999 Average	14,804 15,067	372 380	927 849	16,103 16,295	3,399 3,580	1,565 1.606	569 583	684 705	7,934 7,951	698 696	2,709 2,705	16,989 17,243
2000 Average 2001 Average	15,128	429	825	16,382	3,695	1,530	556	667	8,022	721	2,703	17,245
2002 Average	14,947	429	941	16,362	3,592	1,514	572	671	8,183	601	2,712	17,263
2003 Average	15,304	419	791	16,513	3,707	1,488	570	658	8,194	660	2,780	17,487
2004 Average	15,475	422	866	16,762	3,814	1,547	584	645	8,265	655	2,887	17,814
2005 Average	15,220	441	1,149	16,811	3,954	1,546	540	573	8,318	628	2,782	17,800
2006 Average	15,242	501	1,238	16,981	4,040	1,481	543	627	8,364	635	2,827	17,975
2007 Average	15,156	505	1,337	16,999	4,133	1,448	562	655	8,358	673	2,728	17,994
2008 Average	14,648	485	2,019	17,153	4,294	1,493	519	630	8,548	620	2,561	18,146
2009 January	14,146	552	1,777	16,476	4,284	1,409	479	383	8,445	585	2,321	17,426
February	14,134	493	1,883	16,509	4,231	1,391	483	471	8,408	571	2,367	17,440
March	14,118	447	2,089	16,654	3,939	1,373	519	618	8,646	583	2,407	17,566
April	14,382	416	2,264	17,062	4,132	1,432	542	782	8,724	475	2,499	18,044
May	14,483	432	2,266	17,181	4,093	1,378	554 566	798	8,793	605	2,488	18,155
June	14,850	429 437	2,323 2,279	17,602 17,352	4,047 3,929	1,404 1,515	566 554	847 809	9,068 8,952	613 586	2,662 2,546	18,641 18,337
July	14,636 14,593	404	2,219	17,352	3,929	1,389	554 554	838	8,856	631	2,546	18,218
August September	14,710	482	1,825	17,214	4,099	1,369	559	624	8,829	604	2,337	18,045
October	14.095	545	1,933	16,573	3.984	1,291	527	476	8,770	672	2,341	17,535
November	13,898	609	2,051	16,558	4,018	1,311	550	379	8,905	624	2,264	17,502
December	13,983	580	2,066	16,629	3,877	1,465	554	442	9.006	624	2,246	17,660
Average	14,336	485	2,082	16,904	4,048	1,396	537	623	8,786	598	2,431	17,882
2010 January	13,666	503	1,501	15,670	3,551	1,338	531	480	8,348	633	2,281	16,631
February	13,950	402	1,654	16,005	3,658	1,340	562	540	8,510	632	2,385	17,065
March	14,314	413	2,166	16,893	3,835	1,379	575	726	8,913	581	2,523	17,957
April	15,131	374	2,135	17,640	4,156	1,470	585	850	9,062	598	2,531	18,668
May	15,215	399	2,348	17,963	4,375	1,449	571	857	9,113	615	2,622	19,031
June	15,382	397	2,349	18,127	4,408	1,495	572	870	9,211	559	2,670	19,212
July	15,519 15,110	384 390	2,595 2,607	18,498 18,107	4,425 4.404	1,542 1,463	574 552	860 778	9,500 9,426	576 554	2,704 2,605	19,607 19,230
August September	14,740	443	2,007	17,477	4,404	1,403	552 551	614	9,420	588	2,449	18,539
October	14,740	504	2,517	17,021	4,315	1,317	526	501	9.049	528	2,323	18,033
November	14,637	531	2,223	17,391	4.503	1,394	543	390	9,134	564	2,457	18,442
December	14,976	563	2,185	17,724	4,670	1,417	572	430	9.252	595	2,547	18,911
Average	14,724	442	2,219	17,385	4,223	1,418	560	659	9,059	585	2,509	18,452
2011 January	14,446	543	1,732	16,721	4,305	1,362	560	439	8,671	552	2,459	17,788
February	13,745	517	2,229	16,491	4,032	1,298	513	490	8,793	529	2,329	17,471
March	14,453	454	2,183	17,090	4,284	1,435	525	632	8,824	519	2,424	18,117
April	14,302	452	2,494	17,248	4,187	1,422	540	773	8,931	535	2,402	18,249
May	14,776	427	2,457	17,660	4,277	1,483	561	805	9,142	557	2,477	18,742
June	15,365	443	2,440	18,248	4,469	1,568	566	840	9,286	553	2,632	19,349
July	15,617	417	2,247	18,281	4,655	1,550	557	814	9,165	562	2,659	19,405
August	15,592	437	2,353	18,382	4,667	1,543	550 560	784	9,265	604 516	2,652	19,514
September		494 <sup>R</sup> 524	2,092 2,252	17,855 R 17 219	4,574 R 4,534	1,553 R 1.375	569 <sup>R</sup> 541	608 R 494	9,132 R 8.953	516 <sup>R</sup> 529	2,604 R 2,540	18,987 R 18,425
October November	14,043 E 14 750	F 565	2,252 RE 2,143	R 17,318 RF 17,468	E 4.786	E 1,375	RE 582	F 385	RE 9,038	E 493		RE 18.540
December	E 14,759	F 588	E 2,363	F 17,466	E 4,766	E 1,432	E 516	F 429	E 9,104	E 477	E 2,351	E 18,711
Average	E 14 804	E 488	E 2,248	E 17,540	E 4.477	E 1,450	E 548	E 625	E 9,027	E 536	E 2,501	E 18,616
Average	14,004	400	2,240	17,540	7,411	1,450	340	023	3,021	550	≥,301	10,010

k Asphalt and road oil, finished aviation gasoline, kerosene, lubricants, petrochemical feedstocks, petroleum coke, special naphthas, still gas, waxes, and miscellaneous products. Beginning in 2005, also includes naphtha-type jet fuel. R=Revised. E=Estimate. F=Foreast. Notes:

Notes:

Total may not equal sum of components due to independent rounding.

Geographic coverage is the 50 States and the District of Columbia. Web Pages:

For all available data beginning in 1973, see http://www.eia.gov/totalenergy/data/monthly/#petroleum.

For related information, see http://www.eia.gov/petroleum/.

Sources:

1976-1980:

U.S. Energy Information Administration (EIA), Energy Data Reports, Petroleum Statement, Annual, annual reports.

1976-1980:

U.S. Energy Information Administration (EIA), Energy Data Reports, Petroleum Statement, Annual, annual reports.

2011:

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. System, and Monthly Energy Review data system calculations.

See "Refinery and Blender Net Inputs," in Glossary. See "Refinery and Blender Net Production," in Glossary. Liquefied petroleum gases.

Liquefied petroleum gases.

d Includes lease condensate.

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

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

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

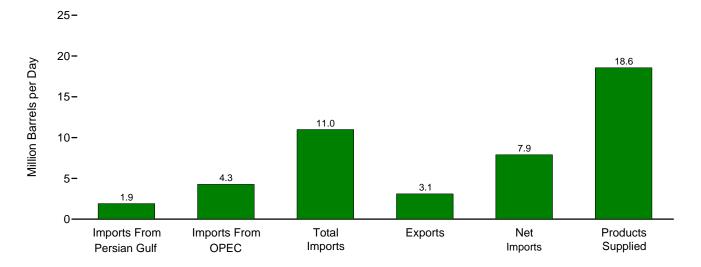
h Through 2004, includes kerosene-type and naphtha-type jet fuel. Beginning in

h Through 2004, includes kerosene-type and naphtha-type jet fuel. Beginning in 2005, includes kerosene-type jet fuel only; naphtha-type jet fuel is included in "Other Products."

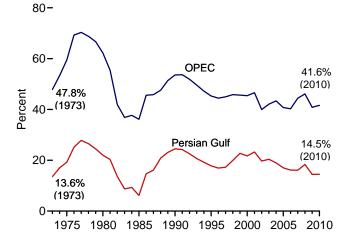
i Includes propylene.
j Finished motor gasoline. Beginning in 1993, also includes fuel ethanol blended into motor gasoline.

Figure 3.3a Petroleum Trade: Overview

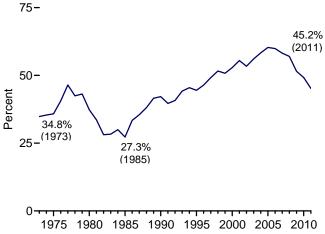
Overview, October 2011



Imports From OPEC and Persian Gulf as Share of Total Imports, 1973-2010

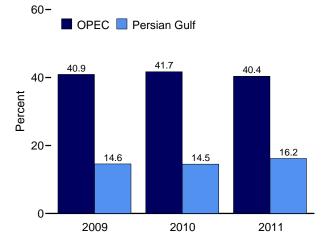


Net Imports as Share of Products Supplied, 1973-2011



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

Imports From OPEC and Persian Gulf as Share of Total Imports, January-October



Net Imports as Share of Products Supplied, January-December

75-

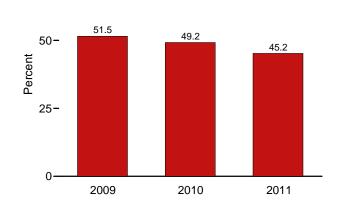


Table 3.3a Petroleum Trade: Overview

									are of Supplied			nare of mports
	Imports From Persian Gulf <sup>a</sup>	Imports From OPEC <sup>b</sup>	Imports	Exports	Net Imports	Products Supplied	Imports From Persian Gulf <sup>a</sup>	Imports From OPEC <sup>b</sup>	Imports	Net Imports	Imports From Persian Gulf <sup>a</sup>	Imports From OPEC <sup>b</sup>
			Thousand Ba	arrels per Day	/				Per	rcent		
1973 Average	848	2,993	6,256	231	6,025	17,308	4.9	17.3	36.1	34.8	13.6	47.8
1975 Average	1,165	3,601	6,056	209	5,846	16,322	7.1	22.1	37.1	35.8	19.2	59.5
1980 Average	1,519	4,300	6,909	544	6,365	17,056	8.9	25.2	40.5	37.3	22.0	62.2
1985 Average	311 1,966	1,830 4,296	5,067 8.018	781 857	4,286 7,161	15,726 16,988	2.0 11.6	11.6 25.3	32.2 47.2	27.3 42.2	6.1 24.5	36.1 53.6
1990 Average1995 Average	1,573	4,002	8,835	949	7,161	17,725	8.9	22.6	49.8	44.5	17.8	45.3
1996 Average	1,604	4,211	9,478	981	8,498	18,309	8.8	23.0	51.8	46.4	16.9	44.4
1997 Average	1,755	4,569	10,162	1,003	9,158	18,620	9.4	24.5	54.6	49.2	17.3	45.0
1998 Average	2,136	4,905	10,708	945	9,764	18,917	11.3	25.9	56.6	51.6	19.9	45.8
1999 Average	2,464	4,953	10,852	940	9,912	19,519	12.6	25.4	55.6	50.8	22.7	45.6
2000 Average	2,488	5,203	11,459	1,040	10,419	19,701	12.6	26.4	58.2	52.9	21.7	45.4
2001 Average	2,761	5,528	11,871	971	10,900	19,649	14.1	28.1	60.4	55.5	23.3	46.6
2002 Average	2,269	4,605	11,530	984	10,546	19,761	11.5	23.3	58.3	53.4	19.7	39.9
2003 Average	2,501	5,162	12,264	1,027	11,238	20,034	12.5	25.8	61.2	56.1	20.4	42.1
2004 Average	2,493	5,701	13,145	1,048	12,097	20,731	12.0	27.5	63.4	58.4	19.0	43.4
2005 Average2006 Average	2,334 2,211	5,587 5,517	13,714 13,707	1,165 1,317	12,549 12,390	20,802 20,687	11.2 10.7	26.9 26.7	65.9 66.3	60.3 59.9	17.0 16.1	40.7 40.2
2007 Average	2,163	5,980	13,468	1,433	12,036	20,680	10.7	28.9	65.1	58.2	16.1	44.4
2008 Average	2,370	5,954	12,915	1,802	11,114	19,498	12.2	30.5	66.2	57.0	18.4	46.1
2009 January	2,218	5,689	13,127	1,922	11,205	19,040	11.6	29.9	68.9	58.9	16.9	43.3
February	1,974	4,958	12,095	1,808	10,287	18,822	10.5	26.3	64.3	54.7	16.3	41.0
March	1,823	5,212	12,446	1,838	10,609	18,719	9.7	27.8	66.5	56.7	14.6	41.9
April	1,735	4,803	11,962	1,900	10,061	18,672	9.3	25.7	64.1	53.9	14.5	40.2
May	1,548	4,372	11,477	2,015	9,461	18,211	8.5	24.0	63.0	52.0	13.5	38.1 40.4
June	1,602 1,730	4,825 4,554	11,936 11,830	1,963 2,348	9,973 9,482	18,828 18,626	8.5 9.3	25.6 24.4	63.4 63.5	53.0 50.9	13.4 14.6	40.4 38.5
July August	1,730	4,534	11,183	2,346	9,462	18,949	7.5	23.9	59.0	47.8	12.8	40.5
September	1,718	5,052	11,756	2,105	9,651	18,594	9.2	27.2	63.2	51.9	14.6	43.0
October	1,545	4,581	10,878	2,223	8,655	18,803	8.2	24.4	57.9	46.0	14.2	42.1
November	1,606	4,585	11,105	2,029	9,076	18,753	8.6	24.5	59.2	48.4	14.5	41.3
December	1,362	4,171	10,534	1,996	8,538	19,237	7.1	21.7	54.8	44.4	12.9	39.6
Average	1,689	4,776	11,691	2,024	9,667	18,771	9.0	25.4	62.3	51.5	14.4	40.9
2010 January February	1,563 1,666	4,554 4,659	11,300 11,230	1,897 2,034	9,404 9,197	18,652 18,850	8.4 8.8	24.4 24.7	60.6 59.6	50.4 48.8	13.8 14.8	40.3 41.5
March	1,842	5,084	11,621	2,034	9,472	19,099	9.6	26.6	60.8	49.6	15.9	43.7
April	2.026	5,376	12.526	2,432	10.093	19.044	10.6	28.2	65.8	53.0	16.2	42.9
May	1.724	5.055	12.141	2,399	9.742	18.866	9.1	26.8	64.4	51.6	14.2	41.6
June	1,972	5,297	12,444	2,304	10,140	19,537	10.1	27.1	63.7	51.9	15.8	42.6
July	1,679	5,178	12,675	2,516	10,159	19,319	8.7	26.8	65.6	52.6	13.2	40.8
August	1,663	5,117	12,356	2,410	9,946	19,662	8.5	26.0	62.8	50.6	13.5	41.4
September	1,698	5,111	11,823	2,345	9,478	19,438	8.7	26.3	60.8	48.8	14.4	43.2
October November	1,490 1.662	4,305 4,525	11,142 11.096	2,480 2,598	8,662 8.498	18,974 18.977	7.9 8.8	22.7 23.8	58.7 58.5	45.7 44.8	13.4 15.0	38.6 40.8
December	1,564	4,525	11,132	2,596	8.488	19,722	7.9	23.4	56.4	43.0	14.0	41.4
Average	1,711	4,906	11,793	2,353	9,441	19,180	8.9	25.6	61.5	49.2	14.5	41.6
<b>2011</b> January	1,719	4,872	11,954	2,687	9,266	19,121	9.0	25.5	62.5	48.5	14.4	40.8
February	1,495	4,504	10,503	2,575	7,929	18,869	7.9	23.9	55.7	42.0	14.2	42.9
March	1,651	4,588	11,593	2,660	8,933	19,248	8.6	23.8	60.2	46.4	14.2	39.6
April	1,704	4,509	11,592	2,903	8,689	18,613	9.2	24.2	62.3	46.7	14.7	38.9
May	1,829 2,033	4,572 4.883	11,669 11,794	2,642 2,607	9,028 9,187	18,363 19,277	10.0 10.5	24.9 25.3	63.5 61.2	49.2 47.7	15.7 17.2	39.2 41.4
June	2,033 2,167	4,883 4,928	11,794	2,607	9,187 8,748	18,555	10.5	25.3 26.6	62.9	47.7 47.1	17.2	41.4 42.2
July August	1,910	4,648	11,145	3,071	8,074	19,153	10.0	24.3	58.2	42.2	17.1	41.7
September	2.039	4,326	11,209	3,158	8,051	18,795	10.8	23.0	59.6	42.8	18.2	38.6
October	R 1,904	R 4,267	R 10,994	R 3,104	R 7,890	R 18,563	R 10.3	R 23.0	R 59.2	42.5	R 17.3	R 38.8
November	NA	NA	E 11,089	E 2,859	E 8,230	E 18,695	NA	NA	E 59.3	E 44.0	NA	NA
December	NA	NA	E 10,838	E 2,880	E 7,958	E 18,507	NA	NA	E 58.6	E 43.0	NA	NA
Average	NA	NA	E 11,343	<sup>E</sup> 2,840	E 8,503	E 18,813	NA NA	NA	<sup>E</sup> 60.3	<sup>E</sup> 45.2	NA	NA

District of Columbia. U.S. exports include shipments to U.S. territories, and imports include receipts from U.S. territories.

Web Pages: • For all available data beginning in 1973, see http://www.eia.gov/totalenergy/data/monthly/#petroleum. • For related information, see http://www.eia.gov/petroleum/.

Sources: • 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. • 1981-2010: EIA, Petroleum Supply Annual, annual reports. • 2011: EIA, Petroleum Supply Monthly, monthly reports; and, for the current two months, Weekly Petroleum Status Report data system and Monthly Energy Review data system calculations. system calculations.

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

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

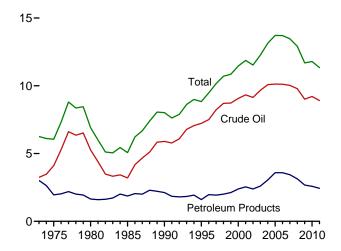
R=Revised. E=Estimate. NA=Not available.

Notes: ● Readers of this table may be interested in a feature article, "Measuring Dependence on Imported Oil," that was published in the August 1995 Monthly Energy See http://www.eia.gov/totalenergy/data/monthly/pdf/historical/imported\_oil.pdf.

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

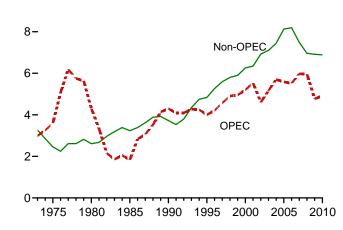
Figure 3.3b Petroleum Trade: Imports (Million Barrels per Day)

Total, Crude Oil, and Petroleum Products, 1973-2011

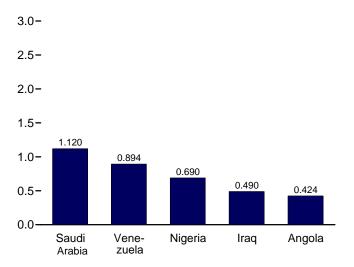


OPEC and Non-OPEC, 1973-2010

10-

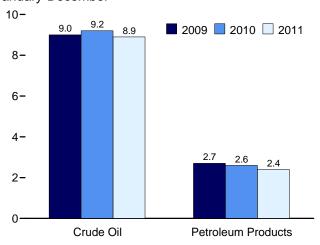


From Selected OPEC Countries, October 2011

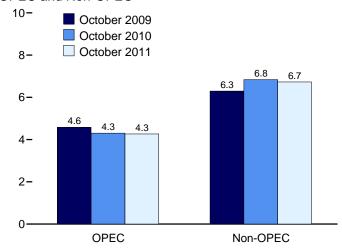


Note: OPEC=Organization of the Petroleum Exporting Countries. Web Page: http://www.eia.gov/totalenergy/data/monthly/#petroleum. Sources: Tables 3.3b–3.3d.

Crude Oil and Petroleum Products, January-December



**OPEC** and Non-OPEC



From Selected Non-OPEC Countries, October 2011

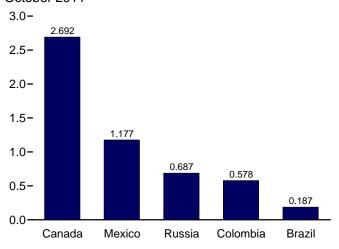


Table 3.3b Petroleum Trade: Imports and Exports by Type

					lm	ports						Export	s
	Crue	de Oila	Distillate	Jet	LPG	b	Motor	Residual			Crude	Petroleum	
	SPR <sup>c,d</sup>	Total	Fuel Oil	Fuele	Propane <sup>f</sup>	Total	Gasoline	Fuel Oil	Otherh	Total	Oila	Products	Total
1973 Average		3,244	392	212	71	132	134	1,853	290	6,256	2	229	231
1975 Average		4,105	155	133	60	112	184	1,223	144	6,056	6	204	209
1980 Average	44	5,263	142	80	69	216	140	939	130	6,909	287	258	544
1985 Average	118	3,201	200	39	67	187	381	510	550	5,067	204	577	781
1990 Average	27	5,894	278	108	115	188	342	504	705	8,018	109	748	857
1995 Average	-	7,230	193	106	102	146	265	187	708	8,835	95	855	949
1996 Average	-	7,508	230	111	119	166	336	248	879	9,478	110	871	981
1997 Average	-	8,225	228	91	113	169	309	194	945	10,162	108	896	1,003
1998 Average		8,706	210	124	137	194	311	275	888	10,708	110	835	945
1999 Average	8	8,731	250 295	128	122	182	382	237	943	10,852	118	822	940
2000 Average	8 11	9,071 9.328	295 344	162 148	161 145	215 206	427 454	352 295	938 1.095	11,459 11.871	50 20	990 951	1,040 971
2001 Average 2002 Average	16	9,326	267	107	145	183	454 498	295 249	1,095	11,530	9	975	984
2002 Average	_10	9,665	333	107	168	225	518	327	1,087	12,264	12	1,014	1,027
2004 Average	77	10.088	325	127	209	263	496	426	1,419	13,145	27	1,014	1,048
2005 Average	52	10,126	329	190	233	328	603	530	1,609	13,714	32	1,133	1.165
2006 Average	8	10,118	365	186	228	332	475	350	1,881	13,707	25	1,292	1,317
2007 Average	7	10,031	304	217	182	247	413	372	1.885	13,468	27	1,405	1,433
2008 Average	19	9,783	213	103	185	253	302	349	1,913	12,915	29	1,773	1,802
2009 January	33	9,779	368	89	223	253	236	424	1,978	13,127	36	1,885	1,922
February	34	9,074	327	71	207	234	263	349	1,776	12,095	30	1,778	1,808
March	221	9,378	269	92	218	249	274	381	1,804	12,446	30	1,807	1,838
April	154	9,374	166	90	124 105	164 172	227 244	396	1,545	11,962	27 53	1,874	1,900
May	52 77	8,797 9,135	206 245	66 65	70	98	244 218	341 363	1,650 1,812	11,477 11,936	53	1,962 1,906	2,015 1,963
June July		9,094	191	102	100	128	230	268	1,812	11,830	31	2,317	2,348
August	16	8,814	166	92	63	105	304	256	1,446	11,183	35	2,084	2,119
September	32	9.254	205	91	95	124	142	309	1,631	11,756	42	2.063	2,105
October		8.566	177	84	145	182	161	303	1.404	10,878	72	2,151	2,223
November	35	8,740	164	71	206	238	149	282	1,462	11,105	46	1,983	2,029
December	16	8,170	224	55	212	241	232	307	1,305	10,534	65	1,931	1,996
Average	56	9,013	225	81	147	182	223	331	1,635	11,691	44	1,980	2,024
2010 January	-	8,492	462	131	192	225	179	376	1,435	11,300	33	1,864	1,897
February	_	8,761	293	75 79	217	242	196	382 376	1,282	11,230	58 45	1,976	2,034
March	_	9,341 9,726	179 220	79 88	137 79	155 102	120 178	480	1,370 1,732	11,621	37	2,104 2.396	2,149 2.432
April May	_	9,720	189	81	82	102	107	404	1,732	12,526 12,141	36	2,363	2,432
June	_	9,927	237	114	73	113	163	283	1,607	12,444	31	2,303	2,304
July	_	9.932	170	113	56	104	114	400	1,841	12,675	69	2,273	2,516
August	_	9,543	246	103	62	107	129	330	1,899	12,356	36	2,374	2,410
September	_	9,229	189	122	85	124	130	367	1,662	11,823	61	2,283	2,345
October	-	8,540	163	94	131	165	86	337	1,758	11,142	23	2,457	2,480
November	-	8,699	178	101	132	165	117	345	1,491	11,096	32	2,567	2,598
December	-	8,695	219	73	214	231	99	315	1,501	11,132	40	2,604	2,644
Average	-	9,213	228	98	121	153	134	366	1,600	11,793	42	2,311	2,353
2011 January	_	9,069	326	65	172	204	103	456	1,733	11,954	72	2,616	2,687
February	-	8,013	206	68	172	199	119	428	1,471	10,503	30	2,544	2,575
March	-	9,033	190	65	136	165	135	468	1,538	11,593	36	2,623	2,660
April	-	8,715	186	80	94	113	138	519	1,842	11,592	41	2,862	2,903
May	_	8,988	167	91	73	100	137	299	1,887	11,669	37	2,605	2,642
June	_	9,247 9,310	126 153	82 95	58 61	85 84	130 92	371 246	1,753 1,686	11,794 11,667	36 73	2,571 2,846	2,607 2,919
July	_	9,310	148	95 66	72	100	106	246 229	1,686	11,667 11,145	34	2,846 3.037	2,919 3.071
August	_	9,021	148	58	107	130	99	229 276	1,474	11,145	35	3,037	3,071
September October	_	R 9.029	R 127	R 61	R 93	R 116	R 66	R 282	R 1,314	R 10,994	R 51	8 3,054	8 3,104
November	_	E 8,803	E 135	E 61	E 97	NA	E 66	E 387	NA	E 11,089	E 36	E 2,823	E 2,859
December	_	E 8,602	E 162	E 23	E 146	NA	_E 83	E 356	NA	E 10,838	E 36	E 2,844	E 2,880
Average	_	E 8,910	E 175	E 68	€ 106	NA	<sup>E</sup> 106	E 359	NA	E 11,343	E 43	E 2,797	E 2,840
		5,5.5						555	. 47-1	,5-70	13	_,,	_,0-10

Includes lease condensate.

naphtha-type jet fuel. R=Revised. E=Estimate. NA=Not available. - =Not applicable. - =No data reported. Notes:

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

Web Pages: • For all available data beginning in 1973, see

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Sources: • 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. • 1981-2010: EIA, Petroleum Supply Annual, annual reports. • 2011: EIA, Petroleum Supply Monthly, monthly reports; and, for the current two months, Weekly Petroleum Status Report data system and Monthly Energy Review data system calculations. system calculations.

a Includes lease condensate.
b Liquefied petroleum gases.
c "SPR" is the Strategic Petroleum Reserve, which began in October 1977.
Through 2003, includes crude oil imports by SPR only; beginning in 2004, includes crude oil imports by SPR, and crude oil imports into SPR by others.
d See Note 6, "Petroleum Data Discrepancies," at end of section.
e Through 2004, includes kerosene-type and naphtha-type jet fuel. Beginning in 2005, includes kerosene-type jet fuel only; naphtha-type jet fuel is included in "Other"

nter.

f Includes propylene.

Finished motor gasoline. Through 1980, also includes motor gasoline

blending components.

<sup>h</sup> Asphalt and road oil, finished aviation gasoline, gasoline blending components, kerosene, lubricants, pentanes plus, petrochemical feedstocks, petroleum coke, special naphthas, unfinished oils, waxes, other hydrocarbons and oxygenates, and miscellaneous products. Beginning in 2005, also includes

Table 3.3c Petroleum Trade: Imports From OPEC Countries

	Algeria	Angolaa	Ecuadorb	Iraq	Kuwait <sup>c</sup>	Libya	Nigeria	Saudi Arabia <sup>c</sup>	Vene- zuela	<b>Other</b> <sup>d</sup>	Total OPEC
070 4	400	(a)	40			404	450	400	4.405		
973 Average	136		48	4	47	164	459	486	1,135	514	2,993
975 Average	282	(a)	57	2	16	232	762	715	702	832	3,601
980 Average	488	(a)	27	28	27	554	857	1,261	481	577	4,300
985 Average	187	(a)	67	46	21	4	293	168	605	439	1,830
990 Average	280	( )	49	518	86	0	800	1,339	1,025	199	4,296
995 Average	234	(a)	(b)	0	218	0	627	1,344	1,480	98	4,002
996 Average	256	(a)	(b)	1	236	0	617	1,363	1,676	62	4,211
997 Average	285	(a)	( b )	89	253	0	698	1,407	1,773	64	4,569
998 Average	290	(a)	(þ)	336	301	0	696	1,491	1,719	73	4,905
999 Average	259	(a)	(b)	725	248	0	657	1,478	1,493	93	4,953
000 Average	225	(a)	( b )	620	272	0	896	1,572	1,546	72	5,203
001 Average	278	(a)	(b)	795	250	0	885	1,662	1,553	105	5,528
002 Average	264	(a)	(b)	459	228	0	621	1,552	1,398	83	4,605
003 Average	382	(a)	(b)	481	220	0	867	1,774	1,376	61	5,162
004 Average	452	(a)	(b)	656	250	20	1,140	1,558	1,554	70	5,701
005 Average	478	(a)	(b)	531	243	56	1,166	1,537	1,529	47	5,587
006 Average	657	(a)	(b)	553	185	87	1,114	1,463	1,419	38	5,517
007 Average	670	`5ó8	(b)	484	181	117	1,134	1,485	1,361	39	5,980
008 Average	548	513	`221	627	210	103	988	1,529	1,189	26	5,954
009 January	720	541	278	568	242	64	524	1,362	1,353	38	5,689
February	375	671	243	554	251	60	496	1,118	1,139	51	4,958
March	463	653	215	587	181	61	891	967	1,106	88	5,212
April	626	462	237	484	105	118	733	1,057	891	90	4,803
May	272	505	193	295	106	99	626	1,102	1,141	33	4,372
June	433	447	154	390	179	103	830	959	1,256	75	4,825
July	383	320	198	321	187	69	879	1,046	976	176	4,554
August	551	364	131	500	148	68	917	729	1,070	51	4,530
September	655	414	153	428	246	54	912	1,045	1,146	-	5,052
October	491	450	180	499	104	91	869	943	955	_	4.581
November	400	431	155	461	287	140	980	858	874	_	4,585
December	544	278	86	325	160	23	1,029	877	849	_	4,171
Average	493	460	185	450	182	79	809	1,004	1,063	50	4,776
010 January	498	280	215	523	77	40	1,048	963	911	_	4,554
February	498	360	152	540	228	40	932	898	1,010	_	4,659
March	455	502	183	475	218	79	962	1,149	1,061	_	5,084
April	464	509	225	490	278	142	1,060	1,257	951	_	5,376
May	518	448	182	394	225	39	1,026	1,097	1,117	10	5,055
June	550	425	245	630	217	98	1,108	1,125	899		5.297
July	518	374	239	430	189	110	1,174	1,053	1,084	7	5,178
August	565	484	276	281	251	123	985	1,132	1.022		5,117
September	543	417	229	422	172	43	1,174	1,093	1,008	10	5,111
October	451	324	203	143	215	36	872	1,131	930	_	4,305
November	572	276	194	340	170	23	856	1,152	942	_	4,505
December	484	319	192	336	125	66	1,070	1,093	917	9	4,614
Average	510	393	212	415	197	<b>70</b>	1,023	1,096	988	3	4,906
011 January	565	316	178	470	147	57	1,007	1,102	1,030	_	4,872
February	394	370	242	263	118	35	978	1.114	989	_	4.504
March	500	280	146	382	161	31	913	1,108	1,067	_	4,588
April	466	277	142	519	78	(s)	922	1,107	997	_	4.509
May	400	356	134	407	200	(s)	854	1,203	999	19	4,572
June	293	373	219	559	238	35	853	1,169	1,077	68	4,883
July	354	407	172	596	228	-	884	1,326	943	18	4,928
	298	331	309	637	165	1	892	1,075	906	32	4,928
August	296 291	304	305	404	145	2	580	1,479	806	32 11	4,046
September		304 424		490		2					
October	173		178		278		690 857	1,120	894	17	4,267
10-Month Average	374	344	202	475	177	16	857	1,180	971	17	4,611
010 10-Month Average 009 10-Month Average	506 497	412 481	215 198	431 462	207 174	75 79	1,034 770	1,091 1,032	1,000 1,103	3 60	4,974 4,856

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. States and the District of Columbia.

Web Pages: • For all available data beginning in 1973, see http://www.eia.gov/totalenergy/data/monthly/#petroleum. • For related information,

see http://www.eia.gov/lotaierlegy/data/mininthiy/#petroleum. • Por related information, see http://www.eia.gov/petroleum/.

Sources: • 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. • 1981-2010: EIA, Petroleum Supply Annual, annual reports. • 2011: EIA, Petroleum Supply Monthly, monthly reports.

Angola joined OPEC in January 2007. For 1973-2006, Angola is included in "Total Non-OPEC" on Table 3.3d.
 Ecuador was a member of OPEC from 1973-1992, and rejoined OPEC in November 2007. For 1993-2007, Ecuador is included in "Total Non-OPEC" on Table 2.3

Table 3.3d.

c Imports from the Neutral Zone are reported as originating in either Saudi Arabia or Kuwait depending on the country reported to U.S. Customs.

d For all years, includes Iran, Qatar, and United Arab Emirates. For 1973-2008, also includes Indonesia; and for 1975-1994, also includes Gabon.

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

Table 3.3d Petroleum Trade: Imports From Non-OPEC Countries

	Brazil	Canada	Colombia	Mexico	Nether- lands	Norway	Russiaa	United Kingdom	U.S. Virgin Islands	Other	Total Non-OPEC
1973 Average	9	1.325	9	16	53	1	26	15	329	1.480	3,263
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
1996 Average	9	1,424	234	1,244	19	313	25	308	313	1,377	5,267
1997 Average	5	1,563	271	1,385	25	309	13	226	300	1,495	5,593
1998 Average	26	1,598	354	1,351	31	236	24	250	293	1,640	5,803
1999 Average	26	1,539	468	1,324	27	304	89	365	280	1,478	5,899
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
<b>2009</b> January	450	2,549	269	1,377	127	90	516	148	367	1,545	7,438
February	381	2,529	241	1,364	189	74	472	281	337	1,269	7,137
March	338	2,446	283	1,199	141	179	642	208	264	1,534	7,235
April	278	2,287	347	1,289	117	112	759	401	290	1,278	7,158
May	386	2,215	243	1,186	150	179	809	250	313	1,373	7,105
June	299	2,538	313	1,190	157	173	618	268	276	1,279	7,111
July	408	2,664	289	1,076	118	101	758	203	273	1,387	7,276
August	275	2,523	269	1,159	160	52	505	225	223	1,263	6,653
September	268	2,358	301	1,271	122	59	486	295	280	1,263	6,703
October	174	2,367	292	1,136	84	97	385	278	215	1,268	6,297
November	268	2,565	237	1,084	227	110	415	190	205	1,219	6,520
December	184	2,710	231	1,204	99	65	385	199	289	998	6,363
Average	309	2,479	276	1,210	140	108	563	245	277	1,307	6,915
2010 January	353	2,596	322	1,133	116	126	463	282	298	1,057	6,747
February	226	2,491	386	1,137	126	99	423	413	196	1,074	6,571
March	306	2,505	251	1,306	136	59	494	267	235	977	6,538
April	318	2,472	423	1,282	89	166	587	304	331	1,178	7,149
May	319	2,528	315	1,428	108	119	719	176	195	1,180	7,087
June	308	2,717	407	1,211	87	52	760	269	246	1,090	7,146
July	332	2,549	404	1,289	207	119	719	351	239	1,287	7,497
August	251	2,489	372	1,282	137	57	786	266	301	1,298	7,239
September	181	2,479	363	1,254	45	62	648	178	302	1,200	6,712
October	169	2,347	422	1,347	108	111	655	152	270	1,255	6,837
November	198	2,513	492	1,363	57	79	561	187	234	886	6,571
December Average	295 <b>272</b>	2,736 <b>2,535</b>	231 <b>365</b>	1,365 <b>1,284</b>	71 <b>108</b>	26 <b>89</b>	514 <b>612</b>	236 <b>256</b>	191 <b>253</b>	855 <b>1,112</b>	6,518 <b>6,887</b>
<b>2011</b> January	274	2,826	332	1,366	101	85	531	155	276	1,136	7,082
February	274 177	2,820	332 211	1,300	129	69	437	110	182	749	7,062 5.999
March	161	2,666	399	1,104	91	156	690	197	149	1,177	7,005
April	227	2,625	516	1,077	133	167	704	187	179	1,177	7,003
May	282	2,023	433	1,077	128	101	677	233	179	1,283	7,083
June	285	2,524	309	1,222	175	93	689	146	151	1,203	6,911
July	329	2,626	415	1,197	80	58	562	175	192	1,105	6.739
August	228	2,637	395	1,185	81	87	585	125	185	988	6,497
September	188	2,829	529	1,192	64	97	592	123	189	1,079	6,883
October	187	2,629	578	1,177	23	180	687	150	151	903	6,727
10-Month Average	<b>234</b>	2,692 <b>2,672</b>	413	1,214	100	110	617	161	185	1,103	6,809
2010 10-Month Average	277	2,517	366	1,268	116	97	627	265	262	1,161	6,956
2009 10-Month Average	326	2,447	285	1,223	136	112	596	255	283	1,347	7,010

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

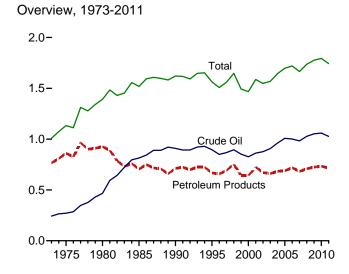
coverage is the 50 States and the District of Columbia.

Web Pages: • For all available data beginning in 1973, see http://www.eia.gov/totalenergy/data/monthly/#petroleum. • For related information, see http://www.eia.gov/petroleum/.

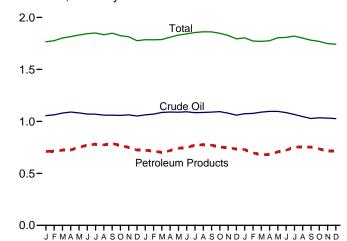
Sources: • 1973-1975: Bureau of Mines, Mineral Industry Surveys, Petroleum Statement, Annual, annual reports. • 1976-1980: U.S. Energy Information Administration (EIA), Energy Data Reports, Petroleum Statement, Annual, annual reports. • 1981-2010: EIA, Petroleum Supply Annual, annual reports. • 2011: EIA, Petroleum Supply Monthly, monthly reports.

Figure 3.4 Petroleum Stocks

(Billion Barrels, Except as Noted)

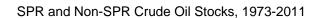


#### Overview, Monthly

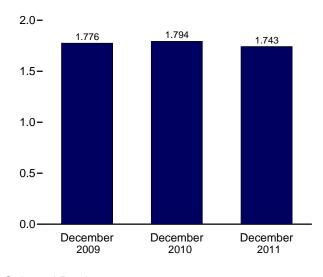


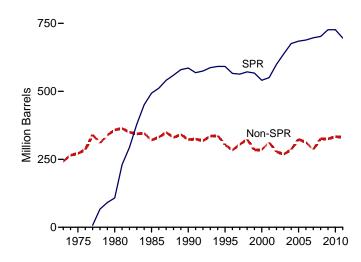
2010

Total Stocks (Crude Oil and Petroleum Products)

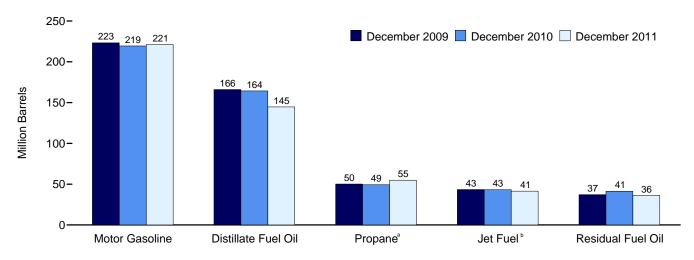


2009





#### Selected Products



<sup>&</sup>lt;sup>a</sup> Includes propylene.

46

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

period

Web Page: http://www.eia.gov/totalenergy/data/monthly/#petroleum. Source: Table 3.4.

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

Table 3.4 Petroleum Stocks

(Million Barrels)

		Crude Oila				LPC	<b>S</b> b				
	SPR <sup>c</sup>	Non-SPR <sup>d,e,f</sup>	Total <sup>e,f</sup>	Distillate Fuel Oil <sup>f,g</sup>	Jet Fuel <sup>h</sup>	Propane <sup>f,i</sup>	Total <sup>f</sup>	Motor Gasoline <sup>f,j</sup>	Residual Fuel Oil <sup>f</sup>	Other <sup>k</sup>	Total <sup>f</sup>
1973 Year		242	242	196	29	65	99	209	53	179	1,008
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	895 850	130 127	40 40	43 43	93	202	37	165	1,563
1996 Year	566 563	284 305	850 868	138	40 44	43 44	86 89	195 210	46 40	164 169	1,507 1.560
1997 Year 1998 Year	571	303 324	895	156	45	65	115	216	40 45	176	1,647
1999 Year	567	284	852	125	41	43	89	193	36	157	1,493
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 January	704	351	1,055	144	41	46	98	220	34	174	1,766
February	706	358	1,063	148	43	40	89	216	38	178	1,777
March	713	367	1,080	145	43	40	91	217	38	188	1,803
April	719	371	1,090	150	44	45	100	211	34	187	1,816
May	722	360	1,081	157	45	56	117	204	38	189	1,831
June	724	347	1,071	163	45	64	133	214	37	182	1,844
July	724	345	1,070	166	47	70	145	212	35	175	1,850
August	724	336	1,060	169	46	71	153	208	33	165	1,834
September	725	335 333	1,060	173 171	46 44	75 72	156	214	35 35	164	1,848
October	725 726	337	1,058 1,063	171	44	63	146 123	211 220	36	161 158	1,825
November December	726 <b>727</b>	325	1,063 1,052	166	42 <b>43</b>	50	123 102	223	37	156 153	1,814 <b>1,776</b>
2010 January	727	337	1,063	164	44	35	80 70	232	40	162	1,786
February	727 727	343 359	1,070 1,086	155 147	44 42	28 28	70 73	235 225	41 41	170 174	1,785 1.787
March April	727	363	1,000	147	42	26 35	73 89	220	41	174	1,767
May	727	362	1,089	150	45	42	105	218	46	178	1,830
June	727	365	1,009	158	45	49	120	216	43	169	1,842
July	727	358	1,084	167	47	55	130	220	41	166	1.855
August	727	359	1,086	170	47	59	139	221	39	159	1,862
September	727	363	1,089	167	47	61	141	219	40	158	1,861
October	727	368	1,094	162	44	61	138	210	41	158	1,847
November	727	352	1,079	162	44	61	131	213	41	158	1,827
December	727	333	1,060	164	43	49	108	219	41	158	1,794
2011 January	727	347	1,074	162	41	35	85	235	39	166	1,803
February	727	350	1,077	154	39	26	71	229	35	168	1,773
March	727	363	1,089	149	40	24	69	215	37	171	1,770
April	727	369	1,096	143	39	28	80	205	39	175	1,776
May	727	370	1,096	145	41	34	92	214	37	180	1,805
June	727	358	1,085	144	42	40	105	215	37	179	1,808
July	718	348	1,066	158	44	47	119	217	37	178	1,820
August	696	349	1,046	157	43	52 57	130	212	39	173	1,801
September	696	332	1,028	154 <sup>R</sup> 143	46 <sup>R</sup> 46	57	132	216	35 <sup>R</sup> 37	170 <sup>R</sup> 169	1,781
October	696 E 696	339 E 336	1,035 E 1,032	<sup>1</sup> 143 E 141	E 42	60 E 60	<sup>R</sup> 133 <sup>E</sup> 139	R 208 E 214	E 38	E 143	<sup>R</sup> 1,770 <sup>E</sup> 1,749
November	E <b>696</b>	E 331	E <b>1,03</b> 2	E <b>14</b> 1	E <b>41</b>	E <b>55</b>	E 139	E <b>221</b>	E 36	E 143	E <b>1,749</b>
December	- 030	- 331	1,021	- 145	- 41	- 55	- 130	- 221	- 30	- 143	1,743

a Includes lease condensate.

components, kerosene, lubricants, pentanes plus, petrochemical feedstocks, petroleum coke, special naphthas, unfinished oils, waxes, miscellaneous products, oxygenates, renewable fuels, and other hydrocarbons. Beginning in 2005, also

oxygenates, reinewable ruets, and onto hydrocarbons. Segment and includes naphtha-type jet fuel.

R=Revised. E=Estimate. — =Not applicable.

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

and the District of Columbia.

Web Pages: • For all available data beginning in 1973, see http://www.eia.gov/totalenergy/data/monthly/#petroleum. • For related information, see http://www.eia.gov/petroleum/.

Sources: • 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. • 1981-2010: EIA, Petroleum Supply Annual, annual reports. • 2011: EIA, Petroleum Supply Monthly, monthly reports; and, for the current two months, Weekly Petroleum Status Report data system and Monthly Energy Review data system calculations.

Liquefied petroleum gases.

c "SPR" is the Strategic Petroleum Reserve, which began in October 1977. <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. See Note 5, "Stocks of Alaskan Crude Oil," at end of section.

<sup>f</sup> See Note 4, "Petroleum New Stock Basis," at end of section.

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

<sup>h</sup> Through 2004, includes kerosene-type and naphtha-type jet fuel. Beginning in 2005, includes kerosene-type jet fuel only; naphtha-type jet fuel is included in "Other."

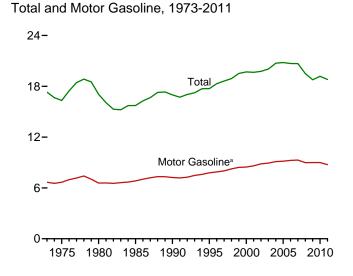
<sup>l</sup> Includes propylene.

Includes propylene.

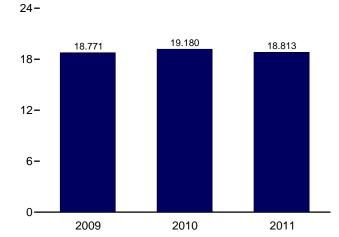
Includes finished motor gasoline and motor gasoline blending components; excludes oxygenates.

<sup>k</sup> Asphalt and road oil, aviation gasoline, aviation gasoline blending

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



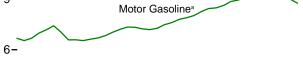
#### Total, January-December

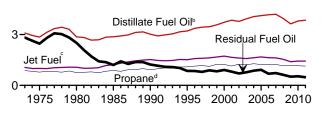


#### Selected Products, 1973-2011

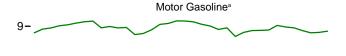


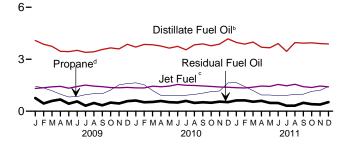




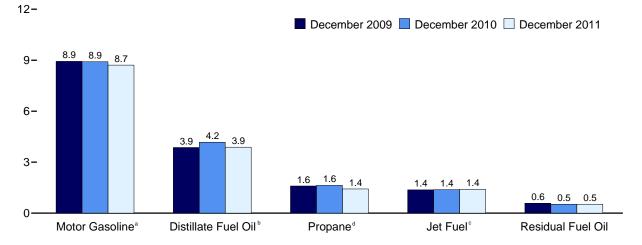


Selected Products, Monthly 12-





#### Selected Products



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

Note: SPR= Strategic Petroleum Reserve.

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

Source: Table 3.5.

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

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

<sup>&</sup>lt;sup>d</sup> Includes propylene.

Table 3.5 Petroleum Products Supplied by Type

Part	,	Asphalt					LPG	≥a			Petro-			
1975 Average 386 35 2,866 1,068 158 784 1,469 159 676 237 2,569 1,561 17,066 1893 Average 386 35 2,866 1,668 158 784 1,469 159 6,675 247 2,2462 1,001 16,322 1383 Average 425 2,2868 1,218 11,218 11,006 1,839 156 7,762 237 2,569 1,551 17,065 1895 Average 488 21 3,207 1,514 4 81,006 1,839 156 7,762 30 1,502 1,003 15,728 1995 Average 505 22 3,345 1,599 66 1,106 1,70 2,003 160 8,017 377 797 1,605 18,009 1997 Average 505 22 3,435 1,599 66 1,170 2,0038 160 8,017 377 797 1,605 18,009 18,009 1997 Average 505 22 3,455 1,599 66 1,170 2,0038 160 8,017 377 797 1,605 18,009 18,009 1,000 Average 512 1 3,461 1,622 37 78 1,120 1,125 2,231 168 8,23 447 887 1,508 18,917 2000 Average 512 18 3,766 1,614 43 1,248 2,163 151 8,846 437 811 1,441 19,649 1,000 Average 512 18 3,376 1,614 43 1,248 2,163 151 8,846 437 811 1,441 19,649 1,000 Average 503 16 3,227 1,578 1,509 67 1,248 2,044 153 8,610 43 8,76 1,614 43 1,248 2,163 151 8,846 437 70 1,474 19,649 1,000 Average 521 18 4,169 1,639		and									leum		Other <sup>f</sup>	Total
1975 Average 386 35 2,866 1,068 158 784 1,469 159 676 237 2,569 1,561 17,066 1893 Average 386 35 2,866 1,668 158 784 1,469 159 6,675 247 2,2462 1,001 16,322 1383 Average 425 2,2868 1,218 11,218 11,006 1,839 156 7,762 237 2,569 1,551 17,065 1895 Average 488 21 3,207 1,514 4 81,006 1,839 156 7,762 30 1,502 1,003 15,728 1995 Average 505 22 3,345 1,599 66 1,106 1,70 2,003 160 8,017 377 797 1,605 18,009 1997 Average 505 22 3,435 1,599 66 1,170 2,0038 160 8,017 377 797 1,605 18,009 18,009 1997 Average 505 22 3,455 1,599 66 1,170 2,0038 160 8,017 377 797 1,605 18,009 18,009 1,000 Average 512 1 3,461 1,622 37 78 1,120 1,125 2,231 168 8,23 447 887 1,508 18,917 2000 Average 512 18 3,766 1,614 43 1,248 2,163 151 8,846 437 811 1,441 19,649 1,000 Average 512 18 3,376 1,614 43 1,248 2,163 151 8,846 437 811 1,441 19,649 1,000 Average 503 16 3,227 1,578 1,509 67 1,248 2,044 153 8,610 43 8,76 1,614 43 1,248 2,163 151 8,846 437 70 1,474 19,649 1,000 Average 521 18 4,169 1,639	1072 Average	E22	45	2 002	1.050	216	072	1 440	162	6 674	261	2 022	1 005	17 200
1980 Average														
1985 Average														
1990 Average														
1995 Average	1990 Average													
1997 Average 551 19 3,461 1,622 78 1,120 1,152 168 8,253 447 887 1,508 18,297 1999 Average 521 19 3,461 1,673 73 1,246 2,195 169 8,431 477 830 1,532 19,519 1999 Average 525 20 3,722 1,725 67 1,235 2,231 166 8,431 477 830 1,532 19,519 1900 Average 525 20 3,722 1,725 67 1,235 2,231 166 8,431 477 830 1,532 19,519 1900 Average 525 20 3,722 1,725 67 1,235 2,231 166 8,431 477 830 1,532 19,519 1900 Average 502 16 8 3,447 1,655 472 406 999 1,488 19,701 1900 Average 503 16 3,927 1,738 55 1,148 2,044 19,045 19,045 19,049 1,481 19,049 1,481 19,045 19,049 1,481 19,049 1,		486	21	3,207		54	1,096	1,899	156	7,789	365	852	1,381	
1998 Average 521 19 3,461 1,622 78 1,120 1,952 168 8,253 447 887 1,508 18,917 1999 Average 547 21 3,572 1,673 73 1,246 2,195 169 8,431 477 830 1,532 19,519 2000 Average 519 19 3,847 1,655 72 1,142 2,044 153 8,610 437 811 1,418 11,964 2002 Average 519 19 3,847 1,655 72 1,142 2,044 153 8,610 437 811 1,418 11,964 2002 Average 510 18 3,776 1,614 45 1,245 2,163 11 8,917 1,000 1,477 19,761 1,000 1,477 1,0		484	20	3,365	1,578	62	1,136	2,012	151	7,891	379	848	1,518	18,309
1999 Average         547         21         3,772         1,673         73         1,246         2,195         169         8,431         477         830         1,532         19,519           2000 Average         519         19         3,847         1,655         72         1,142         2,044         153         8,610         437         811         1,481         19,649           2002 Average         512         18         3,776         1,614         53         1,248         2,133         161         8,848         463         702         1,474         19,761           2002 Average         503         17         3,952         1,530         54         1,275         2,132         141         8,948         463         702         1,474         1,776           2005 Average         521         18         4,169         1,633         54         1,215         2,020         141         9,159         515         920         1,605         20,020           2007 Average         441         4,184         1,622         32         1,235         2,085         132         8,253         426         607         723         1,539         1,539         1,540         8,200	1997 Average													
2000 Average														
2001 Average 519 19 3,847 1,655 72 1,142 2,044 153 8,610 437 811 1,481 19,649 2002 Average 512 18 3,776 1,614 43 1,248 2,163 151 8,848 463 700 1,474 19,161 2003 Average 503 16 3,927 1,578 55 1,215 2,074 140 8,935 455 772 1,579 20,034 2004 Average 537 17 4,058 1,630 64 1,276 2,132 141 9,195 512 820 1,657 20,731 2005 Average 541 13 4,118 1,679 70 1,229 2,030 147 9,195 515 920 1,600 20,802 2007 Average 541 13 4,118 1,679 70 1,229 2,030 147 9,195 515 920 1,600 20,802 2007 Average 414 17 15 3,945 1,539 14 1,15														
2002 Average 512 18 3,776 1,614 43 1,248 2,163 151 8,848 463 700 1,474 19,761 2003 Average 503 16 3,927 1,578 555 1,215 2,074 140 9,105 524 865 1,657 20,731 2004 Average 546 19 4,118 1,679 70 1,229 2,030 141 9,159 515 920 1,605 2008 2006 Average 546 19 4,118 1,679 70 1,229 2,030 141 9,159 515 920 1,605 2008 2006 Average 494 17 4,196 1,633 54 1,215 2,052 137 9,253 522 689 1,640 20,687 2007 Average 494 17 7 4,196 1,622 32 1,225 2,085 142 9,286 490 723 1,593 20,680 2008 Average 417 15 3,945 1,539 14 1,154 1,954 131 8,999 464 622 1,408 19,488 2099 Average 494 17 4,196 1,622 32 1,225 2,085 142 9,286 490 723 1,593 20,680 2008 Average 417 15 3,345 1,539 14 1,154 1,954 131 8,999 464 622 1,408 19,488 2099 Average 277 10 3,864 1,355 40 1,314 2,139 16 8,623 426 760 1,373 19,048 19,488 2099 Average 277 10 3,864 1,355 40 1,314 2,139 16 8,623 425 448 1,330 18,822 Average 279 15 3,455 1,432 14 981 1,906 125 9,029 496 677 1,222 18,672 Average 3,44 1,44 1,446 16 1,181 2,143 19,44 1,44 1,44 1,44 1,44 1,44 1,44 1,4														
2003 Average         503         16         3,927         1,578         55         1,215         2,074         140         8,935         455         772         1,579         20,031           2004 Average         546         19         4,118         1,639         70         1,229         2,030         141         9,159         515         920         1,605         20,081           2006 Average         521         18         4,169         1,633         54         1,215         2,052         137         9,253         522         689         1,600         20,080           2007 Average         494         17         4,196         1,622         32         1,225         2,085         142         9,928         490         723         1,393         20,680           2008 Average         417         15         3,495         1,522         32         1,225         2,085         142         9,986         490         723         1,593         20,080           2008 Average         417         15         3,495         1,356         40         1,341         1,414         2,094         120         8,623         426         448         1,309         1,417         1,418														
2004 Average 557 17 4, 4,058 1,630 64 1,276 2,132 141 9,105 524 865 1,657 20,731 2005 Average 521 18 4,169 1,633 54 1,215 2,052 137 9,253 522 689 1,640 20,680 2006 Average 494 17 4,196 1,622 32 1,255 2,085 142 9,286 490 723 1,593 20,680 2008 Average 417 15 3,3945 1,539 14 1,154 1,954 131 8,899 464 622 1,408 19,438 2009 January 195 13 4,079 1,312 44 1,444 2,094 120 8,623 426 750 1,373 19,040 Average 1417 15 3,864 1,355 40 1,341 2,139 96 8,836 425 448 1,330 18,822 Average 1417 13 3,436 1,329 14 8,841 2,094 120 8,623 426 750 1,373 19,040 Average 1417 13 3,436 1,329 14 8,841 2,094 120 8,623 426 750 1,373 19,040 Average 1417 13 3,436 1,329 14 8,841 2,094 120 8,623 426 750 1,373 18,022 Average 1417 14,066 1,341 2,139 96 8,836 425 448 1,330 18,822 Average 1417 14,066 1,341 2,139 96 8,836 425 448 1,330 18,822 Average 1417 14,066 1,341 2,139 96 8,836 425 448 1,330 18,822 Average 1418 1,341 4,406 16 1,181 2,043 112 8,903 420 591 1,170 18,719 Average 1418 3,455 1,432 14 881 1,774 101 9,084 601 433 1,154 18,211 June 512 18 3,513 1,425 11 849 1,773 124 9,180 536 566 12,133 18,226 August 542 15 3,426 1,449 6 1,012 1,956 138 9,295 407 472 1,244 18,949 Cotober 377 11 3,654 1,362 21 1,219 2,208 133 8,986 329 485 1,236 18,803 November 287 10 3,564 1,332 14 81 1,573 1,244 1,449 1,445 1,44														
2006 Average 546 19 4,118 1,679 70 1,229 2,030 141 9,159 515 920 1,605 20,802 2006 Average 521 18 4,169 1,633 54 1,215 2,052 137 9,253 522 689 1,640 20,687 2007 Average 494 17 4,196 1,622 32 1,235 2,085 142 9,286 490 723 1,593 20,680 2008 Average 4117 15 3,945 1,539 14 1,154 1,954 1,954 131 8,899 464 622 1,408 19,498 2009 January 195 13 4,079 1,312 44 1,444 2,041 131 8,899 464 622 1,408 19,498 2009 January 209 15 3,455 1,432 44 1,356 40 1,341 2,133 9,66 8,836 425 448 31 1,307 18,622 41 1,404 1	2003 Average													
2006   2008														
2007 Average         494         17         4,196         1,622         32         1,235         2,085         142         9,286         490         723         1,593         20,680           2009 January         195         13         4,079         1,312         44         1,444         2,094         120         8,623         426         760         1,373         19,040           February         277         10         3,864         1,366         40         1,341         2,139         96         8,836         425         448         1,330         18,822           March         300         14         3,744         1,406         16         1,181         2,043         12         8,903         420         591         1,170         18,719           April         299         15         3,455         1,432         14         981         1,906         125         9,029         498         677         1,222         18,672           July         495         13         3,436         1,325         11         849         1,731         124         9,180         536         566         1,213         18,822           July         425         15														
2009 Average														
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April 299 15 3,455 1,432 14 981 1,906 125 9,029 498 677 1,222 18,672 May 371 13 3,436 1,329 14 818 1,774 101 9,084 501 433 1,154 18,211 June 512 18 3,513 1,425 11 849 1,731 124 9,180 536 566 566 1,213 18,828 August 542 15 3,426 1,449 6 1,012 1,956 138 9,285 407 472 1,244 18,949 Ctober 377 11 3,654 1,444 4 1,009 1,929 124 8,911 470 340 1,372 18,594 October 377 11 3,654 1,352 22 1,1219 2,208 123 8,986 329 495 1,236 18,803 November 247 10 3,566 1,352 22 1,523 2,531 117 8,906 356 445 1,132 18,753 December 204 15 3,861 1,372 26 1,597 2,504 114 8,931 385 582 1,241 19,237 Average 360 14 3,631 1,393 18 1,160 2,051 118 8,997 427 511 1,251 18,771 1,014 1,0														
May         371         13         3,436         1,329         14         818         1,774         101         9,084         501         433         1,164         18,211           Juln         512         18         3,513         1,425         11         849         1,731         124         9,180         536         566         1,213         18,288           July         495         19         3,395         1,506         1         955         1,807         122         9,260         369         319         1,333         18,828           August         542         15         3,426         1,449         6         1,012         1,956         138         9,295         407         472         1,241         18,949           September         461         19         3,560         1,414         -4         1,009         1,929         124         8,911         470         340         1,372         18,584           October         377         11         3,680         1,352         22         1,523         2,531         117         8,906         356         445         1,122         18,583           Accomber         204         15														
June														
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August 542 15 3,426 1,449 6 1,012 1,956 138 9,295 407 472 1,244 18,949 6 1,012 1,956 138 9,295 407 472 1,244 18,949 6 1,012 1,956 138 1,929 1,014 1,01														
September 461 19 3,560 1,414 -4 1,009 1,929 124 8,911 470 340 1,372 18,594 October 377 11 3,654 1,362 21 1,219 2,208 123 8,986 329 495 1,236 18,803 November 287 10 3,596 1,352 22 1,523 2,531 117 8,906 356 445 1,132 18,753 December 204 15 3,861 1,372 26 1,597 2,504 114 8,931 385 562 1,241 19,237 Average 360 14 3,631 1,393 18 1,160 2,051 118 8,907 427 511 1,251 18,771 2010 January 203 10 3,701 1,344 15 1,638 2,644 116 8,520 268 615 1,218 18,652 February 249 10 3,854 1,343 34 1,526 2,531 137 8,579 334 515 1,263 18,850 March 264 14 3,835 1,443 11 1,193 2,225 138 8,793 425 531 1,421 19,099 April 331 17 3,759 1,410 7 916 1,843 132 9,108 385 590 1,463 19,044 May 378 15 3,639 1,446 11 891 1,878 128 9,162 339 519 1,351 18,866 June 517 18 3,743 1,543 16 901 1,938 155 9,311 411 500 1,386 19,537 July 470 20 3,544 1,494 19 915 1,978 141 9,301 385 595 1,373 19,319 August 537 14 3,830 1,486 9 973 2,025 129 9,255 434 476 1,467 19,662 September 463 20 3,886 1,457 8 1,040 2,084 136 9,112 433 513 1,326 19,348 November 295 11 3,873 1,380 1,432 20 1,160 2,173 131 8,993 376 535 1,343 19,180 20 1,406 1,383 1,396 46 1,168 2,141 125 8,816 389 552 1,333 18,977 December 248 13 3,871 1,343 47 1,423 2,406 121 8,648 282 677 1,264 18,869 March 280 19 3,993 1,399 1,415 19,722 Average 362 15 3,800 1,432 20 1,160 2,173 131 8,993 376 535 1,343 19,180 2011 January 24 14 3,968 1,355 17 1,652 2,660 136 8,412 363 623 1,349 19,121 February 248 13 3,871 1,343 47 1,423 2,406 121 8,648 282 677 1,264 18,669 March 280 19 3,993 1,369 1,451 9 933 1,916 131 8,762 352 600 1,381 18,673 June 455 17 3,903 1,545 4 889 1,938 119 9,046 386 471 1,394 19,272 Average 362 15 3,800 1,435 9 933 1,916 131 8,762 352 600 1,381 18,673 June 455 17 3,903 1,545 4 889 1,938 119 9,046 386 471 1,394 19,272 Average 362 15 3,800 1,432 80 1,461 9 933 1,916 131 8,762 352 600 1,381 18,673 June 455 17 3,903 1,545 4 889 1,938 119 9,046 386 471 1,394 19,274 1,486 1														
October         377         11         3.654         1,362         21         1,219         2,208         123         8,986         329         495         1,236         18,803           November         287         10         3,596         1,352         22         1,523         2,501         117         8,906         356         445         1,132         18,753           December         204         15         3,861         1,372         26         1,597         2,504         114         8,931         385         582         1,214         19,237           Average         360         14         3,631         1,333         18         1,160         2,051         118         8,997         427         511         1,251         18,771           2010         January         203         10         3,701         1,344         15         1,638         2,644         116         8,520         268         615         1,218         18,652           February         249         10         3,854         1,443         11         1,193         2,225         138         8,793         425         531         1,421         19,099           Aprill														
November   287														
December   204		287	10											
2010 January 203 10 3,701 1,344 15 1,638 2,644 116 8,520 268 615 1,218 18,652 February 249 10 3,854 1,343 34 1,526 2,531 137 8,579 334 515 1,263 18,850 March 264 14 3,835 1,443 11 1,193 2,225 138 8,793 425 531 1,421 19,099 April 331 17 3,759 1,410 17 916 1,843 132 9,108 385 590 1,463 19,044 May 378 15 3,639 1,446 11 891 1,878 128 9,162 339 519 1,351 18,866 June 517 18 3,743 1,543 16 901 1,938 155 9,311 411 500 1,386 19,537 July 470 20 3,544 1,494 19 915 1,978 141 9,301 385 595 1,373 19,319 August 537 14 3,830 1,486 9 973 2,025 129 9,255 434 476 1,467 19,662 September 463 20 3,886 1,457 8 1,040 2,084 136 9,112 433 513 1,326 19,438 October 434 15 3,773 1,430 15 1,135 2,126 127 9,016 335 489 1,215 18,974 November 295 11 3,873 1,396 46 1,168 2,141 125 8,816 389 552 1,333 18,977 December 204 12 4,176 1,383 50 1,634 2,677 113 8,911 371 525 1,301 19,722 Average 362 15 3,800 1,432 20 1,160 2,173 131 8,993 376 535 1,343 19,180 2011 January 248 13 3,871 1,343 47 1,432 47 1,423 2,406 121 8,648 282 627 1,264 1,869 April 314 7 3,689 1,451 9 933 1,916 131 8,780 339 547 1,468 19,248 April 314 7 3,689 1,451 9 933 1,916 131 8,780 339 547 1,468 19,248 April 314 7 3,689 1,451 9 933 1,916 131 8,780 339 547 1,468 19,249 130 140 140 140 140 140 140 140 140 140 14			15	3,861	1,372	26		2,504	114	8,931	385	582	1,241	19,237
February 249 10 3,854 1,343 34 1,526 2,531 137 8,579 334 515 1,263 18,850 March 264 14 3,835 1,443 11 1,193 2,225 138 8,793 425 531 1,421 19,099 April 331 17 3,759 1,410 7 916 1,843 132 9,108 385 590 1,463 19,044 May 378 15 3,639 1,446 11 891 1,878 128 9,162 339 519 1,351 18,866 June 517 18 3,743 1,543 16 901 1,938 155 9,311 411 500 1,386 19,537 July 470 20 3,544 1,494 19 915 1,978 141 9,301 385 595 1,373 19,319 August 537 14 3,830 1,486 9 973 2,025 129 9,255 434 476 1,467 19,662 September 463 20 3,886 1,457 8 1,040 2,084 136 9,112 433 513 1,326 19,438 October 434 15 3,773 1,430 15 1,135 2,126 127 9,016 335 489 1,215 18,974 November 295 11 3,873 1,336 46 1,168 2,141 125 8,816 389 552 1,333 18,977 December 204 12 4,176 1,383 50 1,634 2,677 113 8,911 371 525 1,301 19,722 Average 362 15 3,800 1,432 20 1,160 2,173 131 8,993 376 535 1,343 19,180 2011 January 224 14 3,968 1,355 17 1,652 2,660 136 8,412 363 623 1,349 19,121 February 248 13 3,871 1,343 47 1,423 2,406 121 8,648 282 627 1,264 18,869 March 280 19 3,993 1,389 25 1,189 2,291 148 8,750 339 547 1,468 19,248 April 314 7 3,689 1,451 9 933 1,916 131 8,762 352 600 1,381 18,613 May 354 18 3,657 1,429 (s) 933 1,916 131 8,762 352 600 1,381 18,613 May 354 18 3,452 1,466 9 918 1,994 120 8,784 415 478 1,114 18,663 June 455 17 3,903 1,545 4 889 1,994 120 8,784 415 478 1,114 18,663 June 455 17 3,903 1,545 4 889 1,994 120 8,784 415 478 1,114 18,663 June 455 17 3,903 1,545 4 889 1,994 120 8,784 415 478 1,114 18,663 June 455 17 3,903 1,545 4 889 1,994 120 8,784 415 478 1,114 18,663 June 455 17 3,903 1,545 4 889 1,998 119 9,046 386 471 1,394 19,277 July 463 18 3,452 1,466 9 918 1,999 112 8,960 361 316 1,470 18,555 August 543 18 3,999 1,555 5 974 1,987 134 8,907 452 319 1,274 19,153 October 8424 816 83,999 1,555 5 974 1,987 134 8,907 452 319 1,274 19,153 October 8424 816 83,999 1,555 5 974 1,987 134 8,907 452 319 1,274 19,153 October 8424 816 83,999 1,555 5 974 1,987 134 8,907 452 319 1,274 19,153 October 8424 816 83,999 1,555 5 974 1,987 134 8,907 452 319 1,274 19,153 Octobe	Average	360	14	3,631	1,393	18	1,160	2,051	118	8,997	427	511	1,251	18,771
March         264         14         3,835         1,443         11         1,193         2,225         138         8,793         425         531         1,421         19,099           April         331         17         3,759         1,410         7         916         1,843         132         9,108         385         590         1,463         19,044           May         378         15         3,639         1,446         11         891         1,878         128         9,162         339         519         1,351         18,866           June         517         18         3,743         1,543         16         901         1,938         155         9,311         411         500         1,386         19,537           July         470         20         3,544         1,494         19         915         1,978         141         9,301         385         595         1,373         19,319           August         537         14         3,830         1,486         9         973         2,025         129         9,255         434         476         1,467         19,662           September         463         20         3,														
April         331         17         3,759         1,410         7         916         1,843         132         9,108         385         590         1,463         19,044           May         378         15         3,639         1,446         11         891         1,878         128         9,162         339         519         1,351         18,866           July         470         20         3,544         1,494         19         915         1,978         141         9,301         385         595         1,373         19,319           August         537         14         3,830         1,486         9         973         2,025         129         9,255         434         476         1,467         19,662           September         463         20         3,886         1,457         8         1,040         2,084         136         9,112         433         513         1,323         1,946         19,49,48           October         434         15         3,773         1,430         15         1,135         2,126         127         9,016         335         489         1,215         18,974           November         295														
May         378         15         3,639         1,446         11         891         1,878         128         9,162         339         519         1,351         18,866           June         517         18         3,743         1,543         16         901         1,938         155         9,311         411         500         1,386         19,537           July         470         20         3,544         1,494         19         915         1,978         141         9,301         385         595         1,373         19,319           August         537         14         3,830         1,486         9         973         2,025         129         9,255         434         476         1,467         19,662           September         463         20         3,886         1,457         8         1,040         2,084         136         9,112         433         513         1,326         19,438           October         434         15         3,773         1,430         15         1,135         2,126         127         9,016         335         489         1,215         18,974           December         204         12														
June         517         18         3,743         1,543         16         901         1,938         155         9,311         411         500         1,386         19,537           July         470         20         3,544         1,494         19         915         1,978         141         9,301         385         555         1,373         19,319           August         537         14         3,830         1,486         9         973         2,025         129         9,255         434         476         1,467         19,662           September         463         20         3,886         1,457         8         1,040         2,084         136         9,112         433         513         1,326         19,438           October         434         15         3,773         1,430         15         1,135         2,126         127         9,016         335         489         1,215         18,974           November         295         11         3,873         1,396         46         1,168         2,141         125         8,816         389         552         1,301         19,722           Average         362         15														
July         470         20         3,544         1,494         19         915         1,978         141         9,301         385         595         1,373         19,319           August         537         14         3,830         1,486         9         973         2,025         129         9,255         434         476         1,467         19,662           September         463         20         3,886         1,457         8         1,040         2,084         136         9,112         433         513         1,365         19,438           October         434         15         3,773         1,430         15         1,135         2,126         127         9,016         335         489         1,215         18,974           November         295         11         3,873         1,396         46         1,168         2,141         125         8,816         389         552         1,333         18,972           Average         362         15         3,800         1,432         20         1,160         2,173         131         8,993         376         535         1,343         19,180           2011 January         224 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>														
August         537         14         3,830         1,486         9         973         2,025         129         9,255         434         476         1,467         19,662           September         463         20         3,886         1,457         8         1,040         2,084         136         9,112         433         513         1,326         19,438           October         434         15         3,773         1,430         15         1,135         2,126         127         9,016         335         489         1,215         18,974           November         295         11         3,873         1,396         46         1,168         2,141         125         8,816         389         552         1,333         18,977           December         204         12         4,176         1,383         50         1,634         2,677         113         8,993         376         535         1,343         19,172           Average         362         15         3,800         1,432         20         1,160         2,173         131         8,993         376         535         1,343         19,180           2011 January         224														
September         463         20         3,886         1,457         8         1,040         2,084         136         9,112         433         513         1,326         19,438           October         434         15         3,773         1,430         15         1,135         2,126         127         9,016         335         489         1,215         18,974           November         295         11         3,873         1,396         46         1,168         2,141         125         8,816         389         552         1,301         18,974           December         204         12         4,176         1,383         50         1,634         2,677         113         8,911         371         525         1,301         19,722           Average         362         15         3,800         1,432         20         1,160         2,173         131         8,993         376         535         1,343         19,180           2011 January         224         14         3,968         1,355         17         1,652         2,660         136         8,412         363         623         1,349         19,181           February         248														
October         434         15         3,773         1,430         15         1,135         2,126         127         9,016         335         489         1,215         18,974           November         295         11         3,873         1,396         46         1,168         2,141         125         8,816         389         552         1,333         18,977           December         204         12         4,176         1,383         50         1,634         2,677         113         8,911         371         525         1,301         19,722           Average         362         15         3,800         1,432         20         1,160         2,173         131         8,993         376         535         1,343         19,180           2011 January         224         14         3,968         1,355         17         1,652         2,660         136         8,412         363         623         1,349         19,121           February         248         13         3,871         1,343         47         1,423         2,291         148         8,750         339         547         1,264         18,869           March         280	September													
November         295         11         3,873         1,396         46         1,168         2,141         125         8,816         389         552         1,333         18,977           December         204         12         4,176         1,383         50         1,634         2,677         113         8,911         371         525         1,301         19,722           Average         362         15         3,800         1,432         20         1,160         2,173         131         8,993         376         535         1,343         19,180           2011 January         224         14         3,968         1,355         17         1,652         2,660         136         8,412         363         623         1,349         19,121           February         248         13         3,871         1,343         47         1,423         2,406         121         8,648         282         627         1,264         1,869           March         280         19         3,993         1,389         25         1,189         2,291         148         8,750         339         547         1,468         19,248           April         314	October													
December         204         12         4,176         1,383         50         1,634         2,677         113         8,911         371         525         1,301         19,722           Average         362         15         3,800         1,432         20         1,160         2,173         131         8,993         376         535         1,301         19,722           2011 January         224         14         3,968         1,355         17         1,652         2,260         136         8,412         363         623         1,349         19,121           February         248         13         3,871         1,343         47         1,423         2,406         121         8,648         282         627         1,264         18,869           March         280         19         3,993         1,389         25         1,189         2,291         148         8,750         339         547         1,468         19,24           April         314         7         3,689         1,451         9         933         1,916         131         8,762         352         600         1,381         18,613           May         354         18<	November	295	11			46					389	552	1,333	
2011 January 224 14 3,968 1,355 17 1,652 2,660 136 8,412 363 623 1,349 19,121 February 248 13 3,871 1,343 47 1,423 2,406 121 8,648 282 627 1,264 18,869 March 280 19 3,993 1,389 25 1,189 2,291 148 8,750 339 547 1,468 19,248 April 314 7 3,689 1,451 9 933 1,916 131 8,762 352 600 1,381 18,613 May 354 18 3,657 1,429 (s) 934 1,994 120 8,784 415 478 1,114 18,363 June 455 17 3,903 1,545 4 889 1,938 119 9,046 386 471 1,394 19,277 July 463 18 3,452 1,466 9 918 1,929 112 8,960 361 316 1,470 18,555 August 543 18 3,959 1,555 5 974 1,987 134 8,907 452 319 1,274 19,153 September 462 13 3,929 1,417 13 979 2,035 126 8,753 360 482 1,207 18,795 October R 424 R 16 R 3,944 R 1,370 R 4 R 1,147 R 2,140 R 107 R 8,623 R 410 R 402 R 1,132 R 18,563 November F 267 F 12 E 3,903 E 1,452 R 1,77 E 1,202 F 2,221 R 113 E 8,645 F 380 E 384 R 13,07 E 528 E 18,507		204			1,383			2,677	113	8,911				19,722
February         248         13         3,871         1,343         47         1,423         2,406         121         8,648         282         627         1,264         18,869           March         280         19         3,993         1,389         25         1,189         2,291         148         8,750         339         547         1,468         19,248           April         314         7         3,689         1,451         9         933         1,916         131         8,762         352         600         1,381         18,613           May         354         18         3,657         1,429         (s)         934         1,994         120         8,784         415         478         1,114         18,363           June         455         17         3,903         1,545         4         889         1,938         119         9,046         386         471         1,394         19,277           July         463         18         3,452         1,466         9         918         1,929         112         8,960         361         316         1,470         18,555           August         543         18         3,	Average	362	15	3,800	1,432	20	1,160	2,173	131	8,993	376	535	1,343	19,180
March         280         19         3,993         1,389         25         1,189         2,291         148         8,750         339         547         1,468         19,248           April         314         7         3,689         1,451         9         933         1,916         131         8,762         352         600         1,381         18,613           May         354         18         3,657         1,429         (s)         934         1,994         120         8,784         415         478         1,114         18,363           June         455         17         3,903         1,545         4         889         1,938         119         9,046         386         471         1,394         19,277           July         463         18         3,452         1,466         9         918         1,929         112         8,960         361         316         1,470         18,555           August         543         18         3,959         1,555         5         974         1,987         134         8,907         452         319         1,274         19,153           September         462         13         3,92														
April         314         7         3,689         1,451         9         933         1,916         131         8,762         352         600         1,381         18,613           May         354         18         3,657         1,429         (s)         934         1,994         120         8,784         415         478         1,114         18,363           June         455         17         3,903         1,545         4         889         1,938         119         9,046         386         471         1,314         19,277           July         463         18         3,452         1,466         9         918         1,929         112         8,960         361         316         1,470         18,555           August         543         18         3,959         1,555         5         974         1,987         134         8,907         452         319         1,274         19,153           September         462         13         3,929         1,417         13         979         2,035         126         8,753         360         482         1,207         18,795           October         R 424         R 16														
May         354         18         3,657         1,429         (s)         934         1,994         120         8,784         415         478         1,114         18,363           June         455         17         3,903         1,545         4         889         1,938         119         9,046         386         471         1,394         19,277           July         463         18         3,452         1,466         9         918         1,929         112         8,960         361         316         1,470         18,555           August         543         18         3,959         1,555         5         974         1,987         134         8,907         452         319         1,274         19,153           September         462         13         3,929         1,417         13         979         2,035         126         8,753         360         482         1,207         18,795           October         R 424         R 16         R 3,944         R 1,370         R -4         R 1,147         R 2,140         R 107         R 8,623         R 410         R 402         R 1,322         R 18,563           November         F 267														
June         455         17         3,903         1,545         4         889         1,938         119         9,046         386         471         1,394         19,277           July         463         18         3,452         1,466         9         918         1,929         112         8,960         361         316         1,470         18,555           August         543         18         3,959         1,555         5         974         1,987         134         8,907         452         319         1,274         19,153           September         462         13         3,929         1,417         13         979         2,035         126         8,753         360         482         1,207         18,795           October         R 424         R 16         R 3,944         R 1,370         R -4         R 1,417         R 2,140         R 107         R 8,623         R 410         R 402         R 1,132         R 18,563           November         F 267         F 12         E 3,903         E 1,452         R 7,17         E 1,202         F 2,221         R 7,13         E 3,91         E 524         E 828         E 8,867           December         F 16														
July     463     18     3,452     1,466     9     918     1,929     112     8,960     361     316     1,470     18,555       August     543     18     3,959     1,555     5     974     1,987     134     8,907     452     319     1,274     19,153       September     462     13     3,929     1,417     13     979     2,035     126     8,753     360     482     1,207     18,795       October     R     424     R     R     8,3944     R     1,370     R     4     R     1,147     R     8,140     R     8,623     R     410     R     402     R     1,132     R     18,563       November     F     267     F     12     E     3,903     E     1,452     R     1,720     F     2,221     R     113     E     8,645     F     380     E     1,301     E     18,695       December     F     167     F     10     E     3,880     E     1,447     E     2,221     R     113     E     8,695     E     18,695														
August       543       18       3,959       1,555       5       974       1,987       134       8,907       452       319       1,274       19,153         September       462       13       3,929       1,417       13       979       2,035       126       8,753       360       482       1,207       18,795         October       R 424       R 16       R 3,944       R 1,370       R -4       R 1,147       R 2,140       R 107       R 8,623       R 410       R 402       R 1,132       R 18,563         November       F 267       F 12       E 3,903       E 1,452       RF 17       E 1,202       F 2,221       RF 113       E 8,645       F 380       E 384       RE 1,301       E 18,507         December       F 167       F 10       E 3,880       E 1,404       F 27       E 1,424       F 2,461       F 101       E 8,713       F 391       E 524       E 828       E 18,507														
September     462     13     3,929     1,417     13     979     2,035     126     8,753     360     482     1,207     18,795       October     R 424     R 16     R 3,944     R 1,370     R -4     R 1,147     R 2,140     R 107     R 8,623     R 410     R 402     R 1,132     R 1,8563       November     F 267     F 12     F 3,903     F 1,452     R 747     F 1,202     F 2,221     R 713     F 380     E 384     R 2,130     F 18,695       December     F 167     F 10     F 3,880     F 1,404     F 27     F 1,424     F 2,461     F 101     F 8,713     F 391     F 524     F 828     F 18,507														
October	September	462	13	3,929	1,417	13	979	2,035	126	8,753	360	482	1,207	
November		R 424			R 1,370		R 1,147	R 2,140	R 107	R 8,623	R 410		R 1,132	
December £167 £10 £3,880 £1,404 £27 £1,424 £2,461 £101 £8,713 £391 £524 £828 £18,507		F 267			E 1,452	RF 17	E 1,202	F 2,221	RF 113	E 8,645			RE 1,301	E 18,695
Average 5351 51,845 51,432 514 51,138 52,164 5122 58,750 5375 5480 51,265 518,813			F 10		E 1,404	F 27			F 101					
	Average	<sup>∟</sup> 351	<sup>∟</sup> 15	<sup>∟</sup> 3,845	<sup>∟</sup> 1,432	<sup>1</sup> 14	ե 1,138	<sup>□</sup> 2,164	<sup>1</sup> 122	<sup>∟</sup> 8,750	<sup>⊥</sup> 375	<sup>∟</sup> 480	<sup>1</sup> 1,265	⁻ 18,813

greater than -500 barrels per day.

Notes: • Petroleum products supplied is an approximation of petroleum consumption and is synonymous with the term "petroleum consumption" in Tables 3.7a–3.8c. • See Note 7, "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

to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Pages: • For all available data beginning in 1973, see http://www.eia.gov/totalenergy/data/monthly/#petroleum. • For related information, see http://www.eia.gov/petroleum/.

Sources: • 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. • 1981-2010: EIA, Petroleum Supply Annual, annual reports. • 2011: 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.

 <sup>&</sup>lt;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> Through 2004, includes kerosene-type and naphtha-type jet fuel. Beginning in 2005, includes kerosene-type jet fuel only; naphtha-type jet fuel is included in "Other."

<sup>&</sup>quot;Other."

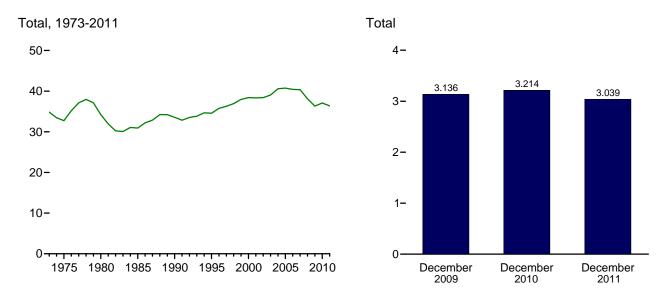
d Includes propylene.
Finished motor gasoline.
Beginning in 1993, also includes fuel ethanol

bended into motor gasoline. Beginning in 1993, also includes ruei euranoi blended into motor gasoline.

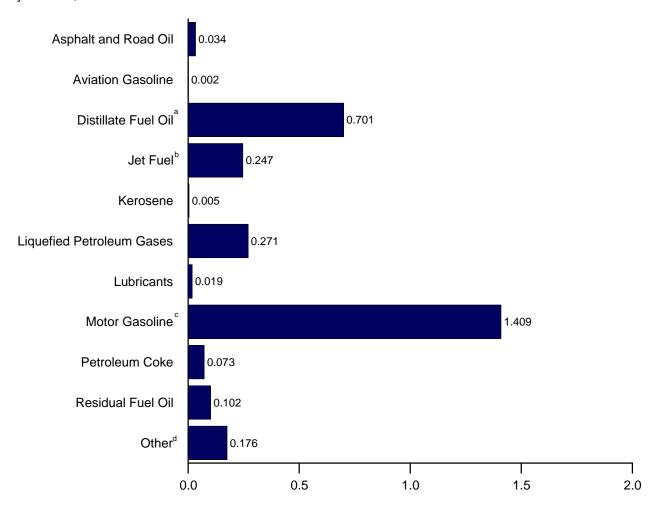
Pentanes plus, petrochemical feedstocks, special naphthas, still gas (refinery gas), waxes, and miscellaneous products. Beginning in 1981, also includes negative barrels per day of distillate and residual fuel oil reclassified as unfinished oils, and other products (from both primary and secondary supply)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

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

Figure 3.6 Heat Content of Petroleum Products Supplied by Type (Quadrillion Btu)



By Product, December 2011



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

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

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

<sup>&</sup>lt;sup>d</sup> All petroleum products not shown above. Web Page: http://www.eia.gov/totalenergy/data/monthly/#petroleum. Source: Table 3.6.

Table 3.6 Heat Content of Petroleum Products Supplied by Type

(Trillion Btu)

	Asphalt and	Aviation	Distillate	Jet	Kero-	LPG	<b>3</b> a	Lubri-	Motor	Petro- leum	Residual		
	Road Oil	Gasoline	Fuel Oilb	Fuel <sup>c</sup>	sene	Propaned	Total	cants	Gasoline	Coke	Fuel Oil	Other <sup>f</sup>	Total
1973 Total	1,264	83	6,575	2,167	447	1,221	1,981	359	12,797	573	6,477	2,114	34,837
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
1996 Total	1,176	37	7,175	3,274	128	1,594	2,660	335	15,064	837	1,952	3,121	35,759
1997 Total	1,224 1,263	40 35	7,304 7,359	3,308 3.357	136 162	1,638 1,568	2,690 2.575	354 371	15,254 15.701	829 982	1,828 2.036	3,298 3.093	36,265 36.934
1998 Total 1999 Total	1,324	39	7,595	3,462	151	1,745	2,897	375	16,036	1,048	1,905	3,129	37,960
2000 Total	1,324	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 January	40	2	736	231	8	172	235	23	1,395	80	148	247	3,144
February	51	1	630	215	6	144	215	16	1,291	72	79	214	2,792
March	62 59	2	676 604	247 244	3 2	140 113	226 201	21 23	1,440 1.413	78 90	115 128	208 209	3,079 2,976
April	76	2	621	234	2	97	193	23 19	1,413	90	84	209	3,000
May June	102	3	614	242	2	98	183	23	1,409	97	107	208	3,000
July	102	3	613	265	(s)	114	198	23	1,498	69	62	236	3,010
August	111	2	619	255	(3)	120	215	26	1,504	76	92	220	3,121
September	92	3	622	241	-i	116	205	23	1.395	85	64	234	2.963
October	78	2	660	239	4	145	243	23	1,454	61	96	218	3,078
November	57	1	628	230	4	175	272	21	1,394	64	84	192	2,949
December	42	2	697	241	5	190	278	22	1,445	72	113	219	3,136
Total	873	27	7,720	2,883	36	1,624	2,664	262	17,135	938	1,173	2,611	36,321
<b>2010</b> January	42	2	668	236	3	195	294	22	1,378	50	120	215	3,029
February	46	1	629	213	5	164	255	23	1,253	56	91	202	2,776
March	54	2	692	254	2	142	246	26	1,422	79	103	252	3,134
April	66	3	657	240	1	105	198	24	1,426	70	111	251	3,046
May	78	2	657	254	2	106	207	24	1,482	63	101	240	3,111
June	103 97	3 3	654 640	263	3	104 109	206 217	28	1,458	74 72	94	237 242	3,122
July August	110	2	692	263 261	2	116	220	27 24	1,504 1.497	72 81	116 93	242 259	3,183 3.241
September	92	3	679	248	1	120	219	25	1,437	78	97	227	3,097
October	89	2	681	251	3	135	233	24	1,458	63	95	215	3,114
November	59	2	677	238	8	134	228	23	1,380	70	104	227	3.014
December	42	2	754	243	9	194	298	21	1,441	69	102	233	3,214
Total	878	27	8,080	2,963	41	1,624	2,821	291	17,127	826	1,228	2,800	37,082
2011 January	46	2	717	238	3	196	295	26	1,361	68	121	239	3,116
February	46	2	631	213	7	153	241	20	1,263	48	110	202	2,784
March	58	3	721	244	4	141	251	28	1,415	63	107	259	3,152
April	63	1	645	247	1	107	201	24	1,372	64	113	234	2,965
May	73	3	660	251	(s)	111	216	23	1,421	78	93	199	3,017
June	91	3	682	263	1	102	204	22	1,416	70	89	236	3,075
July	95	3	623	258	2	109	209	21	1,449	67	62	260	3,049
August	112	3	715	273	1	116	217	25	1,441	84	62	227	3,160
September	92 8 07	2	687	241	2 R -1	113 R 400	215	23	1,370	65 R <b>77</b>	91 8 <b>7</b> 0	208	2,996
October	<sup>R</sup> 87 <sup>F</sup> 53	R 3 F 2	<sup>R</sup> 712 <sup>E</sup> 682	<sup>R</sup> 241 <sup>E</sup> 247	F <sub>3</sub>	<sup>R</sup> 136 <sup>E</sup> 138	<sup>R</sup> 234 <sup>F</sup> 237	R 20 RF 21	R 1,395	<sup>R</sup> 77 <sup>F</sup> 69	<sup>R</sup> 78 <sup>E</sup> 72	<sup>R</sup> 201 <sup>E</sup> 232	R 3,047 E 2,971
November	F 34	F 2	E 701	E 247	F 5	- 138 E 169	F 271	F 19	E 1,353 E 1,409	F 73	E 102	E 176	E 3,039
December	E <b>849</b>	E <b>27</b>			E <b>29</b>	E 1,593		E <b>271</b>		E <b>825</b>	E 1 102		- 3,039 E <b>26 274</b>
Total	- 849	- 27	E 8,176	€ 2,963	- 29	- 1,593	<sup>E</sup> 2,792	- 271	E 16,666	- 825	E 1,101	E 2,674	<sup>E</sup> 36,371

a Liquefied petroleum gases.

see http://www.eia.gov/petroleum/. Sources: See end of section.

 <sup>&</sup>lt;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> Through 2004, includes kerosene-type and naphtha-type jet fuel. Beginning in 2005, includes kerosene-type jet fuel only; naphtha-type jet fuel is included in "Other."
 <sup>d</sup> Includes propylene.
 <sup>e</sup> Einished motor gasoling. Beginning in 1993, also includes fuel ethanol blended.

e Finished motor gasoline. Beginning in 1993, also includes fuel ethanol blended

into motor gasoline.

f 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

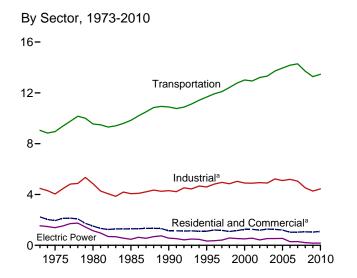
as fuel. Beginning in 2005, also includes naphtha-type jet fuel.

R=Revised. E=Estimate. F=Forecast. (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 7, "Petroleum Products Supplied and Petroleum Consumption," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia. Web Pages:

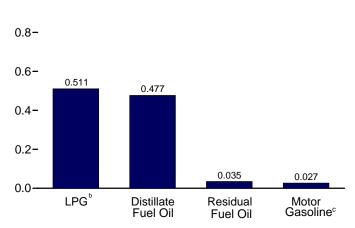
For all available data beginning in 1973, see http://www.eia.gov/totalenergy/data/monthly/#petroleum. • For related information,

Figure 3.7 Petroleum Consumption by Sector (Million Barrels per Day)

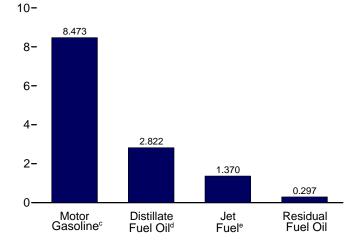


Residential and Commercial Sectors,<sup>a</sup> Selected Products, October 2011

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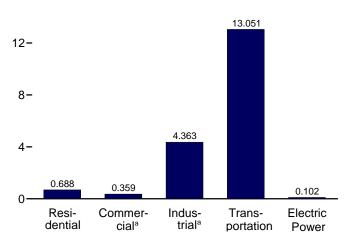
Transportation Sector, Selected Products, October 2011



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

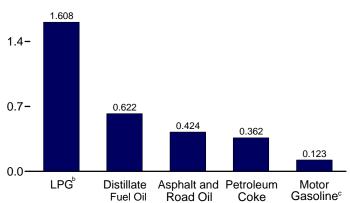
By Sector, October 2011

16-



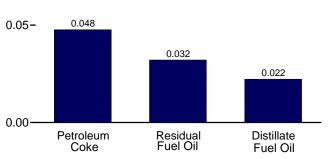
Industrial Sector,<sup>a</sup> Selected Products, October 2011

2.1-



Electric Power Sector, October 2011

0.10 -



distillate fuel oil.

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

<sup>&</sup>lt;sup>b</sup> Liquefied petroleum gases.

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

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

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

Table 3.7a Petroleum Consumption: Residential and Commercial Sectors

		Resident	tial Sector		Commercial Sector <sup>a</sup>							
	Distillate Fuel Oil	Kero- sene	Liquefied Petroleum Gases	Total	Distillate Fuel Oil	Kero- sene	Liquefied Petroleum Gases	Motor Gasoline <sup>b</sup>	Petro- leum Coke	Residual Fuel Oil	Total	
1973 Average	942	110	407	1,459	303	31	105	45	NA	290	774	
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	· · · · · · · · · · · · · · · · · · ·	100	489	
1995 Average	426	36	282	743	225	11	78	10	(s)	62	385	
1996 Average	434	43	334	811	227	10	87	14	(s)	60	397	
1997 Average	411	45	325	781	209	12	86	22	(s)	48	378	
1998 Average	363	52	303	718	202	15	84	20	(s)	37	358	
1999 Average	389	54	376	819	206	13	100	15	(s)	32	366	
2000 Average	424	46	395	865	230	14	107	23	(s)	40	415	
2000 Average	424 427	46	375	849	239	15	107	23 20		30	406	
2001 Average	427 404	46 29	375 384	849 817	209	8	102	20 24	(s)	30 35	376	
2002 Average						9			(s)			
2003 Average	425	34	389	848	226		112	32	(s)	48 52	428	
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	314	10	394	718	174	2	113	24	(s)	32	345	
2009 January	445	33	399	877	306	5	101	27	(s)	52	491	
February	413	31	407	851	284	5	103	27	(s)	48	467	
March	358	12	389	760	246	2	99	28	(s)	42	416	
April	283	11	363	657	195	2	92	28	Ô	33	349	
May	191	11	338	540	131	2	86	28	0	22	269	
June	183	9	330	521	126	1	84	29	0	21	261	
July	205	1	344	550	141	(s)	87	29	0	24	281	
August	214	5	373	591	147	`1	95	29	(s)	25	296	
September	259	-3	367	623	178	-1	93	28	(s)	30	329	
October	223	16	421	659	153	2	107	28	°O	26	316	
November	226	16	482	725	155	3	122	28	(s)	26	335	
December	401	20	477	898	275	3	121	28	(s)	47	474	
Average	283	13	391	687	194	2	99	28	(s)	33	357	
2010 January	496	11	504	1,011	340	2	128	26	(s)	62	558	
February	508	26	482	1,016	349	4	122	27	(s)	63	565	
March	292	9	424	724	200	1	108	27	(s)	36	373	
April	211	5	351	567	145	1	89	28	(s)	26	289	
	223	8	358	589	153	1	91	28	0	28	302	
May June	263	12	369	644	181	2	94	29	0	33	338	
	203	14	377	595	140	2	96	29	0	25	292	
July August	182	7	386	575	125	1	98	29	(s)	23	276	
September	169	6	397	573 572	116	1	101	28	(s)	23 21	268	
October	252	11	405	668	173	2	103	28	(s)	31	337	
November	292	35	408	734	200	5	103	26 27	(s)	36	373	
	466	38	510	1,014	320	6	129	28	(s)	58	541	
December	295	15	414	724	203	2	105	28	(s) (s)	37	375	
Average	293	13	414	724	203	2	105	20	(5)	31	3/3	
2011 January	387	13	507	907	266	2	129	26	(s)	48	471	
February	406	36	458	900	279	5	116	27	(s)	51	478	
March	277	19	436	733	190	3	111	27	(s)	34	366	
April	191	7	365	562	131	1	93	27	°o	24	276	
May	126	(s)	380	506	86	(s)	96	27	0	16	226	
June	195	3	369	568	134	`1	94	28	0	24	281	
July	174	7	367	549	120	1	93	28	Ö	22	264	
August	239	4	378	621	164	1	96	28	Ö	30	318	
September	261	10	388	658	179	1	98	27	Ö	33	339	
October	283	-3	408	688	194	(s)	103	27	ő	35	359	
10-Month Average	253	9	405	668	174	1	103	27	(s)	31	337	
2010 10-Month Average	278	11	405	694	191	2	103	28	(0)	35	358	
2009 10-Month Average	278 277	11 12	405 373	694 662	191	2	103 95	28 28	(s) (s)	35 32	358 347	

an approximation of petroleum consumption and is synonymous with the term "petroleum consumption" in Tables 3.7a–3.8c. • See Note 7, "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 for all available data beginning in 1973.
Sources: See end of section.

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

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

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

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

Table 3.7b Petroleum Consumption: Industrial Sector

					Industria	al Sectora				
	Asphalt and Road Oil	Distillate Fuel Oil	Kerosene	Liquefied Petroleum Gases	Lubricants	Motor Gasoline <sup>b</sup>	Petroleum Coke	Residual Fuel Oil	Other <sup>c</sup>	Total
1973 Average	522	691	75	902	88	133	254	809	1,005	4,479
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
1996 Average	484	557	9	1,580	78	105	343	146	1,518	4,819
1997 Average	505	566	9	1,617	82	111	331	127	1,605	4,953
1998 Average	521	570	11	1,553	86	105	390	100	1,508	4,844
1999 Average	547	558	6	1,709	87	80	426	90	1,532	5,035
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	534	12	1,561	72	171	375	96	1,579	4,903
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	599	2	1,419	67	131	394	86	1,408	4,523
2009 January	195	845	5	1,574	62	123	360	66	1,373	4,602
February	277	676	5	1,608	49	126	358	43	1,330	4,472
March	300	591	2	1,535	58	127	345	55	1,170	4,183
April	299	397	2	1,432	64	129	429	61	1,222	4,034
May	371	440	2	1,333	52	129	434	47	1,154	3,961
June	512	439	. 1	1,301	64	131	466	51	1,213	4,178
July	495	313	(s)	1,357	63	132	299	27	1,333	4,021
August	542	312	1	1,470	71	133	339	38	1,244	4,148
September	461	451 564	-1 3	1,449	64 63	127 128	400 288	30 42	1,372	4,353
October	377 287	608	3	1,659 1,902	60	127	200 314	42	1,236 1,132	4,360 4,474
November December	204	621	3	1,881	59	127	331	54	1,132	4,474
Average	360	521	2	1,541	61	128	363	46	1,251	4,274
2010 January	203	457	2	1,987	60	121	201	53	1,218	4,302
February	249	503	4	1,902	70	122	264	50	1,263	4,428
March	264	673	1	1,672	71	125	356	49	1,421	4,633
April	331	617	1	1,385	68	130	323	55	1,463	4,372
May	378	467	1	1,411	66	131	274	46	1,351	4,126
June	517	421	2	1,456	80	133	333	39	1,386	4,366
July	470	330	2	1,487	73	133	303	48	1,373	4,218
August	537	543	1	1,522	66	132	370	38	1,467	4,675
September	463	698	1	1,566	70	130	371	46	1,326	4,671
October	434	540	2	1,597	66	129	279	47	1,215	4,308
November	295	651	6	1,609	64	126	339	52	1,333	4,474
December	204	675	6	2,012	58	127	307	46	1,301	4,736
Average	362	548	2	1,633	68	128	310	48	1,343	4,442
<b>2011</b> January	224	791	2	1,999	70	120	283	57	1,349	4,893
February	248	631	6	1,808	62	123	215	58	1,264	4,414
March	280	796	3	1,722	76	125	266	51	1,468	4,786
April	314	587	1	1,439	68	125	304	56	1,381	4,275
May	354	594	(s)	1,498	62	125	366	44	1,114	4,158
June	455	614	1	1,456	61 57	129	324	43	1,394	4,476
July	463	305	1	1,450	57	128	286	27	1,470	4,187
August	543	572	1	1,493	69	127	388	27	1,274	4,493
September	462 424	625 622	2 (s)	1,529	65 55	125 123	297	43 37	1,207	4,354
October  10-Month Average	424 <b>378</b>	622 <b>614</b>	(s) <b>2</b>	1,608 <b>1,599</b>	55 <b>64</b>	123 <b>125</b>	362 <b>310</b>	37 <b>44</b>	1,132 <b>1,305</b>	4,363 <b>4,441</b>
_				,					ŕ	,
2010 10-Month Average 2009 10-Month Average	385 384	525 502	2 2	1,597 1,471	69 61	129 128	308 371	47 46	1,349 1,264	4,409 4,229

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 7, "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 for all available data beginning in 1973.

Sources: See end of section.

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

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

c 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.

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

Table 3.7c Petroleum Consumption: Transportation and Electric Power Sectors

				Transportat	ion Sector	r			Electric Power Sector <sup>a</sup>			
	Aviation Gasoline	Distillate Fuel Oil <sup>b</sup>	Jet Fuel <sup>c</sup>	Liquefied Petroleum Gases	Lubri- cants	Motor Gasoline <sup>d</sup>	Residual Fuel Oil	Total	Distillate Fuel Oil <sup>e</sup>	Petro- leum Coke	Residual Fuel Oil <sup>f</sup>	Total
1973 Average	45	1.045	1.042	35	74	6,496	317	9,054	129	7	1,406	1,542
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
1996 Average	20	2,096	1,578	11	73	7,772	370	11,921	51	36	273	360
1997 Average	22	2,198	1,599	10	78	7,883	310	12,099	52	46	311	410
1998 Average	19	2,263	1,622	13	81	8,128	294	12,420	64	56	456	576
1999 Average	21	2,352	1,673	10	82	8,336	290	12,765	66	51	418	535
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	2,665	1,578	12	68	8,733	249	13,321	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	2,824	1,539	29	64	8,834	400	13,704	34	70	104	209
2009 January	13	2,422	1,312	20	58	8,473	450	12,750	60	66	193	319
February	10	2,452	1,356	21	47	8,683	271	12,840	40	67	85	191
March	14	2,508	1,406	20	55	8,748	429	13,180	40	75	65	180
April	15	2,555	1,432	19	61	8,872	526	13,480	26	69	57	152
May	13	2,642	1,329	17	49	8,926	293	13,269	32	67	72	171
June	18	2,734	1,425	17	60	9,020	415	13,689	31	70	78	179
July	19	2,707	1,506	18	59	9,100	185	13,594	28	70	83	180
August	15	2,723	1,449	19	67	9,133	312	13,719	30	68	97	195
September	19	2,649	1,414	19	60	8,756	217	13,134	24	69	63	156
October	11 10	2,688	1,362	22 25	60 57	8,830	358 335	13,332	26 27	41 42	68 42	136 111
November December	15	2,579 2,531	1,352 1,372	25 24	56	8,751 8,776	335 440	13,109 13,215	33	42 54	42	128
Average	14	2,600	1,393	20	<b>57</b>	8,840	353	13,279	33	63	79	175
<b>2010</b> January	10	2,328	1,344	26	57	8,372	407	12,542	79	67	93	239
February	10	2.464	1,343	25	66	8,430	364	12,702	30	69	38	138
March	14	2,645	1,443	22	67	8,640	405	13,235	24	69	41	134
April	17	2,763	1,410	18	64	8,950	468	13,690	23	62	40	125
May	15	2,762	1,446	18	62	9,003	379	13,685	33	64	66	164
June	18	2,837	1,543	19	75	9.149	323	13,965	41	78	105	224
July	20	2,827	1,494	19	69	9,139	401	13,969	42	81	120	244
August	14	2,945	1,486	20	63	9,095	317	13,940	34	63	98	196
September	20	2,873	1,457	20	66	8,954	384	13,775	29	62	61	153
October	15	2,784	1,430	21	62	8,859	373	13,543	25	56	37	118
November	11	2,701	1,396	21	60	8,663	429	13,281	30	50	35	114
December	12	2,655	1,383	26	55	8,756	354	13,241	60	63	67	189
Average	15	2,716	1,432	21	64	8,836	384	13,468	38	65	67	170
2011 January	14	2,485	1,355	26	66	8,266	461	12,673	40	81	57	177
February	13	2,524	1,343	23	59	8,497	482	12,943	31	67	36	134
March	19	2,703	1,389	22	72	8,598	424	13,227	27	73	38	137
April	7	2,749	1,451	19	64	8,610	474	13,373	31	49	46	126
May	18	2,822	1,429	19	58	8,632	377	13,355	29	49	41	119
June	17	2,928	1,545	19	58	8,889	360	13,815	32	62	44	138
July	18	2,816	1,466	19	54	8,804	216	13,393	37	75	52	163
August	18	2,959	1,555	19	65	8,752	217	13,586	26	65	45	135
September	13	2,838	1,417	20	61	8,601	372	13,321	25	63	34	123
October	16	2,822	1,370	21	52	8,473	297	13,051	22	48	32	102
10-Month Average	15	2,766	1,432	21	61	8,613	367	13,275	30	63	43	135
2010 10-Month Average	15	2,724	1,440	21	65	8,862	382	13,509	36	67	70	174
2009 10-Month Average	15	2,609	1,399	19	58	8,856	346	13,302	34	66	86	186

<sup>&</sup>lt;sup>a</sup> Electricity-only and combined-heat-and-power (CHP) plants within the NAICS 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 and independent power producers.
 Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.
 Through 2004, includes kerosene-type and naphtha-type jet fuel. Beginning in 2005, includes kerosene-type jet fuel only; naphtha-type jet fuel is included in "Industrial Sector, Other" on Table 3.7b.
 Finished motor gasoline. Beginning in 1993, also includes fuel ethanol blended into motor gasoline.

blended into motor gasoline.

<sup>e</sup> Fuel oil nos. 1, 2, and 4. Through 2000, electric utility data also include small amounts of kerosene and jet fuel.

<sup>&</sup>lt;sup>f</sup> Fuel oil nos. 5 and 6. Through 2000, electric utility data also include a small

<sup>&#</sup>x27; Fuel oil nos. 5 and 6. Through 2000, electric utility data also include a small amount of fuel oil no. 4.

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 7, "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.

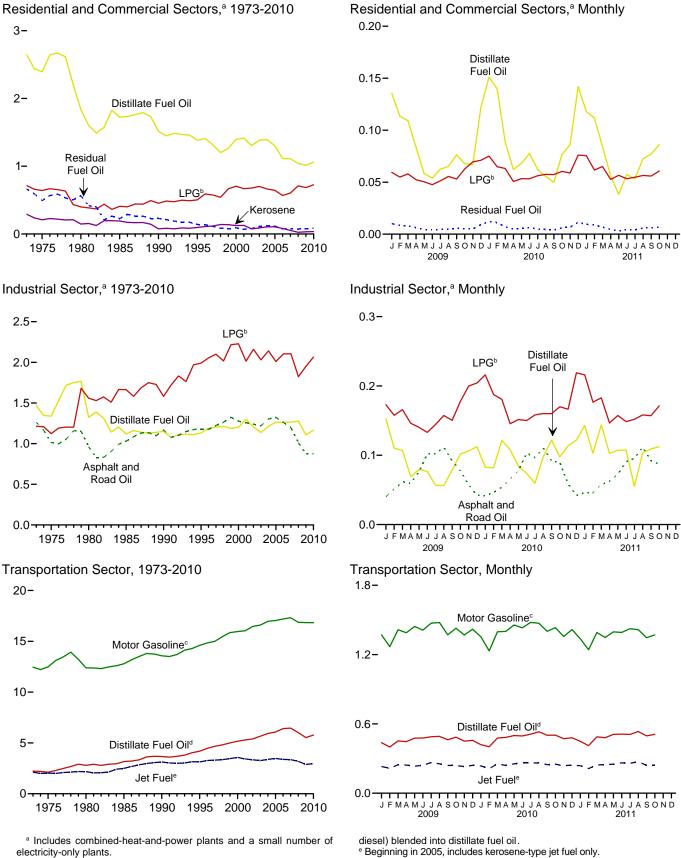
Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.gov/totalenergy/data/monthly/#petroleum for all

available data beginning in 1973.

Sources: See end of section.

**Heat Content of Petroleum Consumption by Sector, Selected Products** Figure 3.8 (Quadrillion Btu)



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

<sup>&</sup>lt;sup>b</sup> Liquefied petroleum gases.

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

<sup>&</sup>lt;sup>d</sup> Beginning in 2009, includes renewable diesel fuel (including bio-

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

		Resident	ial Sector				Con	nmercial Sec	ctora		
	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
1973 Total 1975 Total	2,003 1,807	227 161	570 512	2,800 2,479	644 587	65 49	147 129	87 89	NA NA	665 492	1,607 1,346
1980 Total	1,316	107	311	1,734	518	41	88	107	NA	565	1,318
1985 Total	1,092 978	159 64	314 352	1,565 1,394	631 536	33 12	95 102	96 111	NA 0	228 230	1,083 991
1990 Total 1995 Total	905	74	395	1,394	479	22	102	18	(s)	230 141	769
1996 Total	926	89	469	1,484	483	21	122	27	(s)	137	790
1997 Total	874	93	455	1,422	444	25	120	43	(s)	111	743
1998 Total	772	108	424	1,304	429	31	118	39	(s)	85	702
1999 Total	828	111	526	1,465	438	27	140	28	(s)	73	707
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 2004 Total	905 924	70 85	544 512	1,519 1,520	481 470	19 20	157 152	60 45	(s) (s)	111 122	828 810
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	669	21	553	1,243	372	4	158	46	(s)	73	653
<b>2009</b> January	80	6	47	134	55	1	12	4	(s)	10	83
February	67	5	44	116	46	1	11	4	(s)	8	71
March	65 49	2 2	46 42	113 93	44 34	(s)	12 11	4 4	(s) 0	8 6	69 55
April May	49 35	2	42	93 77	24	(s) (s)	10	5	0	4	43
June	32	1	38	71	22	(s)	10	4	0	4	40
July	37	(s)	41	78	25	(s)	10	5	ő	5	45
August	39	1	44	84	27	(s)	11	5	(s)	5	47
September	45	-1	42	87	31	(s)	11	4	(s)	6	52
October	40	3	50	93	28	(s)	13	5	0	5	50
November	40	3	55	98	27	(s)	14	4	(s)	5	51
December	72	4	57	133	50	1	14	4	(s)	9	78
Total	602	28	547	1,176	413	4	139	53	(s)	76	685
<b>2010</b> January	90 83	2	60 52	151 139	61 57	(s)	15 13	4 4	(s)	12 11	93 86
February March	53	2	52 50	105	36	(s)	13	4	(s) (s)	7	61
April	37	1	40	78	25	(s)	10	4	(s)	5	45
May	40	1	43	84	28	(s)	11	5	0	5	49
June	46	2	42	90	32	(s)	11	5	0	6	53
July	37	3	45	84	25	(s)	11	5	0	5	47
August	33	1	46	80	23	(s)	12	5	(s)	4	44
September	30	1	46	76	20	(s)	12	4	(s)	4	41
October	45 51	2 6	48 47	96 104	31 35	(s) 1	12 12	5 4	(s) (s)	6 7	54 59
November December	84	7	47 61	151	58	1	15	4	(S) (S)	11	90
Total	628	31	580	1,239	431	5	147	53	(s)	84	<b>721</b>
<b>2011</b> January	70	2	60	132	48	(s)	15	4	(s)	9	77
February	66	6	49	121	45	1	12	4	(s)	9	72
March	50	3	52	105	34	1	13	4	(s)	7	59
April	33	. 1	42	76	23	(s)	11	4	0	4	42
May	23	(s)	45	68	16	(s)	11	4	0	3	35
June	34	1	42	77 76	23	(s)	11	4	0	5	43
July	31 43	1	44 45	76 89	22 30	(s)	11 11	5 4	0	4 6	42 51
August September	43 46	2	45 45	89 92	31	(s) (s)	11	4	0	6	53
October	51	(s)	48	99	35	(s)	12	4	0	7	58
10-Month Total	448	16	473	937	307	2	120	43	(s)	60	533
2010 10-Month Total 2009 10-Month Total	493 490	19 21	472 435	984 946	338 336	3 3	120 110	44 44	(s) (s)	66 62	572 556

<sup>&</sup>lt;sup>a</sup> Commercial fuel use, including that sector commercial

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

available data beginning in 1973. Sources: See end of section.

Confinercial sector ider use, including that at confinercial combined-heat-and-power (CHP) and commercial electricity-only plants.

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

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

and is synonymous with the term "petroleum consumption" in Tables 3.7a-3.8c. See Note 7, "Petroleum Products Supplied and Petroleum Consumption in Tables 5.74—5.6c.

 See Note 7, "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 for all

Table 3.8b Heat Content of Petroleum Consumption: Industrial Sector

(Trillion Btu)

	Industrial Sector <sup>a</sup>												
	Asphalt and Road Oil	Distillate Fuel Oil	Kerosene	Liquefied Petroleum Gases	Lubricants	Motor Gasoline <sup>b</sup>	Petroleum Coke	Residual Fuel Oil	Other <sup>c</sup>	Total			
1973 Total	1,264	1,469	156	1,215	195	255	558	1,858	2,114	9,083			
1975 Total	1,204	1,339	119	1,213	149	223	540	1,509	2,114	9,063 8.127			
1975 Total	962	1,339	181		182	158	540 516	1,349	3,278	9,509			
1980 Total	1,029	1,119	44	1,559 1,664	166	218	575	748	2,152	7,714			
1985 Total	1,170	1,119	12	1,582	186	185	714	411	2,839	8,251			
1990 Total	1,178	1,130	15	1,990	178	200	721	337	2,837	8,588			
	1,176	1,187	18	2,054	173	200	757	335	3,121	9.020			
1996 Total 1997 Total	1,176	1,107	19	2,100	182	212	727	291	3,121	9,256			
1998 Total	1,263	1,211	22	2,016	191	199	858	230	3,093	9.083			
1999 Total	1,324	1.187	13	2,217	193	152	936	207	3,129	9,357			
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	1.136	24	2,030	159	324	825	220	3,264	9,202			
2004 Total	1,304	1,130	28	2,141	161	372	934	249	3,428	9,831			
2005 Total	1,304	1,214	39	2,009	160	356	889	281	3,318	9,640			
2006 Total	1,323	1,264	39	2,009 2,104	156	376	934	239	3,416	9,640 9.780			
2007 Total	1,201	1,265	13	2,104	161	306	906	193	3,410	9,760			
2008 Total	1,012	1,203	4	1,823	150	250	868	198	2,941	8,523			
	40	153	1	173	12	20	67	13	247	725			
2009 January	51	110	1	158	8	18	60	8	214	629			
February	62	107	(s)	166	11	21	64	11	208	649			
March	59	69		146	12	20	78	12	208	606			
April	76	79	(s)	140	10	21	76 81	9	209	623			
May	102	79 77	(s) (s)	133	10	20	84	10	208	623 646			
June	102	57		144	12	21	56	5	236	634			
July	111	56	(s)	157	13	21	63	7	220	650			
August	92	79	(s) (s)	150	12	20	72	6	234	665			
September October	78	102	(s)	178	12	21	72 54	8	218	670			
November	57	102	(s)	200	11	20	57	8	192	651			
December	42	112	(5)	204	11	21	62	11	219	682			
Total	873	1,107	4	1,950	135	244	799	106	2,611	7,829			
<b>2010</b> January	42	83	(s)	216	11	20	38	10	215	635			
February	46	82	(5)	188	12	18	45	9	202	602			
March	54	122	(s)	181	13	20	67	10	252	718			
April	66	108	(s)	145	12	20	58	10	251	672			
May	78	84	(s)	151	12	21	51	9	240	648			
June	103	74	(s)	150	14	21	60	7	237	667			
July	97	60	(s)	158	14	21	57	9	242	658			
August	110	98	(s)	160	12	21	69	7	259	738			
September	92	122	(s)	160	13	20	67	9	227	710			
October	89	98	(s)	170	12	21	52	9	215	666			
November	59	114	1	166	12	20	61	10	227	669			
December	42	122	i	219	11	21	57	9	233	714			
Total	878	1,165	5	2,065	149	244	682	109	2,800	8,097			
<b>2011</b> January	46	143	(s)	216	13	19	53	11	239	741			
February	46	103	(5)	177	11	18	36	10	202	603			
March	58	144	1	183	14	20	50	10	202 259	737			
April	63	103	(s)	147	12	20	55	10	234	643			
May	73	103	(s)	157	12	20	68	9	23 <del>4</del> 199	646			
June	73 91	107	(s)	149	11	20	59	8	236	681			
July	95	55	(s)	152	11	21	53	5	260	653			
August	112	103	(s)	158	13	21	72	5	200	711			
September	92	103	(s)	157	12	20	72 54	8	208	659			
October	87	112	(s)	171	10	20	68	7	201	676			
10-Month Total	<b>762</b>	1,087	3	1,666	11 <b>9</b>	1 <b>98</b>	<b>567</b>	8 <b>4</b>	2,266	6,752			
10-month 10tal	102	1,007	3	1,000	113		307	04	2,200	0,132			
2010 10-Month Total 2009 10-Month Total	777 774	929 889	3 3	1,679 1,546	127 113	204 204	563 680	90 88	2,341 2,200	6,714 6,496			

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. and is synonymous with the term petroleum consumption in Tables 3.74–3.8c.

See Note 7, "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 for all available data beginning in 1973.

Sources: See end of section.

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

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

c 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.

<sup>(</sup>s)=Less than 0.5 trillion Btu and greater than -0.5 trillion Btu.

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

				Transporta	tion Secto	r			E	lectric Po	Electric Power Sector <sup>a</sup>			
	Aviation Gasoline	Distillate Fuel Oil <sup>b</sup>	Jet Fuel <sup>c</sup>	Liquefied Petroleum Gases	Lubri- cants	Motor Gasolined	Residual Fuel Oil	Total	Distillate Fuel Oile	Petro- leum Coke	Residual Fuel Oil <sup>f</sup>	Total		
1973 Total	83	2,222	2,131	49	163	12,455	727	17,832	273	15	3,226	3,515		
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		
1996 Total	37	4,469	3,274	16	163	14,837	851	23,648	109	80	628	817		
1997 Total	40	4,672	3,308	14	172	14,999	712	23,918	111	102	715	927		
1998 Total	35	4,812	3,357	18	180	15,463	674	24,538	136	124	1,047	1,306		
1999 Total	39	5,001	3,462	14	182	15,855	665	25,219	140	112	959	1,211		
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	5,666	3,265	17	150	16,597	571	26,297	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	<b>28</b>	<b>6,020</b> 437	<b>3,193</b> 231	<b>40</b> 2	<b>141</b> 11	<b>16,872</b> 1,371	<b>920</b> 88	<b>27,214</b> 2,142	<b>73</b> 11	<b>154</b> 12	<b>240</b> 38	<b>468</b> 61		
February	1	400	215	2	8	1,269	48	1,943	6	11	15	33		
March	2	453	247	2	10	1,415	84	2,214	7	14	13	34		
April	2	446	244	2	11	1,389	99	2,194	5	12	11	28		
May  June  July	2	477	234	2	9	1,444	57	2,225	6	13	14	32		
	3	478	242	2	11	1,412	78	2,226	5	13	15	33		
	3	489	265	2	11	1,472	36	2,278	5	13	16	34		
	2	492	255	2	13	1,477	61	2,302	5	13	19	37		
August September October November	3 2 1	463 485 451	241 239 230	2 3 3	11 11 10	1,477 1,371 1,428 1,370	41 70 63	2,302 2,131 2,239 2,129	4 5 5	13 8 8	12 13 8	29 26 20		
December	2	457	241	3	10	1,420	86	2,219	6	10	8	24		
Total	<b>27</b>	<b>5,528</b>	<b>2,883</b>	<b>28</b>	<b>127</b>	<b>16,837</b>	<b>810</b>	<b>26,240</b>	<b>70</b>	<b>139</b>	<b>181</b>	<b>390</b>		
2010 January	2	420	236	3	11	1,354	79	2,105	14	12	18	45		
February	1	402	213	3	11	1,232	64	1,926	5	12	7	23		
March	2	478	254	3	13	1,398	79	2,225	4	13	8	25		
April May June July	3	483	240	2	12	1,401	88	2,228	4	11	8	23		
	2	499	254	2	12	1,456	74	2,299	6	12	13	31		
	3	496	263	2	14	1,432	61	2,270	7	14	20	41		
	3	511	263	2	13	1,478	78	2,348	8	15	23	46		
August	2	532	261	2	12	1,471	62	2,342	6	12	19	37		
September	3	502	248	2	12	1,402	72	2,241	5	11	12	28		
October	2	503	251	2	12	1,433	73	2,276	4	10	7	22		
November	2	472	238	2	11	1,356	81	2,162	5	9	7	21		
December	2	479	243	3	10	1,416	69	2,223	11	12	13	36		
<b>Total</b>	<b>27</b>	<b>5,776</b>	<b>2,963</b>	<b>30</b>	<b>141</b>	<b>16,830</b>	<b>880</b>	<b>26,646</b>	<b>80</b>	<b>144</b>	<b>154</b>	<b>378</b>		
2011 January	2	449	238	3	12	1,337	90	2,132	7	15	11	33		
February	2	412	213	3	10	1,241	85	1,966	5	11	6	23		
March	3	488	244	3	14	1,391	83	2,225	5	14	7	26		
April May June	1 3 3	480 510 512	247 251 263	2 2 2 2	12 11 10	1,348 1,396 1,391	89 73 68	2,179 2,246 2,249	5 5 6 7	9 9 11	9 8 8	23 22 25		
July August September October	3 3 2 3	508 534 496 510	258 273 241 241	2 2 2	10 12 11 10	1,424 1,416 1,346 1,371	42 42 70 58	2,248 2,283 2,169 2,194	5 4 4	14 12 11 9	10 9 6 6	31 25 22 19		
10-Month Total	24	4,899	2,469	24	112	13,662	700	21,890	53	115	81	250		
2010 10-Month Total	24	4,824	2,482	24	120	14,057	730	22,262	64	123	135	322		
2009 10-Month Total	23	4,620	2,412	22	106	14,047	661	21,892	60	121	165	346		

<sup>&</sup>lt;sup>a</sup> Electricity-only and combined-heat-and-power (CHP) plants within the NAICS <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 and independent power producers.
 <sup>b</sup> Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.
 <sup>c</sup> Through 2004, includes kerosene-type and naphtha-type jet fuel. Beginning in 2005, includes kerosene-type jet fuel only; naphtha-type jet fuel is included in "Industrial Sector Other" on Table 3.8b.
 <sup>d</sup> Finished motor gasoline. Beginning in 1993, also includes fuel ethanol blended into motor gasoline.

Sources: See end of section.

blended into motor gasoline.

<sup>e</sup> Fuel oil nos. 1, 2, and 4. Through 2000, electric utility data also include small amounts of kerosene and jet fuel.

f Fuel oil nos. 5 and 6. Through 2000, electric utility data also include a small

I Fuel oil nos. 5 and 6. I Inrough 2000, electric utility data also include a small amount of fuel oil no. 4.

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 7, "Petroleum Products Supplied and Petroleum Consumption," at end of section. • Totals may not equal sum of components due to independent roughting. • Geographic coverage is the 50 States and the District to independent rounding. . Geographic coverage is the 50 States and the District

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

#### Petroleum

**Note 1. 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.

In 1991, EIA conducted a frame identifier survey of companies that produce, blend, store, or import oxygenates. A summary of the results from the identification survey was published in the *Weekly Petroleum Status Report* dated February 12, 1992, and in the February 1992 issue of the *Petroleum Supply Monthly (PSM)*. In order to continue to provide relevant information about U.S. and regional gasoline supply, EIA conducted a second frame identifier survey of those companies during 1992. As a result, numerous respondents were added to the monthly surveys effective in January 1993. See PSM, Appendix B, "Frame."

**Note 2. Motor Gasoline.** Beginning in January 1981, EIA expanded its universe to include non-refinery blenders and separated blending components from finished motor gasoline as a reporting category. Also, survey forms were modified to describe refinery operations more accurately.

Beginning with the reporting of January 1993 data, EIA made adjustments to the product supplied series for finished motor gasoline. It was recognized that motor gasoline statistics published by EIA through 1992 were underreported because the reporting system was (1) not collecting all fuel ethanol blending, and (2) there was a misreporting of motor gasoline blending components that were blended into finished gasoline. The adjustments are incorporated into EIA's data beginning in January 1993. To facilitate data analysis across the 1992–1993 period, EIA prepared a table of 1992 data adjusted according to the 1993 basis. See *Petroleum Supply Monthly*, March 1993, Table H3.

**Note 3. Distillate and Residual Fuel Oils.** The requirement to report crude oil in pipelines or burned on leases as either distillate or residual fuel oil was eliminated. Prior to January 1981, the refinery input of unfinished oils typically exceeded the available supply of unfinished oils.

That discrepancy was assumed to be due to the redesignation of distillate and residual fuel oils received as such but used as unfinished oil inputs by the receiving refinery. The imbalance between supply and disposition of unfinished oils would then be subtracted from the production of distillate and residual fuel oils. Two-thirds of that difference was subtracted from distillate and one-third from residual. Beginning in January 1981, EIA modified its survey forms to account for redesignated product and discontinued the above-mentioned adjustment.

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.

**Note 4. Petroleum New Stock Basis.** In January 1975, 1979, 1981, and 1983, numerous respondents were added to bulk terminal and pipeline surveys, affecting subsequent stocks reported and stock change calculations. Using the expanded coverage (new basis), the end-of-year stocks, in million barrels, would have been:

Crude Oil: 1982—645 (Total) and 351 (Non-SPR).

Distillate Fuel Oil: 1974—224; 1980—205; and 1982—186.

Jet Fuel (Total): 1974—30; 1980—42; and 1982—39.

Liquefied Petroleum Gases: 1974—113; 1978—136; 1980—128; and 1982—102.

Propane and Propylene: 1978—86; 1980—69; and 1982—57.

Motor Gasoline (Total): 1974—225; 1980—263; 1982—244.

Residual Fuel Oil: 1974—75; 1980—91; and 1982—69. Total Petroleum: 1974—1,121; 1980—1,425; and 1982—1.461.

Stock change calculations beginning in 1975, 1979, 1981, and 1983 were made by using new basis stock levels.

In January 1984, changes were made in the reporting of natural gas liquids. As a result, unfractionated stream is now reported on a component basis (ethane, propane, normal butane, isobutane, and pentanes plus). This change affects stocks reported and stock change calculations. Under the new basis, 1983 end-of-year stocks, in million barrels, would have been 108 for liquefied petroleum gases, and 55 for propane and propylene.

In January 1993, changes were made in the monthly surveys to begin collecting bulk terminal and pipeline stocks of oxygenates. This change affected stocks reported and stock change calculations. However, a new basis stock level was not calculated for 1992 end-of-year stocks.

Note 5. Stocks of Alaskan Crude Oil. Stocks of Alaskan crude oil in transit were included for the first time in January 1981. The major impact of this change is on the reporting of stock change calculations. Using the expanded coverage (new basis), 1980 end-of-year stocks, in million barrels, would have been 488 (Total) and 380 (Non-SPR).

**Note 6. Petroleum Data Discrepancies.** Due to differences internal to EIA data processing systems, some small discrepancies exist between data in the *Monthly Energy Review* and the *Petroleum Supply Annual (PSA)* and *Petroleum Supply Monthly (PSM)*. The data that have discrepancies are footnoted in Section 3 tables. The corresponding PSA/PSM values, in thousand barrels per day, are: Natural Gas Plant Liquids Production, 1976: 1,603; Total Exports, 1979: 472; Petroleum Products Exports, 1979: 237; and SPR Crude Oil Imports, 1978: 162.

Note 7. 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.

#### **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 "Other" petroleum products sources for Table 3.5). 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 in these tables are derived from data for "petroleum products supplied" from the following sources:

1973–1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, "Petroleum Statement, Annual."

1976—1980: U.S. Energy Information Administration's (EIA), *Energy Data Reports*, "Petroleum Statement, Annual."

1981–2010: EIA, Petroleum Supply Annual.

2011: EIA, Petroleum Supply Monthly.

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:

Since 1979, the residential sector sales total is directly from the Sales reports. Prior to 1979, 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.

Since 1979, the commercial sector sales total is directly from the Sales reports. Prior to 1979, 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.

Since 1979, the industrial sector sales total is the sum of the sales for industrial, farm, oil company, off-highway diesel, and all other uses. Prior to 1979, 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." After 1993, 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 consumed by the transportation sector. Beginning in 2005, kerosene-type jet fuel is consumed by 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).

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

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

Since 1979, the industrial sector sales total is the sum of the sales for industrial, farm, and all other uses. Prior to 1979, 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. Since 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. Prior to 2003, 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 78 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:

Since 1979, commercial sales data are directly from the Sales reports. Prior to 1979, 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.

Since 1979, industrial sales data are the sum of sales for industrial, oil company, and all other uses. Prior to 1979, 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**

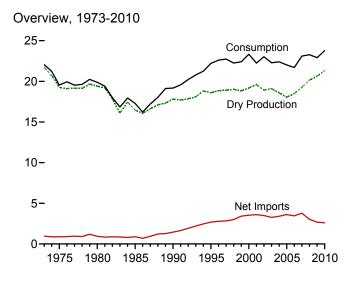
Transportation sector total petroleum consumption is the sum of the data in trillion Btu for the petroleum products shown under "Transportation Sector" in Table 3.8c. Electric power sector total petroleum consumption is the sum of the data in trillion Btu for the petroleum products shown under "Electric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

# **Natural Gas**

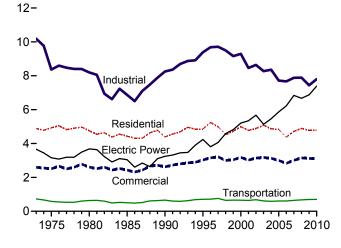


Natural gas pipeline, El Paso County, Texas. Source: U.S. Department of Energy.

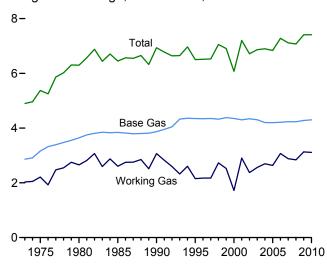
Figure 4.1 Natural Gas (Trillion Cubic Feet)



### Consumption by Sector, 1973-2010

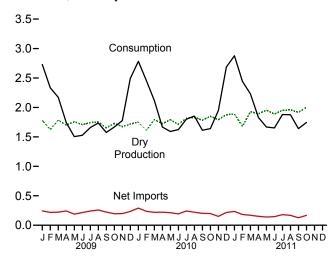


### Underground Storage, End of Year, 1973-2010



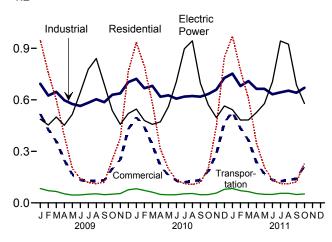
Web Page: http://www.eia.gov/totalenergy/data/monthly/#naturalgas. Sources: Tables 4.1, 4.3, and 4.4.

Overview, Monthly



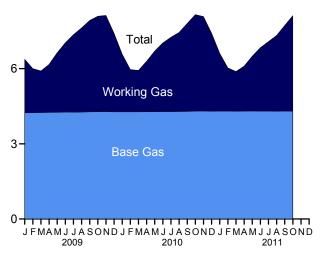
### Consumption by Sector, Monthly

1.2-



### Underground Storage, End of Month

9-



**Table 4.1 Natural Gas Overview** 

(Billion Cubic Feet)

(Dill	ion Cubic	1 661)									
	Gross	Marketed			Supple- mental		Trade		Net Storage		
	With- drawals <sup>a</sup>	Production (Wet) <sup>b</sup>	Extraction Loss <sup>c</sup>	Dry Gas Production <sup>d</sup>	Gaseous Fuels <sup>e</sup>	Imports	Exports	Net Imports	With- drawals <sup>f</sup>	Balancing Item <sup>g</sup>	Consump- tion <sup>h</sup>
1973 Total	24,067	22,648	917	21,731	NA	1,033	77	956	-442	-196	22,049
1975 Total	21,104	<sup>i</sup> 20,109	872	<sup>1</sup> 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	19,174
1995 Total	23,744	19,506 19,812	908 958	18,599 18,854	110 109	2,841 2,937	154 153	2,687 2,784	415 2	396 860	22,207 22,609
1996 Total	24,114 24,213	19,866	964	18,902	109	2,937	157	2,764	24	871	22,737
1997 Total 1998 Total	24,213	19,961	938	19,024	103	3,152	159	2,037	-530	657	22,737
1999 Total	23,823	19,805	973	18,832	98	3,586	163	3,422	172	-119	22,240
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	R <b>467</b>	R 65	R 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	R 461	R 22,403
2005 Total	23,457	18,927	876	18,051	64	4,341	729	3,612	52	R 236	R 22,014
2006 Total	23,535	19,410	906	18,504	66	4,186	724	3,462	-436	R 103	R 21,699
2007 Total	24,664	20,196	930	19,266	63	4,608	822	3,785	192	R -203	R 23,104
2008 Total	25,636	21,112	953	20,159	61	3,984	963	3,021	34	R 2	R 23,277
2009 January	R 2,252	R 1,870	R 88	R 1,782	6	357	113	244	719	R -21	R 2,730
February	R 2,074	R 1,705	81	R 1,624	5	322	103	218	380	<sup>R</sup> 105	R 2,333
March	R 2,262	R 1,875	89	R 1,786	6	325	104	221	98	R 59	R 2,171
April	R 2,148	R 1,783	84	R 1,699	5	322	80	242	-257	<sup>R</sup> 52	R 1,741
May	R 2,190	R 1,843	87	R 1,756	6	266	77	189	-475	29	R 1,504
June	R 2,141	R 1,792	85	R 1,707	_ 5	282	66	216	-393	8	R 1,528
July	R 2,170	R 1,828	86	R 1,741	R 6	317	76	240	-345	R <sub>_</sub> 16	R 1,658
August	R 2,193	R 1,842	87	R 1,755	6	337	79	258	-280	R -2	R 1,736
September	R 2,089	R 1,734	82	R 1,652	5	307	84	223	-301	R -5	R 1,575
October	R 2,197	R 1,815	86	R 1,729	5	273	78	195	-172	R -91 R -65	R 1,667
November	R 2,144 2,196	<sup>R</sup> 1,758 1,802	83 85	R 1,674	5 5	295	97	198 234	-36 707	R -172	<sup>R</sup> 1,776 <sup>R</sup> 2,492
December Total	R <b>26,057</b>	R <b>21,648</b>	1,024	1,717 R <b>20,624</b>	65	350 <b>3,751</b>	115 <b>1,072</b>	<b>2,679</b>	-355	R -103	R 22,910
2010 January	R 2.224	R 1.838	R 88	R 1.750	R 5	385	94	291	R 822	R -86	R 2,783
February	R 2,057	R 1,692	R 81	R 1,611	R 5	324	88	236	R 628	R -24	R 2,456
March	R 2,296	R 1,884	R 90	R 1,794	R 5	319	100	219	R 34	R 65	R 2,117
April	R 2,187	R 1,810	R 86	R 1,723	5	298	76	223	<sup>R</sup> -364	R 80	R 1,667
May	R 2,231	R 1,881	<sup>R</sup> 90	R 1,791	<sup>R</sup> 5	298	86	212	<sup>R</sup> -416	R -2	R 1,591
June	R 2,134	R 1,797	<sup>R</sup> 86	R 1,712	<sup>R</sup> 5	282	90	192	R -326	<sup>R</sup> 41	R 1,624
July	R 2,221	R 1,908	<sup>R</sup> 91	<sup>R</sup> 1,817	6	329	86	243	<sup>R</sup> -231	R -35	R 1,800
August	R 2,241	R 1,924	R 92	R 1,832	6	305	84	221	R -190	R -15	R 1,853
September	R 2,251	R 1,874	R 89	R 1,785	R 5	282	79	202	R -363	R-16	R 1,612
October	R 2,343	R 1,942	R 93	R 1,849	<sub>R</sub> 6	295	96	199	R -360	R -54	R 1,639
November	R 2,266	R 1,882	R 90	R 1,792	<sup>R</sup> 5	273	124	150	R 77	R -78	R 1,947
December	R 2,388	R 1,971	R 94	R 1,877	R <b>65</b>	352	135	217	<sup>R</sup> 675 <sup>R</sup> <b>-13</b>	R -89	R 2,685
Total	R <b>26,836</b>	R 22,402	R 1,070	R 21,332	., 65	3,741	1,137	2,604	···-13	R -213	R 23,775
<b>2011</b> January	2,309	E 1,972	85	E 1,887	6	371	136	235	799	R -49	R 2,878
February	2,109	E 1,752	73	E 1,679	R 5	308	125	183	584	R -10	R 2,442
March	2,423	E 2,020	91	E 1,928	6	314	145	170	145	R-19	R 2,230
April	2,363	E 1,979	88	E 1,891	5	278	127	152	-212	R -6	R 1,829
May	2,420	E 2,046	94	E 1,953	3	271	132	139	-398	R -29	R 1,667
June	2,330	E 1,977	89	E 1,888	5	265	120	146	-340	R -46	R 1,652
July	2,344	E 2,044	92	E 1,952	5	293	113	179	-244	R -12	R 1,880
August	2,371 R 2,371	E 2,051 RE 2,005	92 88	E 1,959 RE 1,917	5 5	279 R 253	111 127	168 <sup>R</sup> 127	-244	<sup>R</sup> -11 <sup>R</sup> -10	R 1,876 R 1,639
September October	2,483	E 2,005	96	E 2,003	5 5	265	97	168	-398 -385	-46	1,745
10-Month Total	2,403 <b>23,523</b>	E 19,945	889	E 19,056	5 <b>0</b>	2,898	1,233	1,665	-365 - <b>695</b>	-46 <b>-238</b>	1,745 <b>19,838</b>
		-,-		-,							
2010 10-Month Total 2009 10-Month Total	22,183 21,716	18,549 18,088	886 856	17,663 17,232	53 55	3,116 3,107	878 860	2,238 2,247	-765 -1,025	-46 134	19,144 18,642

<sup>&</sup>lt;sup>a</sup> Gas withdrawn from natural gas and crude oil wells; excludes lease

ondensate.

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

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

<sup>C See Note 2, "Natural Gas Extraction Loss," at end of section.

Marketed production (wet) minus extraction loss.

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

Net withdrawals from underground storage. For 1980-2010, also includes net withdrawals of liquefied natural gas in above-ground tanks. See Note 4, "Natural Gas Storage," at end of section.

See Note 5, "Natural Gas Balancing Item," at end of section. Since 1980, excludes transit shipments that cross the U.S.-Canada border (i.e., natural gas delivered to its destination via the other ceruptar).</sup> 

delivered to its destination via the other country).

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

i May include unknown quantities of nonhydrocarbon gases.

For 1989-1992, a small amount of consumption at independent power

j For 1989-1992, a small amount of consumption at independent power producers may be counted in both "Other Industrial" and "Electric Power Sector" on Table 4.3. See Note 7, "Natural Gas Consumption, 1989-1992," at end of section. R=Revised. E=Estimate. NA=Not available.
Notes: • See Note 8, "Natural Gas Adjustments, 1993-2000," 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/#naturalgas for all available 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: 1973-2005—U.S. Energy Information Administration (EIA), Natural Gas Annual, annual reports.

2006 forward—EIA, Natural Gas Monthly, December 2011, Table 1.

Table 4.2 Natural Gas Trade by Country

(Billion Cubic Feet)

					Imports							Exports		
	Algeria	<b>Canada</b> <sup>b</sup>	<b>Egypt</b> <sup>a</sup>	<b>Mexico</b> b	Nigeria	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
1973 Total 1975 Total 1980 Total 1985 Total 1995 Total 1995 Total 1996 Total 1997 Total 1998 Total 1998 Total 1998 Total	5 86 24 84 18 35 66 69 76 47	1,028 948 797 926 1,448 2,816 2,899 3,052 3,368 3,544	0 0 0 0 0 0 0 0	2 0 102 0 0 7 14 17 15 55	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 51	0 0 0 0 0 0 5 12 17 17 21	1,033 953 985 950 1,532 2,841 2,937 2,994 3,152 3,586 3,782	15 10 0 17 28 52 56 40 39 73	48 53 45 53 53 65 68 62 66 64 66	14 9 4 2 16 61 34 38 53 61	0 0 0 0 0 0 0	77 73 49 55 86 154 153 157 159 163 244
2001 Total 2002 Total 2003 Total 2004 Total 2005 Total 2006 Total 2007 Total 2008 Total	27 53 120 97 17 77	3,729 3,785 3,437 3,607 3,700 3,590 3,783 3,589	0 0 0 73 120 115 55	10 2 0 0 9 13 54 43	38 8 50 12 8 57 95 12	23 35 14 12 3 0 18 3	98 151 378 462 439 389 448 267	14 8 11 46 11 0 18 15	3,977 4,015 3,944 4,259 4,341 4,186 4,608 3,984	167 189 271 395 358 341 482 559	66 63 66 62 65 61 47 39	141 263 343 397 305 322 292 365	0 0 0 0 0 0 2	373 516 680 854 729 724 822 963
2009 January February March April May June July August September October November December Total	0 0 0 0 0 0 0 0	324 293 293 259 216 230 270 299 274 244 258 311 <b>3,271</b>	5 6 12 22 15 14 17 14 15 12 14 <b>160</b>	6 (s) 1 7 1 1 2 3 1 2 (s) 3 28	0 0 0 8 0 0 3 0 2 0 0 0	0 0 0 0 0 0 0 0 0 0 8 4 <b>13</b>	19 16 17 20 31 34 21 17 15 13 17 17 236	3 6 3 6 0 0 0 0 29	357 322 325 322 266 282 317 337 307 273 295 350 <b>3,751</b>	84 75 77 55 46 37 42 45 47 66 81	2 3 3 2 2 2 4 2 4 2 4 2 4 2 4 2 4 3 3	28 25 24 23 29 28 31 32 33 29 29 28 <b>338</b>	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	113 103 104 80 77 66 76 79 84 78 97 115
2010 January February March April May June July August September October November December Total	0 0 0 0 0 0 0 0	327 277 276 252 257 248 291 282 250 257 242 322 3,280	17 12 9 6 9 6 0 6 3 0 0 73	1 1 5 5 4 2 1 1 3 4 (s)	0 0 3 9 9 11 5 0 3 2 0 0	12 6 1 9 0 0 0 0 0 5 9 4 46	22 16 16 15 16 11 17 17 16 15 14 15	6 12 9 3 3 5 8 5 3 9 9 9 9 8	385 324 319 298 298 282 329 305 282 295 273 352 <b>3,741</b>	68 60 77 50 55 51 50 49 50 63 84 82 739	2 2 2 4 2 2 4 2 7 2 2 3 3	23 22 21 22 29 34 32 33 25 30 38 33	0 3 0 0 0 3 0 0 0 6 8 12 32	94 88 100 76 86 90 86 84 79 96 124 135 <b>1,137</b>
Pebruary	0 0 0 0 0 0	331 276 275 245 235 238 272 249 R 233 234 <b>2,588</b>	3 6 6 6 3 6 0 0 3 3 3 3 3	(s) (s) (s) (s) (s) (s) (s) (s) (s)	0 0 0 0 0 0 0 0 2 0 0	13 0 14 4 24 5 5 8 4 8	16 11 10 11 8 11 13 11 8 8	9 15 9 13 0 6 3 9 9 12 83	371 308 314 278 271 265 293 279 R 253 265 2,898	85 84 98 76 80 71 64 67 77 53 <b>755</b>	2 2 2 2 3 2 0 2 2 0 16	37 37 41 43 44 47 47 42 39 41 <b>418</b>	13 3 6 6 0 3 0 8 3	136 125 145 127 132 120 113 111 127 97 <b>1,233</b>
2010 10-Month Total 2009 10-Month Total	0 0	2,716 2,702	73 134	29 25	42 13	33 0	161 203	63 29	3,116 3,107	573 554	28 25	265 281	12 0	878 860

a As liquefied natural gas.

As inquened natural gas.
 By pipeline, except for very small amounts of liquefied natural gas imported from Canada in 1973, 1977, and 1981 and exported to Mexico beginning in 1998.
 See Note 9, "Natural Gas Imports and Exports," at end of section.
 Australia in 1997-2001 and 2004; Brunei in 2002; Equatorial Guinea in 2007; Indonesia in 1986 and 2000; Malaysia in 1999 and 2002-2005; Norway in 2008 forward; Oman in 2000-2005; Peru in 2010 and 2011; United Arab Emirates in 1996-2009; Vennen is 2010 and 2011; and Cother (unsexinged) in 2004.

<sup>1996-2000;</sup> Yemen in 2010 and 2011; and Other (unassigned) in 2004.

d Brazil in 2010 and 2011; China in 2011; India in 2010 and 2011; 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:  $\bullet$  See Note 9, "Natural Gas Imports and Exports," at end of section.

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

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 for all available data beginning in 1973.

Sources: • 1973-1987: U.S. Energy Information Administration (EIA), Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas."

\* 1988-2008: EIA, Natural Gas Annual, annual reports. • 2009 forward: EIA, Natural Gas Monthly, December 2011, Table 4; 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)

(011	iioii Cul	oic reet)										
					End-Us	e Sectors						
					Industrial			Tra	ansportatio	n		
	Resi-	Com-			Other Industr	ial		Pipelines <sup>d</sup> and Dis-	Vahiala		Electric Power	
	dential	mercial <sup>a</sup>	Lease and Plant Fuel	CHPb	Non-CHP <sup>c</sup>	Total	Total	tribution <sup>e</sup>	Vehicle Fuel	Total	Sector <sup>f,g</sup>	Total
1973 Total 1975 Total 1980 Total 1985 Total 1990 Total 1995 Total 1996 Total 1997 Total	4,879 4,924 4,752 4,433 4,391 4,850 5,241 4,984	2,597 2,508 2,611 2,432 2,623 3,031 3,158 3,215	1,496 1,396 1,026 966 1,236 1,220 1,250 1,203	(h) (h) (h) (h) 1,055 1,258 1,289 1,282	8,689 6,968 7,172 5,901 5,963 6,906 7,146 7,229	8,689 6,968 7,172 5,901 7,018 8,164 8,435 8,511	10,185 8,365 8,198 6,867 8,255 9,384 9,685 9,714	728 583 635 504 660 700 711 751	NA NA NA (s) 5 6	728 583 635 504 660 705 718 760	3,660 3,158 3,682 3,044 3,245 4,237 3,807 4,065	22,049 19,538 19,877 17,281 19,174 22,207 22,609 22,737
1998 Total 1999 Total 2000 Total 2001 Total 2001 Total 2002 Total 2003 Total 2004 Total 2005 Total 2005 Total 2006 Total 2007 Total 2007 Total	4,520 4,726 4,996 4,771 4,889 5,079 4,869 4,827 4,368 4,722 4,892	2,999 3,045 3,182 3,023 3,144 3,179 3,129 2,999 2,832 3,013 3,153	1,173 1,079 1,151 1,119 1,113 1,122 1,098 1,112 1,142 1,226 1,220	1,355 1,401 1,386 1,310 1,240 1,144 1,191 1,084 1,115 1,050 955	6,965 6,678 6,678 6,035 R 6,287 6,007 R 6,066 R 5,518 R 5,412 R 5,604 R 5,715	8,320 8,079 8,142 7,344 R 7,527 7,150 R 7,256 R 6,601 R 6,527 R 6,655 R 6,670	9,493 9,158 9,293 8,463 R 8,640 8,273 R 8,354 R 7,713 R 7,669 R 7,881 R 7,890	635 645 642 625 667 591 566 584 584 621 648	9 12 13 15 15 18 21 23 24 25 26	645 657 655 640 682 610 587 607 608 646 674	4,588 4,820 5,206 5,342 5,672 5,135 5,464 5,869 6,222 6,841 6,668	22,246 22,405 23,333 22,239 R 23,027 22,277 R 22,403 R 22,014 R 21,699 R 23,104 R 23,277
2009 January February March April May June July August September October November December Total	948 756 600 390 201 141 119 111 120 251 376 764	518 427 358 249 166 134 128 129 131 199 251 429 <b>3,119</b>	110 101 111 105 108 105 107 108 102 107 R 105 107 1,275	81 71 79 74 77 82 89 92 88 85 81 91	502 452 457 419 391 377 387 403 R 395 437 452 505 R 5,178	8 583 524 536 492 468 459 476 495 484 522 533 596 <b>6,167</b>	693 625 646 R 598 575 564 583 603 586 629 637 703	R 81 R 669 R 51 R 43 R 44 R 48 R 546 R 48 R 574 R <b>670</b>	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	R 83 R 76 R 53 R 46 R 450 R 53 R 48 R 51 R 54 R 76 R <b>697</b>	487 453 500 451 515 643 778 840 690 537 457 520 <b>6,873</b>	R 2,730 R 2,333 R 2,333 R 1,741 R 1,741 R 1,504 R 1,528 R 1,658 R 1,736 R 1,575 R 1,667 R 1,776 R 2,492 R 22,910
Pebruary February March April May June July August September October November December Total	R 934 R 796 R 580 R 313 R 198 R 134 R 111 R 107 R 117 R 202 R 447 R 848 R 4,787	R 499 R 441 R 337 R 215 R 161 R 130 R 120 R 127 R 133 R 185 R 287 R 467 R 3,102	R 106 R 98 R 109 R 104 R 107 R 102 R 107 R 108 R 107 R 108 R 107 R 112 R 108 R 114 R 1,282	90 80 84 79 82 84 91 95 87 84 82 92 <b>1,029</b>	R 526 R 490 R 488 R 435 R 437 R 420 R 420 R 419 R 424 R 438 R 438 R 521	R 616 R 570 R 572 R 514 R 519 R 504 R 512 R 511 R 6522 R 551 R 613 R <b>6,517</b>	R 722 R 667 R 681 R 618 R 626 R 607 R 619 R 622 R 618 R 659 R 727	R 80 R 70 R 646 R 444 R 450 R 552 R 455 R 455 R 766	3 R 2 2 3 3 3 3 3 3 3 3 3 3 3 8 3 3 8 8 31	R 82 R 72 R 62 R 49 R 47 R 48 R 55 R 47 R 48 R 57 R 79 R 700	546 480 457 471 560 706 897 943 697 570 497 564 <b>7,387</b>	R 2,783 R 2,456 R 2,117 R 1,667 R 1,591 R 1,624 R 1,800 R 1,853 R 1,612 R 1,639 R 1,947 R 2,685 R 23,775
2011 January February March April January June July August September October 10-Month Total January Personal September September October Jo-Month Total September Sept	R 971 R 774 R 608 R 348 R 208 R 133 112 110 123 229 <b>3,617</b>	R 529 435 R 365 236 R 168 R 133 R 126 R 133 141 216 <b>2,481</b>	RE 112 RE 100 RE 115 RE 116 RE 112 RE 116 RE 116 RE 116 RE 116 RE 116 RE 117 E 119 E 1,133	89 79 81 82 87 83 88 89 84	R 551 R 501 513 R 469 R 461 R 437 439 447 R 443 469 <b>4,731</b>	R 640 R 581 R 594 552 R 548 R 520 527 R 537 R 527 550 <b>5,576</b>	R 752 R 680 R 709 R 664 R 664 R 632 R 643 R 653 R 641 670 <b>6,709</b>	RE 81 RE 69 RE 63 RE 651 RE 47 RE 46 RE 53 RE 53 RE 46 E 49 E 558	E 3 E 3 E 3 E 3 E 3 E 3 E 3 E 3 E 3 E 3	RE 84 RE 71 RE 66 RE 54 RE 50 RE 49 RE 56 RE 49 E 56 RE 49	542 482 483 526 578 705 942 923 686 578 <b>6,446</b>	R 2,878 R 2,442 R 2,230 R 1,829 R 1,667 R 1,652 R 1,880 R 1,876 R 1,639 1,745 19,838
2010 10-Month Total 2009 10-Month Total	3,492 3,638	2,348 2,439	1,060 1,064	855 818	4,498 4,221	5,353 5,039	6,414 6,102	538 545	26 23	563 567	6,326 5,896	19,144 18,642

<sup>&</sup>lt;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

fuels. • See Note 8, "Natural Gas Adjustments, 1993-2000," at end of section.
• See Note, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7. • 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/#naturalgas for all available data beginning in 1973.

Sources: • Residential, Commercial, Lease and Plant Fuel, Other Industrial Total and Pipelines and Distribution: 1973-2005—U.S. Energy Information Administration (EIA), Natural Gas Annual (KGA), annual reports and unpublished revisions.

2006 forward—EIA, Natural Gas Monthly (NGM), December 2011, Table

1. Industrial CHP: Table 7.4c. • Vehicle Fuel: 1000 and 1004.

Table

• 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). 1999-2005—EIA, NGA, annual reports. 2006 forward—EIA, NGM, December 2011, Table 2. • Electric Power Sector: Table 7.4b.

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

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

d Natural gas consumed in the operation of pipelines, primarily in compressors.
e Natural gas used as fuel in the delivery of natural gas to consumers.
f The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public.
g Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities and independent power producers.
h Included in "Non-CHP."
i For 1989-1992, a small amount of consumption at independent power producers may be counted in both "Other Industrial" and "Electric Power Sector."
See Note 7, "Natural Gas Consumption, 1989-1992," at end of section.
R=Revised. E=Estimate. NA=Not available. (s)=Less than 500 million cubic feet.

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

Table 4.4 Natural Gas in Underground Storage

(Volumes in Billion Cubic Feet)

	U	Natural Gas in nderground Storag End of Period	e,	From Sar	Vorking Gas ne Period us Year		Storage Activity	
	Base Gas	Working Gas	Totala	Volume	Percent	Withdrawals	Injections	Net <sup>b,c</sup>
973 Total	2.864	2.034	4.898	305	17.6	1.533	1.974	-442
975 Total	3.162	2,212	5,374	162	7.9	1.760	2.104	-344
980 Total	3,642	2,655	6,297	-99	-3.6	1,910	1,896	14
900 Total				-270				231
985 Total	3,842	2,607	6,448		-9.4	2,359	2,128	
990 Total	3,868	3,068	6,936	555	22.1	1,934	2,433	-499
995 Total	4,349	2,153	6,503	-453	-17.4	2,974	2,566	408
996 Total	4,341	2,173	6,513	19	.9	2,911	2,906	6
997 Total	4,350	2,175	6,525	2	.1	2,824	2,800	24
998 Total	4,326	2,730	7,056	554	25.5	2,379	2,905	-526
999 Total	4,383	2,523	6,906	-207	-7.6	2,772	2,598	174
000 Total	4,352	1,719	6,071	-806	-31.9	3,498	2,684	814
001 Total	4,301	2,904	7,204	1,185	68.9	2,309	3,464	-1,156
002 Total	4,340	2,375	6,715	-528	-18.2	3,138	2,670	468
003 Total	4,303	2,563	6,866	187	7.9	3,099	3,292	-193
004 Total	4,201	2,696	6.897	133	5.2	3,037	3,150	-113
005 Total	4,200	2,635	6,835	-61	-2.3	3,057	3,002	55
005 Total								
006 Total	4,211	3,070	7,281	435	16.5	2,493	2,924	-431
007 Total	4,234	2,879	7,113	-191	-6.2	3,325	3,133	192
008 Total	4,232	2,840	7,073	-39	-1.4	3,374	3,340	34
009 January	4,237	2,133	6,370	77	3.8	783	78	705
February	4,243	1,758	6,001	293	20.0	472	100	372
March	4,248	1,660	5,908	394	31.1	294	202	93
April	4,255	1,910	6,165	474	33.0	106	356	-251
May	4,257	2,375	6,632	535	29.1	45	512	-467
June	4.268	2,760	7,028	583	26.8	62	448	-386
July	4,263	3,090	7,354	573	22.8	83	421	-338
August	4,267	3,359	7,626	493	17.2	88	362	-274
September	4,276	3,646	7,922	485	15.3	57	352	-295
	4,276	3,810	8.091	410	12.1	99	266	-293
October								
November	4,288	3,837	8,125	492	14.7	140	173	-33
December	4,277	3,130	7,407	290	10.2	738	44	694
Total	4,277	3,130	7,407	290	10.2	2,966	3,315	-349
110 January	R 4,276	R 2,304	<sup>R</sup> 6,580	<sup>R</sup> 171	R 8.0	R 873	R 63	R 811
February	R 4,278	R 1,683	<sup>R</sup> 5,961	<sup>R</sup> -75	R -4.2	R 657	R 38	R 619
March	R 4,278	R 1,652	R 5,930	R -7	R4	R 238	R 207	R 31
April	R 4,278	R 2,011	R 6,289	R 101	R 5.3	R 68	R 427	R -360
May	R 4,279	R 2,420	R 6,699	R 45	R 1.9	R 53	R 463	R-410
June	R 4,287	R 2,740	R 7.027	R -20	7	64	385	-321
July	R 4,287	R 2,966	R 7,253	R -125	-4.0	R 112	R 339	-227
August	R 4,290	R 3,153	<sup>R</sup> 7,443	R -206	R -6.1	R 137	R 323	-186
September	R 4.294	R 3,508	R 7,801	R -138	R -3.8	R 52	R 411	R -359
	R 4,305	R 3,851	R 8.156	N-136 R 41	R 1.1		R 407	R -355
October	·· 4,305	3,651 R o 700		^ 41 <sup>R</sup> -69		52 R 007		
November	R 4,309	R 3,769	R 8,078	``-69	R <sub>-</sub> 1.8	R 237	163	74
December	R 4,301	R 3,111	7,412	R-19	R6	R 731	66	R 665
Total	<sup>R</sup> 4,301	R 3,111	7,412	<sup>R</sup> -19	R <b>6</b>	R 3,274	R 3,291	R <b>-17</b>
111 January	4,306	2,308	6,614	R 4	R.2	852	53	799
February	4,306	1,724	6,029	<sup>R</sup> 40	R 2.4	668	84	584
March	4,304	1,581	5,884	R -72	R -4.3	317	172	145
April	4.307	1,789	6.096	R -222	R -11.0	108	320	-212
May	4,308	2,188	6.495	R -232	R -9.6	66	464	-398
June	4,305	2,530	6,835	R -210	- <del>7</del> .7	90	430	-340
	4,303	2,774	7,079	R -192	-6.5	124	368	-244
July				F 400	-6.5 R -4.2			
August	4,304	3,020	7,323	R -133	``-4.Z	138	382	-244
September	4,305	3,416	7,721	R -92	R -2.6	64	462	-398
October	4,305	3,804	8,109	-46	-1.2	62	448	-385
10-Month Total						2,489	3,184	-695
10 10-Month Total						2,307	3,063	-756
09 10-Month Total						2,089	3,098	-1,009

<sup>&</sup>lt;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 1980-2010, data differ from those shown on Table 4.1, which includes liquefied natural gas storage for that period.

available data beginning in 1973.

Sources: • Storage Activity: 1973-1975—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.
1996-2005—EIA, Natural Gas Monthly (NGM), monthly issues. 2006 forward—EIA, NGM, December 2011, Table 6. • All Other Data: 1973 and 1974—American Gas Association, Gas Facts, 1972 Data, Table 57, Gas Facts, 1973 Data, Table 57, and Gas Facts, 1974 Data, Table 40. 1975 and 1976—Federal Energy Administration (FEA), Form FEA-G318-M-0, "Underground Gas Storage Report." and Federal Power Commission (FPC), Form FEC-8, "Underground Gas Storage Report." and Federal Energy Regulatory Commission (FERC), Form FERC-8, "Underground Gas Storage Report." and Federal Energy Regulatory Commission (FERC), Form FERC-8, "Underground Gas Storage Report." and FeRC, Form FERC-8, "Underground Gas Storage Report." and FERC, Form FERC-8, "Underground Gas Storage Report." 1979-2006—EIA, NGM, monthly issues. 2007 forward—EIA, NGM, December 2011, Table 6.

liquefied natural gas storage for that period.

Cositive 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.

Notes:

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

Geographic coverage is the 50 States and the District of Columbia.

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

### **Natural Gas**

**Note 1. Natural Gas Production.** Final annual data are from the U.S. Energy Information Administration (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 the EIA *Natural Gas Monthly (NGM)*.

Monthly data are considered preliminary until after publication of the EIA 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 14.73 psi pressure base. Unless there are major changes, data are not revised until after publication of the EIA NGA.

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

**Note 2. Natural Gas Extraction Loss.** Extraction loss is the reduction in volume of natural gas resulting from the removal of natural gas liquid constituents at natural gas processing plants.

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

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

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

included in consumption data for 1979 and earlier years. Monthly data are considered preliminary until after the publication of the EIA NGA. Monthly estimates are based on the annual ratio of supplemental gaseous fuels to the sum of dry gas production, net imports, and net withdrawals from storage. The ratio is applied to the monthly sum of the three elements to compute a monthly supplemental gaseous fuels figure.

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

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

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

<b>1975</b> 6,280	<b>1987</b> 8,124	1999	8,229
<b>1976</b> 6,544	<b>1988</b> 8,124	2000	8,241
<b>1977</b> 6,678	<b>1989</b> 8,120	2001	8,182
<b>1978</b> 6,890	<b>1990</b> 7,794	2002	8,207
<b>1979</b> 6,929	<b>1991</b> 7,993	2003	8,206
<b>1980</b> 7,434	<b>1992</b> 7,932	2004	8,255
<b>1981</b> 7,805	<b>1993</b> 7,989	2005	8,268
<b>1982</b> 7,915	<b>1994</b> 8,043	2006	8,330
<b>1983</b> 7,985	<b>1995</b> 7,953	2007	8,402
<b>1984</b> 8,043	<b>1996</b> 7,980	2008	8,499
<b>1985</b> 8,087	<b>1997</b> 8,332	2009	8,656
<b>1986</b> 8,145	<b>1998</b> 8,179	2010	R8,764

R=Revised

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

The final monthly and annual storage and withdrawal data for 1980–2010 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.

The increase of 0.2 trillion cubic feet (Tcf) in the "Balancing Item" category in 1983, followed by a decline of 0.5 Tcf in 1984, reflected unusually large differences resulting from the use of the annual billing cycle (essentially December 15 through the following December 14) consumption data in conjunction with calendar year supply data. Record cold temperatures during the last half of December 1983 resulted in a reported 0.3 Tcf increase in net withdrawals from underground storage for peak shaving as compared with the same period in 1982, but the effect of this cold weather was reflected primarily in 1984 consumption data. For underground storage data, see Table F2 in the May 1985 EIA NGM, which was published in July 1985.

**Note 6. Natural Gas Consumption.** Consumption includes use for lease and plant fuel, pipelines and distribution, vehicle fuel, and electric power plants, as well as deliveries to residential, commercial, and other industrial customers.

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

**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 through 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.)

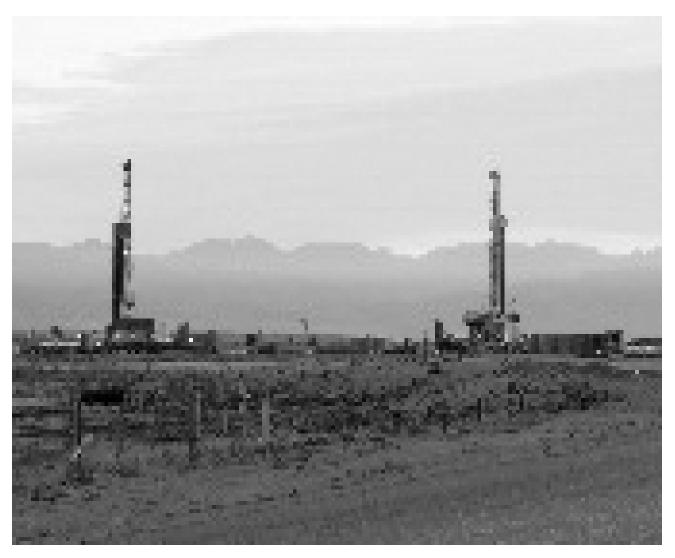
For 1996–2000, monthly data for several natural gas series shown in EIA's Natural Gas Navigator http://www.eia.gov/dnav/ng/ng cons sum dcu nus m.htm) were not reconciled and updated to be consistent with the final annual data in EIA's NGA. In the Monthly Energy Review, monthly data for these series were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

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

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.

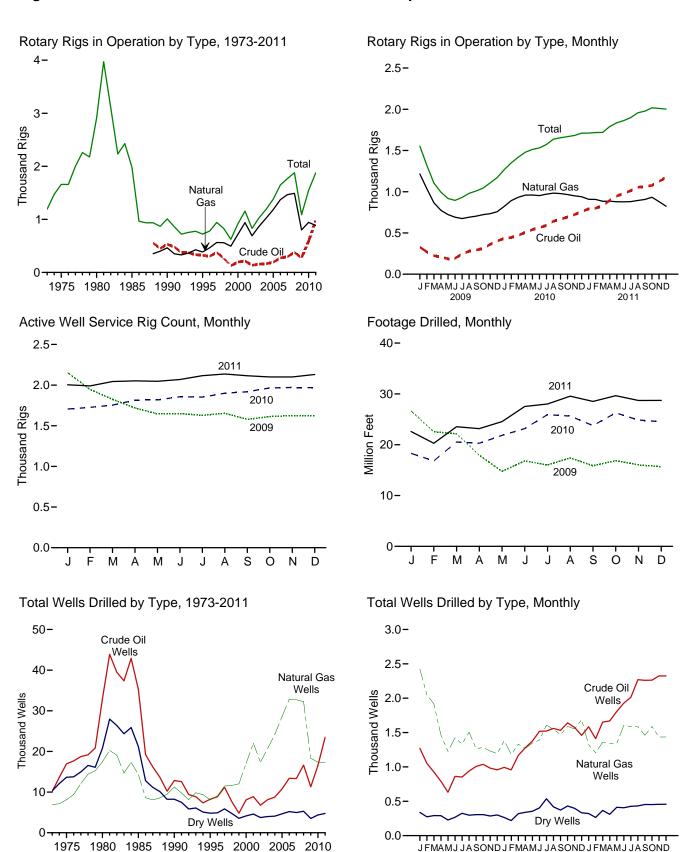
Preliminary monthly data are EIA estimates. For a discussion of estimation procedures, see the EIA NGM. Preliminary data are revised after the publication of the EIA *U.S. Imports and Exports of Natural Gas.* 

## Crude Oil and Natural Gas Resource Development



New oil and gas drilling activity in Wyoming. Source: Dreamstime Stock Photos.

Figure 5.1 Crude Oil and Natural Gas Resource Development Indicators



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)

		Re	otary Rigs in Operation	n <sup>a</sup>		
	Ву	Site	Ву	Туре		Active
	Onshore	Offshore	Crude Oil	Natural Gas	Total <sup>b</sup>	Well Service Rig Count <sup>c</sup>
1973 Average	1.110	84	NA	NA	1.194	2,008
1975 Average	1,554	106	ŇÁ	NA NA	1,660	2,486
1980 Average	2,678	231	ŇÁ	NA NA	2.909	4.089
	1.774	206	NA NA	NA NA	1.980	4.716
1985 Average						
1990 Average	902	108	532	464	1,010	3,658
1995 Average	622	101	323	385	723	3,041
1996 Average	671	108	306	464	779	3,445
1997 Average	821	122	376	564	943	3,499
1998 Average	703	123	264	560	827	3,014
1999 Average	519	106	128	496	625	2,232
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
	1,093	94	194	1,025	1,381	2,004
2005 Average						
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 January	1.487	66	328	1.215	1.553	2.152
February	1,263	57	271	1.037	1.320	1.947
March	1,059	46	225	867	1,105	1.825
	947	48	209	775	995	1,718
April					918	
May	864	54	187	723		1,646
June	848	47	194	691	895	1,648
July	893	38	245	675	931	1,629
August	949	31	279	691	980	1,653
September	976	33	293	704	1,009	1,579
October	1,011	33	312	722	1,044	1,613
November	1.071	36	362	734	1,107	1.625
December	1.136	37	404	758	1,172	1.625
Average	1,046	44	278	801	1,089	1,722
<b>2010</b> January	1.225	42	433	822	1,267	1,706
February	1.305	45	446	892	1,350	1,726
March	1,368	51	471	933	1,419	1,754
April	1.426	53	508	959	1.479	1,816
May	1.464	49	541	960	1,513	1,818
June	1,511	20	566	953	1,531	1,857
July	1,558	15	591	971	1,573	1.852
	1,619	20	644	983	1,638	1,900
August	1,635	19	668	963 977	1,655	1,900
September						
October	1,647	21	693	966	1,668	1,965
November	1,662	22	723	950	1,683	1,971
December	1,687	24	759	940	1,711	1,968
Average	1,514	31	591	943	1,546	1,854
2011 January	1,686	26	793	909	1,711	2,004
February	1,692	26	801	907	1,718	1,990
March	1,694	26	830	884	1,720	2,044
April	1.762	28	896	885	1.790	2.052
May	1.804	32	948	878	1.836	2.047
June	1,829	34	979	877	1.863	2.069
July	1.865	35	1,014	880	1,900	2,116
	1,923	35	1,055	894	1,957	2,116
August	1,923	32	1,063	907	1,978	2,130
September						
October	1,982	35	1,077	933	2,017	2,100
November	1,974	37	1,125	880	2,011	2,100
December	1,960	42	1,173	824	2,002	2,131
Average	1,844	32	980	888	1,876	2,075

a Rotary rigs in operation are reported weekly. Monthly data are averages of 4-or 5-week reporting periods, not calendar months. Multi-month data are averages of the reported data over the covered months, not averages of the weekly data. Annual data are averages over 52 or 53 weeks, not calendar years. Published data are rounded to the nearest whole number.
 b Sum of rigs drilling for crude oil, rigs drilling for natural gas, and other rigs (not shown) drilling for miscellaneous purposes, such as service wells, injection wells, and stratigraphic tests.
 c The number of rigs doing true workovers (where tubing is pulled from the well), or doing rod string and pump repair operations, and that are, on average, crewed and working every day of the month.

NA=Not available.

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 for all available data beginning in 1973.

Sources: • Rotary Rigs in Operation: By Site—Baker Hughes, Inc., Houston, Texas, Rotary Rigs Running—by State. By Type—Baker Hughes, Inc., Houston, Texas, weekly phone recording. • Active Well Service Rig Count: Cameron International Corporation, Houston, Texas. See http://www.c-a-m.com/Forms/Product.aspx?prodID=cdc209c4-79a3-47e5-99c2-fdeda6d4aad6.

Table 5.2 Crude Oil and Natural Gas Exploratory and Development Wells

	Wells Drilled												
		Explo	ratory			Develo	pment			То	tal		
	Crude Oil	Natural Gas	Dry	Total	Crude Oil	Natural Gas	Dry	Total	Crude Oil	Natural Gas	Dry	Total	Total Footage Drilled
						Nun	nber						Thousand Feet
1973 Total	642 982 1,777 1,680 778 570 489 491 327 197 288 357 258 350 383	1,067 1,248 2,099 1,200 811 558 576 562 566 570 657 1,052 844 997	5,952 7,129 9,081 8,954 3,652 2,024 1,956 2,113 1,590 1,157 1,341 1,733 1,282 1,297	7,661 9,359 12,957 11,834 5,241 3,152 3,021 3,166 2,483 1,924 2,286 3,142 2,384 2,644 3,444	9,525 15,966 31,182 33,581 12,061 7,678 8,347 10,715 7,355 4,608 7,802 8,531 6,517 7,779 8,406	5,866 6,879 15,362 13,124 10,435 7,524 8,451 10,936 11,073 11,457 16,394 21,020 16,498 19,725 22,515	4,368 6,517 11,704 12,257 4,593 2,790 2,934 3,761 3,171 2,393 2,805 2,865 2,472 2,685 2,472	19,759 29,362 58,248 58,962 27,089 17,992 19,732 25,412 21,599 18,458 27,001 32,416 25,487 30,189 33,653	10,167 16,948 32,959 35,261 12,839 8,248 8,836 11,206 7,682 4,805 8,090 8,888 6,775 8,129 8,789	6,933 8,127 17,461 14,324 11,246 8,082 9,027 11,498 11,639 12,027 17,051 22,072 17,051 22,072 20,722 24,186	10,320 13,646 20,785 21,211 8,245 4,814 4,890 5,874 4,761 3,550 4,146 4,598 3,754 3,982 4,082	27,420 38,721 71,205 70,796 32,330 21,144 22,753 28,578 24,082 20,382 29,287 35,558 27,871 32,833 37,057	138,223 180,494 316,943 314,409 R 156,106 R 117,202 R 126,444 R 161,460 R 137,334 R 144,526 R 144,526 R 180,152 R 177,392 R 204,334
2005 Total 2006 Total 2007 Total 2008 Total	539 R 646 R 808 R 897	2,141 R 2,456 R 2,794 R 2,345	1,462 R 1,547 R 1,582 R 1,715	4,142 R 4,649 R 5,184 R 4,957	10,240 R 12,739 R 12,522 R 15,736	26,449 R 30,382 R 29,925 R 29,901	3,191 R 3,659 R 3,396 R 3,569	39,880 R 46,780 R 45,843 R 49,206	10,779 R 13,385 R 13,330 R 16,633	28,590 R 32,838 R 32,719 R 32,246	4,653 R 5,206 R 4,978 R 5,284	44,022 R 51,429 R 51,027 R 54,163	R 240,525 R 282,921 R 301,564 R 334,008
2009 January February March April May June July August September October November December Total	R 80 62 59 R 36 R 47 R 44 R 40 49 62 R 56 R 38 R 34 R 607	R 171 R 125 R 146 R 68 R 90 R 91 R 100 R 84 R 74 R 83 R 83 101	R 99 R 88 R 88 R 93 R 80 T5 105 88 98 R 80 R 84 89 R 84	R 350 R 275 R 293 R 197 R 217 R 210 R 245 R 221 R 234 R 219 R 205 R 224 R 2,890	R 1,189 R 991 R 867 R 755 R 584 R 818 R 813 R 891 945 R 982 R 944 924 R 10,703	R 2,253 R 1,925 R 1,771 R 1,396 R 1,333 1,234 R 1,421 1,192 R 1,200 R 1,148 1,093	R 239 R 186 R 204 R 197 R 148 R 192 R 220 R 210 208 R 226 R 202 R 212 R 244	R 3,681 R 3,102 R 2,842 R 2,348 R 1,868 R 2,343 R 2,267 R 2,522 2,345 R 2,408 R 2,294 R 2,229	R 1,269 R 1,053 R 926 R 791 R 631 R 862 R 853 R 940 1,007 R 1,038 R 982 R 958	R 2,424 R 2,050 R 1,917 R 1,464 R 1,226 R 1,424 R 1,505 R 1,266 R 1,283 R 1,231 1,194 R 18,318	R 338 R 274 R 292 R 290 R 228 R 267 R 325 R 298 306 R 306 R 301 R 3,511	R 4,031 R 3,377 R 3,135 R 2,545 R 2,085 R 2,553 R 2,512 R 2,743 R 2,579 R 2,459 R 2,453 R 33,139	R 26,636 R 22,548 R 22,160 R 17,938 R 14,759 R 16,823 R 16,011 R 17,401 R 15,863 R 16,871 R 16,034 R 15,649
2010 January February March April May June July August September October November December Total	R 53 R 444 R 58 R 49 R 50 61 R 46 59 R 60 77 R 65 57 R 679	96 71 R 85 R 80 R 107 110 103 114 83 87 R 114 92	86 69 R 93 81 91 R 94 116 97 93 R 123 109 74	R 235 R 184 R 236 R 210 R 248 R 265 R 265 270 R 236 R 287 R 288 223	R 941 913 1,109 1,231 R 1,325 1,457 1,476 1,501 1,471 1,564 1,510 1,402	1,284 R 1,112 1,245 1,189 1,241 R 1,280 1,504 1,434 1,387 1,503 1,439 1,597 16,215	178 R 151 226 R 258 264 309 420 R 321 R 279 308 288 258 R 3,260	R 2,403 R 2,176 2,580 R 2,678 R 2,830 R 3,046 3,400 R 3,256 R 3,137 3,375 3,237 3,257	R 994 R 957 R 1,167 R 1,280 R 1,375 1,518 R 1,522 1,560 R 1,531 1,641 R 1,575 1,459	1,380 R 1,183 R 1,330 R 1,269 R 1,348 R 1,390 1,607 1,548 1,470 1,590 R 1,553 1,689	264 R 220 R 319 R 339 R 355 R 403 F 536 R 418 R 372 R 431 R 397 R 332 R 4,386	R 2,638 2,360 R 2,816 R 2,888 R 3,078 R 3,311 R 3,665 R 3,526 R 3,526 R 3,525 3,480 R 38,322	R 18,302 R 16,825 R 20,537 R 20,283 R 21,839 R 23,178 R 25,921 R 25,642 R 23,758 R 26,271 R 24,843 R 24,513
2011 January           February           March           April           May           June           July           August           September           October           November           December           Total	70 64 71 76 87 89 94 111 101 103 109 109	83 64 75 83 R 98 R 102 78 87 91 96 81 82 <b>1,020</b>	87 64 70 62 90 82 97 98 110 118 119	240 192 216 221 R 275 R 273 269 296 302 309 308 310 <b>3,211</b>	1,514 1,347 1,581 1,593 1,720 1,839 1,918 2,158 2,159 2,160 2,215 2,215 22,419	1,239 1,143 1,285 1,253 1,244 1,503 1,509 1,497 1,371 1,493 1,354 1,354	235 201 297 248 323 324 330 334 344 342 338 338 3,654	2,988 2,691 3,163 3,094 3,287 3,666 3,757 3,989 3,874 3,995 3,907 42,318	1,584 1,411 1,652 1,669 1,807 1,928 2,012 2,269 2,260 2,263 2,324 2,324 2,324 2,3503	1,322 1,207 1,360 1,336 R 1,342 R 1,605 1,587 1,584 1,462 1,589 1,435 1,436	322 265 367 310 413 406 427 432 454 452 456 457 <b>4,761</b>	3,228 2,883 3,379 3,315 R 3,562 R 3,939 4,026 4,285 4,176 4,304 4,215 4,217 <b>45,529</b>	22,604 20,290 23,548 23,161 R 24,554 R 27,532 28,015 29,554 28,519 29,643 28,703 28,717 <b>314,840</b>

Notes: • Prior to 1990, these well counts include only the original drilling of a Notes. • Prior to 1990, tress were counts include only the original arining 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. After 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 for all available data beginning in 1973.

Sources: • 1973–1989: U.S. Energy Information Administration (EIA) computations based on well reports submitted to the American Petroleum Institute.

• 1990 forward: EIA computations based on well reports submitted to IHS, Inc., Deputer CO.

## **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

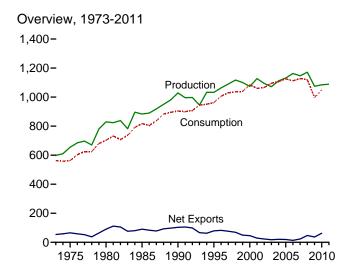
completion data for the above types and classes of wells as reported to the American Petroleum Institute (API) during a given month. Due to time lags between the date of well completion and the date of completion reporting to the API, as-reported well completions proved to be an inaccurate indicator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

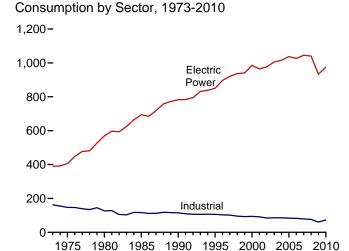
# Coal

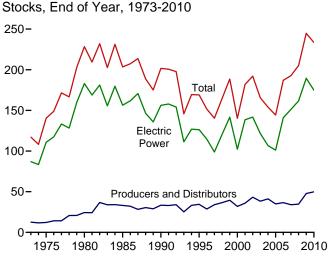


Coal yard, Curtis Bay, Maryland. Source: U.S. Department of Energy.

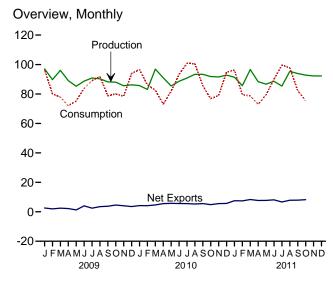
Figure 6.1 Coal (Million Short Tons)

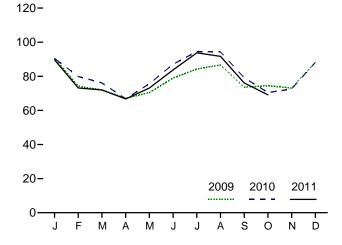




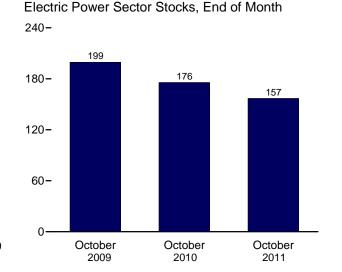








Electric Power Sector Consumption, Monthly



Sources: Tables 6.1-6.3.

**Table 6.1 Coal Overview** 

(Thousand Short Tons)

		Waste Coal		Trade		Stock	Losses and Unaccounted	
	Production <sup>a</sup>	Supplied <sup>b</sup>	Imports	Exports	Net Imports <sup>c</sup>	Changed	fore	Consumption
1973 Total	598,568 654,641	NA NA	127 940	53,587 66,309	-53,460 -65,369	( <sup>f</sup> ) 32,154	<sup>f</sup> -17,476 -5,522	562,584 562,640
1980 Total	829,700	NA 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
1996 Total	1,063,856	8,778	8,115	90,473	-82,357	-17,456	1,411	1,006,321
1997 Total	1,089,932	8,096	7,487	83,545	-76,058	-11,253	3,678	1,029,544
1998 Total	1,117,535	8,690	8,724	78,048	-69,324	24,228	-4,430	1,037,103
1999 Total	1,100,431	8,683	9,089	58,476	-49,387	23,988	-2,906	1,038,647
2000 Total	1,073,612	9,089 10,085	12,513 19,787	58,489 48,666	-45,976 -28,879	-48,309 41,630	938 7,120	1,084,095 1,060,146
2001 Total 2002 Total	1,127,689 1,094,283	9.052	16,875	39.601	-22,726	10,215	4.040	1,066,355
2002 Total	1,071,753	10,016	25,044	43,014	-22,726 -17,970	-26,659	-4,403	1,000,333
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 January	97,022	1,272	2,329	4,907	-2,578	-2,104	1,370	96,449
February	89,688	928	1,855	3,822	-1,968	7,901	626	80,121
March	96,062 89,072	1,121 1,036	2,141 1,303	4,605 3,513	-2,464 -2,210	12,517 13,303	4,389 2,577	77,814 72,019
April May	85.236	1,065	2.283	3,552	-2,210	7,537	2,377	75,264
June	88.708	1,118	1.840	5.886	-4,045	2.746	-792	83.827
July	90.847	1,248	2.018	4.477	-2.459	-781	1.282	89,134
August	90.308	1,206	1,568	5,056	-3,488	-4.988	1.282	91,731
September	88,185	1,113	1,854	5,625	-3,771	4,868	1,902	78,757
October	88,002	1,142	1,762	6,364	-4,603	4,561	-54	80,035
November	85,564	1,164	1,506	5,586	-4,080	2,724	1,423	78,502
December	86,229	1,252	2,179	5,703	-3,524	-8,617	-1,252	93,826
Total	1,074,923	13,666	22,639	59,097	-36,458	39,668	14,985	997,478
<b>2010</b> January	85,711	1,187	1,665	5,866	-4,202	-9,978	-3,933	96,607
February	83,087	908	1,239	5,386	-4,146	-6,588	323	86,115
March	96,904	1,192	1,899	6,554	-4,655	8,845	2,038	82,559
April	90,960 85.401	1,071	1,812	7,358	-5,545 5,745	11,519	1,858	73,108
May June	85,401 88,621	1,138 1,219	1,475 1,771	7,220 7,387	-5,745 -5,616	2,723 -9,407	-3,819 331	81,890 93,301
July	90.795	1,273	1.390	6.928	-5,539	-15.570	1,262	100.837
August	93,350	1,261	1,702	7,001	-5,299	-8,837	-2,502	100,651
September	93,360	1,102	1,588	7.145	-5.556	5.040	-1,778	85,644
October	91,831	982	1,775	6,623	-4,849	11,425	-292	76,831
November	91,558	1,121	1,473	7,015	-5,542	8,840	-641	78,938
December	92,791	1,197	1,563	7,232	-5,669	-9,225	2,718	94,826
Total	1,084,368	13,651	19,353	81,716	-62,363	-11,215	-4,435	1,051,307
<b>2011</b> January	91,398	1,187	1,014	8,509	-7,496	-11,881	722	96,248
February	85,618	1,030	843	8,275	-7,432	-6,225	5,897	79,544
March	96,608	1,068	1,524	9,832	-8,308 7,706	3,605	7,155	78,607
April	88,335	910	1,136	8,843	-7,706 7,730	R 8,695	-6 4 636	<sup>R</sup> 72,849 <sup>R</sup> 79,405
May June	86,652 88,647	852 1,109	1,313 970	9,042 9,102	-7,730 -8,132	R 1,995 R -10,104	-1,626 1,757	<sup>R</sup> 89,971
July	85,375	R 1,173	1.208	7,865	-6,132 -6,657	R -16,240	R -3,510	R 99,641
August	95,362	R 1,173	1,545	9,387	-7,843	R -11,240	R 2,153	R 97,749
September	93,889	R 1.087	835	8,723	-7,888	R 4,560	R 286	R 82,241
October	92,794	RF 1,069	917	9,159	-8,242	R 11,911	R -1,865	R 75,575
November	92,244	NA	NA	NA	NA	NA	NA	NA
	92,278	NA	NA	NA	NIA	NA	NI A	NI A
December Total	1,089,200	NA NA	NA NA	NA NA	NA <b>NA</b>	NA NA	NA <b>NA</b>	NA <b>NA</b>

<sup>&</sup>lt;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

<sup>&</sup>quot;Consumption."

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

greater than imports.

d A negative value indicates a decrease in stocks; a positive value indicates an increase.

e "Losses and Unaccounted for" is calculated as the sum of production, imports,

and waste coal supplied, minus exports, stock change, and consumption.

† In 1973, stock change is included in "Losses and Unaccounted for."

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 include refined coal. • 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 for all available data beginning in 1973.

Sources: See end of section.

Sources: See end of section.

Table 6.2 Coal Consumption by Sector

(Thousand Short Tons)

	End-Use Sectors											
			Commerci	al			Industrial					
	Resi-				Coke	0	ther Industria	al		Trans-	Electric Power	
	dential	CHPa	Otherb	Total	Plants	CHPc	Non-CHP <sup>d</sup>	Total	Total	portation	Sector <sup>e,f</sup>	Total
1973 Total 1975 Total 1985 Total 1985 Total 1995 Total 1995 Total 1995 Total 1996 Total 1997 Total 1998 Total 1997 Total 2000 Total 2001 Total 2002 Total 2003 Total 2004 Total 2005 Total 2005 Total 2006 Total 2007 Total 2008 Total	551 512 378	(9) (9) (9) (9) 1,191 1,660 1,738 1,443 1,490 1,547 1,448 1,405 1,817 1,917 1,922 1,886 1,927 2,021	7,004 6,587 5,097 6,068 4,189 3,633 3,622 4,015 2,879 2,803 2,126 2,441 2,506 1,869 2,693 2,420 1,050 1,247 1,134	7,004 6,587 5,097 6,068 5,379 5,052 5,285 5,752 4,322 4,293 3,673 3,885 4,685 4,685 4,342 2,936 3,173 3,155	94,101 83,598 66,657 41,056 38,877 33,011 31,706 30,203 28,189 28,108 28,939 26,075 23,656 24,248 23,670 23,434 22,957 22,715 22,070	(h) (h) (h) (h) (h) (27,781 29,434 29,853 28,053 27,763 28,031 25,755 26,232 24,846 26,613 25,875 25,262 22,537 21,902	68,038 63,646 60,347 75,372 48,549 43,693 42,254 41,661 38,887 37,177 39,514 34,515 36,415 35,582 34,465 34,210 34,078 32,491	68,038 63,646 60,347 75,372 76,330 73,055 71,689 71,515 67,439 65,208 65,268 60,747 61,261 62,195 60,340 59,472 56,615 54,393	162,139 147,244 127,004 116,429 115,207 106,067 103,395 101,718 95,628 92,846 94,147 91,344 84,403 85,509 85,865 83,774 82,429 79,331 76,463	116 224 (h) (h) (h) (h) (h) (h) (h) (h) (h) (h)	389,212 405,962 569,274 693,841 782,567 850,230 996,921 921,364 936,619 940,922 985,821 964,433 977,507 1,005,116 1,016,268 1,037,485 1,026,636 1,045,141 1,040,580	562,584 562,640 702,730 818,049 904,498 962,104 1,006,321 1,029,544 1,037,103 1,038,647 1,084,095 1,060,146 1,066,355 1,094,861 1,107,255 1,125,978 1,112,292 1,127,998 1,120,548
Panuary February March March March May June July May September October November December Total	44 38 36 25 22 26 23 24 21 27 31 36 <b>353</b>	208 178 170 128 117 135 137 143 127 129 151 174 <b>1,798</b>	148 126 120 71 65 75 49 51 45 88 103 119	356 305 290 199 181 211 186 194 172 216 255 293 <b>2,857</b>	1,390 1,449 1,559 1,150 1,118 1,134 1,032 1,168 1,250 1,431 1,274 1,371	1,793 1,605 1,692 1,487 1,550 1,600 1,659 1,694 1,611 1,671 1,622 1,783	2,225 2,470 2,289 2,036 1,967 1,903 1,991 2,017 2,136 2,170 2,257 2,088 25,549	4,018 4,075 3,981 3,522 3,517 3,503 3,650 3,710 3,747 3,841 3,878 3,871 <b>45,314</b>	5,409 5,524 5,540 4,673 4,635 4,637 4,682 4,878 4,997 5,272 5,153 5,242 <b>60,641</b>	(h)	90,640 74,254 71,948 67,123 70,425 78,954 84,243 86,635 73,566 74,520 73,063 88,255 <b>933,627</b>	96,449 80,121 77,814 72,019 75,264 83,827 89,134 91,731 78,757 80,035 78,502 93,826 <b>997,478</b>
Petron January	43 37 33 21 21 24 24 25 22 26 27 35 339	193 167 149 117 118 135 142 152 133 121 128 165 <b>1,720</b>	156 136 121 54 55 62 48 52 45 86 90 116 1,022	349 303 271 171 173 197 190 203 178 207 218 281 <b>2,742</b>	1,472 1,584 1,801 1,786 1,794 1,772 1,783 1,814 1,894 1,731 1,787 1,874 21,092	2,094 1,978 2,124 2,220 2,010 1,898 2,122 2,194 1,941 1,958 1,854 2,246 <b>24,638</b>	2,197 2,329 2,220 2,067 2,294 2,378 2,199 2,167 2,432 2,419 2,538 2,202 27,443	4,291 4,306 4,344 4,287 4,305 4,276 4,321 4,361 4,373 4,376 4,392 4,448 <b>52,082</b>	5,763 5,891 6,145 6,073 6,099 6,049 6,104 6,175 6,268 6,107 6,179 6,321	(h) (h) (h) (h) (h) (h) (h) (h) (h) (h)	90,452 79,884 76,110 66,842 75,597 87,030 94,519 94,247 79,176 70,492 72,514 88,189 <b>975,052</b>	96,607 86,115 82,559 73,108 81,890 93,301 100,837 100,651 85,644 76,831 78,938 94,826 <b>1,051,307</b>
2011 January	_ 23	178 165 158 124 128 124 134 124 121 116 1,372	144 133 127 63 65 63 R 30 R 28 R 27 F 96 E 778	322 298 285 187 193 187 R 165 R 152 R 149 F 213 E 2,150	1,746 1,623 1,819 1,668 1,878 1,846 R 1,670 R 1,863 R 1,874 F 2,449 E 18,435	2,320 2,044 2,088 1,767 2,126 2,056 2,208 2,182 2,100 2,080 <b>20,971</b> <b>20,539</b>	2,139 2,386 2,371 R2,463 R2,085 R2,159 R1,842 R1,865 R1,969 F1,699 E20,978	4,458 4,430 4,459 R 4,230 R 4,211 R 4,215 R 4,050 R 4,048 F 3,779 E 41,949 43,242 37,565	6,204 6,053 6,278 R 5,898 R 6,088 R 6,061 R 5,720 R 5,913 F 6,228 E 60,385	(h) (h) (h) (h) (h) (h) (h) (h) (h) (h)	89,682 73,156 72,009 66,741 73,100 83,700 93,736 91,667 76,131 69,109 789,030 814,349 772,308	96,248 79,544 78,607 8 72,849 8 79,405 8 89,971 8 99,641 8 97,749 8 82,241 75,575 851,831 877,542 825,149

<sup>&</sup>lt;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, "Classification of Power Plants Into Energy-Use Sectors," at end of

See Note, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7.

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

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

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

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

f Through 1988, data are for consumption at electric utilities only. Beginning in 1989, data also include consumption at independent power producers.

<sup>1989,</sup> data also include consumption at independent power producers.

g Included in "Commercial Other

g Included in "Commercial Other."
h Included in "Industrial Non-CHP."
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 include refined coal. • 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 for all available data beginning in 1973.

available data beginning in 1973. Sources: See end of section.

Table 6.3 Coal Stocks by Sector

(Thousand Short Tons)

			E	nd-Use Sectors			_	
	Producers and	Residential and		Industrial			Electric Power	
	Distributors	Commercial	Coke Plants	Othera	Total	Total	Sector <sup>b,c</sup>	Total
973 Year	12,530	290	6,998	10,370	17,368	17,658	86,967	117,155
975 Year	12,108	233	8,797	8,529	17,326	17,559	110,724	140,391
980 Year	24,379	NA	9,067	11,951	21,018	21,018	183,010	228,407
985 Year	33,133	NA	3,420	10,438	13,857	13,857	156,376	203,367
990 Year	33,418	NA	3,329	8,716	12,044	12,044	156,166	201,629
995 Year	34,444	NA	2,632	5,702	8,334	8,334	126,304	169,083
996 Year	28,648	NA	2,667	5,688	8,355	8,355	114,623	151,627
997 Year	33,973	NA	1,978	5,597	7,576	7,576	98,826	140,374
998 Year	36,530	NA	2,026	5,545	7,571	7,571	120,501	164,602
999 Year	39,475	NA	1,943	5,569	7,511	7,511	° 141,604	188,590
000 Year	31,905	NA	1,494	4,587	6,081	6,081	102,296	140,282
001 Year	35,900	NA	1,510	6,006	7,516	7,516	138,496	181,912
002 Year	43,257	NA	1,364	5,792	7,156	7,156	141,714	192,127
003 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
<b>009</b> January	38,394	490	2,260	5,788	8,049	8,539	156,075	203,008
February	42,066	483	2,190	5,570	7,760	8,243	160,601	210,909
March	41,257	475	2,119	5,352	7,471	7,946	174,223	223,426
April	43,195	477	2,000	5,266	7,266	7,744	185,790	236,729
May	41,622	480	1,880	5,181	7,061	7,541	195,103	244,266
June	44,018	482	1,760	5,096	6,856	7,338	195,656	247,012
July	45,372	496	1,702	5,099	6,800	7,297	193,563	246,232
August	42,457	510	1,644	5,101	6,745	7,255	191,532	241,244
September	41,690	524	1,585	5,104	6,690	7,214	197,208	246,112
October	43,882	526	1,683	5,106	6,789	7,314	199,477	250,673
November December	42,217 <b>47.718</b>	527 <b>529</b>	1,780 <b>1.957</b>	5,108 <b>5.109</b>	6,888 <b>7.066</b>	7,415 <b>7.595</b>	203,765 <b>189.467</b>	253,397 <b>244,780</b>
	40.054	540	4.000	5.515	7.047	7.057	170.001	
010 January	48,854	510	1,832	5,515	7,347 7,629	7,857	178,091	234,802
February	49,069	490	1,708	5,921		8,119	171,026	228,214
March	50,936 50,761	471 482	1,583 1,715	6,326 6,358	7,910 8,073	8,381 8,556	177,742 189,260	237,058 248,577
April	50,900	494		6,391	8,237	8,730		251,299
May			1,846				191,669	
June	51,497	505 509	1,978	6,423	8,400	8,905 8.882	181,490 169.504	241,892 226,322
July	47,935		1,948	6,425	8,373	-,	,	-,-
August	48,638	513 517	1,918	6,427	8,346	8,859 8.836	159,987 163.776	217,484
September	49,913 49.430	517 529	1,889 1.901	6,430 6.403	8,319 8.304	8,833	175.686	222,524 233.949
October November	49,430 50,571	529 541	1,901	6,403 6,376	8,304 8,289	8,833 8,830	183,389	233,949 242,790
December	49,820	552	1,913 1,925	6,376 6,350	8,275	8,827	174,917	242,790 233,564
<b>011</b> January	48,295	536	1,937	6,076	8,012	8,548	164,840	221,684
February	45,750	520	1,948	5,802	7,750	8,269	161,439	215,458
March	44,336	503	1,959	5,528	7,487	7,990	166,737	219,063
April	45,585	500	1,958	R 5,717	R 7,675	R 8.175	173,999	R 227,759
May	46,775	497	1,957	R 5,906	<sup>R</sup> 7,863	R 8,360	174,619	R 229,754
June	45,398	494	1,956	R 6,096	R 8.051	R 8,545	165,707	R 219.650
July	46.926	R 498	R 2,082	R 5.937	R 8,019	R 8,517	147.967	R 203,410
August	44.445	R 502	R 2.221	R 5,777	R 7.998	R 8,500	139.225	R 192.170
September	43,763	R 506	R 2,405	R 5,618	R 8,023	R 8,529	144,438	R 196,730
October	<sup>F</sup> 44,415	F 536	F 2,034	F 4,750	<sup>F</sup> 6,784	F 7,320	156,906	208,641

<sup>&</sup>lt;sup>a</sup> Through 1977, data are for stocks held by the manufacturing and transportation sectors. Beginning in 1978, data are for stocks held at manufacturing

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 include refined coal. • 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 for all

available data beginning in 1973.

Sources: See end of section.

plants only.

b The electric power sector comprises electricity-only and combined-heat-andpower (CHP) plants within the NAICS 22 category whose primary business is to sell

c Through 1998, data are for stocks at electric utilities only. Beginning in 1999, data also include stocks at independent power producers.

### 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.

Prior to 2002, 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 in EIA's Quarterly Coal Report. 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. The fourth quarter estimates may or may not be revised when preliminary data become available in March of the following year, depending on the magnitude of the difference between the estimates and the preliminary data. In any event, 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.** Coal consumption data are reported by major end-use sector. Forecast data (designated

by an "F") are derived from forecasted values shown in the EIA *Short-Term Energy Outlook* (DOE/EIA-0202) table titled "U.S. Coal Supply and Demand: Base Case." The monthly estimates are based on the quarterly values, which are released in March, June, September, and December. The estimates are revised quarterly as collected data become available from the data sources. Sector-specific information follows.

Residential and Commercial—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 by 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. The 2007 share is applied to 2008 forward, and the other missing years' shares are interpolated.

Industrial Coke Plants—Prior to 1980, 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 January 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—Prior to 1978, 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 January 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. Prior to 2008, 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 20,000 to 30,000 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 the EIA *Short-Term Energy Outlook* (DOE/EIA-0202) table titled "U.S. Coal Supply and Demand: Base Case." The monthly estimates are based on the quarterly values (released in March, June, September, and December) or annual values. The estimates are revised as collected data become available from the data sources. Sector-specific information follows.

Producers and Distributors—Prior to 1998, 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—Prior to 1980, 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 stocks data are collected on Form EIA-3 (data for "Commercial and Institutional Coal Users").

Industrial Coke Plants—Prior to 1980, 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—Prior to 1978, 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 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/emeu/steo/pub/contents.html.

**Note 5. Additional Coal Information.** EIA's *Quarterly Coal Report* provides additional information about coal data and estimation procedures.

### **Table 6.1 Sources**

### **Production**

1973–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**

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

### **Stock Change**

Calculated from data in Table 6.3.

### Losses and Unaccounted for

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

### Consumption

Table 6.2.

### **Table 6.2 Sources**

### **Residential and Commercial Total**

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:

1973–1976: 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 Mine Employment and Coal Production."

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.

### **Commercial CHP**

Table 7.4c.

### **Commercial Other**

Calculated as "Commercial Total" minus "Commercial CHP."

### **Industrial Coke Plants**

1973–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, "Coke Plant Report—Quarterly"; and, for forecast values, EIA, Short-Term Integrated Forecasting System.

### **Other Industrial Total**

1973–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, Short-Term Integrated Forecasting System.

### **Other Industrial CHP**

Table 7.4c.

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

Calculated as "Other Industrial Total" minus "Other Industrial CHP."

### **Transportation**

1973–1976: 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**

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.

### **Residential and Commercial**

1973–1976: 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, Short-Term Integrated Forecasting System.

### **Industrial Coke Plants**

1973–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, "Coke Plant Report—Quarterly"; and, for forecast values, EIA, Short-Term Integrated Forecasting System.

### **Industrial Other**

1973–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, Short-Term Integrated Forecasting System.

### **Electric Power**

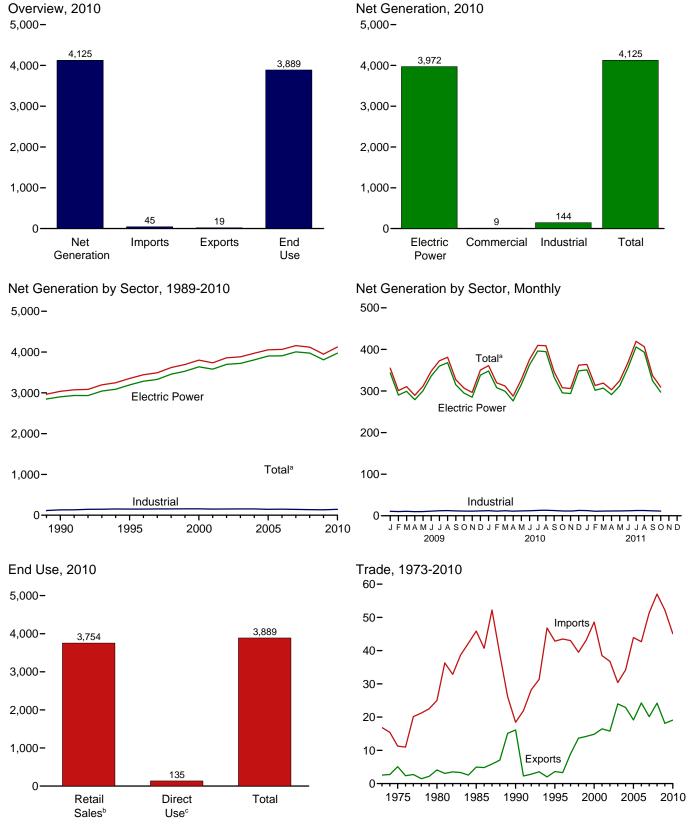
Table 7.5.

# **Electricity**



High-tension power lines and towers. Source: U.S. Department of Energy.

Figure 7.1 Electricity Overview (Billion Kilowatthours)



<sup>&</sup>lt;sup>a</sup> Includes commercial sector.

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

<sup>&</sup>lt;sup>c</sup> See "Direct Use" in Glossary. Web Page: http://www.eia.gov/totalenergy/data/monthly/#electricity. Source: Table 7.1.

**Table 7.1 Electricity Overview** 

(Billion Kilowatthours)

		Net Gen	eration			Trade			End Use			
	Electric Power Sectora	Com- mercial Sector <sup>b</sup>	Indus- trial Sector <sup>c</sup>	Total	Importsd	Exportsd	Net Imports <sup>d</sup>	T&D Losses <sup>e</sup> and Unaccounted for <sup>f</sup>	Retail Sales <sup>g</sup>	Direct Use <sup>h</sup>	Total	
1973 Total	1,861 1,918 2,286 2,470 2,901	NA NA NA NA 6	3 3 3 3 131	1,864 1,921 2,290 2,473 3,038	17 11 25 46 18	3 5 4 5 16	14 6 21 41 2	165 180 216 190 203	1,713 1,747 2,094 2,324 2,713	NA NA NA NA 125	1,713 1,747 2,094 2,324 2,837	
1995 Total 1996 Total 1997 Total 1998 Total 1998 Total 2000 Total 2001 Total 2002 Total	3,194 3,284 3,329 3,457 3,530 3,638 3,580 3,698	8 9 9 9 8 7 7	151 151 154 154 156 157 149 153	3,353 3,444 3,492 3,620 3,695 3,802 3,737 3,858	43 43 40 43 49 39 37	4 3 9 14 14 15 16	39 40 34 26 29 34 22 21	229 231 224 221 240 244 202 248	3,013 3,101 3,146 3,264 3,312 3,421 3,394 3,465	151 153 156 161 172 171 163 166	3,164 3,254 3,302 3,425 3,484 3,592 3,557 3,632	
2003 Total 2004 Total 2005 Total 2006 Total 2007 Total 2008 Total	3,721 3,808 3,902 3,908 4,005 3,974	7 8 8 8 8	155 154 145 148 143 137	3,883 3,971 4,055 4,065 4,157 4,119	30 34 44 43 51 57	24 23 19 24 20 24	6 11 25 18 31 33	228 266 269 266 298 287	3,494 3,547 3,661 3,670 3,765 3,733	168 168 150 147 126 132	3,662 3,716 3,811 3,817 3,890 3,865	
February March April	344 290 299 279 300	1 1 1 1	11 10 11 10	355 301 311 290 311	4 4 3 3 4	2 2 2 1	2 2 1 2 3	25 7 18 16 29	321 287 284 266 275	E 10 E 10 E 10 E 10	332 297 294 275 285	
June	336 360 368 315 295 285 338 <b>3,810</b>	1 1 1 1 1 1 8	11 12 12 12 11 11 12 <b>132</b>	348 373 381 327 307 297 351 <b>3,950</b>	5 6 4 5 4 5 <b>52</b>	2 1 1 1 1 1 1	3 4 4 3 3 3 3 3	35 27 29 8 12 21 33 <b>261</b>	305 338 345 311 287 268 310 <b>3,597</b>	E 11 E 11 E 12 E 11 E 11 E 11 E 11	315 349 357 322 298 278 321 <b>3,724</b>	
2010 January February March April May June July August	348 308 300 276 316 363 396 395	1 1 1 1 1 1	12 11 12 11 12 11 12 13 13	361 320 312 288 328 376 410 409	5 4 4 4 3 4 4	1 1 1 1 2 2 1 2	4 3 3 3 1 2 3 2	22 14 12 13 35 36 32 26	332 298 293 267 284 331 369 372	E 11 E 10 E 11 E 10 E 11 E 11 E 12 E 13 E 11	343 309 304 277 295 342 381 384	
September October November December Total	333 296 294 349 <b>3,972</b>	1 1 1 1 9	12 12 11 13 <b>144</b>	346 308 306 362 <b>4,125</b>	3 3 4 <b>45</b>	2 2 2 1 19	1 (s) 1 3 <b>26</b>	7 10 21 34 <b>262</b>	328 288 275 319 <b>3,754</b>	E 11 E 11 E 12 <b>135</b>	339 299 286 331 <b>3,889</b>	
2011 January	351 302 307 291 312 356 406 393 325 297 <b>3,340</b>	1 1 1 1 1 1 1 1 1 1	12 11 11 11 12 12 13 13 12 11 11	364 313 319 303 325 368 419 406 338 309 3,465	4 4 4 5 4 6 6 4 4 <b>4</b>	2 2 2 1 1 1 1 1 1 1 1	3 2 2 2 4 3 5 5 5 3 3 3 3	22 9 21 21 31 33 44 29 5 16 233	333 296 290 274 286 327 369 370 324 286 3,154	E 12 E 10 E 11 E 10 E 11 E 11 E 12 E 12 E 11 E 11	344 306 301 284 297 338 380 382 335 296 3,264	
2010 10-Month Total 2009 10-Month Total	3,330 3,187	7 7	120 110	3,457 3,303	38 44	16 16	23 28	207 207	3,161 3,019	E 112 E 105	3,273 3,125	

<sup>&</sup>lt;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.

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

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

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

† Data collection frame differences and nonsampling error.

<sup>&</sup>lt;sup>9</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.

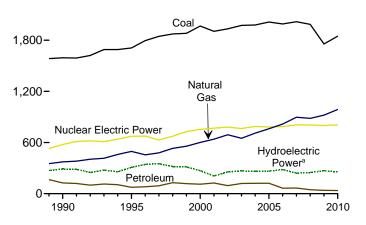
Notes: • See Note, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

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

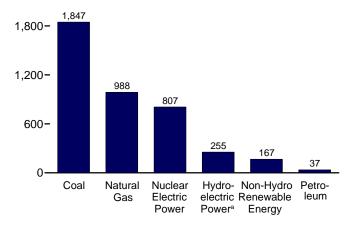
Sources: See end of section.

Figure 7.2 Electricity Net Generation (Billion Kilowatthours)

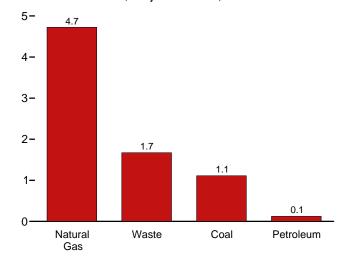
Total (All Sectors), Major Sources, 1989-2010 2,400-



Total (All Sectors), Major Sources, 2010 2,400-

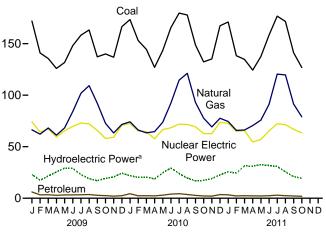


Commercial Sector, Major Sources, 2010



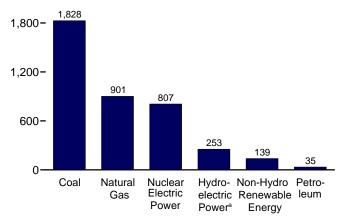
<sup>&</sup>lt;sup>a</sup> Conventional and pumped storage hydroelectric power.

Total (All Sectors), Major Sources, Monthly 200-



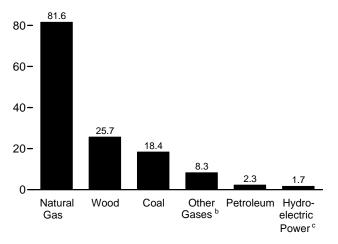
Electric Power Sector, Major Sources, 2010

2,400-



Industrial Sector, Major Sources, 2010

100-



<sup>&</sup>lt;sup>c</sup> Conventional hydroelectric power.

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

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

**Table 7.2a Electricity Net Generation: Total (All Sectors)** 

(Sum of Tables 7.2b and 7.2c; Million Kilowatthours)

,		Fossil F	uels			Renewable Energy							
							Conven-	Bio	mass				
	Coala	Petro- leum <sup>b</sup>	Natural Gas <sup>c</sup>	Other Gases <sup>d</sup>	Nuclear Electric Power	Hydro- electric Pumped Storage <sup>e</sup>	tional Hydro- electric Power <sup>f</sup>	Woodg	Wasteh	Geo- thermal	Solar/ PV <sup>i</sup>	Wind	Total
1973 Total 1975 Total 1980 Total	847,651 852,786 1,161,562	314,343 289,095 245,994	340,858 299,778 346,240	NA NA NA	83,479 172,505 251,116	(f) (f) (f)	275,431 303,153 279,182	130 18 275	198 174 158	1,966 3,246 5,073	NA NA NA	NA NA NA	1,864,057 1,920,755 2,289,600
1985 Total 1990 Total <sup>k</sup>	1,402,128	100,202 126,460	291,946 372,765	NA 10,383	383,691 576,862	(f) -3,508	284,311 292,866	743 32,522	13,260	9,325 15,434	11 367	2,789	2,473,002 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
1996 Total 1997 Total	1,795,196 1,845,016	81,411 92,555	455,056 479,399	14,356 13,351	674,729 628,644	-3,088 -4,040	347,162 356,453	36,800 36,948	20,911 21,709	14,329 14,726	521 511	3,234 3,288	3,444,188 3,492,172
1998 Total	1,873,516	128,800	531,257	13,492	673,702	-4,467	323,336	36,338	22,448	14,774	502	3,026	3,620,295
1999 Total		118,061	556,396	14,126	728,254	-6,097	319,536	37,041	22,572	14,827	495	4,488	3,694,810
2000 Total 2001 Total		111,221 124,880	601,038 639,129	13,955 9,039	753,893 768,826	-5,539 -8,823	275,573 216,961	37,595 35,200	23,131 14,548	14,093 13,741	493 543	5,593 6,737	3,802,105 3,736,644
2002 Total		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 2005 Total	1,978,301 2,012,873	121,145 122,225	710,100 760,960	15,252 13,464	788,528 781,986	-8,488 -6,558	268,417 270,321	38,117 38,856	15,421 15,420	14,811 14,692	575 550	14,144 17,811	3,970,555 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 1.985.801	65,739	896,590	13,453	806,425	-6,896	247,510	39,014	16,525	14,637	612 864	34,450	4,156,745
2008 Total	1,965,601	46,243	882,981	11,707	806,208	-6,288	254,831	37,300	17,734	14,840	004	55,363	4,119,388
2009 January	171,925	6,104	66,390	807	74,102	-501	23,490	3,030	1,462	1,289	7	5,951	354,993
February March	140,916 135,530	3,318 3,349	62,139 68,203	784 834	64,227 67,241	-413 -315	17,812 21,827	2,823 2,919	1,357 1,553	1,168 1,300	30 78	5,852 7,099	300,887 310,603
April	125,935	2,807	61,159	758	59,408	-272	25,770	2,664	1,542	1,222	99	7,458	289,537
May	131,673	3,209	68,146	773	65,395	-349	29,560	2,735	1,522	1,235	110	6,262	311,306
June July	148,087 158,234	3,243 3,358	84,205 101,894	876 966	69,735 72,949	-226 -491	29,233 23,385	2,997 3,227	1,558 1,628	1,209 1,255	103 121	5,599 4,955	347,658 372,542
August	163,260	3,642	109,240	1,012	72,245	-613	19,580	3,355	1,604	1,251	116	5,464	381,221
September	137,145	2,853	92,127	1,022	65,752	-348	17,359	3,061	1,501	1,217	95	4,651	327,401
October November	139,956 136,810	2,560 2,072	72,603 63,285	960 910	58,021 59,069	-385 -330	19,691 21,008	3,032 3,049	1,533 1,572	1,221 1,273	68 40	6,814 6,875	307,040 296,635
December	166,434	2,422	71,590	930	70,710	-383	24,730	3,158	1,608	1,368	21	6,906	350,507
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 January	173,320	4,348	74,173	909	72,569	-565	22,383	3,126	1,503	1,312	10	6,854	360,957
February March	153,044 144,406	2,373 2,470	66,198 63,431	825 1,010	65,245 64,635	-351 -325	20,590 20,886	2,895 3,090	1,382 1,592	1,159 1,307	33 76	5,432 8,589	319,735 312,168
April	126,952	2,286	64,644	943	57,611	-335	19,097	2,932	1,558	1,240	112	9,764	287,800
May	143,272	2,994	73,665	1,017	66,658	-441	25,079	2,893	1,577	1,311	153	8,698	327,936
June July	165,491 179,600	3,989 4,411	92,268 114,624	964 963	68,301 71,913	-472 -557	29,854 24,517	3,094 3,308	1,627 1.640	1,264 1,274	176 161	8,049 6,724	375,759 409,725
August	177,745	3,575	121,151	1,061	71,574	-600	20,119	3,319	1,642	1,297	156	6,686	408,884
September October	148,746 132,270	2,783 2,228	93,004 77,738	954 808	69,371 62,751	-421 -438	17,265 17,683	3,157 3,003	1,575 1,547	1,253 1,222	138 75	7,106 7,944	346,045 307,921
November	135,185	2,220	69,227	907	62,655	-436 -467	19,562	3,080	1,625	1,252	77	9,748	306,010
December	167,258	3,523	77,573	952	73,683	-530	23,169	3,275	1,650	1,330	44	9,059	362,119
Total	1,847,290	37,061	987,697	11,313	806,968	-5,501	260,203	37,172	18,917	15,219	1,212	94,652	4,125,060
2011 January	170,983	3,268	74,458	910	72,743	-426	26,148	3,258	1,503	1,478	31	8,659	363,855
February	138,295 134,717	2,201 2,454	65,852	770 955	64,789 65,662	-247 -350	24,687 31,737	2,896 3,041	1,393 1,655	1,326 1,465	80 113	10,528 R 10,537	313,351 319,092
March April	124,293	2,454	66,169 70,529	913	54,547	-350 -467	31,737	2,788	1,619	1,465	161	12,447	R 302,994
May	137,493	2,198	75,769	848	57,017	-419	33,105	2,802	1,702	1,438	201	11,635	R 324,757
June July	158,308 176,709	2,439 3,011	91,096 120,377	980 1,059	65,270 72,345	-568 -709	32,253 31,570	3,243 3,348	1,685 1,767	1,363 1,372	257 226	10,887 R 7,382	R 368,184 R 419,480
August	171,472	2,407	119,646	999	71,339	-663	26,320	3,290	1,717	1,380	236	R 7,342	R 406,450
September	141,220	2,247	91,377	958	66,849	-554	21,500	3,113	1,621	1,334	183	<sup>R</sup> 6,883	R 337,606
October 10-Month Total	126,872 <b>1,480,362</b>	1,934 <b>24,438</b>	79,078 <b>854,351</b>	949 <b>9,341</b>	63,354 <b>653,914</b>	-572 <b>-4,975</b>	20,036 <b>278,985</b>	2,876 <b>30,655</b>	1,669 <b>16,333</b>	1,393 <b>13,884</b>	169 <b>1,657</b>	10,623 <b>96,924</b>	309,279 <b>3,465,048</b>
											,	•	
2010 10-Month Total 2009 10-Month Total		31,458 34,442	840,897 786,104	9,454 8,791	670,630 669,075	-4,504 -3,914	217,472 227,708	30,816 29,843	15,642 15,263	12,637 12,367	1,091 830	75,845 60,105	3,456,931 3,303,189

<sup>&</sup>lt;sup>a</sup> Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal

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

synfuel.

b Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other

Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, otner petroleum, and waste oil.

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

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

derived from fossil fuels.

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

i Solar thermal and photovoltaic (PV) energy.
i Includes batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).
k Through 1988, all data except hydroelectric are for electric utilities only; hydroelectric data through 1988 include industrial plants as well as electric utilities. Beginning in 1989, data are for electric utilities, independent power producers, commercial plants, and industrial plants.

R=Revised. NA=Not available.

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

Web Page: See http://www.eia.gov/totalenergy/data/monthly/#electricity for all available 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 F	Fuels						Renewabl	e Energy			
					Manatana	Hydro-	Conven- tional	Bio	nass				
	Coala	Petro- leum <sup>b</sup>	Natural Gas <sup>c</sup>	Other Gases <sup>d</sup>	Nuclear Electric Power	electric Pumped Storage <sup>e</sup>	Hydro- electric Power <sup>f</sup>	Wood <sup>g</sup>	Waste <sup>h</sup>	Geo- thermal	Solar/ PV	Wind	Total <sup>j</sup>
1973 Total 1975 Total 1980 Total	847,651 852,786 1.161,562	314,343 289,095 245,994	340,858 299,778 346,240	NA NA NA	83,479 172,505 251,116	${f \brace f}$	272,083 300,047 276,021	130 18 275	198 174 158	1,966 3,246 5,073	NA NA NA	NA NA NA	1,860,710 1,917,649 2,286,439
1985 Total	1,402,128	100,202	291,946	NA 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	309,486	621	576,862	-3,508	289,753	7,032	11,500	15,434	367	2,789	2,901,322
1995 Total	1,686,056	68,146	419,179	1,927	673,402 674,729	-2,725	305,410	7,597 8,386	17,986	13,378	497	3,164	3,194,230
1996 Total 1997 Total	1,771,973 1,820,762	74,783 86,479	378,757 399,596	1,341 1,533	628,644	-3,088 -4,040	341,159 350,648	8,680	17,816 18,485	14,329 14,726	521 511	3,234 3,288	3,284,141 3,329,375
1998 Total	1,850,193	122,211	449,293	2,315	673,702	-4,467	317,867	8,608	19,233	14,774	502	3,026	3,457,416
1999 Total	1,858,618	111,539	472,996	1,607	728,254	-6,097	314,663	8,961	19,493	14,827	495	4,488	3,529,982
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 2003 Total	1,910,613 1,952,714	89,733 113,697	607,683 567,303	1,970 2,647	780,064 763,733	-8,743 -8,535	260,491 271,512	9,009 9,528	13,145 13,808	14,491 14,424	555 534	10,354 11,187	3,698,458 3,721,159
2004 Total	1,952,714	114,678	627,172	3,568	788,528	-0,535 -8,488	265.064	9,736	13,062	14,424	575	14,144	3,721,159
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 January	170,626	5,736	59.969	220	74,102	-501	23,316	990	1,256	1,289	7	5,951	343,516
February	139,743	2,999	56,164	213	64,227	-413	17,662	903	1,178	1,168	30	5,852	290,221
March	134,314	3,077	61,837	240	67,241	-315	21,624	862	1,343	1,300	78	7,099	299,257
April	124,803	2,557	55,301	231	59,408	-272	25,570	721	1,334	1,222	99	7,458	278,994
May	130,527	2,965	62,125	234	65,395	-349	29,364	749	1,323	1,235	110	6,262	300,496
June July	146,845 156,943	2,994 3,111	77,591 94,487	253 288	69,735 72,949	-226 -491	29,055 23,243	928 976	1,358 1,417	1,209 1,255	103 121	5,599 4,955	336,011 359,842
August	161,917	3,391	101,636	278	72,343	-613	19,444	1,021	1,395	1,251	116	5,464	368,139
September	135,950	2,607	84,942	298	65,752	-348	17,263	891	1,301	1,217	95	4,651	315,163
October	138,667	2,340	65,852	280	58,021	-385	19,552	825	1,315	1,221	68	6,814	295,093
November	135,644	1,846	56,735	256	59,069	-330	20,865	866	1,345	1,273	40	6,875	285,012
December Total	165,146 <b>1,741,123</b>	2,190 <b>35,811</b>	64,367 <b>841,006</b>	269 <b>3,058</b>	70,710 <b>798,855</b>	-383 <b>-4,627</b>	24,548 <b>271,506</b>	1,004 <b>10,738</b>	1,388 <b>15,954</b>	1,368 <b>15,009</b>	21 <b>891</b>	6,906 <b>73,886</b>	338,095 <b>3,809,837</b>
Total	1,741,123	33,011	041,000	3,030	7 30,033	-4,021	27 1,500	10,730	13,334	13,003	031	75,000	3,003,037
<b>2010</b> January	171,660	4,111	66,847	275	72,569	-565	22,207	1,011	1,294	1,312	10	6,853	348,128
February	151,461	2,166	59,556	247	65,245	-351	20,421	926	1,207	1,159	33	5,431	307,994
March	142,665 125,615	2,299 2,109	56,492 58,124	275 273	64,635 57,611	-325 -335	20,691 18,898	939 837	1,391 1,334	1,307 1,240	76 112	8,588 9,763	299,571 276,121
April May	141,669	2,109	66,862	273	66,658	-441	24,903	830	1,359	1,311	153	8,696	315,656
June	163,912	3,792	85,033	265	68,301	-472	29,711	955	1,409	1,264	175	8,048	362,985
July	177,778	4,199	106,961	267	71,913	-557	24,405	1,061	1,419	1,274	161	6,723	396,195
August	175,848	3,375	112,961	249	71,574	-600	20,019	1,074	1,413	1,297	156	6,685	394,651
September October	147,157 130,663	2,608 2,037	85,498 70,876	240 170	69,371 62,751	-421 -438	17,188 17,561	974 887	1,364 1,330	1,253 1,222	137 75	7,104 7,942	333,057 295,646
November	133,815	1.879	62.305	219	62,751	-436 -467	19,426	934	1,330	1,222	75 76	9.746	293,846
December	165,494	3,302	69,875	208	73,683	-530	23,024	1,018	1,443	1,330	43	9,058	348,549
Total	1,827,738	34,679	901,389	2,967	806,968	-5,501	258,455	11,446	16,376	15,219	1,206	94,636	3,972,386
2011 January	169,157	3,056	67,038	247	72,743	-426	26,001	986	1,293	1,478	31	8,657	350,775
February	136,752	2,042	59,187	206	64,789	-247	24,517	873	1,204	1,326	79	10,525	301,735
March	133,163	2,282	59,350	250	65,662	-350	31,537	883	1,457	1,465	112	10,534	306,932
April	123,067	2,112	63,709	250	54,547	-467	31,422	674	1,439	1,337	160	12,444	291,282
May	135,794	2,053	68,567	250	57,017	-419	32,888	753	1,467	1,438	199	11,632	312,220
June	156,677 174,850	2,276 2,840	84,032 112,765	282 296	65,270 72,345	-568 -709	32,097 31,442	921 1,042	1,470 1,537	1,363 1,372	254 223	10,884	355,569 406,019
July August	169,572	2,040	111,765	290	71,339	-663	26.217	1,042	1,537	1,372	223	7,380 7,339	393.059
September	139,458	2,075	84,392	287	66,849	-554	21,375	896	1,395	1,334	181	6,880	325,121
October	125,200	1,792	72,407	279	63,354	-572	19,905	752	1,444	1,393	167	10,618	297,294
10-Month Total	1,463,692	22,770	783,437	2,640	653,914	-4,975	277,399	8,801	14,188	13,884	1,640	96,891	3,340,008
2010 10-Month Total 2009 10-Month Total	1,528,429 1,440,333	29,497 31,775	769,209 719,904	2,541 2,533	670,630 669,075	-4,504 -3,914	216,005 226,093	9,494 8,867	13,521 13,221	12,637 12,367	1,086 830	75,833 60,105	3,330,004 3,186,730

<sup>&</sup>lt;sup>a</sup> Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal

A Miniactie, bitchinious coal, subbitchinious coal, lighte, waste coal, and coal synfuel.

b Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.

c Natural gas, plus a small amount of supplemental gaseous fuels.
d Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

derived from fossil fuels.

<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). tire-derived fuels).

i Solar thermal and photovoltaic (PV) energy.
j Includes batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).
k Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities and independent power producers.
NA=Not available.

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

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

Sources: See end of section.

Table 7.2c Electricity Net Generation: Commercial and Industrial Sectors

(Subset of Table 7.2a; Million Kilowatthours)

		Com	mercial Se	ectora		Industrial Sector <sup>b</sup>							
		- ·		Biomass			Datas		044	Hydro-	Biomass		
	Coalc	Petro- leum <sup>d</sup>	Natural Gas <sup>e</sup>	Wastef	Total <sup>g</sup>	Coal <sup>c</sup>	Petro- leum <sup>d</sup>	Natural Gas <sup>e</sup>	Other Gases <sup>h</sup>	electric Power <sup>i</sup>	Wood <sup>j</sup>	Waste <sup>f</sup>	Total <sup>k</sup>
1973 Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,347	NA	NA	3,347
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
1996 Total	1,051	369	5,249	2,176	9,030	22,172	6,260	71,049	13,015	5,878	28,354	919	151,017
1997 Total	1.040	427	4,725	2,342	8,701	23,214	5,649	75,078	11,814	5,685	28,225	882	154,097
1998 Total	985	383	4,879	2,335	8,748	22,337	6,206	77,085	11,170	5,349	27,693	880	154,132
1999 Total	995	434	4,607	2,393	8,563	21,474	6,088	78,793	12,519	4,758	28,060	686	156,264
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 January	105	44	362	131	717	1,194	324	6,059	587	165	2,039	75	10,760
February	92	19	333	120	627	1,081	299	5,642	571	144	1,919	59	10,040
March	86	11	344	145	668	1,130	261	6,022	595	193	2,054	65	10,678
April	74	11	324	145	633	1.058	239	5.534	527	191	1.941	63	9.910
May	76	9	310	155	640	1,070	235	5,710	539	187	1,984	44	10,170
June	82	5	345	155	675	1,160	244	6,269	623	169	2.068	46	10,973
July	96	8	394	156	733	1,195	239	7,013	678	140	2,249	55	11,968
August	109	13	414	154	769	1,235	239	7,189	734	136	2,332	55	12,314
September	89	8	374	148	693	1,105	238	6,810	725	95	2,168	52	11.545
October	85	8	346	146	659	1,204	212	6,405	680	136	2,206	72	11,289
November	94	11	311	151	648	1,072	215	6,239	655	137	2,181	76	10,975
December	107	13	367	143	703	1.181	219	6,855	662	175	2,152	78	11,709
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
<b>2010</b> January	116	13	367	137	709	1,544	225	6,959	634	169	2,114	72	12,120
February	102	11	339	111	623	1,481	197	6.303	578	162	1.967	64	11.118
March	91	8	351	134	661	1,649	163	6,588	735	188	2,149	67	11,936
April	80	9	326	144	645	1,258	169	6,194	669	187	2.094	80	11,034
May	84	12	326	149	666	1,519	181	6,477	738	164	2,061	69	11,614
June	97	10	350	150	699	1,482	187	6,885	700	132	2,137	68	12,075
July	110	18	459	146	812	1,713	194	7,205	696	107	2,246	75	12,718
August	105	11	490	152	838	1,792	189	7,701	812	99	2,243	78	13,395
September	89	. 9	421	148	750	1,499	165	7,085	713	76	2,182	62	12,238
October	80	7	419	133	712	1,527	184	6,443	637	117	2,114	84	11,562
November	69	4	401	134	683	1,301	196	6,520	688	130	2.145	79	11,493
December	88	12	476	136	793	1,677	209	7,223	744	134	2,255	71	12,777
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
	,		,	•	,	-			,	•	,		•
<b>2011</b> January	103	13	402	139	739	1,723	198	7,017	663	137	2,271	71	12,341
February	95	8	350	125	656	1,447	151	6,314	564	160	2,021	64	10,961
March	97	7	341	134	666	1,457	165	6,478	705	188	2,156	65	R 11,494
April	71	5	347	118	622	1,155	162	6,473	662	196	2,112	62	11,089
May	77	6	373	160	714	1,622	140	6,829	597	208	2,047	74	11,822
June	82	.8	368	144	693	1,549	155	6,696	698	147	2,321	71	11,921
July	96	13	431	155	791	1,763	158	7,181	762	118	2,304	76	12,669
August	86	7	408	160	752	1,814	157	7,248	706	100	2,268	76	R 12,639
September	76	6	356	150	674	1,686	166	6,629	670	123	2,215	76	R 11,811
October	63	8	359	153	668	1,609	135	6,312	669	126	2,123	72	11,317
10-Month Total	847	81	3,735	1,437	6,974	15,823	1,587	67,179	6,697	1,503	21,838	708	118,066
2010 10-Month Total	954	108	3,849	1,402	7,115	15,464	1,853	67,840	6,911	1,404	21,306	719	119,812
2009 10-Month Total	895	138	3,547	1,454	6,813	11,433	2,529	62,653	6,258	1,556	20,959	587	109,646

<sup>&</sup>lt;sup>a</sup> Commercial combined-heat-and-power (CHP) and commercial electricity-only

plants.

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

c Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal

synfuel.  $\,^{\rm d}$  Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other

Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, otner petroleum, and waste oil.

Patrural gas, plus a small amount of supplemental gaseous fuels.

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 the other biomass.)

fire-derived fuels).

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

 $<sup>^{\</sup>rm h}$  Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

l'Conventional hydroelectric power.

Voor and wood-derived fuels.

I conventional hydroelectric power.

Wood and wood-derived fuels.

I ncludes 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 the derived fuels). tire-derived fuels).

R=Revised. NA=Not available.

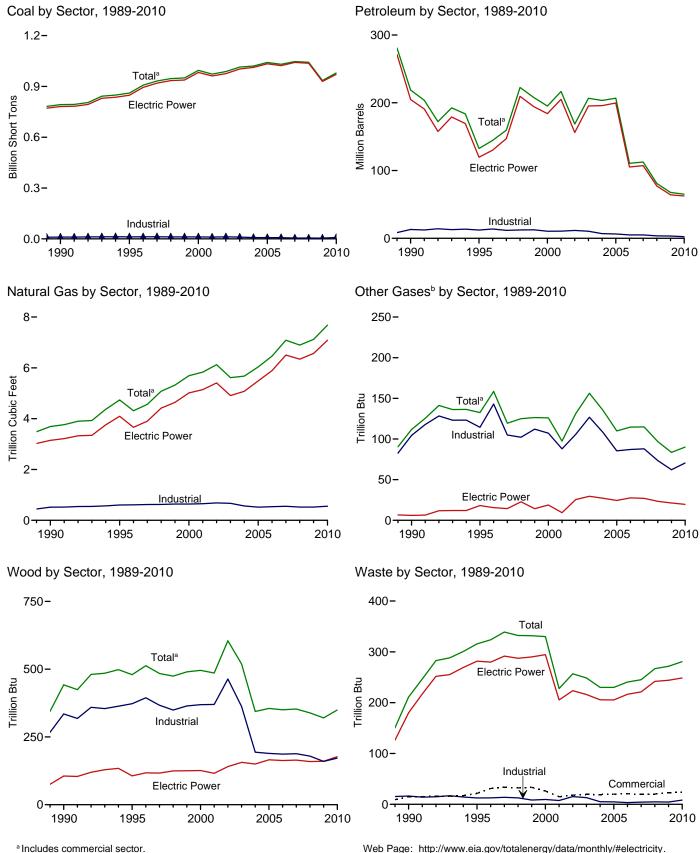
R=Revised. NA=Not available.

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

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

Sources: See end of section.

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



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

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

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

				Petroleum					Bion	nass	
	Coala	Distillate Fuel Oil <sup>b</sup>	Residual Fuel Oil <sup>c</sup>	Other Liquids <sup>d</sup>	Petroleum Coke <sup>e</sup>	Totale	Natural Gas <sup>f</sup>	Other Gases <sup>9</sup>	Wood <sup>h</sup>	Waste <sup>i</sup>	Other <sup>j</sup>
	Thousand Short Tons	Ti	housand Barre	els	Thousand Short Tons	Thousand Barrels	Billion Cubic Feet		Trillio	n Btu	
1973 Total 1975 Total	389,212 405,962	47,058 38,907	513,190 467,221	NA NA	507 70	562,781 506,479	3,660 3,158	NA NA	1 (s)	2 2	NA NA
1980 Total	569,274 693,841	29,051 14,635	391,163 158,779	NA NA	179 231	421,110 174,571	3,682 3,044	NA NA	`´3 8	2	NA NA
1985 Total 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
1996 Total 1997 Total	907,209 931.949	20,252 20,309	106,055 118,741	1,712 237	3,322 4,086	144,626 159,715	4,312 4,565	159 119	513 484	324 339	37 36
1998 Total	946,295	25,062	172,728	549	4,860	222,640	5,081	125	475	332	36
1999 Total	949,802	25,951	158,187	974	4,552	207,871	5,322	126	490	332	41
2000 Total	994,933	31,675	143,381	1,450	3,744 3,871	195,228	5,691	126 97	496 486	330 228	46
2001 Total 2002 Total	972,691 987,583	31,150 23,286	165,312 109,235	855 1,894	6,836	216,672 168,597	5,832 6,126	131	400 605	226 257	160 191
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 2006 Total	1,041,448 1,030,556	20,651 13,174	141,518 58,473	2,968 2,174	8,330 7,363	206,785 110,634	6,036 6,462	110 115	355 350	230 241	173 172
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 January	90,639	1,882	6,033	424	426	10,467	505	6	28	21	13
February	74,256	1,203	2,414	256	390	5,823	470	6	25	20	12
March April	71,990 67,209	1,252 825	2,045 1,691	246 178	480 427	5,943 4,828	519 468	7 6	26 23	23 23	14 14
May	70,508	1,071	2,216	185	432	5,632	533	6	24	23	15
June	79,071	1,001	2,313	150	433	5,628	665	7	26	23	15
July August	84,360 86,789	934 1.002	2,517 2,976	134 166	455 439	5,859 6.338	802 865	8 8	29 30	24 24	15 15
September	73,705	765	1,846	135	438	4,936	713	8	27	22	14
October	74,686	847	2,062	139	276	4,427	559	7	27	22	14
November December	73,150 88,320	827 1,050	1,217 1,246	143 172	273 353	3,551 4,234	479 544	7 8	27 29	23 23	14 14
Total	934,683	12,658	28,576	2,328	4,821	67,668	7,121	84	320	272	170
2010 January	90,767	2,485	2,860	241	433	7,751	570	7	30	22	15
February	80,209	869	1,075	212	404	4,174	502	6	28	20	13
March April	76,544 67,037	785 726	1,245 1,160	147 126	438 382	4,370 3,923	479 494	8 8	29 27	24 23	15 15
May	76,061	1,050	1,997	121	415	5,244	582	8	27	24	15
June	87,395	1,244	3,087	154	493	6,950	731	8	29	24	16
July August	94,993 94,786	1,347 1,093	3,681 2,987	200 164	524 423	7,849 6,358	923 972	8 8	31 32	24 24	16 16
September	79,573	905	1,789	151	394	4,813	723	8	30	23	16
October	70,918	787	1,113	129	362	3,840	594	6	28	23	15
November December	72,756 88,645	876 1,883	982 2,021	143 266	317 408	3,588 6,210	519 591	7 8	29 31	24 24	15 16
Total	979,684	14,050	23,997	2,056	4,994	65,071	7,680	90	350	281	184
2011 January	90,106	1,238	1,700	231	526	5,802	564	7	30	22	12
February	73,505	854	1,007	124	387	3,919	503	6	27	21	11
March April	72,340 66,870	839 957	1,122 1,328	133 121	465 304	4,421 3,924	504 548	7 7	28 24	24 23	14 13
May	73,511	909	1,222	110	316	3,820	603	7	25	24	14
June	84,072	969	1,261	145	388	4,316	729	8	29	25	14
July August	94,214 92,177	1,161 809	1,542 1,333	167 122	479 415	5,265 4,341	966 948	8 8	30 30	26 25	15 14
September	76,612	778	958	162	392	3,861	710	8	28	24	13
October	69,524	711	940	124	307	3,311	600	8	26	24	13
10-Month Total	792,932	9,225	12,415	1,439	3,980	42,980	6,674	75	276	238	135
2010 10-Month Total 2009 10-Month Total	818,283 773,213	11,291 10,781	20,994 26,113	1,646 2,013	4,268 4,195	55,273 59,882	6,570 6,098	75 69	289 265	233 226	153 142

<sup>&</sup>lt;sup>a</sup> Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal

tire-derived fuels).

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

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

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

Web Page: See http://www.eia.gov/totalenergy/data/monthly/#electricity for all available data beginning in 1973.
Sources: See sources for Tables 7.3b and 7.3c.

Thirmacie, biuminous coal, subbluminous coal, lightle, waste coal, and coal synfuel.

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

c Fuel oil nos. 5 and 6. For 1973-1979, data are for steam plant use of

petroleum. For 1980-2000, electric utility data also include a small amount of fuel oil no. 4.

d Jet fuel, kerosene, other petroleum liquids, and waste oil.

oil no. 4.

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

<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, propane gas, and other manufactured and waste gases derived from fossil fuels.

h Wood and wood-derived fuels.

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

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

				Petroleum					Bion	nass	
	Coala	Distillate Fuel Oil <sup>b</sup>	Residual Fuel Oil <sup>c</sup>	Other Liquids <sup>d</sup>	Petroleum Coke <sup>e</sup>	Totale	Natural Gas <sup>f</sup>	Other Gases <sup>g</sup>	Woodh	Waste <sup>i</sup>	Other <sup>j</sup>
	Thousand Short Tons	Th	nousand Barre	els	Thousand Short Tons	Thousand Barrels	Billion Cubic Feet		Trillio	n Btu	
1973 Total	405,962	47,058 38,907	513,190 467,221	NA NA	507 70	562,781 506,479	3,660 3,158	NA NA	1 (s)	2 2	NA NA
1980 Total	569,274 693,841	29,051 14,635	391,163 158,779	NA NA	179 231	421,110 174,571	3,682 3,044	NA NA	`´3 8	2 7	NA NA
1990 Total k	781,301 847,854	16,394 18,066	183,285 88,895	25 441	1,008 2,452	204,745 119,663	3,147 4,094	6 18	106 106	180 282	(s) 2
1995 Total	894,400	18,472	98,795	567	2,452 2,467	130,168	3,660	16	117	280	2
1997 Total	919,009	18,646	112,423	130	3,201	147,202	3,903	14	117	292	1
1998 Total	934,126 937,888	23,166 23,875	165,875 151,921	411 514	3,999 3,607	209,447 194,345	4,416 4.644	23 14	125 125	287 290	2
2000 Total	982,713	29,722	138,047	403	3,155	183,946	5.014	19	125	294	i
2001 Total	961,523	29,056	159,150	374	3,308	205,119	5,142	9	116	205	109
2002 Total		21,810 27,441	104,577 137,361	1,243 1,937	5,705 5,719	156,154 195,336	5,408 4.909	25 30	141 156	224 216	137 136
2003 Total 2004 Total		18,793	138,831	2,511	7,135	195,336	4,909 5,075	27	150	206	130
2005 Total	1,033,567	19,450	138,337	2,591	7,877	199,760	5,485	24	166	205	116
2006 Total 2007 Total	1,022,802 1,041,346	12,578 15,135	56,347 62,072	1,783 2,496	6,905 5,523	105,235 107,316	5,891 6,502	28 27	163 165	216 221	117 117
2008 Total	1,036,891	12,318	37,222	2,490	5,000	77,149	6,342	23	159	242	122
2009 January	90,224	1,778	5,871	400	398	10,039	460	1	15	19	9
February		1,084	2,313	234	363	5,445	429	1	13	18	8
March		1,198 769	1,958 1,623	201 149	455 403	5,632 4,557	475 428	2 2	13 11	20 20	10 9
April May		981	2,154	172	407	5,340	491	2	11	21	10
June	78,636	932	2,264	130	406	5,357	619	2	14	21	10
July	83,917 86,322	865 927	2,474 2.935	126 150	423 409	5,577 6.056	751 812	2 2	15 15	22 21	10 10
August September		927 707	2,935 1.801	122	409 407	4.663	664	2	13	20	10
October	74,232	809	2,022	129	247	4,195	512	2	13	20	9
November		787 1.012	1,173	136 161	243	3,309 3,982	434 494	2 2	13	20 21	9
December Total		1,012 11,848	1,180 <b>27,768</b>	2,110	326 <b>4,485</b>	64,151	6,567	21	15 <b>160</b>	244	10 <b>115</b>
2010 January	90,080	2,441	2,804	219	404	7,482	519	2	16	20	9
February	79,537	833	1,023	196	379	3,946	456	2	15	18	8
March April	75,772 66,559	756 695	1,214 1,132	130 112	415 360	4,176 3,741	432 449	2 2	15 14	21 20	9
May	75,311	1,021	1,964	104	390	5,040	536	2	13	21	10
June	86,725	1,220	3,059	137	463	6,733	681	2	15	21	10
July August	94,194 93.922	1,306 1.066	3,643 2,962	185 149	495 392	7,610 6.136	869 915	2	16 16	22 22	10 10
September	78,881	880	1,760	136	371	4,628	671	1	15	21	10
October	70,205	762	1,076	112	337	3,634	547	1	13	20	10
November December		849 1.847	949 1,973	125 244	290 383	3,373 5,978	473 538	1 1	15 16	21 22	10 10
Total	971,245	13,677	23,560	1,848	4,679	62,477	7,085	20	177	249	116
<b>2011</b> January	89,305	1,215	1,653	223	495	5,564	512	1	15	20	9
February		832	973	117 121	365 440	3,750	457 457	1	14 13	18 22	8 10
March April		822 936	1,093 1,296	121 104	440 282	4,234 3,747	457 500	1 2	13 11	22	10 10
May	72,742	891	1,199	103	295	3,670	551	2	12	22	10
June	83,360	946	1,236	129	364	4,134	679	2	14	22	10
July August	93,388 91,340	1,135 788	1,518 1,311	158 107	452 389	5,069 4,152	912 894	2	15 15	23 22	11 10
September		756	940	126	369	3,670	661	2 2	13	21	10
October	68,779	686	911	119	288	3,155	553	2	12	21	10
10-Month Total	785,630	9,009	12,131	1,306	3,740	41,145	6,177	17	133	212	97
2010 10-Month Total 2009 10-Month Total	811,185 769,032	10,980 10,050	20,638 25,415	1,479 1,813	4,006 3,916	53,126 56,860	6,075 5,639	17 18	147 132	206 203	96 96

<sup>&</sup>lt;sup>a</sup> Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal

tire-derived fuels).

tire-derived fuels).

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

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

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

Notes: Data are for fuels consumed to produce electricity. Data also include fuels consumed to produce useful thermal output at a small number of electric utility combined-heat-and-power (CHP) plants. The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. Totals may not equal sum of components due to independent rounding.

Geographic coverage is the 50 States and the District of Columbia.

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

Sources: See end of section.

Thirmacie, biuminous coal, subbluminous coal, lightle, waste coal, and coal synfuel.

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

c Fuel oil nos. 5 and 6. For 1973-1979, data are for steam plant use of

petroleum. For 1980-2000, electric utility data also include a small amount of fuel oil no. 4.

d Jet fuel, kerosene, other petroleum liquids, and waste oil.

oil no. 4.

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

<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, propane gas, and other manufactured and waste gases derived from fossil fuels.

h Wood and wood-derived fuels.

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

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

		Commerci	ial Sector <sup>a</sup>				Indu	strial Sector	b		
			Natural	Biomass			Natural	Other	Bion	nass	
	Coal <sup>c</sup>	Petroleum <sup>d</sup>	Gase	Waste <sup>f</sup>	Coalc	Petroleum <sup>d</sup>	Gase	Gases	Woodh	Wastef	Other <sup>i</sup>
	Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu	Thousand Short Tons	Thousand Barrels	Billion Cubic Feet		Trillion	n Btu	
1989 Total	414	1.165	18	9	9.707	8.482	444	83	267	15	37
1990 Total	417	953	28	15	10,740	13,103	517	104	335	16	36
1995 Total	569 656	649 645	43 42	21 31	12,171 12,153	12,265	601 610	114 143	373 394	13 13	40 35
1996 Total	630	790	42 39	31	12,153	13,813 11,723	623	105	394 367	14	36
1998 Total	440	802	41	32	11.728	12.392	625	102	349	13	35
1999 Total	481	931	39	33	11,432	12,595	639	112	364	8	39
2000 Total	514	823	37	26	11,706	10,459	640	107	369	10	45
2001 Total	532	1,023	36	15	10,636	10,530	654	88	370	7	44
2002 Total	477	834	33	18	11,855	11,608	685	106	464	15	43
2003 Total	582	894	38	19	10,440	10,424	668	127	362	13 5	46 41
2004 Total 2005 Total	377 377	766 585	33 34	19 20	7,687 7,504	6,919 6,440	566 518	108 85	194 189	5 5	41 46
2006 Total	347	333	35	21	7,304	5.066	536	87	187	3	45
2007 Total	361	258	34	19	5,089	5,041	554	88	188	4	41
2008 Total	369	166	33	20	5,075	3,617	520	73	179	5	39
2009 January	32	54	3	2	384	374	42	5	13	(s)	3
February	28 25	22 12	3 3	2 2	334 382	356	38	5 5	12	(s)	3 3
March April	25 22	12	3	2	356	299 259	41 38	5 4	13 12	(s) (s)	3
May	22	11	3	2	381	282	39	4	13	(s)	4
June	24	7	3	2	412	265	43	5	13	(s)	4
July	28	9	3	2	415	273	48	6	14	(s)	4
August	30	15	3	2	437	267	50	6	15	(s)	4
September	26	10	3	2	391	263	47	6	14	(s)	3
October	24	10	3	2	430	223	44	6	14	(s)	3
November	26	11	3 3	2 2	357	232 236	43 47	5 6	14	(s)	4 4
December Total	30 <b>317</b>	16 <b>190</b>	34	23	396 <b>4,674</b>	3,328	520	62	14 <b>160</b>	(s) <b>4</b>	42
2010 January	32	18	3	2	654	252	48	5	14	1	4
February	28	16	3	2	643	212	43	5	13	1	4
March	26	12	3	2	746	182	44	6	14	1	4
April	23	11	3	2	456	171	42	6	14	1	4
May	23 27	14 13	3 3	2 2	727 643	190 204	44 47	6 6	14 14	1	4 5
June July	30	26	3 4	2	769	213	50	6	15	1	5
August	29	15	4	2	835	207	53	7	15	i	5 5
September	26	13	3	2	666	171	48	6	15	1	5
October	23	11	3	2	690	195	44	5	14	1	5
November	21	7	3	2	529	208	43	6	14	1	4
December	26	15	4	2	765	217	_48	_6	15	1	_5
Total	314	172	39	24	8,125	2,422	555	70	172	8	55
2011 January	30 28	14 9	3 3	2 2	771 663	223 160	49 44	6 5	15 13	1	2
February March	28 28	8	3	2	641	179	44	5 6	14	1	2 3 3
April	20	6	3	2	437	179	45	6	14	1	3
May	23	7	3	2	746	143	48	5	13	i	3
June	24	9	3	2	688	173	47	6	15	i	3
July	28	15	4	2	798	181	50	7	15	1	3
August	26	9	3	2	811	180	50	6	15	1	3
September	23	8	3	2	769	183	46	6	14	1	2
October 10-Month Total	20 <b>252</b>	11 <b>97</b>	3 <b>31</b>	2 <b>19</b>	725 <b>7,049</b>	145 <b>1,738</b>	44 <b>466</b>	6 <b>58</b>	14 <b>143</b>	1 <b>7</b>	3 <b>26</b>
2010 10-Month Total	267	150	32	20	6,830	1,997	463	58	142	7	46
2009 10-Month Total	260	163	29	19	3,921	2,860	430	51	132	4	34

<sup>&</sup>lt;sup>a</sup> Commercial combined-heat-and-power (CHP) and commercial electricity-only

technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels). (s)=Less than 0.5 trillion Btu.

Notes: 

Data are for fuels consumed to produce electricity. Through 1988, data are not available.

See Note, "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

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

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

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

plants.

b 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.

d Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other

petroleum, and waste oil.

Patroleum, and waste oil.

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

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

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

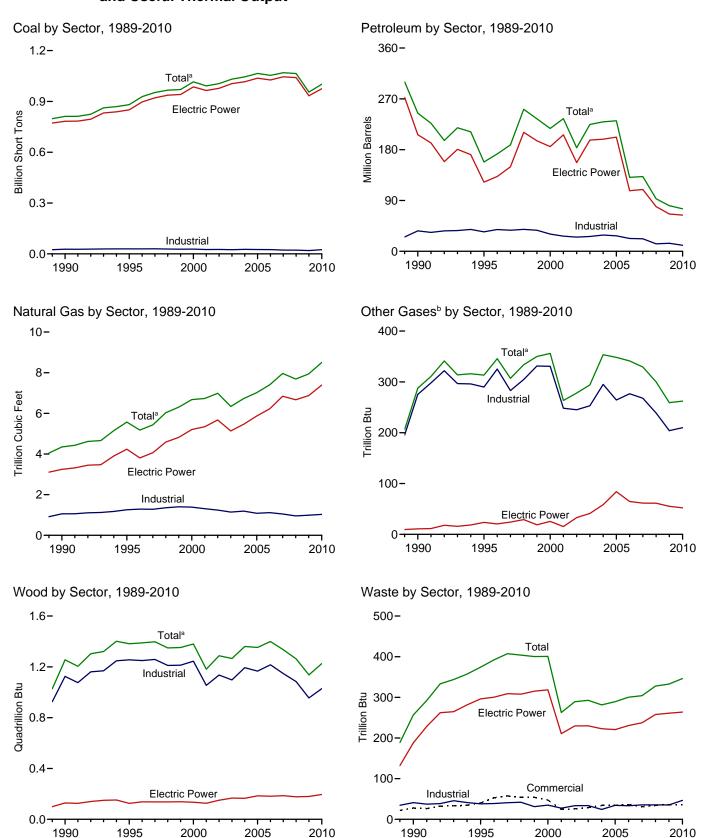
non-reflexible waste (minicipal solid waste from non-biogenic sources, and tire-derived fuels).

9 Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

h Wood and wood-derived fuels.

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

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



<sup>&</sup>lt;sup>a</sup> Includes commercial sector.

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

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)

				Petroleum					Bion	nass	
	Coala	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>	Natural Gas <sup>f</sup>	Other Gases <sup>g</sup>	Woodh	Waste <sup>i</sup>	Other <sup>j</sup>
	Thousand Short Tons	Tł	nousand Barre	els	Thousand Short Tons	Thousand Barrels	Billion Cubic Feet		Trillio	n Btu	
1973 Total 1975 Total 1980 Total	389,212 405,962 569,274	47,058 38,907 29,051	513,190 467,221 391,163	NA NA NA	507 70 179	562,781 506,479 421,110	3,660 3,158 3,682	NA NA NA	1 0 3	2 2 2	NA NA NA
1985 Total	693,841	14,635	158,779	NA 4 000	231	174,571	3,044	NA OOO	8	7	NA_
1990 Total k 1995 Total	811,538 881,012	20,194 21,697	209,081 112,168	1,332 1,322	2,832 4,590	244,765 158,140	4,346 5,572	288 313	1,256 1,382	257 374	86 97
1996 Total	928,015	22,444	124,607	2,468	4,596	172,499	5,178	346	1,389	392	91
1997 Total	952,955	22,893	134,623	526	6,095	188,517	5,433	307	1,397	407	103
1998 Total	966,615	30,006	189,267	1,230	6,196	251,486	6,030	334	1,349	404	95
1999 Total	970,175	30,616	172,319	1,812	5,989	234,694	6,305	350	1,352	400	101
2000 Total 2001 Total	1,015,398 991,635	34,572 33,724	156,673 177,137	2,904 1,418	4,669 4,532	217,494 234,940	6,677 6,731	356 263	1,380 1,182	401 263	109 229
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 2008 Total	1,069,606 1,064,503	17,042 14,137	74,616 43,477	4,237 3,765	7,299 6,314	132,389 92,948	7,962 7,689	329 300	1,336 1,263	304 328	239 212
		,	,			,					
2009 January	92,641	2,157	6,799	536	509	12,037	575	21	95	27	18
February March	76,038 73,810	1,432 1,449	2,913 2,473	354 350	474 559	7,069 7,068	531 584	20 21	89 92	25 30	17 18
April	68,738	994	2,054	275	494	5,794	531	19	86	27	19
May	72,092	1,238	2,817	270	501	6,827	597	20	89	27	20
June	80,689	1,174	2,706	205	514	6,652	731	21	93	27	20
July	86,039	1,118	2,850	181	545	6,876	874	23	100	28	20
August	88,471	1,158	3,297	215	530	7,322	940	24	103	28	20
September October	75,305 76,319	923 980	2,168 2,380	199 195	531 364	5,946 5,377	785 628	24 22	96 98	26 28	19 19
November	74.836	972	1,546	194	366	4,541	544	22	97	29	19
December	90,212	1,204	1,671	242	441	5,320	618	22	101	29	19
Total	955,190	14,800	33,672	3,218	5,828	80,830	7,938	259	1,137	333	228
<b>2010</b> January	92,738	2,643	3,212	338	525	8,819	643	21	103	29	18
February	82,029	978	1,397	286	497	5,143	566	19	96	26	17
March	78,383	866	1,439	207	522	5,124	547	23	103	30	19
April	69,179 77,725	837 1,111	1,355 2,221	176 176	458 500	4,656 6,005	556 647	22 23	98 98	29 29	19 20
May June	89.063	1,111	3,291	204	586	7,721	796	23	101	29	21
July	96,783	1,455	3,921	244	613	8,684	997	22	105	29	21
August	96,593	1,185	3,190	206	510	7,132	1,047	23	106	29	21
September	81,250	961	2,006	191	475	5,534	791	22	103	27	20
October	72,571	871	1,370	186 204	453 414	4,693	662	20	101 102	29 30	20 20
November December	74,496 90.600	1,017 2,029	1,212 2,332	204 361	414 499	4,503 7,218	586 665	21 23	102	30 30	20
Total	1,001,411	15,247	26,944	2,777	6,053	75,231	8,502	262	1,226	346	237
<b>2011</b> January	92,180	1,302	2,014	286	602	6,611	639	22	108	29	15
February	75,364	934	1,197	161	490	4,742	568	20	96	26	14
March	74,254	890	1,327	175	573	5,256	570	24	100	29	16
April	68,631	1,020	1,541	170	409	4,774	615	23	95	27	15
May	75,353	962	1,405	147	434	4,683	671	23	94	29	16
June July	85,880 96,079	1,013 1,208	1,452 1,739	188 206	475 566	5,030 5,982	794 1,037	24 24	104 105	29 30	17 17
August	93,974	851	1,523	165	498	5,029	1,020	24	103	30	16
September	78,352	816	1,129	225	465	4,497	777	23	101	29	15
October	71,305	762	1,162	152	388	4,018	666	25	97	29	15
10-Month Total	811,373	9,758	14,488	1,877	4,900	50,621	7,358	232	1,004	288	157
2010 10-Month Total 2009 10-Month Total	836,315 790,142	12,201 12,624	23,400 30,456	2,212 2,781	5,139 5,022	63,510 70,969	7,251 6,776	218 215	1,014 939	286 275	196 190

<sup>&</sup>lt;sup>a</sup> Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal

plants. NA=Not available.

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

synfuel.

b Fuel oil nos. 1, 2, and 4. Through 2000, electric utility data also include small amounts of kerosene and jet fuel.

<sup>c</sup> Fuel oil nos. 5 and 6. Through 2000, electric utility data also include a small

amount of fuel oil no. 4.

Jet fuel, kerosene, other petroleum liquids, and waste oil.

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

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

Blast furnace gas, propane gas, and other manufactured and waste gases</sup> 

blast inflined gas, proparie gas, and other manufactures and most gasterined from fossil fuels.

h Wood and wood-derived fuels.

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

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

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

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

Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia. Web Page: See http://www.eia.gov/totalenergy/data/monthly/#electricity for all available data beginning in 1973.

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

				Petroleum					Bion	nass	
	Coala	Distillate Fuel Oil <sup>b</sup>	Residual Fuel Oil <sup>c</sup>	Other Liquids <sup>d</sup>	Petroleum Coke <sup>e</sup>	Totale	Natural Gas <sup>f</sup>	Other Gases	Woodh	Waste <sup>i</sup>	Other
	Thousand Short Tons	TI	nousand Barre	els	Thousand Short Tons	Thousand Barrels	Billion Cubic Feet		Trillio	n Btu	
1973 Total	389,212 405,962	47,058 38,907 29,051	513,190 467,221	NA NA NA	507 70 179	562,781 506,479 421,110	3,660 3,158	NA NA	1 (s) 3	2 2 2	NA NA
1980 Total 1985 Total	569,274 693,841	14,635	391,163 158,779	NA	231	174,571	3,682 3,044	NA NA	8	7	NA NA
1990 Total <sup>k</sup>	782,567	16,567	184,915	26	1,008	206,550	3,245	11	129	188	(s) 2
1995 Total	850,230 896,921	18,553 18,780	90,023 99,951	499 653	2,674 2,642	122,447 132,593	4,237 3,807	24 20	125 138	296 300	2
1997 Total	921,364	18,989	113,669	152	3,372	149,668	4,065	24	137	309	1
1998 Total	936,619	23,300	166,528	431	4,102	210,769	4,588	29	137	308	2
1999 Total	940,922	24,058	152,493	544	3,735	195,769	4,820	19	138	315	1
2000 Total 2001 Total	985,821 964,433	30,016 29,274	138,513 159,504	454 377	3,275 3,427	185,358 206,291	5,206 5,342	25 15	134 126	318 211	1 113
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 1,026,636	19,675 12,646	139,409 57,345	2,685 1,870	8,083 7,101	202,184 107,365	5,869 6,222	84 65	185 182	221 231	123 125
2006 Total2007 Total	1,045,141	15,327	63,086	2,594	5,685	107,363	6,841	61	186	237	123
2008 Total	1,040,580	12,547	38,241	2,670	5,119	79,056	6,668	61	177	258	131
2009 January	90,640	1,865	5,974	424	410	10,311	487	4	17	21	10
February	74,254	1,106	2,385	256	374	5,614	453	4	15	19	9
March	71,948	1,227	2,023	214	464	5,785	500	4	14	24	10
April	67,123 70.425	776 987	1,709	159 192	414 418	4,712 5,497	451 515	4 5	12 13	21 22	10 11
May June	70,425 78.954	967 935	2,230 2,345	132	418	5,497 5,501	643	5 5	15	22	11
July	84,243	868	2,558	127	434	5,721	778	5	16	23	11
August	86,635	930	3,021	151	419	6,199	840	5	17	23	11
September	73,566	709	1,885	123	416	4,799	690	5	14	21	10
October November	74,520 73,063	813 797	2,123 1,260	132 138	256 252	4,349 3,457	537 457	5 4	14 15	21 22	10 10
December	88,255	1,023	1,270	162	336	4,137	520	5	17	22	10
Total	933,627	12,035	28,782	2,210	4,611	66,081	6,873	55	180	261	124
2010 January	90,452	2,459	2,887	222	413	7,636	546	5	17	21	10
February	79,884	851	1,061	219	389	4,076	480	4 5	16	20 22	9
March April	76,110 66.842	759 699	1,256 1,214	131 112	427 369	4,281 3,871	457 471	5	16 15	22	10 10
May	75,597	1,023	2,055	104	400	5,181	560	5 5	14	22	10
June	87,030	1,222	3,147	137	471	6,860	706	5	16	23	11
July	94,519	1,309	3,730	185	503	7,742	897	5	17	23	11
August September	94,247 79,176	1,068 883	3,051 1,845	149 136	394 372	6,236 4,726	943 697	4 4	18 16	23 22	11 10
October	70,492	772	1,161	112	346	3,773	570	3	15	22	10
November	72,514	890	1,035	126	301	3,557	497	4	16	23	10
December	88,189	1,854	2,062	245	391	6,118	564	4	17	23	11
Total	975,052	13,790	24,503	1,877	4,777	64,055	7,387	52	196	264	124
<b>2011</b> January	89,682	1,225	1,759	224	500	5,707	542	4	16	21	10
February March	73,156 72,009	858 827	1,020 1,164	117 121	374 451	3,866 4,364	482 483	4 5	15 15	20 23	9 11
April	72,009 66.741	940	1,164	104	291	4,364 3.879	526	4	12	23 22	10
May	73,100	894	1,279	103	306	3,807	578	4	13	22	11
June	83,700	950	1,316	129	374	4,265	705	5	15	23	11
July	93,736	1,139	1,603 1,400	158 107	462 400	5,211	942 923	5	16	24 23	11 11
August September	91,667 76.131	793 760	1,400 1.027	107 127	400 380	4,299 3.812	923 686	5 5	16 15	23	11 10
October	69,109	690	995	119	295	3,280	578	5	13	23	10
10-Month Total	789,030	9,075	12,941	1,309	3,833	42,492	6,446	47	146	223	105
2010 10-Month Total	814,349	11,046	21,406	1,507	4,084	54,380	6,326	44	162	218	103
2009 10-Month Total	772,308	10,215	26,253	1,909	4,022	58,487	5,896	46	148	217	103

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

b Fuel oil nos. 1, 2, and 4. Through 2000, electric utility data also include small

tire-derived fuels).

amounts of kerosene and jet fuel.

<sup>c</sup> Fuel oil nos. 5 and 6. Through 2000, electric utility data also include a small

amount of fuel oil no. 4.

d Jet fuel, kerosene, other petroleum liquids, and waste oil.

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

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

Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.
 Wood and wood-derived fuels.

<sup>&</sup>quot; Wood and wood-derived rueis.

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

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

k Through 1988, data are for electric utilities only. Beginning in 1989, data are

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

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

Notes:

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

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

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

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

		Commerci	ial Sector <sup>a</sup>				Indu	strial Sector	b		
				Biomass					Bion	nass	
	Coalc	Petroleumd	Natural Gas <sup>e</sup>	Wastef	Coalc	Petroleumd	Natural Gas <sup>e</sup>	Other Gases	Woodh	Wastef	Other <sup>i</sup>
	Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu	Thousand Short Tons	Thousand Barrels	Billion Cubic Feet		Trillior	ı Btu	
1989 Total	1,125	1,967	30	22	24,867	25,444	914	195	926	35	85
1990 Total	1,191	2,056	46	28	27,781	36,159	1,055	275	1,125	41	86
1995 Total 1996 Total	1,419 1,660	1,245 1,246	78 82	40 53	29,363 29,434	34,448 38.661	1,258 1,289	290 325	1,255 1,249	38 39	95 89
1997 Total	1,738	1.584	87	58	29,853	37,265	1,282	283	1,259	41	102
1998 Total	1,443	1,807	87	54	28,553	38,910	1,355	305	1,211	42	93
1999 Total	1,490	1,613	84	54	27,763	37,312	1,401	331	1,213	31	99
2000 Total	1,547	1,615	85 79	47	28,031	30,520	1,386	331	1,244	35	108
2001 Total	1,448 1,405	1,832 1,250	79 74	25 26	25,755 26,232	26,817 25,163	1,310 1,240	248 245	1,054 1,136	27 34	101 92
2002 Total 2003 Total		1,230	58	29	24,846	26,212	1,144	253	1,097	34	103
2004 Total		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 60
2008 Total	2,021	671	66	34	21,902	13,222	955	239	1,084	35	-
2009 January		176	7	3	1,793	1,550	81	17	78	4	6
February March		70 35	6 6	3	1,605 1,692	1,385 1,248	71 79	16 17	74 77	3 4	6 6
April	128	26	5	3	1,487	1,056	74	15	73	3	6
May	117	19	5	3	1,550	1,311	77	15	76	2	7
June	135	14	6	3	1,600	1,138	82	16	77	2	7
July	137	19	7	3	1,659	1,136	89	18	83	2	7
August		38	7	3	1,694	1,086	92	19	86	2	7
September October		20 17	7 6	3	1,611 1,671	1,128 1.010	88 85	19 17	81 84	2	7 7
November	151	35	6	3	1,622	1,049	81	17	82	4	7
December	174	53	7	3	1.783	1.130	91	17	84	4	7
Total	1,798	521	76	36	19,766	14,228	990	204	955	35	82
2010 January	193	55	7	3	2,094	1,128	90	17	86	4	6
February		47	7	3	1,978	1,021	80	15	79	4	7
March		26	7	3	2,124	817	84	18	86	4	7
April May	117 118	24 28	6 6	3 4	2,220 2,010	761 796	79 82	18 18	83 83	5 3	7 7
June	135	26	6	3	1.898	835	84	18	85	3	8
July	142	59	8	3	2,122	883	91	17	88	3	8
August	152	46	9	3	2,194	849	95	19	88	3	8
September	133	27	7	3	1,941	780	87	18	87	3	8
October		21	7	3	1,958	899	84	17	86	5	8
November December	128 165	22 55	7 8	3	1,854 2,246	924 1,045	82 92	17 19	86 91	5 4	8 8
Total	1,720	437	86	36	24,638	10,740	1,029	210	1,029	47	91
2011 January	178	45	8	3	2,320	858	89	18	91	4	3
February	165	24	7	3	2,044	852	79	16	81	4	3
March	158	29	6	3	2,088	862	81	20	86	3	3
April	124	15	6	3	1,767	880	82	19	83	3	3
May	128 124	17 22	7 6	3	2,126 2.056	859 743	87 83	18 19	81 89	4	4
June July	134	35	7	3	2,056	743 737	83 88	19	89 89	4	4
August	124	20	7	3	2,182	710	89	19	86	4	3
September	121	15	6	3	2,100	670	84	18	87	4	3
October	116	19	6	3	2,080	719	81	20	84	4	3
10-Month Total	1,372	240	67	29	20,971	7,890	845	186	857	36	33
2010 10-Month Total 2009 10-Month Total	1,427 1,473	360 433	70 63	31 30	20,539 16,361	8,770 12,050	855 818	174 170	851 790	37 28	75 68

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

plants.

b 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.  $^{\rm d}$  Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.

Politicular das, plus a small amount of supplemental gaseous fuels.
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

fitre-derived fuels).

<sup>9</sup> Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels

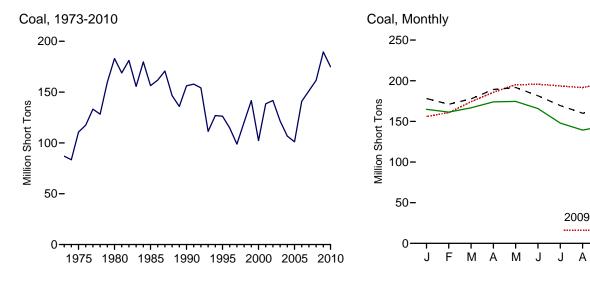
h Wood and wood-derived fuels.

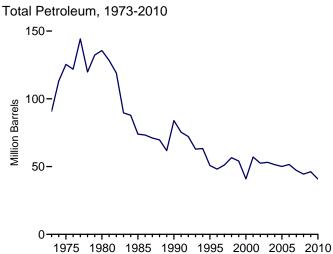
Nood and wood-derived fuels.
Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).
Notes: • See Note, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.
Web Page: See http://www.eia.gov/totalenergy/data/monthly/#electricity for all available data beginning in 1989.

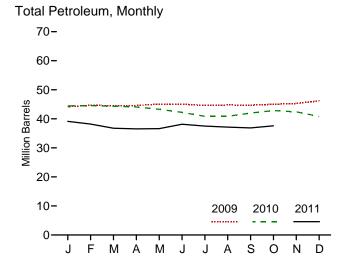
Web Page: See http://www.eia.gov/totalenergy/data/monthly/#electricity for all available data beginning in 1989.

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

Figure 7.5 Stocks of Coal and Petroleum: Electric Power Sector



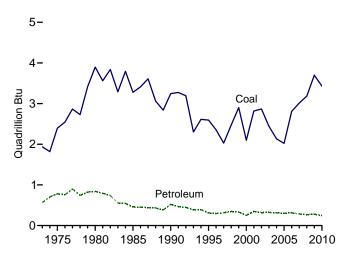




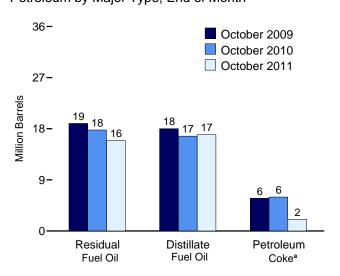
2010

2011

Coal and Petroleum Stocks, 1973-2010



### Petroleum by Major Type, End of Month



<sup>&</sup>lt;sup>a</sup> Converted from short tons to barrels by multiplying by 5. Web Page: http://www.eia.gov/totalenergy/data/monthly/#electricity. Sources: Tables 7.5, A1, and A5 (column 6).

Table 7.5 Stocks of Coal and Petroleum: Electric Power Sector

				Petroleum		
	Coal <sup>a</sup>	Distillate Fuel Oilb	Residual Fuel Oil <sup>c</sup>	Other Liquids <sup>d</sup>	Petroleum Coke <sup>e</sup>	Totale
	Thousand Short Tons		Thousand Barrels		Thousand Short Tons	Thousand Barrels
973 Year	86,967	10.095	79,121	NA	312	90,776
975 Year	110,724	16.432	108.825	NA.	31	125,413
980 Year	183,010	30,023	105,351	NA NA	52	135,635
985 Year	156,376	16,386	57,304	NA NA	49	73.933
90 Year	156,166	16,471	67,030	NA	94	83,970
95 Year		15,392	35.102	NA NA	65	50.821
96 Year	114,623	15,216	32,473	NA NA	91	48,146
97 Year		15,456	33,336	NA NA	469	51,138
998 Year		16,343	37,451	NA NA	559	56.591
999 Year <sup>f</sup>			34,256	NA NA	372	
	102,296	17,995			211	54,109
000 Year		15,127	24,748	NA NA		40,932
001 Year		20,486	34,594	NA	390	57,031
002 Year	141,714	17,413	25,723	800	1,711	52,490
003 Year	121,567	19,153	25,820	779	1,484	53,170
004 Year		19,275	26,596	879	937	51,434
005 Year		18,778	27,624	1,012	530	50,062
006 Year	140,964	18,013	28,823	1,380	674	51,583
007 Year	151,221	18,395	24,136	1,902	554	47,203
008 Year	161,589	17,761	21,088	1,955	739	44,498
009 January	156,075	17,882	20,501	2,061	746	44,175
February	160,601	17,737	21,141	2,102	738	44,668
March	174,223	17,691	21,160	2,118	715	44,544
April	185,790	18,055	20,890	2,129	705	44,598
May	195,103	17,958	21,022	2,195	779	45,072
June		17,866	21,131	2.234	763	45.048
July		17,971	20,734	2,252	729	44,604
August	191,532	18.040	20.093	2,265	876	44,777
September		18.162	19.454	2,292	963	44.726
October	199,477	18,009	18,931	2,307	1,152	45,007
	203.765	17.880	18.806	2,307	1,132	45,007
November  December	189,467	17,886	19,068	2,257	1,394	46,181
<b>010</b> January	178,091	17,193	18,035	2,198	1,406	44,454
February	171,026	17,193	18,532	2,196	1,280	44,562
March		17,409	18,679	2,222	1,240	44,362
	189,260	17,333	18,353	2,103		44,090
April	191.669	17,295	17,935	2,226	1,243 1.188	44,090
May						
June		17,040	17,411	2,172	1,117	42,209
July		16,917	16,441	2,268	1,046	40,856
August	159,987	16,737	16,288	2,292	1,112	40,878
September	163,776	16,608	17,269	2,330	1,158	41,996
October		16,698	17,781	2,377	1,197	42,840
November	183,389	17,024	17,492	2,410	1,098	42,414
December	174,917	16,758	16,629	2,319	1,019	40,800
011 January	164,840	16,673	16,061	2,383	801	39,123
February	161,439	16,654	15,575	2,435	707	38,200
March	166,737	16,498	15,393	2,437	489	36,776
April	173,999	16,301	15,180	2,460	522	36,551
May	174,619	16,195	15,235	2,447	548	36,617
June	165,707	16,779	16,356	2,564	491	38,152
July		16,550	16,090	2,561	462	37,510
August	139,225	16,583	15,804	2,581	435	37,144
September	144,438	16,691	15,654	2,593	389	36,884
	156,906	16,955		2,640		37,601
October	130,900	10,900	15,942	∠,040	413	37,007

<sup>&</sup>lt;sup>a</sup> Anthracite, bituminous coal, subbituminous coal, and lignite.

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.

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

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

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

available data beginning in 1973.

Sources: • 1973-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." • 1998-2000: EIA, Form EIA-759, "Monthly Power Plant Report." • 1998-2000: EIA, Form EIA-759, "Monthly Power Plant Report." • 1998-2000: EIA, Form EIA-959, "Monthly Power Plant Report." • 1998-2000: EIA, Form EIA-906, "Power Plant Report." • 2004-2007: EIA, Form EIA-906, "Power Plant Report." • 2004-2007: EIA, Form EIA-906, "Power Plant Report." • 1998-2008 Forward: EIA-923, "Power Plant Operations Report."

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.
 Fuel oil nos. 5 and 6. For 1973-1979, data are for steam plant stocks of

<sup>&</sup>lt;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.

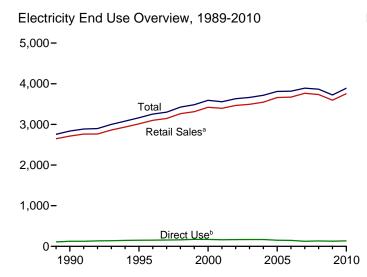
d let fuel and kerosene. Through 2003, data also include a small amount of

<sup>&</sup>lt;sup>d</sup> Jet fuel and kerosene. Through 2003, data also include a small amount of waste oil

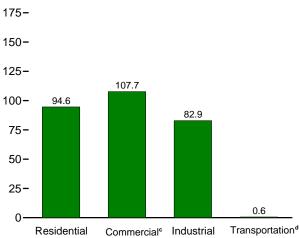
e Petroleum coke is converted from short tons to barrels by multiplying by 5.

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

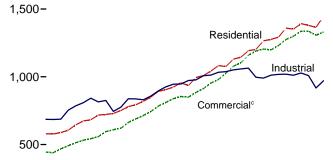
Figure 7.6 Electricity End Use (Billion Kilowatthours)

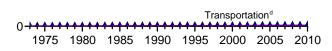




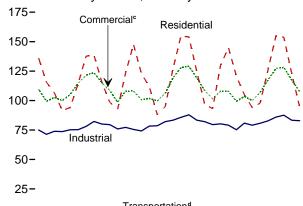


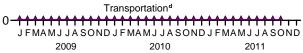




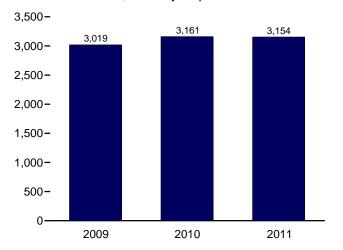


#### Retail Sales<sup>a</sup> by Sector, Monthly



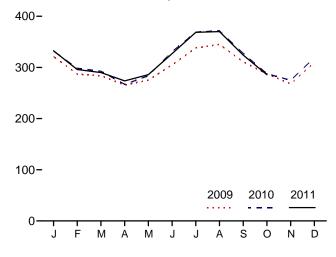






<sup>&</sup>lt;sup>a</sup> Electricity retail sales to ultimate customers reported by utilities and other energy service providers.

#### Retail Sales<sup>a</sup> Total, Monthly



<sup>&</sup>lt;sup>d</sup> Transportation sector, including sales to railroads and railways. Web Page: http://www.eia.gov/totalenergy/data/monthly/#electricity. Source: Tables 7.6.

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

<sup>&</sup>lt;sup>c</sup> Commercial sector, including public street and highway lighting, interdepartmental sales, and other sales to public authorites.

Table 7.6 Electricity End Use

(Million Kilowatthours)

			Retail Sales <sup>a</sup>					Discont Retail Sale	
	Residential	Commercialb	Industrialc	Transpor- tation <sup>d</sup>	Total Retail Sales <sup>e</sup>	Direct Use <sup>f</sup>	Total End Use <sup>9</sup>	Commercial (Old) h	Other (Old) <sup>i</sup>
1973 Total	579,231	E 444,505	686,085	E 3,087	1,712,909	NA	1,712,909	388,266	59,320
1975 Total	588,140	E 468,296	687,680	<sup>E</sup> 2,974	1,747,091	NA NA	1,747,091	403,049	68,222
980 Total	717,495	558,643	815,067	3,244	2,094,449	NA NA	2,094,449	488,155	73,732
985 Total	793,934	689,121	836,772	4,147	2,323,974	NA NA	2,323,974	605,989	87,279
990 Total	924,019	838,263	945,522	4,751	2,712,555	124,529	2,837,084	751,027	91,988
995 Total	1,042,501	953,117	1,012,693	4,751	3,013,287	150,677	3,163,963	862,685	95,40
996 Total	1,082,512	980,061	1,033,631	4,923	3,101,127	152,638	3,253,765	887,445	97,53
997 Total	1,075,880	1,026,626	1,038,197	4,907	3,145,610	156,239	3,301,849	928,633	102,90
998 Total	1,130,109	1,077,957	1,051,203	4,962	3,264,231	160,866	3,425,097	979,401	103,51
999 Total	1,144,923	1,103,821	1,058,217	5,126	3,312,087	171,629	3,483,716	1,001,996	103,510
	1,192,446	1,159,347	1,064,239	5,382	3,421,414	171,029	3,592,357	1,055,232	100,93
000 Total			996,609			162,649			
001 Total	1,201,607 1,265,180	1,190,518	990,238	5,724	3,394,458	162,649	3,557,107 3,631,650	1,083,069	113,17
002 Total		1,204,531	1,012,373	5,517	3,465,466	168,295	3,662,029	1,104,497	105,55
003 Total	1,275,824	1,198,728		6,810	3,493,734				
004 Total	1,291,982	1,230,425	1,017,850	7,224	3,547,479	168,470	3,715,949		
005 Total	1,359,227	1,275,079	1,019,156	7,506	3,660,969	150,016	3,810,984		
006 Total	1,351,520	1,299,744	1,011,298	7,358	3,669,919	146,927	3,816,845		
007 Total	1,392,241	1,336,315	1,027,832	8,173	3,764,561	125,670	3,890,231		
008 Total	1,379,981	1,335,981	1,009,300	7,700	3,732,962	132,197	3,865,159		
009 January	136,080	109,523	75,003	774	321,379	E 10,369	331,749		
February	115,536	99,358	71,304	672	286,869	E 9,637	296,507		
March	106,544	102,646	73,913	671	283,773	E 10,251	294,025		
April	91,473	100,020	73,662	611	265,766	E 9,526	275,292		
May	94,180	105,215	75,198	599	275,193	E 9,767	284,960		
June	114,347	114,752	75,246	611	304,956	E 10,524	315,480		
July	137,681	121,608	78,045	674	338,009	E 11,475	349,484		
August	138,447	123,662	82,298	644	345,051	E 11,820	356,871		
September	115,372	115,027	80,022	638	311,059	E 11,057	322,116		
October	98,522	108,635	79,584	607	287,348	E 10,795	298,143		
November	92,722	98,646	75,917	592	267,877	E 10,501	278,378		
December Total	123,570 <b>1,364,474</b>	108,076 <b>1,307,168</b>	77,251 <b>917,442</b>	688 <b>7,781</b>	309,585 <b>3,596,865</b>	E 11,214 <b>126,938</b>	320,800 <b>3,723,803</b>		
						F 44 200			
010 January	147,500	108,120	75,506	715	331,841	E 11,306	343,148		
February	122,840	100,747	74,164	689	298,440	E 10,348	308,788		
March	111,790	101,756	78,303	656	292,505	E 11,102	303,607		
April	88,046	99,791	78,597	600	267,034	E 10,293	277,327		
May	94,843	106,176	82,088	606	283,712	E 10,823	294,536		
June	127,496	119,388	83,347	658	330,889	E 11,258	342,148		
July	154,688	127,925	85,725	667	369,006	E 11,924	380,930		
August	154,053	129,143	87,904	628	371,728	E 12,544	384,272		
September	124,582	119,137	83,353	639	327,711	E 11,446	339,157		
October	96,688	108,461	82,046	615	287,811	E 10,818	298,629		
November	93,166	101,524	79,575	607	274,871	E 10,731	285,602		
December	130,015	108,031	80,264	_ 633	318,943	E 11,960	330,903		
Total	1,445,708	1,330,199	970,873	7,712	3,754,493	134,554	3,889,047		
111 January	144,911	107,884	79,055	710	332,561	RE 11,528	R 344,089		
February	120,685	99,368	75,223	633	295,909	RE 10,238	306,146		
March	105,065	103,507	80,817	655	290,044	RE 10,717	300,760		
April	94,069	100,019	79,099	618	273,805	RE 10.322	R 284,127		
May	97,755	106,841	80,741	615	285,951	E 11,048	<sup>R</sup> 297,000		
June	126,008	117,460	82,775	637	326,881	E 11,117	R 337,998		
July	154,888	127,139	85,907	645	368,580	E 11,863	380.442		
August	153,688	128,200	87,565	620	370,073	RE 11,802	R 381,875		
September	122,842	117,403	83,311	630	324,186	RE 11,003	R 335,189		
October	94,576	107,655	82,860	608	285,699	E 10,563	296,263		
10-Month Total	1,214,487	1,115,476	817,354	6,372	3,153,689	E 110,200	3,263,889		
010 10-Month Total	1,222,527	1,120,645	811,034	6,473	3,160,679	E 111,863	3,272,542		
		.,,	J , UU T			,	U, , U		

<sup>&</sup>lt;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 railreade and articles.

In 2003, includes agriculture and irrigation.

d Transportation sector, including sales to railroads and railways.
e The sum of "Residential," "Commercial," "Industrial," and "Transportation."
f Use of electricity that is 1) self-generated, 2) produced by either the same entity that consumes the power or an affiliate, and 3) used in direct support of a service or industrial process located within the same facility or group of facilities that house the generating equipment. Direct use is exclusive of station use.

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

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

h "Commercial (Old)" is a discontinued series—data are for the commercial sector, excluding public street and highway lighting, interdepartmental sales, and other sales to public authorities.

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

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

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

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

Sources: See end of section.

### **Electricity**

Note. 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\_form.doc.

#### **Table 7.1 Sources**

### **Net Generation, Electric Power Sector**

Table 7.2b.

**Net Generation, Commercial and Industrial Sectors** Table 7.2c.

# Imports and Exports, Electricity Trade With Canada and Mexico, 1973–1989

1973–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."

# Imports and Exports, Electricity Trade with Canada, 1990 Forward

National Energy Board of Canada, data for total sales (firm and interruptible; which exclude non-revenue, inadvertent, and service) from Canada to the United States, and data for total purchases (which exclude non-revenue, inadvertent, and service) by Canada from the United States.

## Imports and Exports, Electricity Trade with Mexico, 1990 Forward

DOE, Office of Electricity Delivery and Energy Reliability, Form OE-781R, "Monthly Electricity Imports and Exports Report," and predecessor form. For 2001 forward, data from the California Independent System Operator are used in combination with the Form OE-781 values to estimate electricity trade with Mexico.

#### **T&D** Losses and Unaccounted for

Calculated as the sum of total net generation and imports minus end use and exports.

#### **End Use**

Table 7.6.

#### **Table 7.2b Sources**

1973–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, 1973-1988

1973–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

1973–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

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

#### **Table 7.4b Sources**

1973–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

1973–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." 1984–1996: EIA, Form EIA-861, "Annual Electric Utility Report."

1997 forward: EIA, *Electric Power Monthly*, January 2012, Table 5.1.

#### Retail Sales, Commercial

1973–2002: Estimated by EIA as the sum of "Commercial (Old)" and the non-transportation portion of "Other (Old)." See estimation methodology at

 $http://www.eia.gov/states/sep\_use/notes/use\_elec.pdf.$ 

2003 forward: EIA, *Electric Power Monthly*, January 2012, Table 5.1.

#### **Retail Sales, Transportation**

1973–2002: Estimated by EIA as the transportation portion of "Other (Old)." See estimation methodology at http://www.eia.gov/states/sep\_use/notes/use\_elec.pdf.

2003 forward: EIA, *Electric Power Monthly*, January 2012, Table 5.1.

#### **Direct Use, Annual**

1989–1996: EIA, Form EIA-867, "Annual Nonutility Power Producer Report."

1997–2010: EIA, Electric Power Annual 2010, November 2011, Table 7.2.

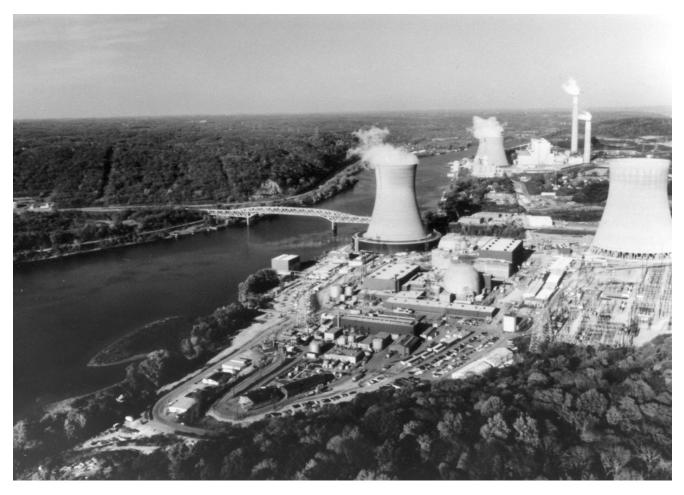
#### **Direct Use, Monthly**

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 2011, the 2010 annual share is used.

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

1973-2002: See sources for "Residential" and "Industrial."

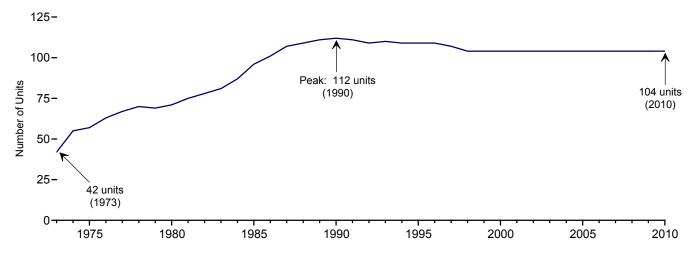
# **Nuclear Energy**



Site of Shippingport atomic power station, the first commercial nuclear power plant in the United States (rectangular reactor building and foreground); background, Beaver Valley 1 and 2 nuclear power plants and Bruce Mansfield coal-fired power plant (southwestern Pennsylvania). Source: U.S. Department of Energy.

Figure 8.1 Nuclear Energy Overview

Operable Units, End of Year, 1973-2010



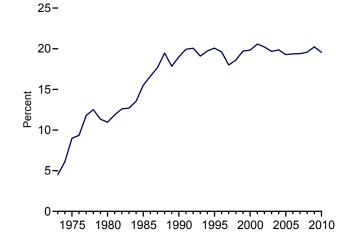
Electricity Net Generation, 1973-2010

5
4Total

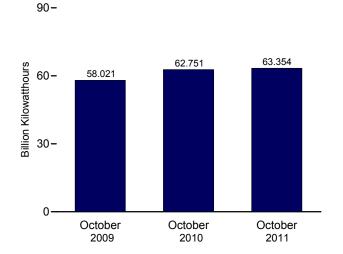
3
Nuclear Electric
Power

1975 1980 1985 1990 1995 2000 2005 2010

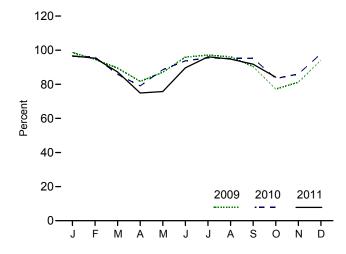
Nuclear Share of Electricity Net Generation, 1973-2010



**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
	Number	Million Kilowatts	Million Kilowatthours	Per	rcent
73 Total	42	22.683	83.479	4.5	53.5
	57	37.267	172,505	9.0	55.9
75 Total					
80 Total	71	51.810	251,116	11.0	56.3
85 Total	96	79.397	383,691	15.5	58.0
90 Total	112	99.624	576,862	19.0	66.0
95 Total	109	99.515	673,402	20.1	77.4
96 Total	109	100.784	674,729	19.6	76.2
97 Total	107	99.716	628,644	18.0	71.1
98 Total	104	97.070	673.702	18.6	78.2
99 Total	104	97.411	728,254	19.7	85.3
00 Total	104	97.860	753.893	19.8	88.1
00 TOtal					
01 Total	104	98.159	768,826	20.6	89.4
02 Total	104	98.657	780,064	20.2	90.3
03 Total	104	99.209	763,733	19.7	87.9
04 Total	104	99.628	788,528	19.9	90.1
05 Total	104	99.988	781,986	19.3	89.3
06 Total	104	100.334	787,219	19.4	89.6
07 Total	104	100.266	806,425	19.4	91.8
08 Total	104	100.755	806,208	19.6	91.1
	404	404.004	74.400	20.0	00.0
<b>09</b> January	104	101.004	74,102	20.9	98.6
February	104	101.004	64,227	21.3	94.6
March	104	101.004	67,241	21.6	89.5
April	104	101.004	59,408	20.5	81.7
May	104	101.004	65,395	21.0	87.0
June	104	101.004	69.735	20.1	95.9
July	104	101.004	72,949	19.6	97.1
	104		72,343	19.0	96.1
August		101.004			
September	104	101.004	65,752	20.1	90.4
October	104	101.004	58,021	18.9	77.2
November	104	101.004	59,069	19.9	81.2
December	104	101.004	70,710	20.2	94.1
Total	104	101.004	798,855	20.2	90.3
10 January	104	101.167	72,569	20.1	96.4
February	104	101.167	65,245	20.4	96.0
March	104	101.167	64,635	20.7	85.9
April	104	101.167	57,611	20.0	79.1
May	104	101.167	66,658	20.3	88.6
June	104	101.167	68,301	18.2	93.8
July	104	101.167	71,913	17.6	95.5
August	104	101.167	71,574	17.5	95.1
September	104	101.167	69,371	20.0	95.2
October	104	101.167	62,751	20.4	83.4
November	104	101.167	62,655	20.5	86.0
	104	101.167		20.3	97.9
December			73,683		
Total	104	101.167	806,968	19.6	91.1
11 January	104	101.167	72,743	20.0	96.6
February	104	101.167	64,789	20.7	95.3
March	104	101.167	65,662	20.6	87.2
April	104	101.167	54,547	18.0	74.9
May	104	101.167	57,017	17.6	75.8
	104				89.6
June		101.167	65,270	17.7	
July	104	101.167	72,345	17.2	96.1
August	104	101.167	71,339	17.6	94.8
September	104	101.167	66,849	19.8	91.8
October	104	101.167	63,354	20.5	84.2
10-Month Total	104	101.167	653,914	18.9	88.6
40.40.00		404 :		40.1	
10 10-Month Total 09 10-Month Total	104	101.167	670,630	19.4	90.9
	104	101.004	669,075	20.3	90.8

<sup>&</sup>lt;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. For additional information on nuclear generating units, see Annual Energy Review 2010, October 2011, Table 9.1, http://www.eia.gov/totalenergy/data/annual/#nuclear.

Sources: See end of section.

At end of period.
 For the definition of "Net Summer Capacity," see Note 2, "Nuclear Capacity," at end of section.

d For an explanation of the method of calculating the capacity factor, see Note

<sup>2, &</sup>quot;Nuclear Capacity," at end of section.

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 for all available data beginning in 1973.

### **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.

- **Note 2. Nuclear Capacity.** Nuclear generating units may have more than one type of net capacity rating, including the following:
- (a) Net Summer Capacity—The steady hourly output that generating equipment is expected to supply to system load, exclusive of auxiliary power, as demonstrated by test at the

time of summer peak demand. Auxiliary power of a typical nuclear power plant is about 5 percent of gross generation.

(b) Net Design Capacity or Net Design Electrical Rating (DER)—The nominal net electrical output of a unit, specified by the utility and used for plant design.

The monthly capacity factors are calculated as the monthly nuclear electricity net generation divided by the maximum possible nuclear electricity net generation for that month. The maximum possible nuclear electricity net generation is the number of hours in the month (assuming 24-hour days, with no adjustment for changes to or from Daylight Savings Time) multiplied by the net summer capacity of operable nuclear generating units at the end of the month. That fraction is then multiplied by 100 to obtain a percentage. Annual capacity factors are calculated as the annual nuclear electricity net generation divided by the annual maximum possible nuclear electricity net generation (the sum of the monthly values for maximum possible nuclear electricity net generation).

#### **Table 8.1 Sources**

## **Total Operable Units and Net Summer Capacity of Operable Units**

1973-1982: 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 monthly updates as appropriate. For a list of currently operable units, see http://www.eia.gov/nuclear/reactors/stats table1.html.

# **Nuclear Electricity Net Generation and Nuclear Share of Electricity Net Generation**

See Table 7.2a.

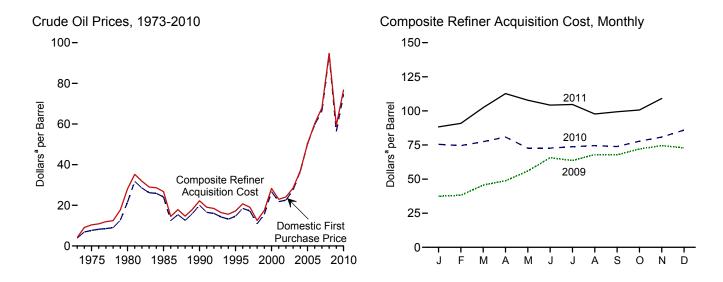
#### **Capacity Factor**

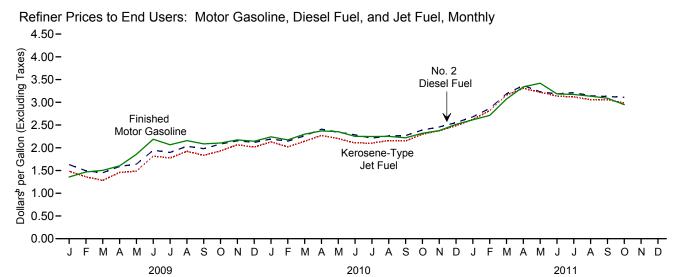
Calculated by EIA using the method described above in Note 2.

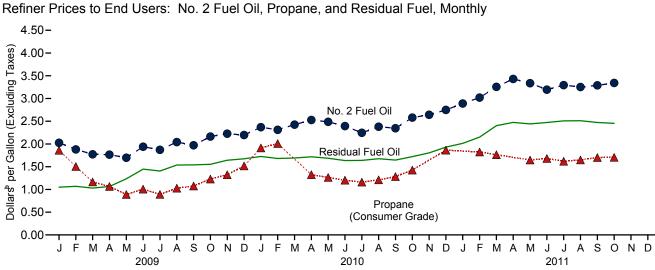
# **Energy Prices**



Figure 9.1 Petroleum Prices







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

**Table 9.1 Crude Oil Price Summary** 

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

				R	efiner Acquisition Co	<b>st</b> <sup>b</sup>
	Domestic First Purchase Price <sup>c</sup>	F.O.B. Cost of Imports <sup>d</sup>	Landed Cost of Imports <sup>e</sup>	Domestic	Imported	Composite
1973 Average	3.89	<sup>f</sup> 5.21	<sup>f</sup> 6.41	<sup>E</sup> 4.17	<sup>E</sup> 4.08	<sup>E</sup> 4.15
975 Average	7.67	11.18	12.70	8.39	13.93	10.38
980 Average	21.59	32.37	33.67	24.23	33.89	28.07
	24.09	25.84	26.67	26.66	26.99	26.75
985 Average						
990 Average	20.03	20.37	21.13	22.59	21.76	22.22
995 Average	14.62	15.69	16.78	17.33	17.14	17.23
996 Average	18.46	19.32	20.31	20.77	20.64	20.71
997 Average	17.23	16.94	18.11	19.61	18.53	19.04
998 Average	10.87	10.76	11.84	13.18	12.04	12.52
999 Average	15.56	16.47	17.23	17.90	17.26	17.51
000 Average	26.72	26.27	27.53	29.11	27.70	28.26
001 Average	21.84	20.46	21.82	24.33	22.00	22.95
002 Average	22.51	22.63	23.91	24.65	23.71	24.10
003 Average	27.56	25.86	27.69	29.82	27.71	28.53
004 Average	36.77	33.75	36.07	38.97	35.90	36.98
005 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
007 Average	66.52	66.36	67.97	69.65	67.04	67.94
008 Average	94.04	90.32	93.33	98.47	92.77	94.74
000 lanuari	35.00	36.87	38.74	38.67	36.84	37.45
009 January						
February	34.14	38.08	40.27	37.51	38.56	38.15
March	42.45	44.34	46.74	44.92	45.96	45.57
April	45.19	47.67	51.43	47.52	49.58	48.78
May	52.67	55.61	58.27	54.58	56.77	55.96
June	63.09	64.82	65.89	64.65	66.37	65.72
July	60.44	62.32	64.78	63.79	63.46	63.58
August	65.28	67.47	68.53	67.81	68.09	67.99
September	65.28	65.41	68.50	67.87	67.65	67.74
October	69.82	70.45	72.58	72.09	72.06	72.08
November	71.99	73.16	74.41	74.60	74.40	74.48
December	70.42	71.24	73.50	73.35	72.67	72.95
Average	56.35	57.78	60.23	59.49	59.17	59.29
<b>010</b> January	72.89	72.96	74.78	76.04	75.07	75.48
February	72.74	71.50	75.01	75.91	73.73	74.58
March	75.77	75.41	77.65	78.52	76.77	77.43
April	78.80	78.27	79.34	82.12	80.03	80.83
	70.90	69.21	72.00	75.23	71.15	72.66
May						
June	70.77	70.17	72.62	73.93	71.91	72.66
July	71.37	71.01	73.43	74.54	73.25	73.73
August	72.07	71.27	73.63	76.21	73.50	74.58
September	71.23	71.72	74.25	74.87	73.20	73.85
October	76.02	75.52	77.26	78.88	77.02	77.77
November	79.20	79.56	81.56	82.05	80.07	80.85
December	83.98	83.95	86.64	86.48	85.59	85.95
Average	74.71	74.20	76.49	77.96	75.88	76.69
<b>011</b> January	85.66	86.80	89.61	88.73	87.99	88.28
February	86.69	92.07	94.25	89.50	91.72	90.85
March	99.19	104.19	104.80	102.34	102.48	102.43
April	108.80	111.52	112.54	111.96	113.08	112.65
May	102.46	105.92	108.28	107.55	107.99	107.82
June	97.30	104.35	105.19	102.53	105.36	107.82
July	97.82	105.60	106.19	102.67	105.94	104.23
	89.00	R 97.72	R 99.27	95.89	99.01	97.70
August		81.12 R404.05				
September	R 90.22	R 101.05	R 100.72	96.89	101.05	99.39
October	R 92.28	R 101.69	R 100.79	R 98.42	R 102.06	R 100.65
November	NA	NA	NA	E 106.69	E 111.43	E 109.08

Notes: • Values for Domestic First Purchase Price and Refiner Acquisition Cost for the current two months and for F.O.B. and Landed Costs of Imports for the

current three months are preliminary. • F.O.B. and landed costs through 1980 reflect the period of reporting; prices since then reflect the period of loading.

available data beginning in 1973.

Sources: See end of section.

<sup>a Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.
b See Note 1, "Crude Oil Refinery Acquisition Costs," at end of section.
c See Note 2, "Crude Oil Domestic First Purchase Prices," at end of section.
d See Note 3, "Crude Oil F.O.B. Costs," at end of section.
e See Note 4, "Crude Oil Landed Costs," at end of section.
f Based on October, November, and December data only.</sup> 

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

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 for all

Table 9.2 F.O.B. Costs of Crude Oil Imports From Selected Countries

(Dollarsa per Barrel)

	uio pei L								I	1
			s	elected Count	ries			Persian		
	Angola	Colombia	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela	Gulf Nations <sup>b</sup>	Total OPEC <sup>c</sup>	Total Non-OPEC <sup>c</sup>
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
1996 Average	20.71	21.33	19.14	21.27	19.28	19.43	17.73	19.22	18.94	19.65
1997 Average	18.81	18.85	16.72	19.43	15.16	18.59	15.33	15.24	16.26	17.51
1998 Average	12.11	12.56	10.49	12.97	8.87	12.52	9.31	9.09	10.20	11.21
1999 Average	17.46	17.20	15.89	17.32	17.65	19.14	14.33	17.15	15.90	16.84
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 24.09	24.25 24.64	18.89 21.60	24.85 25.38	18.98 23.92	23.30	18.01 20.13	18.89 23.38	19.73 22.18	21.04 22.93
2002 Average	28.22	28.89	24.83	29.40	25.92	24.50 28.76	23.81	25.36 25.17	25.36	26.21
2003 Average 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 January	39.50	26.24	36.96	46.26	W	W	36.68	35.24	37.61	36.15
February	40.60	32.55	37.59	45.02	W	_	38.03	36.38	39.71	36.81
March	44.56	46.69	40.94	50.34	48.31	W	41.78	47.66	45.75	42.96
April	50.59	W	46.71	54.00	W	-	45.98	51.05	48.82	46.87
May	55.23	54.17	55.49	59.02	W	_	54.91	58.05	56.30	55.12
June	66.96	62.94	63.83	69.00	W	_	63.16	64.26	65.37	64.34
July	63.34	58.58	60.42	69.73	W	_	60.16	63.42	63.25	61.39
August	72.25	64.41 63.68	67.20 64.51	72.37 69.65	66.37 W	W	65.42 64.18	66.14 67.25	67.65	67.31
September	67.49 71.19	69.59	68.71	76.01	W	W	66.95	73.45	65.91 70.54	65.04 70.38
October November	76.89	70.96	72.71	77.58	W	W	69.43	72.99	73.60	70.36 72.81
December	74.56	66.72	69.75	76.06	W		68.32	72.85	72.48	70.01
Average	57.07	57.90	56.47	64.61	57.87	65.63	55.58	59.53	58.53	57.16
<b>2010</b> January	74.62	70.08	72.96	75.91	W	_	70.86	W	73.42	72.49
February	W	68.70	69.16	76.07	W	_	68.83	71.89	71.77	71.14
March	78.11	73.90	72.76	81.27	W	_	70.88	76.10	75.83	74.91
April	84.40	74.85	75.57	85.94	W	W	72.59	80.01	78.88	77.73
May	71.86	64.32	68.30	74.28	W	_	66.37	73.60	70.45	68.24
June	72.90	67.19	67.64	75.61	W	_	66.19	72.49	71.39	69.20
July	74.77 77.11	70.00 69.88	68.53 69.53	79.63 75.70	W	– W	67.25 68.27	71.76 72.79	72.16 72.38	69.87 70.35
August	77.11 W	69.71	69.53	80.93	74.06	vv —	67.59	73.34	72.36 73.24	70.35
September October	W	76.06	73.93	84.59	74.00 W	_	72.10	78.28	77.55	73.80
November	85.99	78.92	77.14	86.61	W	_	75.03	80.99	80.95	78.49
December	W	81.62	81.75	93.68	w	_	77.78	W	85.72	82.40
Average	78.18	72.56	72.46	80.83	76.44	W	70.30	75.65	75.23	73.24
2011 January	95.97	83.36	84.36	99.86	W	-	81.25	W	89.74	83.92
February	W	87.23	88.77	109.07	W	_	85.11	97.25	96.01	88.67
March	113.63	101.29	102.55	117.98	W	-	97.56	107.36	106.19	102.44
April	122.52	114.17	109.90	126.05	W	_	106.56	114.82	115.15	107.71
May	113.33	106.15	105.13	117.66	W	_	101.60	110.29	108.50	103.81
June	115.13	102.78	103.43	119.13	W	_	100.59	106.39	108.22	100.42
July	114.80 W	100.30	104.84	119.68	W	_	100.62	109.06	110.09	100.90 R 93.57
August September		95.01 97.45	98.21 <sup>R</sup> 100.28	115.61 <sup>R</sup> 115.43	109.99	_	97.17 <sup>R</sup> 95.71	106.98 <sup>R</sup> 108.41	104.19 <sup>R</sup> 105.81	R 97.30
October	108.87	102.46	101.33	114.70	109.99 W	_	96.33	105.53	104.92	98.29
O00001	100.01	102.70	101.00	11-7.70	**		55.55	100.00	10 1.02	00.20

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

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." in Glossary, and Note 3, "Crude Oil F.O.B. Costs," at end of section. • Values for the current two months are preliminary. • Prices through 1980 reflect the period of reporting; prices since then 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 data until the actual prices have been determined and reported. • U.S. geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.gov/totalenergy/data/monthly/#prices for all

available data beginning in 1973. Sources: See end of section.

 <sup>&</sup>lt;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): 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."

Based on October. November. and December data only.

d Based on October, November, and December data only. R=Revised. - =No data reported. W=Value withheld to avoid disclosure of individual company data.

Table 9.3 Landed Costs of Crude Oil Imports From Selected Countries

(Dollarsa per Barrel)

				Selected (	Countries						
	Angola	Canada	Colombia	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela	Persian Gulf Nations <sup>b</sup>	Total OPEC <sup>c</sup>	Total Non-OPEC <sup>c</sup>
1973 Averaged	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
1996 Average	21.86	19.94	22.02	19.64	21.95	20.49	20.88	18.59	20.45	20.14	20.47
1997 Average	20.24	17.63	19.71	17.30	20.64	17.52	20.64	16.35	17.44	17.73	18.45
1998 Average	13.37	11.62	13.26	11.04	14.14	11.16	13.55	10.16	11.18	11.46	12.22
1999 Average	18.37	17.54	18.09	16.12	17.63	17.48	18.26	15.58	17.37	16.94	17.51
	29.57	26.69	29.68	26.03	30.04	26.58	29.26	26.05	26.77	27.29	27.80
2000 Average	25.13	20.09	25.88	19.37	26.55	20.98	25.32	19.81	20.77	21.52	22.17
2001 Average											
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
<b>2009</b> January	43.58	34.17	32.08	38.08	48.98	39.78	W	39.12	39.41	40.26	36.96
February	42.83	35.83	34.49	38.16	47.00	44.46	W	39.58	43.17	42.75	38.08
March	47.58	44.22	46.70	41.76	53.02	52.14	47.76	43.87	50.54	48.55	45.09
April	53.45	47.60	46.43	47.26	59.03	57.32	52.41	48.40	57.10	54.22	48.78
May	56.44	54.42	54.90	56.22	63.48	62.40	60.43	56.78	62.11	60.06	56.79
June	68.46	63.97	65.65	64.39	69.29	66.27	68.54	64.52	66.28	66.63	65.19
July	67.21	62.18	63.24	60.99	71.46	66.14	W	62.11	66.20	66.27	63.23
August	72.52	64.23	66.71	67.71	73.94	69.37	73.66	67.23	69.23	70.00	66.96
September	72.63	66.59	66.27	65.00	71.98	72.77	W	65.85	72.05	70.02	66.84
October	74.94	70.28	71.24	69.40	77.72	74.20	W	68.85	74.18	73.71	71.46
November	78.25	71.95	72.70	73.29	79.00	73.92	W	71.41	73.99	75.18	73.67
December	77.11	70.01	70.18	70.20	78.63	73.08	78.33	70.46	74.54	75.01	71.88
Average	61.32	57.60	58.50	57.35	68.01	62.14	63.87	57.78	62.15	61.90	58.58
2010 January	77.32	72.59	74.26	73.23	78.58	76.63	77.97	72.63	76.34	75.91	73.59
February	79.06	73.37	73.11	69.48	79.25	77.29	77.84	70.91	77.27	76.24	73.33
March	80.93	76.82	76.08	73.07	83.68	77.57	79.07	72.92	77.55	78.40	76.84
April	82.26	78.36	76.33	75.03	86.80	79.53	80.25	75.21	79.15	80.07	78.61
May	74.80	69.16	66.52	68.71	76.90	77.52	W	68.53	76.20	73.95	70.20
June	76.54	69.14	69.64	68.02	78.14	76.01	77.67	68.30	75.14	74.55	70.92
	77.20	70.25	71.61	69.31	81.07	75.46	76.60	69.59	74.75	74.81	72.03
July	78.40	70.23		69.95	79.15		79.52	70.14		75.42	71.81
August	80.49	68.66	71.49 70.85	70.47	81.58	76.06 77.15	79.52 W	68.88	75.81 76.64	76.39	71.89
September October	85.33	69.23	76.72	74.73	86.01	81.81	W	74.29	81.24	80.52	71.69
November	86.98	75.40	80.24	77.55	89.15	84.62	87.10	77.53	84.09	84.38	78.96
December Average	91.77 <b>80.63</b>	80.76 <b>72.80</b>	82.76 <b>74.25</b>	82.37 <b>72.86</b>	95.44 <b>83.15</b>	90.45 <b>79.25</b>	92.50 <b>80.12</b>	80.79 <b>72.43</b>	89.99 <b>78.58</b>	89.25 <b>78.27</b>	83.97 <b>74.67</b>
-											
<b>2011</b> January	99.58	81.43	85.88	85.00	101.24	96.59	W	84.70	96.57	94.03	85.02
February	110.07	80.65	90.14	89.08	108.94	103.20	W	89.88	101.81	99.96	89.03
March	114.40	89.32	105.74	103.03	117.17	110.12	118.42	101.22	109.56	109.23	101.20
April	124.01	99.26	112.47	110.55	126.47	116.13	124.67	107.95	115.18	116.64	108.91
May	116.76	98.29	109.70	105.62	119.95	112.19	W	104.04	111.48	111.90	105.06
June	116.73	92.36	104.31	103.71	120.81	110.00	W	102.32	108.97	109.87	100.83
July	_ 117.98	91.76	101.35	105.38	121.80	_ 111.06	W	103.04	110.19	្ន 111.58	100.38
August	R 113.36	R 84.05	R 95.08	98.78	_ 115.83	R 109.38	W	99.54	R 108.26	R 106.24	<sup>R</sup> 93.81
September	<sup>R</sup> 112.73	<sup>R</sup> 84.96	<sup>R</sup> 99.17	<sup>R</sup> 99.90	<sup>R</sup> 117.18	<sup>R</sup> 110.14	<sup>R</sup> W	R 99.09	<sup>R</sup> 109.01	<sup>R</sup> 107.52	<sup>R</sup> 95.51
October	111.16	87.01	103.05	101.68	116.05	109.35	W	99.62	108.25	107.15	96.13

Costs," at end of section. • Values for the current two months are preliminary. Costs, at end of section. • Values for the current two months are preliminary.

• Prices through 1980 reflect the period of reporting; prices since then 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 busined States are not included in the published data until the price. into the United States, are not included in the published data until the actual prices have been determined and reported. • U.S. geographic coverage is the 50 States

and the District of Columbia.

Web Page: See http://www.eia.gov/totalenergy/data/monthly/#prices for all

Web Page: See http://www.eia.gov/totalenergy/uata/mionunily/#prices for an available data beginning in 1973.

Sources: • October 1973-September 1977: Federal Energy Administration, Form FEA-F701-M-0, "Transfer Pricing Report." • October 1977-December 1977: U.S. Energy Information Administration (EIA), Form FEA-F701-M-0, "Transfer Pricing Report." • 1978-2009: EIA, Petroleum Marketing Annual 2009, Table 22. • 2010 and 2011: EIA, Petroleum Marketing Monthly, January 2012, Table 22.

<sup>&</sup>lt;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).

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 hearings in 2007, also included in and beginning in 2007, also includes Angola. Data for all countries not included in "Total OPEC" are included in "Total Non-OPEC."

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

R=Revised. - =No data reported. W=Value withheld to avoid disclosure of 

Table 9.4 Motor Gasoline Retail Prices, U.S. City Average

	Leaded Regular	Unleaded Regular	Unleaded Premium <sup>b</sup>	All Types <sup>c</sup>
270 4	0.000			
73 Average	0.388	NA	NA	NA
75 Average	0.567	NA	NA	NA
80 Average	1.191	1.245	NA	1.221
85 Average	1.115	1.202	1.340	1.196
90 Average	1.149	1.164	1.349	1.217
95 Average	NA	1.147	1.336	1.205
	NA NA	1.231	1.413	1.288
96 Average				
97 Average	NA	1.234	1.416	1.291
98 Average	NA	1.059	1.250	1.115
99 Average	NA	1.165	1.357	1.221
00 Average	NA	1.510	1.693	1.563
01 Average	NA	1.461	1.657	1.531
<del>-</del>	NA NA	1.358		1.441
02 Average			1.556	
03 Average	NA	1.591	1.777	1.638
04 Average	NA	1.880	2.068	1.923
05 Average	NA	2.295	2.491	2.338
06 Average	NA	2.589	2.805	2.635
07 Average	NA.	2.801	3.033	2.849
•				
08 Average	NA	3.266	3.519	3.317
<b>09</b> January	NA	1.787	2.036	1.838
February	NA	1.928	2.182	1.979
March	NA	1.949	2.197	2.000
April	NA	2.056	2.309	2.107
May	NA NA	2.265	2.511	2.314
•				
June	NA	2.631	2.883	2.681
July	NA	2.543	2.806	2.594
August	NA	2.627	2.887	2.677
September	NA	2.574	2.845	2.626
October	NA	2.561	2.826	2.613
November	NA	2.660	2.917	2.709
December	NA	2.621	2.882	2.671
Average	NA	2.350	2.607	2.401
<b>10</b> January	NA	2.731	2.987	2.779
February	NA	2.659	2.922	2.709
March	NA	2.780	3.035	2.829
April	NA	2.858	3.113	2.906
May	NA	2.869	3.124	2.915
June	NA	2.736	3.000	2.783
July	NA	2.736	2.997	2.783
August	NA	2.745	3.015	2.795
September	NA	2.704	2.968	2.754
October	NA	2.795	3.055	2.843
November	NA	2.852	3.109	2.899
December	NA	2.985	3.234	3.031
Average	NA	2.788	3.047	2.836
11 January	NA	3.091	3.345	3.139
February	NA	3.167	3.424	3.215
March	NA	3.546	3.807	3.594
April	NA	3.816	4.074	3.863
May	NA	3.933	4.192	3.982
June	NA	3.702	3.972	3.753
July	NA	3.654	3.915	3.703
August	NA	3.630	3.893	3.680
September	NA	3.612	3.887	3.664
October	NA	3.468	3.745	3.521
November	NA	3.423	3.700	3.475
December Average	NA	3.278	3.553	3.329
	NA	3.527	3.792	3.577

NA=Not available.

Notes: • See Note 5, "Motor Gasoline Prices," at end of section. • In September 1981, the Bureau of Labor Statistics changed the weights used in the calculation of average motor gasoline prices. From September 1981 forward, gasohol is included in the average for all types, and unleaded premium is weighted

available data beginning in 1973.

Sources: • Monthly Data: U.S. Department of Labor, Bureau of Labor Statistics, Consumer Prices: Energy. • Annual Data: 1973—Platt's Oil Price Handbook and Oilmanac, 1974, 51st Edition. 1974 forward—calculated by the U.S. Energy Information Administration as the simple averages of monthly data.

 $<sup>^{\</sup>rm a}$  Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.  $^{\rm b}$  The 1981 average (available in Web file) is based on September through December data only.

C Also includes types of motor gasoline not shown separately.

more heavily. • Geographic coverage for 1973-1977 is 56 urban areas. Geographic coverage for 1978 forward is 85 urban areas.

Web Page: See http://www.eia.gov/totalenergy/data/monthly/#prices for all

Table 9.5 Refiner Prices of Residual Fuel Oil

	Sulfur Co	Il Fuel Oil ntent Less al to 1 Percent	Sulfur	al Fuel Oil Content an 1 Percent	Ave	erage
	Sales for Resale	Sales to End Users	Sales for Resale	Sales to End Users	Sales for Resale	Sales to End Users
978 Average	0.293	0.314	0.245	0.275	0.263	0.298
980 Average	0.608	0.675	0.479	0.523	0.528	0.607
985 Average	0.610	0.644	0.560	0.582	0.577	0.610
990 Average	0.472	0.505	0.372	0.400	0.413	0.444
995 Average	0.383	0.436	0.338	0.377	0.363	0.392
996 Average	0.456	0.526	0.389	0.433	0.420	0.455
997 Average	0.415	0.488	0.366	0.403	0.387	0.423
	0.415	0.354	0.269	0.403	0.280	0.423
998 Average						
999 Average	0.382	0.405	0.329	0.362	0.354	0.374
000 Average	0.627	0.708	0.512	0.566	0.566	0.602
001 Average	0.523	0.642	0.428	0.492	0.476	0.531
002 Average	0.546	0.640	0.508	0.544	0.530	0.569
003 Average	0.728	0.804	0.588	0.651	0.661	0.698
004 Average	0.764	0.835	0.601	0.692	0.681	0.739
005 Average	1.115	1.168	0.842	0.974	0.971	1.048
006 Average	1,202	1.342	1.085	1.173	1.136	1.218
007 Average	1.406	1.436	1.314	1.350	1.350	1.374
008 Average	1.918	2.144	1.843	1.889	1.866	1.964
009 January	1.035	1.164	0.861	0.953	0.926	1.049
February	1.011	1.200	0.918	0.974	0.954	1.068
March	1.019	1.183	0.917	0.952	0.952	1.030
April	1.077	1.174	0.992	1.027	1.017	1.066
May	1.205	1.213	1.191	1.245	1.195	1.234
June	1.401	1.440	1.373	1.451	1.381	1.447
			1.400	1.369		
July	1.417	1.488			1.405	1.404
August	1.584	1.641	1.567	1.488	1.572	1.536
September	1.531	1.689	1.556	1.491	1.549	1.540
October	1.619	1.717	1.549	1.501	1.560	1.552
November	1.743	1.739	1.700	1.602	1.711	1.642
December	1.723	1.813	1.673	1.614	1.685	1.674
Average	1.337	1.413	1.344	1.306	1.342	1.341
010 January	1.767	1.852	1.705	1.660	1.721	1.725
February	1.725	1.862	1.650	1.574	1.666	1.681
March	1.739	1.862	1.700	1.609	1.711	1.692
April	1.827	1.887	1.725	1.655	1.748	1.718
May	1.675	1.898	1.675	1.601	1.675	1.686
June	1.629	1.874	1.604	1.555	1.612	1.636
July	1.686	1.858	1.604	1.536	1.629	1.639
August	1.705	1.895	1.625	1.571	1.642	1.676
September	1.716	1.883	1.612	1.558	1.632	1.645
	1.716	1.913	1.612	1.637	1.032	1.721
October						
November	1.865	2.025	1.741	1.701	1.768	1.804
December	2.036	2.215	1.814	1.784	1.865	1.931
Average	1.756	1.920	1.679	1.619	1.697	1.713
011 January	NA 2.400	2.302	1.896	1.870	1.918	2.013
February	2.100	2.451	2.079	2.019	2.086	2.150
March	2.344	2.654	2.307	2.245	2.321	2.403
April	2.555	2.741	2.427	2.370	2.448	2.475
May	2.463	2.786	2.374	2.325	2.392	2.440
June	2.467	2.905	2.377	2.312	2.402	2.473
July	2.547	2.877	2.430	2.362	2.474	2.508
August	2.394	2.896	2.392	2.342	2.392	2.512
September	2.368	2.882	2.370	2.318	2.369	2.473
October	2.512	2.891	2.378	2.276	2.409	2.454

<sup>&</sup>lt;sup>a</sup> Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary. 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. • Prices prior to 1983 are U.S. Energy Information Administration (EIA) estimates. See Note

<sup>6, &</sup>quot;Historical Petroleum Prices," at end of section. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.gov/totalenergy/data/monthly/#prices for all

available data beginning in 1978.

Sources: • 1978-2009: EIA, Petroleum Marketing Annual 2009, Table 16.
• 2010 and 2011: EIA, Petroleum Marketing Monthly, January 2012, Table 16.

Table 9.6 Refiner Prices of Petroleum Products for Resale

	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)
78 Average	0.434	0.537	0.386	0.404	0.369	0.365	0.237
980 Average	0.941	1.128	0.868	0.864	0.803	0.801	0.415
985 Average	0.835	1.130	0.794	0.874	0.776	0.772	0.398
990 Average	0.786	1.063	0.773	0.839	0.697	0.694	0.386
	0.626	0.975	0.539	0.580	0.511	0.538	0.344
995 Average		1.055	0.646	0.714	0.639	0.659	0.461
96 Average	0.713						
97 Average	0.700	1.065	0.613	0.653	0.590	0.606	0.416
98 Average	0.526	0.912	0.450	0.465	0.422	0.444	0.288
99 Average	0.645	1.007	0.533	0.550	0.493	0.546	0.342
000 Average	0.963	1.330	0.880	0.969	0.886	0.898	0.595
01 Average	0.886	1.256	0.763	0.821	0.756	0.784	0.540
02 Average	0.828	1.146	0.716	0.752	0.694	0.724	0.431
03 Average	1.002	1.288	0.871	0.955	0.881	0.883	0.607
04 Average	1.288	1.627	1.208	1.271	1.125	1.187	0.751
05 Average	1.670	2.076	1.723	1.757	1.623	1.737	0.933
06 Average	1.969	2.490	1.961	2.007	1.834	2.012	1.031
07 Average	2.182	2.758	2.171	2.249	2.072	2.203	1.194
08 Average	2.586	3.342	3.020	2.851	2.745	2.994	1.437
OO lanuari	1.246	1.851	1.472	1.810	1.548	1.480	0.974
09 January							
February	1.333	2.040	1.352	1.607	1.427	1.326	0.890
March	1.397	2.031	1.266	1.456	1.358	1.315	0.805
April	1.482	2.225	1.425	1.480	1.397	1.456	0.719
May	1.763	2.478	1.460	1.540	1.468	1.531	0.728
June	2.022	2.743	1.780	1.849	1.744	1.828	0.838
July	1.867	2.548	1.759	1.773	1.658	1.745	0.760
August	2.026	2.759	1.894	1.951	1.804	1.937	0.837
September	1.915	2.592	1.822	1.857	1.774	1.848	0.923
October	1.975	2.611	1.917	2.053	1.918	1.978	1.004
November	2.039	2.701	2.060	2.067	2.004	2.037	1.088
December	1.999	2.655	2.012	2.148	1.989	1.997	1.178
Average	1.767	2.480	1.719	1.844	1.657	1.713	0.921
40 (	0.007	0.750	0.404	0.000	0.075	0.070	4 222
10 January	2.097	2.759	2.121	2.282	2.075	2.078	1.332
February	2.033	2.662	1.999	2.216	1.986	2.025	1.324
March	2.197	2.906	2.129	2.219	2.100	2.163	1.179
April	2.265	2.999	2.247	2.281	2.214	2.312	1.144
May	2.152	2.945	2.186	2.110	2.129	2.177	1.098
June	2.113	2.835	2.094	2.103	2.037	2.120	1.049
July	2.113	2.891	2.100	2.046	2.001	2.098	1.012
August	2.095	2.842	2.138	2.125	2.041	2.161	1.084
September	2.088	2.805	2.131	2.163	2.093	2.190	1.151
October	2.198	2.890	2.263	2.384	2.221	2.325	1.253
November	2.243	2.868	2.342	NA	2.308	2.392	1.277
December	2.383	3.024	2.459	2.744	2.435	2.486	1.322
Average	2.165	2.874	2.185	2.299	2.147	2.214	1.212
go							
11 January	2.472	3.161	2.585	2.804	2.585	2.621	1.380
February	2.584	3.248	2.783	2.974	2.737	2.820	1.401
March	2.934	3.607	3.095	3.196	2.996	3.134	1.403
April	3.218	4.035	3.259	3.296	3.167	3.296	1.433
May	3.174	4.096	3.188	W	3.039	3.116	1.515
June	2.970	3.847	3.101	3.054	2.956	3.079	1.503
July	3.058	4.011	3.090	3.158	3.024	3.135	1.513
August	2.949	3.899	3.040	3.089	2.927	3.032	1.522
September	2.896	3.878	3.025	3.073	2.927	3.035	1.557

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

NA=Not available.

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. • Prices prior to 1983 are U.S. Energy

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

Web Page: See http://www.eia.gov/totalenergy/data/monthly/#prices for all

available data beginning in 1978.

Sources: • 1978-2009: EIA, Petroleum Marketing Annual 2009, Table 4.
• 2010 and 2011: EIA, Petroleum Marketing Monthly, January 2012, Table 4.

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

Table 9.7 Refiner Prices of Petroleum Products to End Users

	Finished Motor Gasoline <sup>b</sup>	Finished Aviation Gasoline	Kerosene- Type Jet Fuel	Kerosene	No. 2 Fuel Oil	No. 2 Diesel Fuel	Propane (Consume Grade)
978 Average	0.484	0.516	0.387	0.421	0.400	0.377	0.335
980 Average	1.035	1.084	0.868	0.902	0.788	0.818	0.482
985 Average	0.912	1.201	0.796	1.030	0.849	0.789	0.717
990 Average	0.883	1.120	0.766	0.923	0.734	0.725	0.745
	0.765	1.005	0.540	0.589	0.754	0.560	0.492
995 Average	0.765	1.116	0.651	0.740	0.673	0.681	0.605
96 Average	0.839	1.128	0.613	0.745		0.642	0.552
997 Average					0.636		
998 Average	0.673	0.975	0.452	0.501	0.482	0.494	0.405
999 Average	0.781	1.059	0.543	0.605	0.558	0.584	0.458
000 Average	1.106	1.306	0.899	1.123	0.927	0.935	0.603
001 Average	1.032	1.323	0.775	1.045	0.829	0.842	0.506
002 Average	0.947	1.288	0.721	0.990	0.737	0.762	0.419
003 Average	1.156	1.493	0.872	1.224	0.933	0.944	0.577
04 Average	1.435	1.819	1.207	1.160	1.173	1.243	0.839
05 Average	1.829	2.231	1.735	1.957	1.705	1.786	1.089
006 Average	2.128	2.682	1.998	2.244	1.982	2.096	1.358
007 Average	2.345	2.849	2.165	2.263	2.241	2.267	1.489
008 Average	2.775	3.273	3.052	3.283	2.986	3.150	1.892
009 January	1.358	1.857	1.483	2.626	2.026	1.630	1.861
February	1.468	1.974	1.360	2.627	1.879	1.495	1.505
March	1.503	1.977	1.281	2.565	1.772	1.450	1.166
April	1.601	2.150	1.458	2.540	1.765	1.589	1.065
May	1.856	2.423	1.486	2.497	1.697	1.640	0.889
June	2.187	2.707	1.818	2.490	1.939	1.945	1.008
July	2.067	2.607	1.774	2.462	1.871	1.897	0.891
August	2.157	2.764	1.922	2.545	2.041	2.032	1.029
September	2.086	2.684	1.834	NA	1.972	1.980	1.075
October	2.104	2.693	1.930	2.738	2.163	2.082	1.229
November	2.173	2.845	2.064	2.875	2.227	2.155	1.323
December	2.144	2.799	2.016	2.894	2.197	2.117	1.517
Average	1.888	2.442	1.704	2.675	1.962	1.834	1.220
<b>)10</b> January	2.240	2.914	2.129	2.986	2.369	2.192	1.913
February	2.173	2.855	2.018	2.974	2.310	2.144	2.009
March	2.301	3.103	2.144	2.978	2.425	2.265	NA
April	2.370	3.201	2.272	3.040	2.527	2.410	1.326
May	2.353	3.129	2.199	2.938	2.487	2.343	1.264
June	2.251	2.981	2.105	2.965	2.393	2.284	1.204
July	2.247	3.028	2.103	NA	2.246	2.212	1.162
August	2.250	2.967	2.158	2.772	2.379	2.260	1.211
September	2.219	2.893	2.148	2.898	2.346	2.269	1.283
October	2.319	3.000	2.298	3.058	2.580	2.389	1.425
November	2.378	3.095	2.374	3.130	2.641	2.457	NA
December	2.514	3.218	2.484	3.276	2.749	2.554	1.863
Average	2.301	3.216 3.028	2.404 <b>2.201</b>	3.276 3.063	2.749 <b>2.462</b>	2.314	1.481
Average	2.301	3.020	2.201		2.402	2.314	
11 January	2.615 2.712	3.323 3.374	2.623 2.818	3.358 3.506	2.889 3.020	2.681 2.867	NA 1.823
February							
March	3.072	3.767	3.161	3.697	3.255	3.189	1.763
April	3.340	4.132	3.306	3.796	3.430	3.370	NA
May	3.419	4.091	3.220	3.894	3.337	3.231	1.648
June	3.184	3.913	3.138	3.802	3.193	3.183	1.681
July	3.172	4.027	3.118	3.812	3.294	3.214	1.620
August	3.134	3.920	3.057	3.851	3.251	3.143	1.650
September	3.090	3.915	R 3.059	3.873	3.288	3.127	1.702
October	2.948	3.697	2.987	3.823	3.342	3.109	1.706

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

a Prices are not adjusted for initiation. See "nominal Dollars III Dollassaly.

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

R=Revised. NA=Not available.

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 burchasers other than ultimate consumers. • Values for they are sales made to purchasers other than ultimate consumers. • Values for the current month are preliminary. • Prices prior to 1983 are U.S. Energy

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

Web Page: See http://www.eia.gov/totalenergy/data/monthly/#prices for all

available data beginning in 1978.

Sources: • 1978-2009: EIA, Petroleum Marketing Annual 2009, Table 2.
• 2010 and 2011: EIA, Petroleum Marketing Monthly, January 2012, Table 2.

Table 9.8a No. 2 Distillate Prices to Residences: Northeastern States

	Maine	New Hampshire	Vermont	Massachusetts	Rhode Island	Connecticut	New York	New Jersey	Pennsylvania
978 Average	0.486	0.503	0.508	0.488	0.507	0.501	0.501	0.496	0.488
980 Average	0.963	1.004	1.015	0.978	1.011	0.983	0.982	0.979	0.964
985 Average	0.997	1.024	1.077	1.070	1.067	1.080	1.113	1.059	1.023
990 Average	0.989	1.028	1.070	1.084	1.086	1.098	1.125	1.087	1.026
995 Average	0.787	0.779	0.853	0.844	0.874	0.864	0.955	0.888	0.826
996 Average	0.972	0.940	0.969	0.976	0.986	0.986	1.063	1.024	0.953
997 Average	0.942	0.942	0.987	0.960	0.989	0.963	1.065	1.033	0.950
998 Average	0.788	0.788	0.873	0.818	0.868	0.831	0.948	0.892	0.814
999 Average	0.813	0.770	0.854	0.836	0.858	0.852	0.969	0.913	0.815
000 Average	1.297	1.281	1.255	1.273	1.259	1.291	1.442	1.404	1.224
001 Average	1.217	1.256	1.261	1.221	1.236	1.239	1.363	1.314	1.159
002 Average	1.129	1.119	1.172	1.141	1.124	1.118	1.218	1.220	1.064
003 Average	1.314	1,312	1.309	1.386	1.344	1.355	1.436	1.489	1.304
004 Average	1.511	1.497	1.505	1.559	1.511	1.518	1.627	1.662	1.489
005 Average	1.986	1.972	1.987	2.064	2.000	2.012	2.105	2.166	1.974
006 Average	2.294	2.283	2.408	2.355	2.360	2.357	2.458	2.467	2.286
007 Average	2.540	2.535	2.679	2.576	2.602	2.615	2.674	2.664	2.508
008 Average	3.199	3.207	3.323	3.197	3.210	3.195	3.293	3.267	3.157
009 January	2.506	2.537	2.774	2.356	2.346	2.576	2.543	2.389	2.427
February	2.404	2.426	2.693	2.226	2.209	2.429	2.447	2.288	2.268
March	2.237	2.283	2.545	2.166	2.127	2.362	2.334	2.166	2.202
April	2.250	2.246	2.437	2.192	2.143	2.314	2.338	2.187	2.177
May	2.175	2.151	2.370	2.142	2.169	2.225	2.300	2.187	2.190
June	2.295	2.201	2.376	2.371	2.385	2.413	2.428	2.381	2.211
July	2.268	2.077	2.324	2.312	2.285	2.354	2.291	2.322	2.137
August	2.350	2.243	2.378	2.432	2.454	2.490	2.523	2.454	2.257
September	2.333	2.272	2.403	2.386	2.357	2.349	2.455	2.437	2.196
October	2.391	2.373	2.484	2.470	2.537	2.516	2.574	2.541	2.315
November	2.461	2.484	2.604	2.619	2.685	2.645	2.747	2.710	2.520
December	2.486	2.523	2.640	2.634	2.718	2.665	2.733	2.731	2.536
Average	2.382	2.377	2.593	2.358	2.376	2.487	2.504	2.404	2.330
<b>010</b> January	2.583	2.611	2.753	2.762	2.856	2.764	2.893	2.928	2.692
February	2.536	2.600	2.705	2.729	2.777	2.730	2.845	2.871	2.697
March	2.560	2.632	2.747	2.795	2.800	2.758	2.801	2.929	2.755
April	2.565	2.651	2.771	2.868	2.959	2.815	2.845	2.946	2.752
May	2.511	2.636	2.710	2.811	2.921	2.736	2.781	2.873	2.680
June	2.479	2.574	2.649	2.716	2.829	2.705	2.691	2.747	2.561
July	2.478	2.532	2.614	2.656	2.728	2.653	2.651	2.715	2.519
August	2.469	2.513	2.619	2.651	2.735	2.634	2.668	2.701	2.543
September	2.539	2.543	2.657	2.686	2.745	2.647	2.721	2.754	2.583
October	2.677	2.642	2.784	2.860	2.942	2.822	2.848	2.912	2.759
November	2.774	2.772	2.924	2.969	3.044	2.946	2.969	3.077	2.892
December	2.910	2.904	3.032	3.126	3.197	3.106	3.147	3.278	3.061
Average	2.639	2.680	2.795	2.850	2.927	2.835	2.894	2.973	2.780
011 January	3.071	3.102	3.186	3.313	3.368	3.268	3.281	3.458	3.237

<sup>&</sup>lt;sup>a</sup> Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary. NA=Not available.

Notes: • States are grouped in Tables 9.8a–9.8c by geographic region of the country. • Values for the current month are preliminary. • Prices prior to 1983 are U.S. Energy Information Administration (EIA) estimates. See Note 6, "Historical

Petroleum Prices," at end of section.

Due to recent budget cuts, EIA is adjusting its data programs. Beginning with the June 2011 Monthly Energy Review, No. 2 distillate fuel oil prices to residences (Tables 9.8a-9.8c) will not be available for March 2011 forward.

Web Page: See http://www.eia.gov/totalenergy/data/monthly/#prices for all

available data beginning in 1978.

Sources: • 1978-2009: EIA, Petroleum Marketing Annual 2009, Table 15.

• 2010 and 2011: EIA, Petroleum Marketing Monthly, January 2012, Table 15.

Table 9.8b No. 2 Distillate Prices to Residences: Selected South Atlantic and Midwestern States (Dollars<sup>a</sup> per Gallon, Excluding Taxes)

				(20	1	,	<u> </u>	-,			
		District									
		of			West						
	Delaware	Columbia	Maryland	Virginia	Virginia	Ohio	Michigan	Indiana	Illinois	Wisconsin	Minnesota
1978 Average	0.478	0.507	0.492	0.491	0.462	0.474	0.479	0.485	0.465	0.447	0.478
1980 Average	0.954	1.026	0.979	0.985	0.922	0.919	0.978	0.996	0.958	0.915	0.999
1985 Average	1.046	1.143	1.088	1.063	0.980	0.997	1.021	0.991	0.975	0.983	1.019
1990 Average	1.058	1.078	1.119	1.106	0.991	0.981	1.009	0.993	0.961	0.942	1.014
1995 Average	0.870	1.010	0.936	0.844	0.815	0.808	0.860	0.816	0.785	0.812	0.801
1996 Average	0.984	1.178	1.063	0.952	0.960	0.921	0.977	0.912	0.893	0.899	0.909
1997 Average	0.984	1.174	1.057	0.948	0.962	0.913	0.942	0.865	0.870	0.933	0.899
1998 Average	0.858	1.022	0.902	0.856	0.818	0.767	0.804	0.748	0.735	0.801	0.738
1999 Average	0.884	1.011	0.907	0.870	0.789	0.820	0.883	0.793	0.716	0.847	0.774
2000 Average	1.270	W	1.351	1.269	1.251	1.220	NA	1.207	1.095	1.171	1.156
2001 Average	1.234	1.431	1.342	1.202	1.139	1.160	NA	1.133	1.121	1.180	1.122
2002 Average	1.164	W	1.201	1.057	1.054	1.058	1.109	1.025	0.975	1.073	1.051
2003 Average	1.433	W	1.455	1.311	1.304	1.284	1.321	1.202	1.198	1.269	1.218
2004 Average	1.570	W	1.632	1.462	1.493	1.475	1.539	1.537	1.405	1.465	1.433
2005 Average	2.075	W	2.127	2.044	2.043	2.009	2.053	2.017	2.021	1.993	1.987
2006 Average	2.381	W	2.398	2.268	2.261	2.244	2.329	2.317	2.312	2.297	2.268
2007 Average	2.584	W	2.668	2.407	2.478	2.494	2.588	2.557	2.528	2.571	2.587
2008 Average	3.187	W	3.273	3.124	3.221	3.147	3.067	3.105	3.152	3.088	3.065
2009 January	2.428	W	2.470	2.225	2.329	2.041	1.991	2.062	2.069	2.004	1.974
February	2.310	W	2.407	2.145	2.188	1.888	1.866	1.912	1.869	1.854	1.813
March	2.253	W	2.275	1.999	2.042	1.826	1.806	1.822	1.836	1.781	1.735
April	2.267	W	2.263	NA	2.035	1.917	1.810	1.922	1.983	1.870	1.890
May	2.253	W	2.224	1.824	2.008	1.941	1.807	1.972	NA	1.975	1.872
June	2.289	W	2.320	2.037	2.119	2.180	2.095	2.176	2.060	2.200	2.156
July	2.253	W	2.307	2.055	2.122	2.103	1.964	2.181	NA	2.166	2.092
August	2.340	W	2.397	2.140	2.217	2.279	2.153	2.321	2.147	2.284	2.297
September	2.309	W	2.396	2.118	2.253	2.205	2.179	2.318	NA	2.262	2.232
October	2.505	W	2.561	2.322	2.397	2.364	2.336	2.391	2.386	2.331	2.301
November	2.683	W	2.707	2.408	2.504	2.479	2.485	2.520	2.483	2.421	2.388
December	2.724	W	2.763	2.495	2.496	2.493	2.447	2.507	2.427	2.395	2.394
Average	2.421	W	2.473	2.193	2.265	2.130	2.096	2.189	2.155	2.105	2.124
2010 January	2.878	W	2.861	2.594	2.681	2.572	2.526	2.565	2.526	2.466	2.505
February	2.857	W	2.833	2.561	2.714	2.533	2.501	2.510	2.516	2.421	W
March	2.988	W	2.894	2.587	2.712	2.585	2.640	2.614	2.660	2.537	2.580
April	NA	W	2.858	NA	2.676	2.566	2.731	2.679	2.777	2.640	2.668
May	2.853	W	2.808	2.435	2.583	2.574	2.669	NA	2.783	2.567	2.581
June	2.695	W	2.705	2.356	2.501	2.436	2.505	2.482	NA	2.478	2.557
July	2.655	W	2.636	2.345	2.499	2.436	2.481	2.510	2.582	2.508	2.466
August	2.617	W	2.669	2.351	2.547	2.511	2.508	2.550	W	2.514	2.559
September	2.678	W	2.692	2.397	2.577	2.554	2.596	2.607	2.732	2.562	2.596
October	2.847	W	2.822	2.567	2.720	2.695	2.734	2.701	NA	2.702	2.719
November	NA	W	2.985	2.754	2.834	2.802	2.830	2.864	2.915	2.788	2.866
December	3.223	W	3.195	2.920	3.024	2.923	2.933	2.979	3.030	2.894	2.965
Average	2.951	W	2.925	2.621	2.724	2.653	2.657	2.670	2.749	2.610	2.470
2011 January	3.431	W	3.377	3.093	3.204	3.039	3.041	3.109	3.098	3.008	3.031
February	3.560	W	3.508	3.222	3.365	3.189	3.196	3.246	3.286	3.169	3.184

<sup>&</sup>lt;sup>a</sup> Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary. NA=Not available. W=Value withheld to avoid disclosure of individual company

Notes: • States are grouped in Tables 9.8a–9.8c by geographic region of the country. • Values for the current month are preliminary. • Prices prior to 1983 are U.S. Energy Information Administration (EIA) estimates. See Note 6, "Historical

Due to recent budget cuts, EIA is adjusting its data programs. Beginning with the June 2011 Monthly Energy Review, No. 2 distillate fuel oil prices to residences (Tables 9.8a-9.8c) will not be available for March 2011 forward.

Petroleum Prices," at end of section.

Web Page: See http://www.eia.gov/totalenergy/data/monthly/#prices for all available data beginning in 1978.

Sources: • 1978-2009: EIA, Petroleum Marketing Annual 2009, Table 15.

<sup>• 2010</sup> and 2011: EIA, Petroleum Marketing Monthly, January 2012, Table 15.

Table 9.8c No. 2 Distillate Prices to Residences: Selected Western States and U.S. Average (Dollars<sup>a</sup> per Gallon, Excluding Taxes)

	Idaho	Washington	Oregon	Alaska	U.S. Average
978 Average	0.436	0.486	0.458	0.532	0.490
980 Average	0.916	1.008	0.973	0.978	0.974
	0.972	1.011	0.971	1.083	1.053
985 Average	0.974	1.029	0.970	1.101	1.063
990 Average					
995 Average	0.839	0.962	0.894	0.834	0.867
996 Average	0.933	1.080	0.989	0.909	0.989
997 Average	0.953	1.139	1.031	0.973	0.984
998 Average	0.784	0.978	0.861	0.852	0.852
999 Average	0.762	1.065	0.938	0.966	0.876
000 Average	1.170	1.445	1.368	1.337	1.311
001 Average	1.038	1.336	1.211	1.377	1.250
002 Average	0.919	1.204	1.060	1.087	1.129
003 Average	1.188	1.487	1.303	1.243	1.355
004 Average	1.495	1.749	1.594	1.524	1.548
005 Average	2.123	2.385	2.146	2.061	2.052
006 Average	2.391	2.681	2.411	2.395	2.365
007 Average	2.598	2.909	2.500	2.518	2.592
008 Average	3.078	3.401	3.060	3.485	3.219
009 January	1.879	2.388	1.939	2.160	2.426
February	1.762	2.253	1.819	NA	2.309
March	1.674	2.124	1.727	1.946	2.210
April	1.863	2.414	1.986	2.140	2.211
May	1.878	2.473	2.050	2.256	2.167
June	2.148	2.544	2.278	2.506	2.307
July	2.123	2.335	2.149	2.362	2.219
August	2.158	2.489	2.326	2.554	2.369
September	2.273	2.658	2.357	NA	2.334
October	2.333	2.737	2.469	NA	2.458
November	2.459	2.871	2.551	NA NA	2.608
December	2.354	2.830	2.475	NA NA	2.628
Average	2.048	<b>2.491</b>	2.132	2.503	2.386
<b>010</b> January	2.392	2.918	2.583	NA	2.763
February	2.412	2.817	2.536	2.790	2.658
March	2.569	2.924	2.664	2.884	2.757
April	2.747	3.105	2.817	2.965	2.787
May	2.675	3.053	2.685	2.958	2.723
June	2.075 NA	2.892	2.653	2.891	2.623
	2.540	2.092 NA	2.053 NA	2.878	2.584
July					
August	2.598	2.757	2.625	2.901	2.597
September	2.676	NA	2.760	2.944	2.641
October	2.853	3.174	2.871	3.041	2.795
November	2.937	3.195	2.935	3.070	2.926
December	2.980	3.242	2.991	3.134	3.089
Average	2.716	3.039	2.776	2.951	2.798
011 January	3.005	3.350	3.079	3.210	3.251
February	3.173	3.537	3.295	3.366	3.409

<sup>&</sup>lt;sup>a</sup> Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary. NA=Not available.

Notes: • States are grouped in Tables 9.8a–9.8c by geographic region of the country. • Values for the current month are preliminary. • Prices prior to 1983 are U.S. Energy Information Administration (EIA) estimates. See Note 6, "Historical

Petroleum Prices," at end of section.

Due to recent budget cuts, EIA is adjusting its data programs. Beginning with the June 2011 Monthly Energy Review, No. 2 distillate fuel oil prices to residences (Tables 9.8a-9.8c) will not be available for March 2011 forward.

Web Page: See http://www.eia.gov/totalenergy/data/monthly/#prices for all

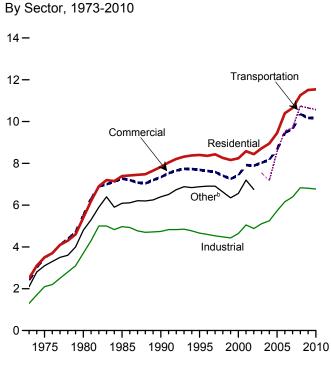
available data beginning in 1978.

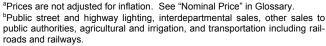
Sources: • 1978-2009: EIA, Petroleum Marketing Annual 2009, Table 15.

• 2010 and 2011: EIA, Petroleum Marketing Monthly, January 2012, Table 15.

Figure 9.2 Average Retail Prices of Electricity

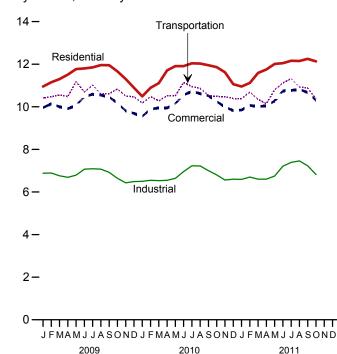
(Centsa per Kilowatthour)





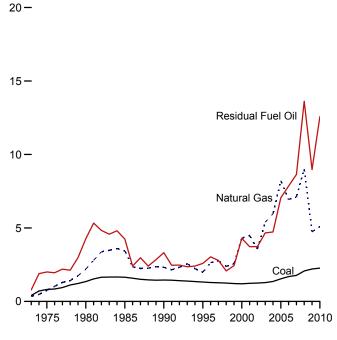
Costs, 1973-2010

By Sector, Monthly



Note: Includes taxes. Web Page: http://www.eia.gov/totalenergy/data/monthly/#prices. Source: Table 9.9.

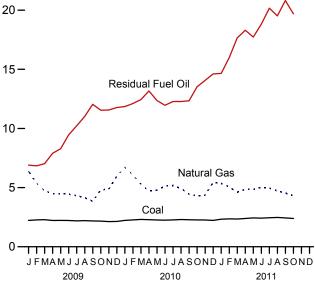
Figure 9.3 Cost of Fossil-Fuel Receipts at Electric Generating Plants (Dollarsa per Million Btu, Including Taxes)



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

Costs, Monthly





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

#### Table 9.9 Average Retail Prices of Electricity

(Centsa per Kilowatthour, Including Taxes)

	Residential	Commercial <sup>b</sup>	Industrial <sup>c</sup>	Transportationd	Other <sup>e</sup>	Total
1973 Average	2.50	2.40	1.30	NA	2.10	2.00
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 NA	6.88	6.89
1996 Average	8.36	7.64	4.60	NA NA	6.91	6.86
1997 Average	8.43	7.59	4.53	NA NA	6.91	6.85
1998 Average	8.26	7.41	4.48	NA NA	6.63	6.74
1999 Average	8.16	7.26	4.43	NA NA	6.35	6.64
2000 Average	8.24	7.43	4.64	NA NA	6.56	6.81
2001 Average	8.58	7.92	5.05	NA NA	7.20	7.29
	8.44	7.89	4.88	NA NA	6.75	7.29
2002 Average	8.72	8.03	5.11	7.54	0.75	7.44
2003 Average						
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 January	10.95	9.96	6.88	10.42		9.66
February	11.15	10.14	6.89	10.47		9.74
March	11.30	10.00	6.76	10.55		9.65
April	11.51	9.91	6.69	10.48		9.57
May	11.77	10.07	6.79	11.18		9.76
June	11.80	10.47	7.07	10.69		10.13
July	11.85	10.59	7.09	11.02		10.30
August	11.96	10.55	7.07	10.61	  	10.28
September	11.95	10.46	6.92	10.61		10.10
October	11.66	10.17	6.64	10.84		9.70
November	11.30	9.81	6.43	10.50		9.37
December	10.89	9.69	6.49	10.47		9.38
Average	11.51	10.17	6.81	10.65		9.82
2010 January	10.49	9.55	6.50	10.17		9.28
February	10.89	9.89	6.55	10.48		9.47
March	11.11	9.95	6.53	10.28		9.48
April	11.71	9.95	6.55	10.52		9.53
May	11.91	10.15	6.64	10.52		<sup>R</sup> 9.72
	11.91	10.15	6.96	11.14		10.18
June						
July	12.04	10.72	7.23	10.95		10.46
August	12.03	10.62	7.22	10.86		10.40
September	11.95	10.52	7.00	10.53		10.17
October	11.86	10.25	6.80	10.49		9.81
November	11.62	9.99	6.56	10.47		9.55
December	11.06	9.82	6.60	10.39		9.52
Average	11.54	10.19	6.77	10.57		9.83
2011 January	10.95	9.85	6.59	10.39		9.55
February	11.12	10.07	6.70	10.69		9.64
March	11.59	10.01	6.60	10.35		9.64
April	11.75	10.05	6.60	10.14		9.64
May	12.01	10.27	6.75	10.80		9.87
June	12.05	10.75	7.21	11.12		10.35
July	12.16	10.77	7.39	11.32		10.57
August	12.15	10.82	7.46	10.93		10.58
September	12.25	10.67	7.23	10.88		10.39
October	12.13	10.30	6.82	10.37		9.90
10-Month Average	11.81	10.38	6.95	10.70		10.04
2010 10-Month Average	11.58	10.24	6.81	10.59		9.88
2009 10-Month Average	11.59	10.25	6.88	10.68		9.91

Prices are not adjusted for inflation. See "Nominal Price" in Glossary.

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

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

Notes: • Beginning in 2003, the category "Other" has been replaced by "Transportation," and the categories "Commercial" and "Industrial" have been redefined. • Prices are calculated by dividing revenue by sales. Revenue may not correspond to sales for a particular month because of energy service provider billing and accounting procedures. That lack of correspondence could result in uncharacteristic increases or decreases in the monthly prices. • Prices include State and local taxes, energy or demand charges, customer service charges, environmental surcharges, franchise fees, fuel adjustments, and other

miscellaneous charges applied to end-use customers during normal billing operations. Prices do not include deferred charges, credits, or other adjustments, such as fuel or revenue from purchased power, from previous reporting periods.

• 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/batalenerg/idata/menthb//fforiage.for.ell.

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

available data beginning in 1973.
Sources: • 1973-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-86, "Electric Utility Company Monthly Statement." • 1984-1996: EIA, Form EIA-861, "Annual Electric Utility Report." • 1997 forward: EIA, Electric Power Monthly, January 2012, Table 5.3.

 <sup>&</sup>lt;sup>a</sup> Prices are not adjusted for inflation. See "Nominal Price" in Glossary.
 <sup>b</sup> Commercial sector. For 1973–2002, prices exclude public street and highway lighting, interdepartmental sales, and other sales to public authorities.
 <sup>c</sup> Industrial sector. For 1973–2002, 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.

Table 9.10 Cost of Fossil-Fuel Receipts at Electric Generating Plants

(Dollarsa per Million Btu, Including Taxes)

			Petrole	um			
	Coal	Residual Fuel Oilb	Distillate Fuel Oilc	Petroleum Coke	Total <sup>d</sup>	Natural Gas <sup>e</sup>	All Fossil Fuels
1973 Average	0.41	0.79	NA	NA	0.80	0.34	0.48
1975 Average	.81	2.01	NA NA	NA NA	2.02	.75	1.04
1980 Average	1.35	4.27	NA NA	NA NA	4.35	2.20	1.93
985 Average	1.65	4.24	NA	NA	4.32	3.44	2.09
990 Average	1.45	3.32	5.38	.80	3.35	2.32	1.69
995 Average	1.32	2.59	3.99	.65	2.57	1.98	1.45
996 Average	1.29	3.03	4.87	.78	3.03	2.64	1.52
997 Average	1.27	2.79	4.49	.91	2.73	2.76	1.52
998 Average	1.25	2.08	3.30	.71	2.02	2.38	1.44
999 Average	1.22	2.44	4.03	.65	2.36	2.57	1.44
	1.20	4.29		.58	4.18	4.30	1.74
2000 Average			6.65				
2001 Average	1.23	3.73	6.30	.78	3.69	4.49	1.73
002 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
005 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
	1.77	8.64	14.85	1.51	6.23 7.17	6.94 7.11	3.23
2007 Average							
2008 Average	2.07	13.62	21.46	2.11	10.87	9.01	4.12
2009 January	2.23	6.90	11.67	2.06	6.76	6.38	3.42
February	2.27	6.84	11.36	1.82	6.28	5.38	3.14
March	2.29	7.02	10.75	1.63	5.83	4.73	2.98
April	2.22	7.90	11.54	1.20	5.82	4.48	2.85
May	2.23	8.29	12.00	1.68	6.30	4.48	2.93
June	2.22	9.46	13.66	1.58	7.43	4.44	3.01
July	2.19	10.23	14.00	1.63	7.59	4.32	3.02
August	2.21	11.02	14.94	1.81	7.83	4.15	2.99
September	2.18	12.04	15.22	1.36	6.81	3.84	2.80
October	2.17	11.54	15.79	1.55	7.50	4.82	3.04
November	2.13	11.56	15.50	1.30	8.01	4.87	2.96
December	2.14	11.77	15.88	1.61	8.37	5.96	3.40
Average	2.21	8.98	13.22	1.61	7.02	4.74	3.04
2010 January	2.23	11.85	15.73	1.72	9.72	6.71	3.74
February	2.27	12.11	15.69	1.80	9.51	6.07	3.45
	2.31	12.44	16.42	2.09	8.95	5.29	3.16
March							
April	2.29	13.17	17.10	2.18	7.95	4.71	3.01
May	2.26	12.36	16.54	2.22	9.47	4.79	3.12
June	2.25	11.96	16.12	2.15	9.26	5.12	3.34
July	2.27	12.28	15.89	2.42	9.63	5.18	3.51
August	2.30	12.28	16.24	2.65	9.18	4.92	3.39
September	2.28	12.34	16.53	2.67	9.35	4.45	3.10
October	2.27	13.53	17.14	2.43	9.13	4.30	2.94
		14.06		2.43			2.94
November	2.26		17.43		10.86	4.35	
December	2.23	14.61	18.56	2.57	11.29	5.43	3.32
Average	2.27	12.57	16.60	2.28	9.54	5.09	3.26
<b>011</b> January	2.33	14.65	19.48	2.92	11.71	5.35	3.36
February	2.36	15.98	20.93	2.67	12.08	5.06	3.26
March	2.34	17.65	22.60	2.94	13.71	4.61	3.12
April	2.39	18.30	24.06	2.99	13.73	4.85	3.29
May	2.44	17.73	23.17	3.22	13.70	4.85	3.38
June	2.42	18.81	22.89	2.57	13.82	5.03	3.49
July	2.45	20.17	22.96	3.14	12.22	4.96	3.61
August	2.48	19.51	22.48	2.95	11.68	4.72	3.44
September	2.44	20.81	22.67	2.79	12.17	4.54	3.26
October	2.39	19.69	23.04	2.80	13.68	4.32	3.12
10-Month Average	2.40	18.18	22.33	2.91	12.86	4.83	3.34
2010 10-Month Average	2.27	12.33	16.24	2.26	9.27	5.12	3.28
2009 10-Month Average	2.22	8.58	12.78	1.64	6.81	4.62	3.02

NA=Not available.

Notes: • Receipts are purchases of fuel. • Yearly costs are averages of monthly values, weighted by quantities in Btu. • Geographic coverage is the 50 States and the District of Columbia.

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

Sources: See end of section.

 $<sup>^{\</sup>rm a}$  Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.  $^{\rm b}$  For 1973–2001, electric utility data are for heavy oil (fuel oil nos. 5 and 6, and

For 1973–2001, electric utility data are for neavy oil (fuel oil nos. 5 and 6, and small amounts of fuel oil no. 4).

C For 1973–2001, electric utility data are for light oil (fuel oil nos. 1 and 2).

Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil. For 1973–1982, data do not include refined motor oil, bunker oil, and liquefied petroleum gases. For 1973-1989, data do not include

petroleum coke.

<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.

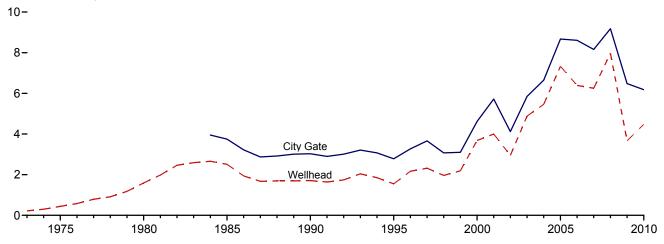
f Weighted average of costs shown under "Coal," "Petroleum," and "Natural

Gas." <sup>9</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. See Note 8, "Costs of Fossil-Fuel Receipts at Electric Generating Plants," at end of section for plant coverage.

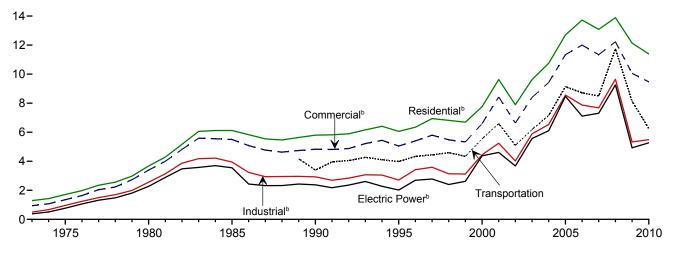
Figure 9.4 Natural Gas Prices

(Dollars<sup>a</sup> per Thousand Cubic Feet)

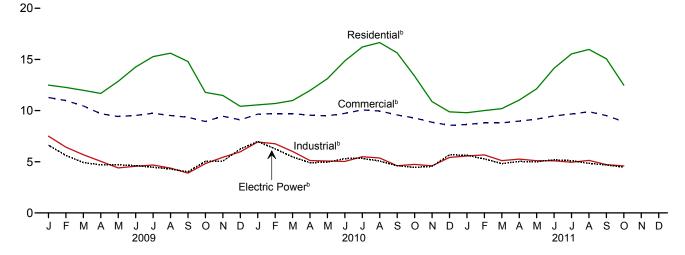
Selected Prices, 1973-2010



### Consuming Sectors, 1973-2010



#### Consuming Sectors, Monthly



 $^{\rm a}\textsc{Prices}$  are not adjusted for inflation. See "Nominal Dollars" in Glossary.  $^{\rm b}\textsc{Includes}$  taxes.

Web Page: http://www.eia.gov/totalenergy/data/monthly/#prices. Source: Table 9.11.

#### **Table 9.11 Natural Gas Prices**

(Dollarsa per Thousand Cubic Feet)

						Co	onsuming	Sectorsb			
		•	Res	sidential	Com	mercial <sup>c</sup>	Ind	ustrial <sup>d</sup>	Transportation	Electi	ric Power <sup>e</sup>
	Wellhead Price	City Gate Price	Price <sup>f</sup>	Percentage of Sector <sup>g</sup>	Pricef	Percentage of Sector <sup>g</sup>	Pricef	Percentage of Sector <sup>g</sup>	Vehicle Fuel <sup>h</sup> Price <sup>f</sup>	Pricef	Percentage of Sector <sup>g,i</sup>
1973 Average 1975 Average 1980 Average 1980 Average 1990 Average 1990 Average 1997 Average 1997 Average 1999 Average 1999 Average 2000 Average 2001 Average 2002 Average 2003 Average 2004 Average 2005 Average 2006 Average 2007 Average 2007 Average 2007 Average 2008 Average 2008 Average	.44 1.59 2.51 1.71 1.55 2.17 2.32 1.96 2.19 3.68 4.00 2.95 4.88 5.46 7.33 6.39 6.25	NA NA 3.75 3.03 2.78 3.27 3.66 3.07 3.10 5.72 4.12 5.85 6.65 8.67 8.16 9.18	1.29 1.71 3.68 6.12 5.80 6.04 6.84 6.82 6.69 7.76 9.63 7.89 9.63 10.75 12.70 13.73 13.08	NA NA NA 99.2 99.0 98.8 97.7 95.2 92.4 97.9 97.5 97.7 R 98.1 98.0 97.5	0.94 1.35 3.39 5.50 4.83 5.05 5.40 5.80 5.48 6.53 8.43 6.63 8.43 11.34 12.23	NA NA NA 86.6 76.7 77.6 67.0 66.1 63.9 66.0 77.4 78.2 78.0 82.1 80.4 79.9	0.50 .96 2.56 3.95 2.71 3.42 3.59 3.14 3.12 5.24 4.02 6.53 8.56 7.68 9.65	NA NA NA NA 68.8 35.2 24.5 19.4 18.1 16.1 18.8 19.8 22.7 22.1 R 23.6 R 24.0 23.4 22.2 20.5	NA NA NA 3.39 3.98 4.34 4.44 4.59 4.34 5.54 6.60 5.10 6.19 7.16 9.14 8.72 8.50 11.75	0.38 .77 2.27 2.38 2.02 2.69 2.78 2.40 2.62 4.38 2.40 6.11 8.47 7.11 7.31 9.26	92.1 96.1 96.9 94.0 76.8 71.4 68.4 68.0 63.7 58.3 50.2 83.9 91.2 89.8 91.3 92.2
2009 January February March April May June July August September October November December Average	3.70 3.38 3.18 3.23 3.38 3.45 3.37 2.98 3.83 4.20 4.66	R 7.97 R 7.26 R 6.85 R 5.71 R 5.49 R 5.55 R 5.70 R 5.61 R 5.37 R 5.65 R 6.34 R 6.22 R <b>6.48</b>	12.49 12.26 11.98 11.68 12.86 14.26 15.27 15.61 14.80 11.78 11.48 R 10.42 12.14	97.6 97.7 97.4 97.2 97.2 96.8 96.9 96.6 96.8 97.2 97.4	11.28 10.98 10.46 9.70 9.42 9.53 9.74 9.52 9.35 R 8.93 9.45 R 9.10	82.4 81.1 R 80.8 77.7 74.4 73.3 70.5 68.5 69.3 73.3 75.8 80.1	7.50 6.43 5.69 R 5.05 4.40 4.56 4.68 R 4.38 R 3.89 4.82 5.44 5.97 <b>5.33</b>	20.1 19.9 19.4 18.6 19.0 18.7 18.6 18.3 18.0 R 17.9 17.8 18.8	NA NA NA NA NA NA NA NA NA NA NA NA	6.62 5.62 4.92 4.70 4.62 4.47 4.30 4.02 5.04 5.06 6.24 <b>4.93</b>	100.9 101.1 101.8 101.6 101.5 101.0 100.8 100.7 100.6 102.4 101.0 100.7
2010 January February March April May June July August September October November December Average	R 5.30 R 4.70 R 4.10 R 4.24 R 4.27 R 4.44 R 4.38 R 3.83 R 4.05 R 4.12	R 6.84 R 6.64 R 6.50 R 5.88 R 5.81 R 6.02 R 6.31 R 6.22 R 5.72 R 5.70 5.48 5.74 R 6.18	R 10.56 R 10.69 R 10.98 R 11.97 R 13.12 R 14.86 R 16.21 R 16.65 R 15.64 R 15.84 9.88 R 11.39	R 97.4 R 97.8 R 97.6 R 96.2 R 97.1 R 96.9 R 96.8 R 96.7 R 96.8 R 97.4 P 97.4	R 9.65 R 9.71 R 9.70 R 9.55 R 9.49 R 9.73 R 10.07 R 9.96 R 9.57 R 9.57 R 9.57 R 9.57 R 9.28 R 8.86 R 9.47	R 81.2 R 81.8 R 79.7 R 75.7 R 73.0 R 71.9 R 70.6 R 69.8 R 68.5 R 71.8 R 77.7 R 80.2 R 77.5	R 6.93 R 6.76 R 6.01 R 5.12 R 5.07 R 5.03 R 5.49 R 5.37 R 4.61 R 4.60 5.42 R 5.49	R 19.0 R 18.6 R 18.4 R 17.7 R 17.9 R 18.0 R 17.5 R 16.8 R 17.5 R 16.8 R 17.6 R 17.8 R 18.0	NA NA NA NA NA NA NA NA NA NA NA NA	6.98 6.27 5.47 4.91 4.96 5.31 5.34 5.06 4.61 4.45 4.55 5.68 <b>5.27</b>	101.0 100.5 101.0 100.9 100.9 100.6 100.6 100.7 101.3 101.0 101.3
Page 10-10 January February March April May June July August September October 10-Month Average	E 4.23 E 3.90 E 3.98 E 4.12 E 4.19 E 4.27 E 4.20 E 3.82	R 5.68 R 5.75 R 5.68 5.61 R 5.78 R 6.08 R 6.12 6.19 R 5.93 5.41 <b>5.76</b>	9.79 10.00 R 10.19 R 11.03 12.13 R 14.14 R 15.54 R 15.98 R 15.06 12.48 11.03	96.1 96.1 R 95.8 95.5 R 95.8 95.9 95.9 95.2 95.1 95.2 <b>95.8</b>	8.64 8.81 8.87 9.17 9.17 R 9.48 R 9.67 R 9.89 R 9.51 8.91 <b>8.97</b>	R 68.4 R 67.7 R 64.9 R 61.7 R 58.5 R 56.5 R 54.8 R 52.8 R 52.0 52.7 <b>62.1</b>	R 5.56 R 5.67 5.11 R 5.26 R 5.10 R 5.09 4.95 R 5.13 R 4.72 4.59 <b>5.13</b>	R 16.3 R 16.1 R 16.2 R 15.6 R 16.2 R 15.6 R 15.5 R 15.7 15.6 16.0	NA NA NA NA NA NA NA NA NA NA	5.63 5.28 4.82 5.03 5.01 5.19 5.11 4.84 4.69 4.47 <b>5.00</b>	101.5 102.1 101.2 101.8 101.1 101.2 100.2 100.9 101.5 101.6 <b>101.2</b>
2010 10-Month Average 2009 10-Month Average	4.50 3.51	6.36 6.55	11.77 12.57	97.3 97.4	9.66 10.30	77.0 77.6	5.58 5.24	18.0 18.9	NA NA	5.29 4.80	100.8 101.2

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

b See Note 9, "Natural Gas Prices," at end of section.

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

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

e The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. Through 2001, data are for electric utilities only; beginning in 2002, data also include independent power producers. See Note 8, "Costs of Fossil-Fuel Receipts at Electric Generating Plants," at end of section for plant coverage.

Includes taxes.

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 9.11 Sources at end of section.

<sup>&</sup>lt;sup>h</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.

i 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 9, "Natural Gas Prices," at end of section. • Wellhead annual and year-to-date prices are wolume-weighted 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 for all available data beginning in 1973.

Sources: See end of section.

### **Energy Prices**

Note 1. Crude Oil Domestic First Purchase Prices. The average domestic first purchase price represents the average price at which all domestic crude oil is purchased. Prior to February 1976, the price represented an estimate of the average of posted prices; beginning with February 1976, the price represents an average of actual first purchase prices. The data series was previously called "Actual Domestic Wellhead Price."

**Note 2. 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 3. 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 4. 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 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 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. From 1974–1977, 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).

Refiner prices of finished motor gasoline for resale and to end users are determined by the 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. Costs of Fossil-Fuel Receipts at Electric Generating Plants. Data for 1973–1982 cover all regulated electric generating plants at which the generator nameplate capacity of all steam-electric units combined totaled 25 megawatts or greater. From 1974–1982, peaking units were included in the data and counted towards the 25-megawatt-or-greater total. Data for 1983–1990 cover all regulated electric generating plants at which the generator nameplate capacity of all steam-electric units combined totaled 50 megawatts or greater. Data for 1991–2001 cover all regulated electric generating plants at which the generator nameplate capacity of all steam-electric units and combined-cycle units together totaled 50

megawatts or greater. Data for 2002 forward cover the aforementioned regulated generating plants plus unregulated generating plants (independent power producers, as well as combined-heat-and-power generating plants and electricity-only plants in the commercial and industrial sector) whose total facility fossil-fueled nameplate generating capacity is 50 or more megawatts, regardless of unit type.

Note 9. 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. Deliveredto-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 the EIA Natural Gas Monthly, Appendix C.

### **Table 9.1 Sources**

### **Domestic First Purchase Price**

1973–1976: 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 and 2011: EIA, *Petroleum Marketing Monthly*, January 2012, 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 and 2011: EIA, *Petroleum Marketing Monthly*, January 2012, Table 1.

### **Refiner Acquisition Cost**

1973: EIA estimates. The domestic price was derived by adding estimated transportation costs to the reported domestic first purchase price. The imported price was derived by adding an estimated ocean transport cost 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 and 2011: EIA, *Petroleum Marketing Monthly*, January 2012, 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."

1978–2009: EIA, Petroleum Marketing Annual 2009, Table

2010 and 2011: EIA, *Petroleum Marketing Monthly*, January 2012, Table 21.

### **Table 9.10 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*, January 2012, Table 4.1; and Form EIA-923, "Power Plant Operations Report."

### **Table 9.11 Sources**

### All Prices Except Vehicle Fuel and Electric Power

1973–2005: U.S. Energy Information Administration (EIA), *Natural Gas Annual (NGA)*, annual reports and unpublished revisions

2006 forward: EIA, *Natural Gas Monthly (NGM)*, December 2011, Table 3.

#### **Vehicle Fuel Price**

EIA, NGA, annual reports.

### **Electric Power Sector Price**

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

1989–2009: EIA, Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition."

2010 and 2011: Estimated by EIA as the average of the three previous annual values.

### **Percentage of Commercial Sector**

1987–2005: 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.

2006 forward: EIA, NGM, December 2011, Table 3.

### Percentage of Industrial Sector

1982–2005: 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.

2006 forward: EIA, NGM, December 2011, Table 3.

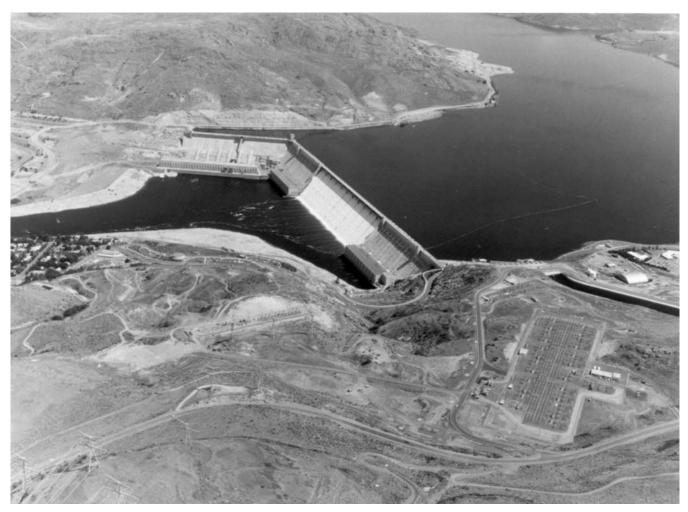
### **Percentage of Electric Power Sector**

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 Quantity 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*, Table 7.3b; for 1989-2001, see *Monthly Energy Review*, 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 Quantity 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 *Monthly Energy Review*, 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 *Monthly Energy Review*, Table 7.4b).

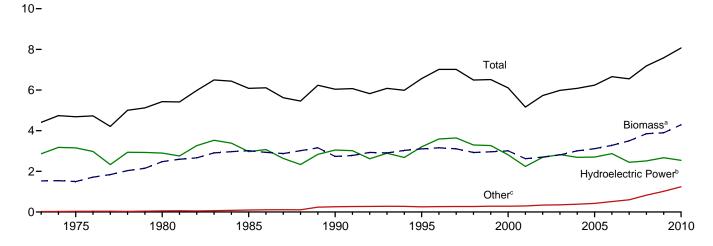
# Renewable Energy



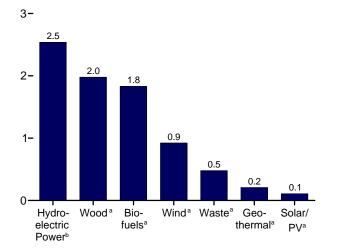
Grand Coulee Dam, Washington State. Source: U.S. Bureau of Reclamation.

Figure 10.1 Renewable Energy Consumption (Quadrillion Btu)

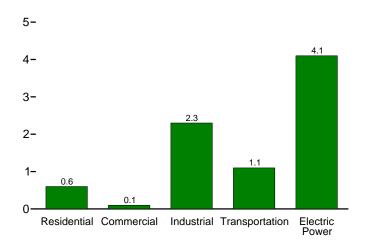
Total and Major Sources, 1973-2010



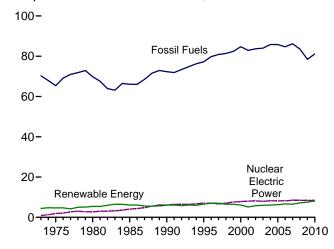




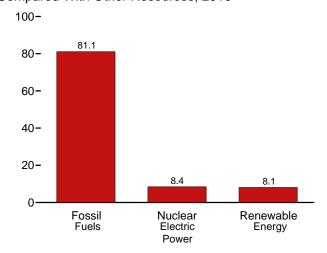
By Sector, 2010



Compared With Other Resources, 1973-2010



# Compared With Other Resources, 2010



<sup>&</sup>lt;sup>a</sup> See Table 10.1 for definition.

<sup>&</sup>lt;sup>b</sup> Conventional hydroelectric power.

<sup>&</sup>lt;sup>c</sup> Geothermal, solar/PV, and wind.

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

Table 10.1 Renewable Energy Production and Consumption by Source

(Trillion Btu)

		Production	a					Consumpti	on			
	Bior	mass	Total						Bior	nass		Total
	Bio- fuels <sup>b</sup>	Total <sup>c</sup>	Renew- able Energy <sup>d</sup>	Hydro- electric Power <sup>e</sup>	Geo- thermal <sup>f</sup>	Solar/ PV <sup>9</sup>	Wind <sup>h</sup>	Wood <sup>i</sup>	Waste <sup>j</sup>	Bio- fuels <sup>k</sup>	Total	Renew- able Energy
1973 Total	NA	1,529	4,411	2,861	20	NA	NA	1,527	2	NA	1,529	4,411
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	ŅĄ	2,474	2	NA	2,475	5,428
1985 Total 1990 Total	93 111	3,016 2.735	6,084 6.041	2,970 3.046	97 171	(s) 59	(s) 29	2,687 2,216	236 408	93 111	3,016 2,735	6,084 6.041
1995 Total	198	3.099	6,558	3,205	152	69	33	2,370	531	200	3,101	6.560
1996 Total	141	3,155	7,012	3,590	163	70	33	2,437	577	143	3,157	7,014
1997 Total	186	3,108	7,018	3,640	167	70	34	2,371	551	184	3,105	7,016
1998 Total	202	2,929	6,494	3,297	168	69	31	2,184	542	201	2,927	6,493
1999 Total	211	2,965	6,517	3,268	171	68	46	2,214	540	209	2,963	6,516
2000 Total	233	3,006	6,104	2,811	164	65	57	2,262	511	236	3,008	6,106
2001 Total	254 308	2,624	5,164	2,242	164	64	70	2,006	364	253	2,622	5,163
2002 Total 2003 Total	308 402	2,705 2.805	5,734 5.982	2,689 2.825	171 175	63 62	105 115	1,995 2.002	402 401	303 404	2,701 2.807	5,729 5,983
2004 Total	487	2,998	6,070	2,623	178	63	142	2,002	389	499	3,010	6,082
2005 Total	564	3.104	6.229	2,703	181	63	178	2.136	403	577	3,116	6,242
2006 Total	720	3,226	6,608	2,869	181	68	264	2,109	397	771	3,276	6,659
2007 Total	978	3,489	6,537	2,446	186	76	341	2,098	413	991	3,502	6,551
2008 Total	1,387	3,867	7,205	2,511	192	89	546	2,044	436	1,372	3,852	7,190
2009 January	120	315	627	229	17	8	58	158	37	115	310	622
February	111	291	545	174	16	7	57	146	34	102	283	537
March	120	316	624	213	17	8	69	155	40	118	314	621
April	116	300 315	649 690	252 289	16 17	8 9	73 61	147 152	37 37	120 131	304 319	653 694
May June	126 127	318	683	285	16	8	55	154	37	129	320	685
July	139	340	643	228	17	9	48	163	39	139	340	643
August	141	345	615	191	17	9	53	166	38	141	346	615
September	136	329	568	169	16	8	45	157	36	134	327	567
October	144	343	627	192	16	8	67	161	38	145	344	627
November	149	345	642	205	17	8	67	158	39	144	340	637
December Total	154 <b>1,583</b>	357 <b>3,915</b>	692 <b>7,603</b>	241 <b>2,669</b>	18 <b>200</b>	8 <b>98</b>	67 <b>721</b>	164 <b>1,881</b>	39 <b>452</b>	148 <b>1,567</b>	352 <b>3,899</b>	686 <b>7,587</b>
2010 January	152	359	670	218	18	8	67	167	40	142	349	661
February	142	332	609	201	16	8	53	154	36	136	326	603
March	158	366	680	204	18	9	84	167	41	149	357	671
April	152	352	659	186	17	9	95	160	40	149	348	656
May	157	358	715	245	18	10	85	162	40	155	356	714
June	152	355	751	291	17	10	79	163	40	154	357	754
July August	158 160	368 371	700 660	239 196	17 18	10 10	66 65	169 170	41 41	159 158	368 369	700 658
September	155	359	623	168	17	9	69	165	38	152	356	620
October	162	368	644	173	17	9	77	165	40	159	365	641
November	163	369	680	191	17	9	95	164	41	157	362	674
December	167	382	723	226	18	9	88	173	42	162	377	718
Total	1,879	4,337	8,116	2,539	208	109	923	1,979	479	1,832	4,291	8,069
<b>2011</b> January	169	381	748	255	19	9	84	172	40	154	365	733
February	151	341	711	241	18	8	103	154	37	144	335	704
March	170	374 357	815 814	310 309	19 18	9 10	103 121	164 157	40 38	159	364 348	805 805
April May	162 168	357 367	814 833	309	18	10	121	157	38 40	153 163	348 361	805 827
June	165	371	821	315	18	10	106	166	40	164	370	820
July	170	381	790	308	18	10	72	169	42	160	371	780
August	174	382	739	257	19	11	72	167	41	172	380	737
September	165	368	673	210	18	10	67	163	40	159	362	666
October	176	378	706	195	19	10	104	161	41	168	369	697
10-Month Total	1,670	3,701	7,650	2,722	185	97	946	1,632	399	1,595	3,626	7,575
2010 10-Month Total 2009 10-Month Total	1,548 1,280	3,587 3,213	6,712 6,269	2,122 2,222	173 165	91 82	740 587	1,642 1,559	396 374	1,514 1,275	3,552 3,207	6,678 6,264

<sup>&</sup>lt;sup>a</sup> Production equals consumption for all renewable energy sources except

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

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

Hydroelectric power, geothermal, solar thermal/photovoltaic, wind, and biomass

<sup>&</sup>lt;sup>u</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>†</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).

rate—see Table A6).

i Wood and wood-derived fuels.

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

k Fuel ethanol (minus denaturant) and biodiesel consumption, plus losses and constitute from the preduction of fuel behavel and biodiesel.

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

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 for all available data beginning in 1973.

Sources: Tables 10.2a–10.4.

Table 10.2a Renewable Energy Consumption: Residential and Commercial Sectors

(Trillion Btu)

		Reside	ntial Sector					Co	mmercial	Sectora			
			Biomass		Hydro-					Bio	mass		
	Geo- thermal <sup>b</sup>	Solar/ PV <sup>c</sup>	Woodd	Total	electric Power <sup>e</sup>	Geo- thermal <sup>b</sup>	Solar/ PV <sup>f</sup>	Windg	Woodd	Wasteh	Fuel Ethanol <sup>i</sup>	Total	Total
1973 Total	NA NA	NA NA	354 425	354 425	NA NA	NA NA	NA NA	NA NA	7 8	NA NA	NA NA	7 8	7 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 7	64	520 540	591 612	1 1	5 5	_	_	72	40 53	(s)	113 129	118
1996 Total 1997 Total	8	65 64	430	502		5 6	_	_	76 73	58	(s) (s)	131	135 138
1998 Total	8	64	380	452	l i	7	_	_	64	54	(s)	118	127
1999 Total	9	63	390	461	1	7	_	_	67	54	(s)	121	129
2000 Total	9	60	420	489	1	8	-	_	71	47	(s)	119	128
2001 Total	9	59	370	438	1 1	8	-	-	67	25	(s)	92	101
2002 Total	10	57	380	448	(s)	9	-	-	69	26	(s)	95	104
2003 Total 2004 Total	13 14	57 57	400 410	470 481	1	11 12	_	_	71 70	29 34	1	101 105	113 118
2005 Total	16	57 58	430	504		14	_	_	70 70	34 34	1	105	119
2006 Total	18	63	390	472	i	14	_	_	65	36	i	103	117
2007 Total	22	70	430	522	l i	14	_	_	69	31	ż	102	118
2008 Total	26	80	450	556	1	15	(s)	-	73	34	2	109	125
2009 January	3	8	37	47	(s)	1	(s)	(s)	6	3	(s)	9	11
February	3 3	7 8	33 37	42 47	(s) (s)	1	(s)	(s)	6 6	3 3	(s) (s)	8 9	10 11
March April	3	7	35	47	(s)	1	(s) (s)	(s) (s)	6	3	(s)	9	11
May	3	8	37	47	(s)	i	(s)	(s)	6	3	(s)	10	11
June	3	7	35	45	(s)	1	(s)	(s)	6	3	(s)	9	11
July	3	8	37	47	(s)	1	(s)	(s)	6	3	(s)	10	11
August	3	8	37	47	(s)	1	(s)	(s)	6	3	(s)	10	11
September	3	7	35	45	(s)	1	(s)	(s)	6	3	(s)	9	10
October	3	8	37	47	(s)	1	(s)	(s)	6	3	(s)	9	11
November December	3 3	7 8	35 37	45 47	(s) (s)	1	(s) (s)	(s) (s)	6 6	3 3	(s)	9 9	11 11
Total	33	89	430	552	1	17	(s)	(s)	72	36	(s) <b>3</b>	112	129
2010 January	3	8	36	47	(s)	2	(s)	(s)	6	3	(s)	9	11
February	3	7	32	42	(s)	1	(s)	(s)	5	3	(s)	8	10
March	3	8	36	47	(s)	2	(s)	(s)	6	3	(s)	9	11
April May	3 3	8 8	35 36	45 47	(s) (s)	2 2	(s) (s)	(s) (s)	6 6	3 4	(s) (s)	9 10	11 12
June	3	8	35	45	(s)	2	(s)	(s)	6	3	(s)	9	11
July	3	8	36	47	(s)	2	(s)	(s)	6	3	(s)	9	11
August	3	8	36	47	(s)	2	(s)	(s)	6	3	(s)	9	11
September	3	8	35	45	(s)	2	(s)	(s)	6	3	(s)	9	11
October	3	8	36	47	(s)	2	(s)	(s)	6	3	(s)	9	11
November	3	8	35	45 47	(s)	2	(s)	(s)	6	3	(s)	9 9	10
Total	3 <b>37</b>	8 <b>97</b>	36 <b>420</b>	47 <b>554</b>	(s) 1	2 <b>19</b>	(s) ( <b>s)</b>	(s) ( <b>s)</b>	6 <b>70</b>	3 <b>36</b>	(s) <b>3</b>	1 <b>09</b>	11 <b>129</b>
2011 January	3	8	36	47	(s)	2	(s)	(s)	6	3	(s)	9	11
February	3	7	32	42	(s)	1	(s)	(s)	5	3	(s)	9	10
March	3	8	36	47	(s)	2	(s)	(s)	6	3	(s)	9	11
April	3 3	8	35 36	45 47	(s)	2	(s)	(s)	6	3 3	(s)	9 9	10
May June	3	8 8	36 35	47 45	(s) (s)	2 2	(s) (s)	(s) (s)	6 6	3	(s) (s)	9	11 11
July	3	8	36	45 47	(s)	2	(s)	(s)	6	3	(s)	9	11
August	3	8	36	47	(s)	2	(s)	(s)	6	3	(s)	9	11
September	3	8	35	45	(s)	2	(s)	(s)	6	3	(s)	9	11
October	3	8	36	47	(s)	2	(s)	(s)	6	3	(s)	9	11
10-Month Total	31	81	350	461	1 1	15	(s)	(s)	58	29	`3	90	107
2010 10-Month Total 2009 10-Month Total	31 27	81 74	350 358	461 460	1 1	15 14	(s) (s)	(s) (s)	58 60	31 30	3 2	92 93	108 107

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

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

d Wood and wood-derived fuels.

Wood and wood-derived tuels.
 Conventional hydroelectricity net generation (converted to Btu using the fossii-fuels heat rate—see Table A6).
 Photovoltaic (PV) electricity net generation (converted to Btu using the fossii-fuels heat rate—see Table A6) at commercial plants with capacity of 1 megawatt or greater.

<sup>9</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 density of the solid sources) and the solid soli

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

<sup>&#</sup>x27;The ruel emanol (minus denaturant) portion of motor ruels, such as £10, 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. District of Columbia.

Web Page: See http://www.eia.gov/totalenergy/data/monthly/#renewable for all available data beginning in 1973.
Sources: See end of section.

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

					Industri	al Sector <sup>a</sup>					Trans	portation S	Sector
							Biomass					Biomass	
	Hydro- electric Power <sup>b</sup>	Geo- thermal <sup>c</sup>	Solar/ PV <sup>d</sup>	Winde	Wood <sup>f</sup>	Waste <sup>g</sup>	Fuel Ethanol <sup>h</sup>	Losses and Co- products <sup>i</sup>	Total	Total	Fuel Ethanol	Bio- diesel	Total
1973 Total 1975 Total 1985 Total 1985 Total 1990 Total 1990 Total 1997 Total 1997 Total 1998 Total 1998 Total 1998 Total 2000 Total 2001 Total 2002 Total 2003 Total 2004 Total 2005 Total 2006 Total 2007 Total 2007 Total 2008 Total	35 32 33 33 31 55 61 58 55 49 42 33 39 43 32 29 16	NAAA 2 3 3 3 3 4 4 5 5 3 4 4 4 5 5	NA NA NA 	NA NA NA - - - - - - - - - - -	1,165 1,063 1,603 1,604 1,442 1,652 1,683 1,731 1,603 1,620 1,636 1,443 1,396 1,366 1,452 1,472 1,413 1,344	NA NA 230 192 195 224 184 180 171 145 146 142 148 130 144	NA NA NA 1 1 1 1 1 1 1 3 3 4 6 7 10 10 12	NA NA 42 49 86 80 86 90 99 108 130 169 203 230 285 377 532	1,165 1,063 1,603 1,608 1,918 1,684 1,934 1,996 1,996 1,872 1,882 1,881 1,676 1,676 1,677 1,837 1,837 1,944 2,031	1,200 1,096 1,633 1,951 1,717 1,992 2,033 2,057 1,934 1,928 1,720 1,720 1,720 1,853 1,873 1,934 1,934 1,934 1,934 1,934 1,934 1,935 1,873 1,936	NA NA NA 50 60 112 81 102 113 118 135 141 168 228 327 442 557 786	NA NA NA NA NA NA NA NA 1 2 2 3 12 3 3 46 40	NA NA NA 50 60 112 81 102 113 114 135 147 230 339 475 602 826
2009 January	2 1 2 2 2 2 1 1 1 1 1 2 <b>1</b>	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	- - - - - - - - - - - - - - - - - - -	- - - - - - - - - - - - - - - - - - -	98 93 98 93 96 97 104 107 101 104 101 104 <b>1,198</b>	14 12 14 12 12 12 12 12 12 14 14 14	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	46 43 48 46 50 54 55 53 56 57 60 <b>617</b>	159 149 160 153 160 160 172 175 167 175 174 179 <b>1,982</b>	161 151 162 155 162 162 173 177 168 177 175 181 <b>2,005</b>	67 58 67 70 77 75 80 81 75 82 81 82 894	(s) (s) 3 3 2 3 3 4 6 6 4 5 <b>40</b>	67 58 70 73 79 78 83 85 80 88 85 87
2010 January	2 2 2 2 2 1 1 1 1 1 1 1 1 1 1	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	-	108 100 109 104 106 106 110 111 109 109 108 114 1,293	16 14 15 15 15 14 15 15 14 16 16 16	1 1 1 1 1 1 1 1 1 1 1 1 1	60 56 62 60 62 63 61 64 65 67	185 170 188 181 183 182 188 190 185 190 190 198 <b>2,230</b>	187 172 190 183 185 183 190 191 187 192 191 199 <b>2,251</b>	81 76 83 84 89 91 91 91 86 91 88 92 <b>1,043</b>	(s) 3 2 4 3 2 3 2 3 2 2 2 29	81 79 86 88 92 93 95 93 89 94 90 94
Pebruary February March April May June July August September October 10-Month Total	1 2 2 2 2 1 1 1 1 1 1 1	(s) (s) (s) (s) (s) (s) (s) (s) (s)	(s) (s) (s) (s) (s) (s) (s) (s) (s)	(S) (S) (S) (S) (S) (S) (S) (S) (S) (S)	114 101 108 105 104 111 111 109 108 106 <b>1,077</b>	15 14 15 14 15 14 15 15 15 15	1 1 1 1 1 1 1 1 1 1 1 1 1	66 59 65 62 64 63 64 65 62 65	197 175 189 182 184 189 191 190 186 188 <b>1,873</b>	198 177 192 184 187 191 193 192 188 190 <b>1,891</b>	83 81 87 83 90 92 85 96 83 89	3 5 7 6 7 9 12 12 <b>74</b>	86 84 92 90 96 100 95 105 95 101 <b>944</b>
2010 10-Month Total 2009 10-Month Total	14 15	3 3	(s) _	Ξ	1,072 992	148 127	13 11	610 500	1,843 1,630	1,860 1,649	863 731	26 31	888 762

<sup>&</sup>lt;sup>a</sup> Industrial sector, including industrial combined-heat-and-power (CHP) and industrial electricity-only plants. See Note, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7.

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

and the District of Columbia.

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

Sources: See end of section.

This table has been modified to include a column for "Industrial Sector Wind."

C Geothermal heat pump and direct use energy.

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

<sup>e</sup> Wind electricity net generation (converted to Btu using the fossil-fuels heat

rate—see Table A6).

f Wood and wood-derived fuels.

<sup>9</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 the desired fuels). tire-derived fuels).

<sup>&</sup>lt;sup>h</sup> The fuel ethanol (minus denaturant) portion of motor fuels, such as E10, consumed by the industrial sector.

i Losses and co-products from the production of fuel ethanol and biodiesel.

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

J The fuel ethanol (minus denaturant) portion of motor fuels, such as E10 and

I The fuel ethanol (minus denaturant) portion of minutor ruers, such as £ 10 and £85, 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 1973-1978 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.

Table 10.2c Renewable Energy Consumption: Electric Power Sector

(Trillion Btu)

	Hydro-	0				Biomass		
	electric Power <sup>a</sup>	Geo- thermal <sup>b</sup>	Solar/PV <sup>c</sup>	Windd	Woode	Waste <sup>f</sup>	Total	Total
973 Total	2,827	20	NA	NA	1	2	3	2,851
975 Total	3,122	34	NA NA	NA NA	(s)	2	2	3,158
980 Total	2,867	53	NA NA	NA NA	3	2	4	2,925
985 Total	2,937	97	(s)	(s)	8	7	14	3.049
990 Total <sup>g</sup>	3.014	161	4	29	129	188	317	3,524
995 Total	3,149	138	5	33	125	296	422	3,747
	3,149	148	5 5	33			422 438	
996 Total			5 5		138	300		4,153
997 Total	3,581	150	5 5	34	137	309	446 444	4,216
998 Total	3,241	151		31	137	308		3,872
999 Total	3,218	152	5	46	138	315	453	3,874
000 Total	2,768	144	5	57	134	318	453	3,427
001 Total	2,209	142	6	70	126	211	337	2,763
002 Total	2,650	147	6	105	150	230	380	3,288
003 Total	2,781	148	5	115	167	230	397	3,445
004 Total	2,656	148	6	142	165	223	388	3,340
005 Total	2,670	147	6	178	185	221	406	3,406
006 Total	2,839	145	5	264	182	231	412	3,665
007 Total	2,430	145	6	341	186	237	423	3,345
008 Total	2,494	146	9	546	177	258	435	3,630
<b>009</b> January	228	13	(s)	58	17	21	37	336
February	172	11	(s)	57	15	19	34	276
March	211	13	1	69	14	24	38	332
April	250	12	1	73	12	21	33	369
May	287	12	1	61	13	22	34	395
June	284	12	1	55	15	22	37	388
July	227	12	1	48	16	23	39	328
August	190	12	1	53	17	23	39	296
September	168	12	i	45	14	21	36	262
October	191	12	i	67	14	21	35	305
November	204	12	(s)	67	15	22	37	320
December	240	13	(s)	67	17	22	40	360
Total	2,650	146	9	<b>721</b>	180	261	441	3,967
010 January	217	13	(s)	67	17	21	39	335
February	199	11	(s)	53	16	20	36	300
March	202	13	1	84	16	22	39	338
April	184	12	1	95	15	21	36	329
May	243	13	i	85	14	22	36	378
June	290	12	2	79	16	23	39	421
July	238	12	2	66	17	23	40	358
August	195	13	2	65	18	23	41	315
September	168	12	1	69	16	22	38	288
October	171	12	1	77	15	22	37	298
November	190	12	1	95	16	23	37 39	337
	225	13		95 88	17	23 23	39 41	367
December Total	2, <b>521</b>	148	(s) <b>12</b>	923	196	264	459	4,064
<b>011</b> January	254	14	(s)	84	16	21	38	391
February	239	13	1	103	15	20	35	390
March	308	13	1	103	15	23	38	463
	307	13	2	121	12	23 22	30 33	476
April						22	35	
May	321	14	2	113	13			486
June	313	13	2	106	15	23	38	473
July	307	13	2	72	16	24	40	434
August	256	13	2	72	16	23	39	383
September	209	13	2	67	15	22	37	327
October	194	14	2	104	13	23	36	349
10-Month Total	2,706	135	16	945	146	223	369	4,172
010 10-Month Total 009 10-Month Total	2,107 2,207	123 121	11 8	740 587	162 148	218	380	3,361

<sup>&</sup>lt;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

Sources: • Biomass: Table 7.4b. • All Other Data: Tables 7.2b and A6.

Geothermal electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6).
 Solar thermal and photovoltaic (PV) electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6).
 Wind electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6).
 Wood and wood-derived fuels.
 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>9</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 for all available data beginning in 1973.

available data beginning in 1973.

**Table 10.3 Fuel Ethanol Overview** 

	Feed- stock <sup>a</sup>	Losses and Co- products <sup>b</sup>	Dena- turant <sup>c</sup>	Pi	<b>oduction</b> d		Trade <sup>d</sup> Net Imports <sup>e</sup>	Stocks <sup>d,f</sup>	Stock Change <sup>d,9</sup>	Coi	nsumption	<sub>i</sub> d	Consump- tion Minus Denaturant
	TBtu	TBtu	Mbbl	Mbbl	MMgal	TBtu	Mbbl	Mbbl	Mbbl	Mbbl	MMgal	TBtu	TBtu
1981 Total 1985 Total 1990 Total 1995 Total 1996 Total 1997 Total 1998 Total	13 93 111 198 141 186 202	6 42 49 86 61 80 86 90	40 294 356 647 464 613 669	1,978 14,693 17,802 32,325 23,178 30,674 33,453	83 617 748 1,358 973 1,288 1,405	7 52 63 115 83 109 119	NA NA NA 387 313 85 66	NA NA NA 2,186 2,065 2,925 3,406	NA NA NA -207 -121 860 481	1,978 14,693 17,802 32,919 23,612 29,899 33,038	83 617 748 1,383 992 1,256 1,388	7 52 63 117 84 107 118	7 51 62 114 82 104 115
1999 Total 2000 Total 2001 Total 2002 Total 2003 Total 2004 Total 2005 Total 2006 Total 2007 Total 2007 Total	211 233 253 307 400 484 552 688 914 1,300	99 108 130 169 203 230 285 376 531	698 773 841 1,019 1,335 1,621 1,859 2,326 3,105 4,433	34,881 38,627 42,028 50,956 66,772 81,058 92,961 116,294 155,263 221,637	1,465 1,622 1,765 2,140 2,804 3,404 3,904 4,884 6,521 9,309	124 138 150 182 238 289 331 414 553 790	87 116 315 306 292 3,542 3,234 17,408 10,457 12,610	4,024 3,400 4,298 6,200 5,978 6,002 5,563 8,760 10,535 14,226	618 -624 898 1,902 -222 24 -439 3,197 1,775 3,691	34,350 39,367 41,445 49,360 67,286 84,576 96,634 130,505 163,945 230,556	1,443 1,653 1,741 2,073 2,826 3,552 4,059 5,481 6,886 9,683	122 140 148 176 240 301 344 465 584 821	119 137 144 171 233 293 335 453 569 800
Pebruary March April May June July August September October November December Total	114 106 117 113 123 123 133 135 129 137 141 146 <b>1,517</b>	46 43 48 46 50 54 55 53 55 57 59 <b>616</b>	403 409 452 427 459 455 503 494 479 515 523 569 <b>5,688</b>	19,561 18,255 20,121 19,374 21,024 21,125 22,887 23,136 22,218 23,467 24,122 25,134 260,424	822 767 845 814 883 887 961 972 933 986 1,013 1,056 <b>10,938</b>	70 65 72 69 75 75 82 82 79 84 86 90	388 56 79 166 507 705 960 983 310 269 285 12 4,720	14,514 15,834 16,411 15,322 14,173 13,974 14,223 14,671 15,283 14,933 15,578 16,594	288 1,320 577 -1,089 -1,149 -199 249 448 612 -350 645 1,016 <b>2,368</b>	19,661 16,991 19,623 20,629 22,680 22,029 23,598 23,671 21,916 24,086 23,762 24,130 <b>262,776</b>	826 714 824 866 953 925 991 994 920 1,012 998 1,013 <b>11,037</b>	70 61 70 74 81 78 84 84 88 86 85 86	68 59 68 71 79 76 82 82 76 83 82 83
2010 January	149 138 154 147 152 149 154 157 160 161 165 <b>1,839</b>	60 56 62 59 61 60 62 63 61 64 65 67	541 496 537 522 534 522 543 538 533 563 585 592 <b>6,506</b>	25,625 23,802 26,486 25,384 26,244 25,632 26,584 26,964 26,221 27,471 27,747 28,457 316,617	1,076 1,000 1,112 1,066 1,102 1,077 1,117 1,132 1,101 1,154 1,165 1,195	91 85 94 90 93 91 95 96 93 98 99 101 <b>1,127</b>	-234 -482 -1,104 -927 -368 -341 -578 -695 -924 -830 -923 -1,711 -9,115	18,251 19,297 20,222 20,042 19,851 18,565 17,809 17,380 17,437 17,278 18,150 17,941 17,941	1,657 1,046 925 -180 -191 -1,286 -756 -429 -57 -159 872 -209 1,347	23,734 22,274 24,457 24,637 26,067 26,577 26,762 26,698 25,240 26,800 25,952 26,955 <b>306,155</b>	997 936 1,027 1,035 1,095 1,116 1,124 1,121 1,060 1,126 1,090 1,132 12,858	85 79 87 88 93 95 95 95 92 96 1,090	82 77 85 85 90 92 93 93 88 93 90 93
2011 January	165 147 163 154 161 157 160 163 154 163 <b>1,585</b>	66 59 65 62 64 63 64 65 62 65 <b>635</b>	581 535 548 507 545 535 555 575 525 557 <b>5,463</b>	28,524 25,400 28,194 26,591 27,756 27,064 27,624 28,110 26,645 28,092 274,000	1,198 1,067 1,184 1,117 1,166 1,137 1,160 1,181 1,119 1,180 <b>11,508</b>	102 90 100 95 99 96 98 100 95	-1,359 -1,425 -2,003 -2,865 -1,743 -1,533 -2,731 -790 -1,820 -2,388 -18,657	20,672 20,809 21,440 20,807 20,387 18,833 18,700 17,900 18,437 18,072 18,072	12,732 137 631 -633 -420 -1,554 -133 -800 537 -365 132	24,433 23,838 25,560 24,359 26,433 27,085 25,026 28,120 24,288 26,069 <b>255,211</b>	1,026 1,001 1,074 1,023 1,110 1,138 1,051 1,181 1,020 1,095 10,719	87 85 91 87 94 96 89 100 86 93 <b>909</b>	85 83 89 85 92 94 87 97 84 90
2010 10-Month Total 2009 10-Month Total	1,513 1,231	610 499	5,329 4,596	260,413 211,168	10,937 8,869	927 752	-6,481 4,423	17,278 14,933	684 707	253,248 214,884	10,636 9,025	902 766	878 744

a Total corn and other biomass inputs to the production of undenatured ethanol

barrels), not the final December 2010 value (17,941 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. • See "Denaturant," "Ethanol," "Fuel Ethanol," and "Fuel Ethanol Minus Denaturant" in Glossary. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.gov/totalenergy/data/monthly/#renewable for all available data beginning in 1981. Sources: See end of section.

used for fuel ethanol.

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

The amount of denaturant in fuel ethanol produced.

Includes denaturant.

Thickness denaturant.
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 exports.

f Stocks are at end of period.

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

h Consumption of fuel ethanol minus denaturant. Data for fuel ethanol minus

denaturant are used to develop data for "Renewable Energy/Biomass" in Tables 10.1–10.2b, as well as in Sections 1 and 2.

i Derived from the preliminary December 2010 stocks value (17,940 thousand

Table 10.4 Biodiesel Overview

							Trade				<b>.</b>			
	Feed- stock <sup>a</sup>	Losses and Co- products <sup>b</sup>	Р	roduction		Imports	Exports	Net Imports <sup>c</sup>	Stocksd	Stock Change <sup>e</sup>	Bal- ancing Item <sup>f</sup>	Co	nsumptio	n
	TBtu	TBtu	Mbbl	MMgal	TBtu	Mbbl	Mbbl	Mbbl	Mbbl	Mbbl	Mbbl	Mbbl	MMgal	TBtu
2001 Total	1 1 2 4 12 32 63 88	(s) (s) (s) (s) (s) (s)	204 250 338 666 2,162 5,963 11,662 16,145	9 10 14 28 91 250 490 678	1 1 2 4 12 32 62 87	78 191 94 97 207 1,069 3,342 7,502	39 56 110 124 206 828 6,477 16,128	39 135 -16 -26 1 242 -3,135 -8,626	NA NA NA NA NA NA	NA NA NA NA NA NA	NA NA NA NA NA NA	243 385 322 640 2,163 6,204 8,528 7,519	10 16 14 27 91 261 358 316	1 2 2 3 12 33 46 40
2009 January	5 4 3 4 4 6 6 6 7 8 8 <b>6</b> <b>6</b> 5	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	1,011 780 599 624 689 761 1,030 1,070 1,158 1,364 1,511 1,455 <b>12,054</b>	42 33 25 26 29 32 43 45 49 57 63 61 <b>506</b>	5 4 3 4 4 6 6 6 7 8 8 <b>6</b> <b>6</b> 5	261 158 383 52 117 138 58 126 123 159 105 165 1,844	1,150 1,166 203 154 417 366 581 397 224 424 819 431 <b>6,332</b>	-889 -1,009 180 -102 -300 -228 -523 -271 -101 -265 -714 -265 -4,489	664 424 665 632 600 581 511 511 527 553 531 711	664 -240 241 -33 -32 -19 -70 0 16 26 -22 180 711	621 61 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	79 73 538 554 421 552 576 799 1,041 1,074 819 1,010 <b>7,537</b>	3 3 23 23 18 23 24 34 44 45 34 42 317	(s) (s) 3 2 3 3 4 6 6 4 5
Page 2010 January	3 4 5 4 3 4 3 3 3 2 2 40	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	623 653 806 854 753 606 673 543 564 497 385 409 <b>7,366</b>	26 27 34 36 32 25 28 23 24 21 16 17 309	3 4 4 5 4 3 4 3 3 2 2 <b>39</b>	41 31 60 45 80 54 32 52 69 18 30 34	296 139 433 227 251 304 199 225 131 132 57 109 <b>2,503</b>	-256 -108 -374 -182 -171 -249 -167 -173 -62 -114 -27 -75 -1,958	1,049 1,039 1,057 1,009 1,016 968 830 771 682 650 676 672 672	338 -10 18 -48 7 -48 -138 -59 -89 -32 26 -4	0 0 0 0 0 0 0 0 0	30 556 414 720 575 404 644 429 590 415 332 338 5,447	1 23 17 30 24 17 27 18 25 17 14 14 229	(s) 3 2 4 3 2 3 2 3 2 2 2 2 2 2 2
2011 January	4 7 8 8 8 10 E 12 E 11 E 14 E 85	(s) (s) (s) (s) (s) (s) E(s) E(s) E(s) E	740 718 1,220 1,442 1,424 1,562 1,866 F 2,119 F 1,969 F 2,532 E 15,594	31 30 51 61 60 66 78 F 89 F 83 F 106	4 7 8 8 8 10 F 11 F 11 F 14 E <b>84</b>	49 37 53 52 48 48 62 65 65 82 <b>561</b>	217 88 197 222 192 117 142 71 193 132 <b>1,570</b>	-169 -51 -144 -169 -144 -69 -80 -7 -127 -49	738 869 984 1,012 1,102 1,216 1,267 1,663 1,201 1,481 <b>1,481</b>	9 76 131 115 28 90 114 51 396 -462 280 <b>819</b>	0 0 0 0 0 0 0 0	496 536 961 1,245 1,190 1,379 1,736 E 1,716 E 2,304 E 2,203 E 13,766	21 23 40 52 50 58 73 E 72 E 97 E 93 E 578	3 3 5 7 6 7 9 E 9 E 12 E 12 E 74
2010 10-Month Total 2009 10-Month Total	36 49	(s) 1	6,571 9,087	276 382	35 49	482 1,573	2,338 5,082	-1,856 -3,509	650 553	-61 553	0 682	4,776 5,708	201 240	26 31

<sup>&</sup>lt;sup>a</sup> Total vegetable oil and other biomass inputs to the production of biodiesel.

E=Estimate. F=Forecast. 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. • Data values preceded w. "F" are derived from EIA's Short-Term Integrated Eorecasting System. • Totals by "F" are derived from EIA's Short-Term Integrated Forecasting System. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.gov/totalenergy/data/monthly/#renewable for all available data beginning in 2001.

Sources: See end of section.

Beginning with August 2011, biodiesel production data are not available from the Bureau of the Census; in their place, forecast data from EIA's Short-Term Integrated Forecasting System will be used until survey data from EIA's Monthly Biodiesel Production Report are available.

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

Net imports equal imports minus exports.

d Stocks are at end of period.

e A negative value indicates a decrease in stocks and a positive value indicates

an increase.

f Beginning in 2009, because of incomplete data coverage and different data

sources, "Balancing Item" is used to balance biodiesel supply and disposition.

9 Derived from the preliminary December 2010 stocks value (662 thousand barrels), not the final December 2010 value (672 thousand barrels) that is shown under "Stocks."

# **Renewable Energy**

Note. Renewable Energy Production and Consump-

tion. 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 fossilfuels 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 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

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 estimate for the current year is set equal to that of the previous year.)

### Residential Sector, Solar/PV

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. (The annual estimate for the current year is set equal to that of the previous year.)

# Residential Sector, Wood

1973–1979: 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 the current year is set equal to that of the previous year.)

### **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**

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 estimate for the current year is set equal to that of the previous year.)

### 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

1973–1979: 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 the current year is set equal to that of the previous year); 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**

EIA, MER, Table 7.4c.

### **Commercial Sector, Fuel Ethanol (Minus Denaturant)**

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

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**

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 estimate for the current year is set equal to that of the previous year.)

### **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: 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**

1973–1979: 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 the current year is set equal to that of the previous year); 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 the current year is set equal to that of the previous year); 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)**

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**

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)

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**

EIA, MER, Table 10.4. Transportation sector biodiesel consumption is assumed to equal total biodiesel consumption.

### Table 10.3 Sources

### Feedstock

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**

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 and 2010: U.S. Energy Information Administration (EIA), *Petroleum Supply Annual (PSA)*, 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.

2011: 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 and 2010: EIA, PSA, Table 1, data for net production of fuel ethanol at renewable fuels and oxygenate plants.

2011: EIA, PSM, monthly reports, Table 1, data for net production of fuel ethanol at renewable fuels and oxygenate plants.

### Trade, Stocks, and Stock Change

1992–2010: EIA, PSA, annual reports, Table 1.

2011: 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 and 2010: EIA, PSA, Table 1. Calculated as fuel ethanol refinery and blender net inputs minus fuel ethanol adjustments.

2011: EIA, PSM, monthly reports, Table 1. Calculated as fuel ethanol refinery and blender net inputs minus fuel ethanol adjustments.

### **Consumption Minus Denaturant**

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-toproduction ratio.

### **Table 10.4 Sources**

### **Feedstock**

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**

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).

January 2008–December 2009: 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.

January 2010–July 2011: 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).

August 2011 forward: EIA, Short-Term Integrated Forecasting System.

### **Trade**

U.S. Department of Agriculture, imports data for Harmonized Tariff Schedule codes 3824.90.40.20, "Fatty Esters Animal/Vegetable/Mixture" (for data through June 2010), and 3824.90.40.30, "Biodiesel/Mixes" (for data beginning in July 2010); and exports data for Schedule B code 3824.90.40.00, "Fatty Substances Animal/Vegetable/Mixture" (for data through December 2010), and 3824.90.40.30, "Biodiesel <70%" (for data beginning in January 2011). 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.

### **Stocks and Stock Change**

2009 and 2010: EIA, *Petroleum Supply Annual (PSA)*, Table 1, data for renewable fuels except fuel ethanol.

2011: EIA, *Petroleum Supply Monthly*, Table 1, data for renewable fuels except fuel ethanol.

### **Balancing Item**

Calculated as biodiesel consumption and biodiesel stock change minus biodiesel production and biodiesel net imports.

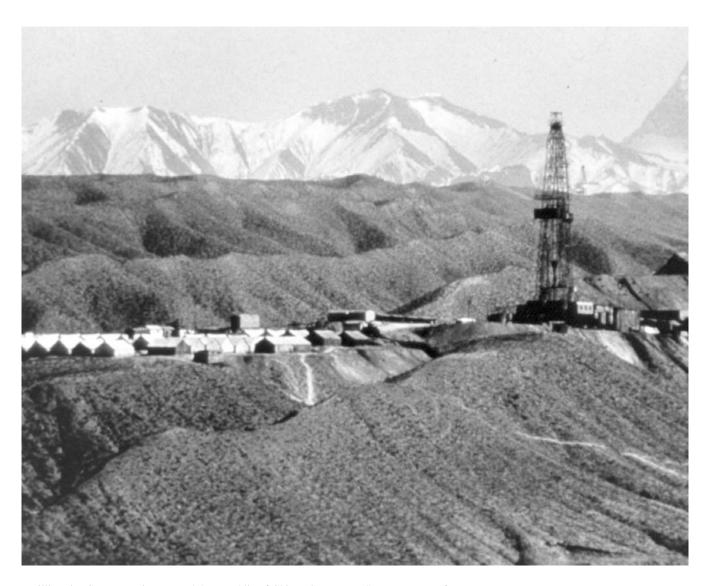
### Consumption

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.

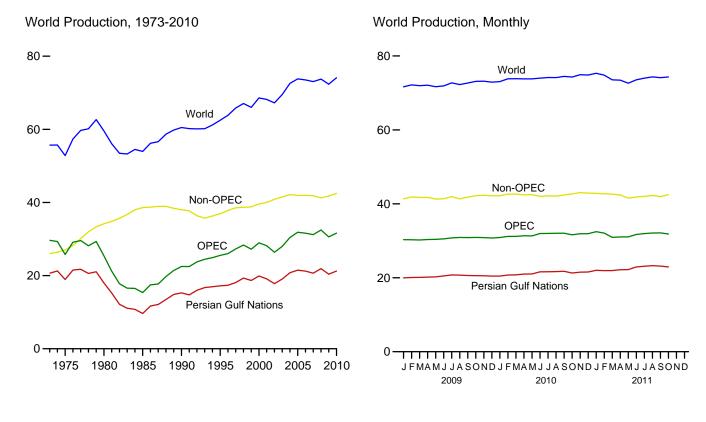
# **International Petroleum**



Drilling rig, Gansu Province, People's Republic of China. Source: U.S. Department of Energy.

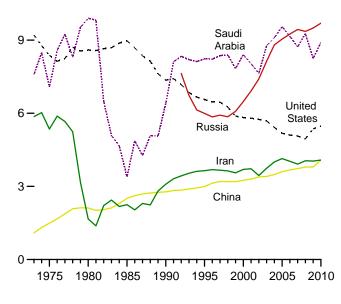
Figure 11.1a World Crude Oil Production Overview

(Million Barrels per Day)



Selected Producers, 1973-2010

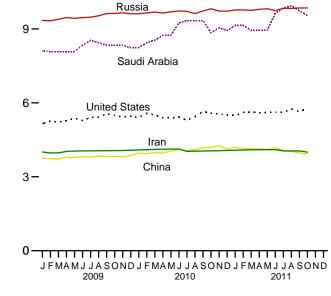
12-



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

Selected Producers, Monthly

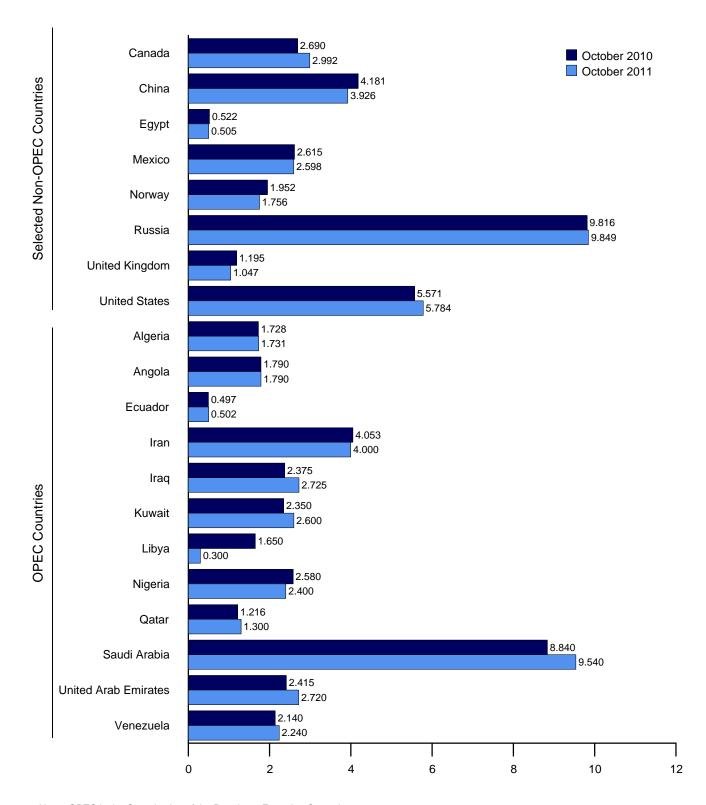
12-



sian Gulf Nations."

Web Page: http://www.eia.gov/totalenergy/data/monthly/#international. Sources: Tables 11.1a and 11.1b.

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



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

Table 11.1a World Crude Oil Production: OPEC Members

(Thousand Barrels per Day)

	Algeria	Angola	Ecuador	Iran	Iraq	Kuwait <sup>a</sup>	Libya	Nigeria	Qatar	Saudi Arabia <sup>a</sup>	United Arab Emirates	Vene- zuela	Total OPEC
973 Average	1,097	162	209	5,861	2,018	3,020	2,175	2,054	570	7,596	1,533	3,366	29,66
975 Average	983	165	161	5,350	2,262	2,084	1,480	1,783	438	7,075	1,664	2,346	25,79
980 Average	1,106	150	204	1,662	2,514	1,656	1,787	2,055	472	9,900	1,709	2,168	25,38
985 Average	1,037	231	281	2,250	1,433	1,023	1,059	1,495	301	3,388	1,193	1,677	15,36
990 Average	1,175	475	285	3,088	2,040	1,175	1,375	1,810	406	6,410	2,117	2,137	22,49
995 Average	1,202	646	392	3,643	560	2,057	1,390	1,993	442	8,231	2,233	2,750	25,54
96 Average	1,242	709	396	3,686	579	2,062	1,401	2,001	510	8,218	2,278	2,938	26,01
997 Average	1,277	714	388	3,664	1,155	2,007	1,446	2,132	550	8,362	2,316	3,280	27,29
998 Average	1,246	735	375	3,634	2,150	2,085	1,390	2,153	696	8,389	2,345	3,167	28,36
99 Average	1,202	745	373	3.557	2,508	1.898	1,319	2,130	665	7.833	2.169	2,826	27,22
000 Average	1,254	746	395	3,696	2,571	2,079	1,410	2,165	737	8,404	2,368	3,155	28,98
001 Average	1,310	742	412	3,724	2,390	1,998	1,367	2,256	714	8,031	2,205	3,010	28,15
	1,306	896	393	3,444	2,023	1,894	1,319	2,118	679	7,634	2,082	2,604	26,39
002 Average													
003 Average	1,611	903	411	3,743	1,308	2,136	1,421	2,275	715	8,775	2,348	2,335	27,98
004 Average	1,677	1,052	528	4,001	2,011	2,376	1,515	2,329	783	9,101	2,478	2,557	30,40
005 Average	1,797	1,250	532	4,139	1,878	2,529	1,633	2,627	835	9,550	2,535	2,565	31,87
006 Average	1,814	1,413	536	4,028	1,996	2,535	1,681	2,440	850	9,152	2,636	2,511	31,59
007 Average	1,834	1,744	511	3,912	2,086	2,464	1,702	2,350	851	8,722	2,603	2,433	31,21
08 Average	1,825	1,981	505	4,050	2,375	2,586	1,736	2,165	924	9,261	2,681	2,394	32,48
<b>09</b> January	1,758	1,915	504	4,007	2,212	2,350	1,650	2,192	860	8,113	2,411	2,340	30,31
February	1,757	1,840	498	3,963	2,313	2,350	1,650	2,162	935	8,068	2,412	2,340	30,28
March	1,757	1,840	497	3,970	2,365	2,350	1,650	2,060	910	8,072	2,412	2,340	30,22
April	1,757	1,840	495	4,030	2,366	2,350	1,650	2,217	910	8,077	2,412	2,240	30,34
May	1.757	1.840	486	4.044	2,418	2,350	1.650	2.212	910	8.081	2.412	2,240	30.39
June	1,756	1,840	491	4,050	2,419	2,350	1,650	2,059	910	8,335	2,412	2,240	30,5
July	1,726	1,890	483	4,053	2,470	2,350	1,650	2,051	910	8,540	2,413	2,240	30,7
	1,726	1,950	477	4,056	2,470	2,350	1,650	2,193	945	8,440	2,413	2,240	30,9
August													
September	1,726	1,950	475	4,060	2,473	2,350	1,650	2,240	945	8,340	2,413	2,240	30,86
October	1,726	1,990	475	4,063	2,425	2,350	1,650	2,290	951	8,340	2,413	2,240	30,91
November	1,726	1,990	477	4,067	2,375	2,350	1,650	2,370	962	8,340	2,413	2,140	30,86
December	1,726	1,990	470	4,076	2,375	2,350	1,650	2,450	974	8,240	2,414	2,040	30,75
Average	1,741	1,907	486	4,037	2,391	2,350	1,650	2,208	927	8,250	2,413	2,239	30,59
110 January	1,730	2,040	464	4,088	2,475	2,250	1,650	2,480	969	8,240	2,414	2,090	30,88
February	1,729	2,060	470	4,100	2,475	2,250	1,650	2,420	1,036	8,440	2,414	2,140	31,18
March	1,729	2,070	478	4,112	2,375	2,250	1,650	2,430	1,055	8,540	2,414	2,090	31,19
April	1,729	2,070	480	4,120	2,375	2,250	1,650	2,360	1,072	8,740	2,414	2,110	31,37
May	1,729	2,030	478	4,120	2,375	2,250	1,650	2,310	1,091	8,740	2,415	2,140	31,32
June	1,728	1,980	491	4,127	2,425	2,250	1,650	2,410	1,113	9,240	2,415	2,140	31,96
July	1,728	1,970	492	4,033	2,325	2,350	1,650	2,410	1,136	9,340	2,415	2,140	31,98
August	1,728	1,890	485	4,033	2,325	2,350	1,650	2,510	1,164	9,340	2,415	2,140	32,03
	1,728	1,790	490	4,040		2,350		2,550		9,340			
September					2,375		1,650		1,193		2,415	2,140	32,0
October	1,728	1,790	497	4,053	2,375	2,350	1,650	2,580	1,216	8,840	2,415	2,140	31,6
November	1,728	1,790	508	4,060	2,375	2,350	1,650	2,510	1,235	9,040	2,415	2,240	31,90
December	1,728	1,790	499	4,068	2,525	2,350	1,650	2,490	1,235	8,940	2,415	2,240	31,9
Average	1,729	1,939	486	4,080	2,399	2,300	1,650	2,455	1,127	8,900	2,415	2,146	31,6
11 January	1,728	1,790	500	4,076	2,625	2,350	1,650	2,580	1,280	9,140	2,520	2,240	32,4
February	1,731	1,790	509	4,084	2,525	2,350	1,340	2,570	1,280	9,140	2,520	2,240	32,0
March	1,731	1,790	501	4,092	2,525	2,450	300	2,450	1,290	8,940	2,620	2,240	30,9
April	1,731	1,740	504	4,100	2,525	2,550	200	2,500	1,300	8,940	2,720	2,240	31,0
May	1,731	1,640	497	4,100	2,575	2,550	200	2,570	1,300	8,940	2,720	2,240	31,0
June	1,731	1,690	495	4,100	2,575	2,550	100	2,570	1,300	9,640	2,720	2,240	31,7
July	1,731	1,740	492	4,050	2,625	2,550	100	2,570	1,300	9,840	2,720	2,240	31,9
August	1,731	1,790	495	4,050	2,625	2,600	0	2,600	1,300	9,940	2,720	2,240	32,0
	1,731	1,840	496	4,050	2,725	2,600	100	2,600	1,300	9,740	2,720	2,240	32,1
September													
October	1,731	1,790	502	4,000	2,725	2,600	300	2,400	1,300	9,540	2,720	2,240	31,8
10-Month Average	1,731	1,760	499	4,070	2,606	2,516	423	2,541	1,295	9,382	2,671	2,240	31,7
10 10-Month Average	1,729	1,968	483	4,084	2,389	2,290	1,650	2,446	1,105	8,882	2,415	2,127	31,5

<sup>&</sup>lt;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. Kuwaiti Neutral Zone output was discontinued following Iraq's invasion of Kuwait on August 2, 1990, but was resumed in June 1991. In October 2011, Neutral Zone production by both Kuwait and Saudi Arabia totaled about 600 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.

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.

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

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.

preliminary monthly data are not available.

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

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

					Selected	Non-OPE	Ca Producer	's				
	Persian							_			Total	
	Gulf Nations <sup>b</sup>	Canada	China	Egypt	Mexico	Norway	Former U.S.S.R.	Russia	United Kingdom	United States	Non- OPEC <sup>a</sup>	World
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	53,966
1990 Average	15,278	1,553	2,774	873	2,553	1,630	10,975	NA	1,820	7,355	37,999	60,492
1995 Average	17,208	1,805	2,990	920	2,711	2,766		5,995	2,489	6,560	36,939	62,479
1996 Average	17,367	1,837	3,131	922	2,944	3,091		5,850	2,568	6,465	37,822	63,841
1997 Average	18,095	1,922	3,200	856	3,104	3,142		5,920	2,518	6,452	38,533	65,825
1998 Average	19,337	1,981	3,198	834	3,160	3,011		5,854	2,616	6,252	38,688	67,055
1999 Average	18,667	1,907	3,195	852	2,998	3,019		6,079	2,684	5,881	38,791	66,015
2000 Average	19,892	1,977	3,249	768	3,104	3,222		6,479	2,275	5,822	39,605	68,584
2001 Average	19,098 17.794	2,029 2,171	3,300	720 715	3,218	3,226		6,917 7.408	2,282	5,801	40,027 40,850	68,186
2002 Average	19,063	2,306	3,390 3,409	713	3,263 3,459	3,131 3,042		8,132	2,292 2,093	5,746 5,681	41,538	67,242 69,519
2003 Average 2004 Average	20,787	2,398	3,485	673	3,439	2,954		8,805	1,845	5,419	42,156	72,565
2005 Average	21,501	2,369	3,609	658	3,423	2,698		9,043	1,649	5,178	41,932	73,803
2006 Average	21,232	2,525	3,673	633	3,345	2,491		9,247	1,490	5,102	41,928	73,519
2007 Average	20,672	2,628	3,729	637	3,143	2,270		9,437	1,498	5,064	41,851	73,061
2008 Average	21,913	2,579	3,790	581	2,839	2,182		9,357	1,391	4,950	41,250	73,733
<b>2009</b> January	19,989	2,592	3,755	553	2,729	2,195		9,343	1,425	5,154	R 41,335	R 71,648
February	20,076	2,684	3,733	550	2,707	2,260		9,331	1,449	5,260	41,880	72,168
March	20,114	2,579	3,726	547	2,697	2,238		9,388	1,451	5,227	R 41,738	R 71,961
April	20,179	2,459	3,795	547	2,688	2,072		9,459	1,468	5,273	R 41,744	R 72,088
May	20,249	2,436	3,775	544	2,655	1,890		9,429	1,390	5,379	R 41,285	R 71,684
June	20,511	2,559	3,824	541	2,563	1,850		9,457	1,359	5,281	R 41,379 R 41,949	<sup>R</sup> 71,892 <sup>R</sup> 72,726
July	20,771	2,667	3,801	538	2,605	2,147		9,476	1,342	5,402	R 41,348	R 72,726
August	20,711	2,575 2,528	3,844	535 532	2,587 2,643	1,970 1,923		9,532	993	5,418	R 41,814	R 72,260
September October	20,616 20,577	2,526	3,826 3,828	529	2,645	2,077		9,623 9,629	1,119 1,266	5,547 5,501	R 42,213	R 73,126
November		2,725	3,813	526	2,597	2,123		9,654	1,372	5,427	R 42,213	R 73,120
December	20,464	2,564	3,863	523	2,639	2,073		9,614	1,310	5,451	R 42,161	R 72,916
Average	20,402	2,579	3,799	539	2,646	2,067		9,495	1,328	5,361	R 41,762	R <b>72,361</b>
2010 January	20,471	2,497	3,968	523	2,660	2,060		9,615	1,379	5,406	R 42,182	R 73,071
February	20,750	2,712	3,938	523	2,655	2,038		9,648	1,274	5,578	R 42,628	R 73,812
March	20,781	2,621	3,981	523	2,641	1,983		9,683	1,429	5,505	R 42,650	R 73,843
April		2,695	3,961	523	2,639	1,967		9,646	1,378	5,390	R 42,434	R 73,804
May	21,025	2,745	4,040	523	2,639	1,921		9,691	1,297	5,390	R 42,478	R 73,805
June	21,604	2,772	4,108	523	2,592	1,611		9,727	1,076	5,425	R 42,037	R 74,006
July	21,634	2,765	4,056	522	2,618	1,864		9,710	1,055	5,288	R 42,170	R 74,159
August	21,669	2,783	4,104	522	2,604	1,648		9,623	1,070	5,440	R 42,102	R 74,139
September		2,648	4,183	522	2,615	1,637		9,725	1,194	5,652	R 42,404	R 74,472
October		2,690	4,181	522 525	2,615	1,952		9,816	1,195	5,571	R 42,674 R 43,026	<sup>R</sup> 74,308 <sup>R</sup> 74,927
November	21,510 21,568	2,942 2,933	4,263 4,126	525 525	2,556 2,620	1,868 1,886		9,723 9,719	1,248 1,207	5,553 5,507	R 42,899	R 74,830
Average	21,366 <b>21,257</b>	2,933 <b>2,734</b>	4,126 <b>4,076</b>	523	2,620 <b>2,621</b>	1,869		9,719	1,207 1,233	5,307 <b>5,474</b>	R <b>42,472</b>	R <b>74,030</b>
<b>2011</b> January	22,026	2,770	4,195	522	2,632	1,905		9,769	1,316	<sup>E</sup> 5,483	R 42,831	<sup>R</sup> 75,311
February	21,934	2,906	4,147	521	2,602	1,861		9,773	1,085	E 5,612	R 42,731	R 74,810
March	21,952	2,854	4,139	517	2,620	1,808		9,753	1,073	E 5,633	R 42,610	R 73,539
April	22,170	2,843	4,127	515	2,621	1,874		9,795	1,164	E 5,594	R 42,397	R 73,446
May	22,220	R 2,548	4,104	515	2,603	1,607		9,818	1,017	E 5,612	R 41,564	<sup>R</sup> 72,628
June		R 2,647	4,172	515	2,592	1,660		R 9,744	1,020	E 5,624	R 41,834	R 73,545
July	23,120	R 2,887	4,073	510	2,580	1,737		9,837	R 946	E 5,610	R 42,031	R 73,988
August	23,270	3,029	4,030	510	2,598	1,714		9,832	R 756	E 5,754	R 42,248	R 74,339
September	23,170	R 2,952	3,964	R 505	2,534	1,636		9,851	915	E 5,641	R 41,988	R 74,130
October 10-Month Average	22,920 <b>22,575</b>	2,992 <b>2,842</b>	3,926 <b>4,087</b>	505 <b>513</b>	2,598 <b>2,598</b>	1,756 <b>1,755</b>		9,849 <b>9,802</b>	1,047 <b>1,033</b>	E 5,784 E <b>5,635</b>	42,468 <b>42,268</b>	74,316 <b>74,000</b>
2010 10-Month Average 2009 10-Month Average	21,200	2,693 2,567	4,053 3,791	523 542	2,628 2,651	1,868 2,061		9,689 9,468	1,234 1,325	5,463 5,345	42,374 41,667	73,942 72,224

<sup>&</sup>lt;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.

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.

for all years.

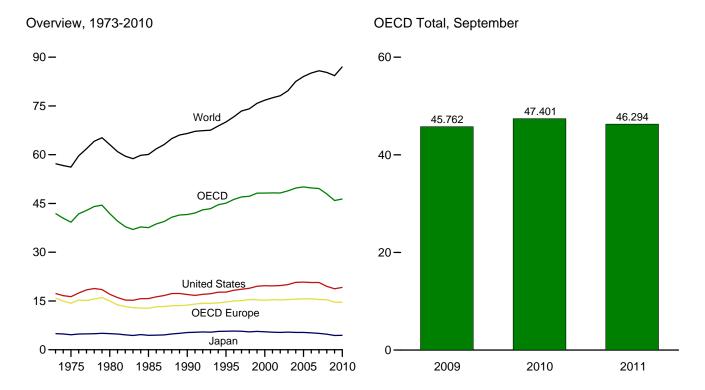
<sup>b</sup> Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, United Arab Emirates, and the Neutral Zone (between Kuwait and Saudi Arabia).

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

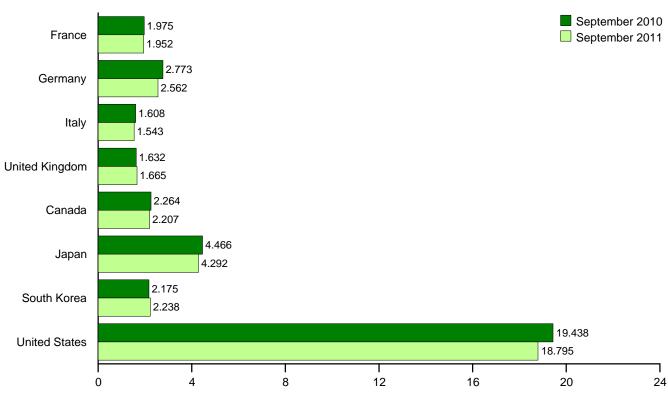
Web Page: See http://www.eia.gov/totalenergy/data/monthly/#international for all available data beginning in 1973.

Sources: See end of section.

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



# 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)

				United	OECD			South	United	Other		
	France	Germanya	Italy	Kingdom	Europeb	Canada	Japan	Korea	States	OECDc	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	12,770	1,526	4,436	552	15,726	2,564	37,575	60,083
1990 Average	1,826	2,682	1,868	1,776	13,729	1,737	5,315	1,048	16,988	2,784	41,601	66,533
1995 Average	1,920 1.949	2,882 2,922	1,942 1,920	1,816 1,852	14,714 14,998	1,817 1,871	5,693 5,739	2,008 2,101	17,725 18,309	3,135 3,206	45,092 46,224	70,067 71,665
1996 Average1997 Average	1,969	2,922	1,934	1,810	15,140	1,940	5,702	2,101	18,620	3,355	47,013	73,450
1998 Average	2,043	2,923	1,943	1,792	15,448	1,931	5,507	1,917	18,917	3,486	47,206	74,105
1999 Average	2,031	2,836	1,891	1,811	15,357	2,016	5,642	2,084	19,519	3,567	48,185	75,819
2000 Average	2,000	2,767	1,854	1,765	15,215	2,014	5,515	2,135	19,701	3,624	48,205	76,781
2001 Average	2.054	2,807	1.832	1,747	15,384	2.043	5.412	2,132	19,649	3,633	48,253	77,508
2002 Average	1,985	2,710	1,870	1,739	15,329	2,065	5,319	2,149	19,761	3,595	48,218	78,161
2003 Average	2.001	2,662	1.860	1,759	15,445	2,191	5,428	2.175	20,034	3,628	48,901	79,708
2004 Average	2,009	2,649	1,829	1,785	15,547	2,282	5,319	2,155	20,731	3,719	49,753	82,530
2005 Average	1,991	2,621	1,781	1,823	15,666	2,315	5,328	2,191	20,802	3,800	50,102	84,064
2006 Average	1,991	2,639	1,777	1,803	15,666	2,229	5,197	2,180	20,687	3,826	49,785	85,133
2007 Average	1,979	2,420	1,729	1,734	15,474	2,283	5,037	2,241	20,680	3,876	49,591	85,823
2008 Average	1,945	2,545	1,667	1,725	15,389	2,232	4,788	2,142	19,498	3,870	47,920	85,318
<b>2009</b> January	2,032	2,416	1,507	1,723	14,882	2,239	4,850	2,301	19,040	3,569	46,881	NA
February	2,044	2,644	1,585	1,675	15,234	2,230	4,721	2,459	18,822	3,712	47,178	NA
March	1,962	2,785	1,521	1,719	15,179	2,160	4,615	2,190	18,719	3,686	46,548	NA
April	1,842	2,506	1,526	1,686	14,674	2,060	4,267	2,212	18,672	3,645	45,529	NA
May	1,711	2,335	1,480	1,594	13,969	2,065	3,857	2,131	18,211	3,662	43,895	NA
June	1,860	2,373	1,541	1,670	14,681	2,155	4,104	2,080	18,828	3,775	45,623	NA
July	1,881	2,412	1,692	1,639	14,806	2,181	4,035	2,009	18,626	3,793	45,449	NA
August	1,618	2,263	1,415	1,636	13,892	2,168	4,211	2,069	18,949	3,757	45,046	NA
September	1,927	2,550	1,596	1,652	15,105	2,148	4,182	2,037	18,594	3,696	45,762	NA
October	1,887	2,506	1,598	1,633	14,893	2,115	4,337	2,192	18,803	3,819	46,158	NA
November	1,757	2,353	1,500	1,616	14,289	2,161	4,436	2,231	18,753	3,849 3,967	45,717	NA
December Average	1,936 <b>1,870</b>	2,299 <b>2,452</b>	1,563 <b>1,543</b>	1,512 <b>1,646</b>	14,415 <b>14,663</b>	2,210 <b>2,157</b>	5,124 <b>4,394</b>	2,370 <b>2,188</b>	19,237 <b>18,771</b>	3,744	47,323 <b>45,918</b>	NA <b>84,336</b>
<b>2010</b> January	1,785	2,186	1,353	1,578	13,483	2,104	4,766	2,344	18,652	3,482	44,830	NA
February	1,988	2,481	1,518	1,679	14,691	2,229	4,988	2,365	18,850	3,804	46,927	NA
March	1,942	2,530	1,547	1,675	14,802	2,137	4,725	2,237	19,099	3,705	46,704	NA
April	1.875	2,286	1,504	1,638	14,225	2,108	4,352	2,232	19.044	3,752	45.712	NA
May	1,723	2,379	1,435	1,607	13,885	2,155	3,865	2,153	18,866	3,723	44,647	NA
June	1,866	2,535	1,561	1,590	14,659	2,241	3,992	2,160	19,537	3,823	46,411	NA
July	1,858	2,596	1,643	1,623	14,918	2,184	4,194	2,094	19,319	3,748	46,457	NA
August	1,770	2,572	1,490	1,635	14,494	2,335	4,412	2,204	19,662	3,595	46,702	NA
September	1,975	2,773	1,608	1,632	15,372	2,264	4,466	2,175	19,438	3,686	47,401	NA
October	1,782	2,647	1,516	1,659	14,894	2,208	4,059	2,209	18,974	3,640	45,983	NA
November	1,818	2,611	1,551	1,639	14,975	2,260	4,620	2,374	18,977	3,802	47,010	NA
December	1,968	2,349	1,615	1,518	14,606	2,274	5,029	2,479	19,722	3,824	47,934	NA
Average	1,861	2,495	1,528	1,622	14,580	2,208	4,452	2,251	19,180	3,714	46,386	87,057
<b>2011</b> January	1,805	2,246	1,354	1,595	13,634	2,256	4,923	2,427	19,121	R 3,463	45,823	NA
February	1,951	2,409	1,504	1,646	14,664	2,253	5,093	2,346	18,869	R 3,822	47,047	NA
March	1,821	2,404	1,446	1,630	14,292	2,242	4,575	2,292	19,248	R 3,860	46,510	NA
April	1,780	2,283	1,463	1,615	13,939 R 14,003	2,115	4,008	2,008	18,613	R 3,754	R 44,437	NA
May	1,766	2,427	1,426	1,549	R 14,002	2,136 R 2 204	3,801	2,016	18,363	R 3,720	R 44,038	NA
June	1,819	2,292	1,511	1,682	R 14,393	R 2,204	3,957	2,109	19,277	R 3,875	R 45,815	NA
July	1,831	2,425 R 2,666	1,479	1,556	R 14,379	R 2,275	4,240	2,186	18,555	R 3,800	R 45,435	NA
August	1,836	R 2,666	1,401	1,611	R 14,707	R 2,335	4,439 4,292	2,209	19,153	R 3,825	R 46,669	NA NA
September 9-Month Average	1,952 <b>1,839</b>	2,562 <b>2,413</b>	1,543 <b>1,458</b>	1,665 <b>1,616</b>	14,987 <b>14,328</b>	2,207 <b>2,225</b>	4,292 <b>4,365</b>	2,238 <b>2,203</b>	18,795 <b>18,889</b>	3,774 <b>3,765</b>	46,294 <b>45,775</b>	NA NA
2010 9-Month Average	1,863	2,482	1,517	1,628	14,498	2,195	4,413	2,217	19,164	3,700	46,188	NA
2009 9-Month Average	1,873	2,474	1,540	1,666	14,707	2,156	4,313	2,163	18,717	3,699	45,754	NA

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

R=Revised. NA=Not available.

Totals may not equal sum of components due to independent

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

Columbia.

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

Sources: • United States: Table 3.1. • Chile, East Germany, Former Czechoslovakia, Hungary, Mexico, Poland, South Korea, Non-OECD Countries, U.S. Territories, and World: 1973-1979—U.S. Energy Information Administration (EIA), International Energy Database. • Countries Other Than United States: 1980-2008—EIA, International Energy Statistics (IES). • OECD Countries, and U.S. Territories: 2009 forward—EIA, IES. • World: 2009 and 2011—EIA Short Term Energy Outlook, Isanuary 10, 2012, Table 3a. • All Other 2010—EIA, Short Term Energy Outlook, January 10, 2012, Table 3a. • All Other Data:—International Energy Agency (IEA), Quarterly Oil Statistics and Energy Balances in OECD Countries, various issues.

Germany.

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

c "Other OECD" consists of Australia, Chile, Mexico, New Zealand, and the

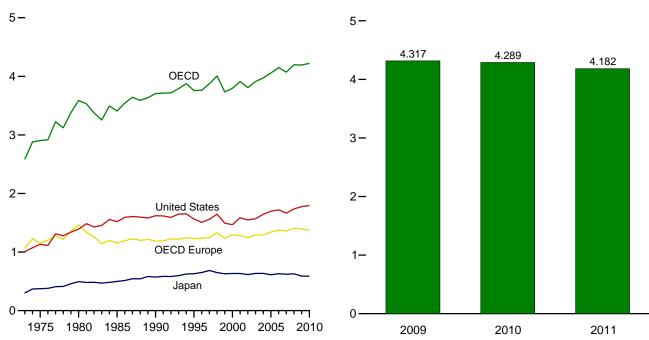
U.S. Territories.

<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."

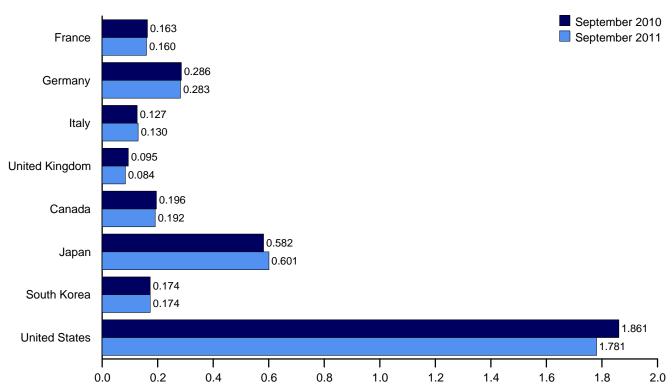
Figure 11.3 Petroleum Stocks in OECD Countries (Billion Barrels)

Overview, End of Year, 1973-2010

OECD Stocks, End of Month, September



By Selected OECD Country, End of Month



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

Table 11.3 Petroleum Stocks in OECD Countries

(Million Barrels)

				United	OECD			South	United	Other	
	France	Germany <sup>a</sup>	Italy	Kingdom	Europeb	Canada	Japan	Korea	States	<b>OECD</b> c	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	110	3,408
1990 Year	143	280	143	103	1,188	143	572	64	1,621	117	3,706
1995 Year	155	302	141	101	1,228	132	631	92	1,563	113	3,758
1996 Year	154	303	135	103	1,235	127	651	123	1,507	118	3,762
1997 Year	161	299	129	100	1,246	144	685	124	1,560	115	3,875
1998 Year	169	323	135	104	1,331	139	649	129	1,647	111	4,006
	160	290	130	104	1,233	142	629	132	1,493	105	3,733
1999 Year	170	290 272	140		,		634	140			3,733 3.796
2000 Year				100	1,294	144			1,468	117	
2001 Year	165	273	134	113	1,281	154	634	143	1,586	112	3,910
2002 Year	170	253	138	104	1,247	155	615	140	1,548	103	3,808
2003 Year	179	273	135	100	1,290	165	636	155	1,568	96	3,910
2004 Year	177	267	136	101	1,292	154	635	149	1,645	99	3,974
2005 Year	185	283	132	95	1,342	168	612	135	1,698	103	4,058
2006 Year	182	283	133	103	1,374	169	631	152	1,720	103	4,148
2007 Year	180	275	133	90	1,358	175	621	143	1,665	108	4,072
2008 Year	179	279	128	99	1,407	174	630	135	1,737	114	4,196
2009 January	179	282	136	100	1,413	177	618	149	1,766	115	4,237
February	178	281	128	98	1,412	177	619	157	1,777	107	4,249
March	178	280	131	100	1,415	175	611	155	1,803	109	4,268
April	173	281	132	98	1,405	178	606	152	1,816	114	4,271
May	176	286	133	92	1,403	178	609	149	1,831	112	4,281
June	173	285	129	92	1,403	177	611	149	1,844	110	4,295
July	174	283	127	97	1,398	181	607	157	1,850	108	4,300
August	178	287	130	96	1,415	182	610	160	1,834	111	4,312
September	174	280	129	94	1,400	177	607	167	1,848	117	4,317
October	173	281	130	96	1,382	179	604	167	1,825	109	4,266
November	179	286	130	96	1,408	177	606	162	1,814	109	4,275
December	175	284	126	94	1,398	169	589	155	1,776	105	4,193
2010 January	182	295	127	95	1,439	172	593	162	1,786	111	4,263
<b>2010</b> January	175	290	134	99	1,424	174	587	163	1,785	117	4,249
February		289	129	99							
March	172				1,404	180	581	164	1,787	114	4,230
April	172	284	135	95	1,414	181	590	166	1,810	111	4,272
May	173	286	131	99	1,422	177	599	166	1,830	108	4,302
June	170	280	133	96	1,405	178	597	167	1,842	120	4,308
July	168	282	127	96	1,389	R 186	598	170	1,855	116	R 4,314
August	171	289	133	93	1,406	<sup>R</sup> 195	597	169	1,862	115	R 4,343
September	163	286	127	95	1,365	<sup>R</sup> 196	582	174	1,861	111	R 4,289
October	161	285	129	94	1,375	<sup>R</sup> 195	599	170	1,847	112	R 4,298
November	170	287	126	92	1,367	<sup>R</sup> 197	604	171	1,827	108	R 4,274
December	168	287	133	89	1,371	<sup>R</sup> 196	588	165	1,794	105	<sup>R</sup> 4,221
2011 January	173	293	140	96	1,413	186	596	168	1,803	105	4,272
February	170	291	131	95	1,386	182	591	162	1,773	108	R 4,203
March	167	289	132	93	1,374	185	575	170	1,770	105	R 4,180
April	163	295	132	93	1,360	191	601	173	1,776	108	4,209
May	168	292	130	90	1,364	R 189	599	170	1,805	110	R 4,236
June	167	291	130	85	R 1,355	R 190	593	175	1,808	107	R 4,229
July	164	295	130	86	R 1,348	R 189	599	173	1,820	R 108	R 4,237
August	162	288	132	R 89	R 1,350	188	598	R 171	1,820	R 110	R 4,237
	160	283	132	84	1,330	192	601	174	1,781	105	4,219
September	100	203	130	04	1,330	192	001	1/4	1,701	105	4,102

<sup>&</sup>lt;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.

R=Revised. NA=Not available.

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

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

Sources: • United States: Table 3.4. • U.S. Territories: 1983 forward—U.S. Energy Information Administration, International Energy Database.
• All Other Data: 1973-1982—International Energy Agency (IEA), Quarterly Oil Statistics and Energy Balances, various issues. 1983—IEA, Monthly Oil and Gas Statistics Database. 1984 forward—IEA, Monthly Oil Data Service, December 13,

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

<sup>c</sup> "Other OECD" consists of Australia, New Zealand, and the U.S. Territories,

and, for 1984 forward, Mexico.

<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.

# **International Petroleum**

### Tables 11.1a and 11.1b Sources

# **United States**

Table 3.1.

# All Other Countries and World, Annual Data

1973–1979: U.S. Energy Information Administration (EIA), *International Energy Annual 1981*, Table 8. 1980 forward: EIA, International Energy Database, January 2012.

# All Other Countries and World, Monthly Data

1973–1980: Petroleum Intelligence Weekly (PIW), Oil &

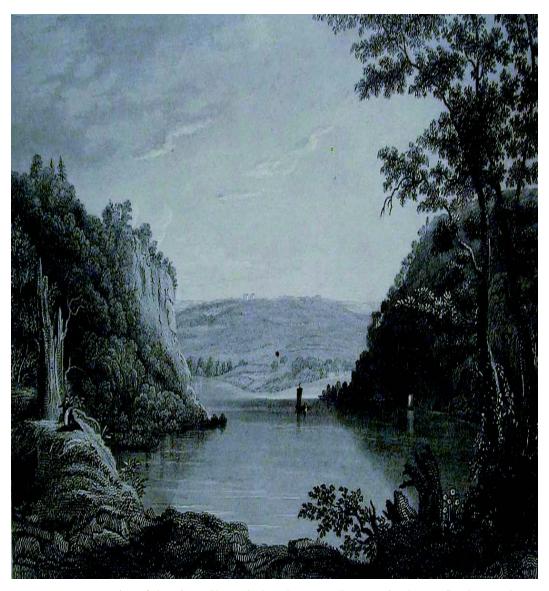
Gas Journal (OGJ), and EIA adjustments.

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

1994 forward: EIA, International Energy Database, January

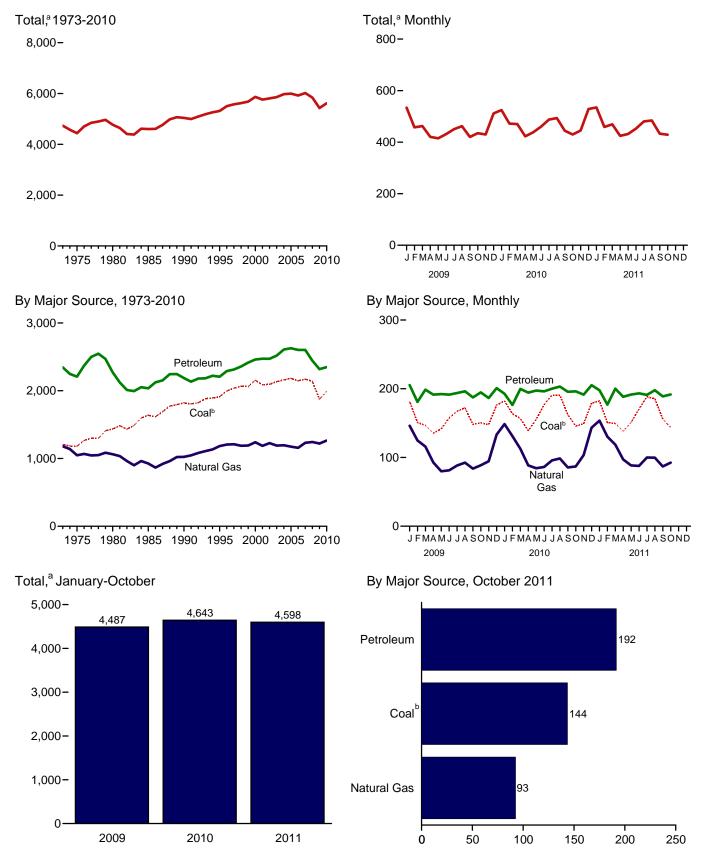
2012.

# **Environment**



"Harpers Ferry, Junction of the Rivers Shenandoah and Potomac." Engraving by W. Goodacre and James Archer, published in *The History and Topography of the United States of North America*, by John Howard Hinton, 1852. From the collection of the National Park Service, Harpers Ferry National Historical Park, Accession #1297.

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



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

Web Page: http://www.eia.gov/totalenergy/data/monthly/#environment. Source: Table 12.1.

<sup>&</sup>lt;sup>b</sup> Includes coal coke net imports.

**Carbon Dioxide Emissions From Energy Consumption by Source Table 12.1** 

						-		Petrole	um					
	Coalb	Natural Gas <sup>c</sup>	Aviation Gasoline	Distillate Fuel Oil <sup>d</sup>	Jet Fuel	Kero- sene	LPG <sup>e</sup>	Lubri- cants	Motor Gasoline <sup>f</sup>	Petroleum Coke	Residual Fuel Oil	<b>Other</b> <sup>g</sup>	Total	Total <sup>h,i</sup>
1973 Total 1975 Total 1980 Total 1985 Total 1995 Total 1995 Total 1995 Total 1996 Total 1997 Total 1997 Total 1998 Total 1998 Total 2000 Total 2001 Total 2002 Total 2003 Total 2004 Total 2005 Total 2006 Total 2007 Total 2007 Total 2007 Total 2008 Total	1,207 1,181 1,436 1,638 1,821 1,913 1,995 2,040 2,062 2,155 2,088 2,095 2,136 2,160 2,182 2,147 2,172 2,139	1,181 1,047 1,063 926 1,025 1,184 1,221 1,189 1,192 1,192 1,187 R 1,227 1,175 R 1,175 R 1,175 R 1,175 R 1,175 R 1,123 1,233 1,243	6 5 4 4 3 3 3 3 3 3 2 2 2 2 2 2 2 2 2 2 2 2	480 443 446 445 470 498 524 538 555 580 598 587 610 632 640 648 652 615	155 146 156 178 222 232 234 235 245 254 243 237 231 240 240 238 226	32 24 17 6 8 9 10 11 10 11 6 8 10 10 10 2 2	91 82 87 86 97 78 84 85 75 91 102 92 98 95 98 94 93	13 11 13 12 13 13 12 13 14 14 14 14 11 12 12 11 11	911 900 930 988 1,044 1,063 1,075 1,107 1,127 1,135 1,151 1,183 1,188 1,214 1,214 1,224 1,227 1,166	51 48 46 55 67 75 78 89 93 84 88 94 105 105 104 98 92	508 443 453 216 220 152 152 142 158 148 163 145 125 138 155 164 122 129	100 97 142 93 127 114 132 138 125 130 117 132 127 140 142 141 150 148 130	2,346 2,209 2,272 2,035 2,187 2,207 2,313 2,358 2,417 2,473 2,472 2,518 2,609 2,628 2,603 2,603 2,603	4,733 4,437 4,770 4,609 5,314 5,501 5,575 5,622 5,887 5,759 R 5,867 5,975 R 5,991 R 6,020 5,838
Page 1 Pa	181 151 147 135 142 158 167 172 148 150 148 176 <b>1,876</b>	146 R 125 116 R 93 80 81 88 R 93 84 R 95 133 R 1,222	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	54 46 49 44 45 45 45 45 45 51 564	16 15 18 17 17 17 19 18 17 17 16 17	1 (s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	9 8 7 6 6 7 7 7 8 10 10 <b>91</b>	1 1 1 1 1 1 1 1 1 1 1	95 88 98 96 99 97 101 101 94 98 97 1,157	7 7 7 8 9 9 6 7 8 6 6 7 8 <b>7</b>	12 6 9 10 7 8 5 7 5 8 7 9	11 10 9 8 9 8 10 9 10 9 111	205 181 199 191 192 191 194 196 187 195 187 201 <b>2,320</b>	R 534 R 458 462 R 421 415 431 450 462 420 R 435 430 511 R 5,429
Page 2010 January	182 164 157 139 155 177 191 162 146 149 179	R 149 R 131 R 113 R 88 R 84 R 86 R 99 R 86 R 87 R 103 R 143 R 1,265	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	49 46 51 48 48 47 50 50 50 49 55 <b>590</b>	17 18 17 18 19 19 19 18 18 17 17	(s) (s) (s) (s) (s) (s) (s) (s) (s) 1	10 9 8 7 7 7 7 7 7 8 8 8 11 <b>94</b>	1 1 1 1 1 1 1 1 1 1	92 84 95 96 99 97 101 100 96 97 92 96 1,146	5 7 6 6 7 7 8 7 6 7	9 7 8 9 8 7 9 7 8 8 8 8 9	9 9 11 11 10 10 10 11 10 9 9 10	193 176 200 194 197 196 200 203 196 196 191 205 <b>2,349</b>	R 525 R 472 R 470 R 423 R 438 R 460 488 R 493 R 444 R 430 R 445 R 528
Pebruary	182 151 149 138 151 R 171 R 188 R 185 156 144 <b>1,616</b>	154 R 130 119 97 88 88 100 100 87 93 <b>1,055</b>	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	52 46 53 47 48 50 45 52 50 52 495	17 15 17 17 18 19 18 19 17 17	(s) 1 (s) (s) (s) (s) (s) (s) (s) (s) 2	10 8 8 6 7 6 7 7 7 8 <b>75</b>	1 1 1 1 1 1 1 1 1 9	91 84 95 92 95 94 97 96 92 93	6 4 6 7 7 6 8 6 7	9 8 9 7 7 5 5 7 6 <b>72</b>	10 9 12 10 9 10 11 10 9 8	198 177 200 188 192 193 191 198 189 192 <b>1,918</b>	535 459 469 425 432 R 453 R 480 R 484 433 429 <b>4,598</b>
2010 10-Month Total 2009 10-Month Total	1,663 1,552	1,018 994	2 2	485 467	176 171	2 2	76 71	9 8	958 967	64 75	80 76	101 94	1,952 1,932	4,643 4,487

<sup>&</sup>lt;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.

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

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

• See Note 1, "Emissions of Carbon Dioxide and Other Greenhouse Gases," at end of section. • Data exclude emissions from biomass energy consumption. See Table 12.7 and Note 2, "Accounting for Carbon Dioxide Emissions From Biomass Energy Combustion," at end of section.

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

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

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

Natural gas, excluding supplemental gaseous fuels. Distillate fuel oil, excluding biodiesel.

Liquefied petroleum gases.

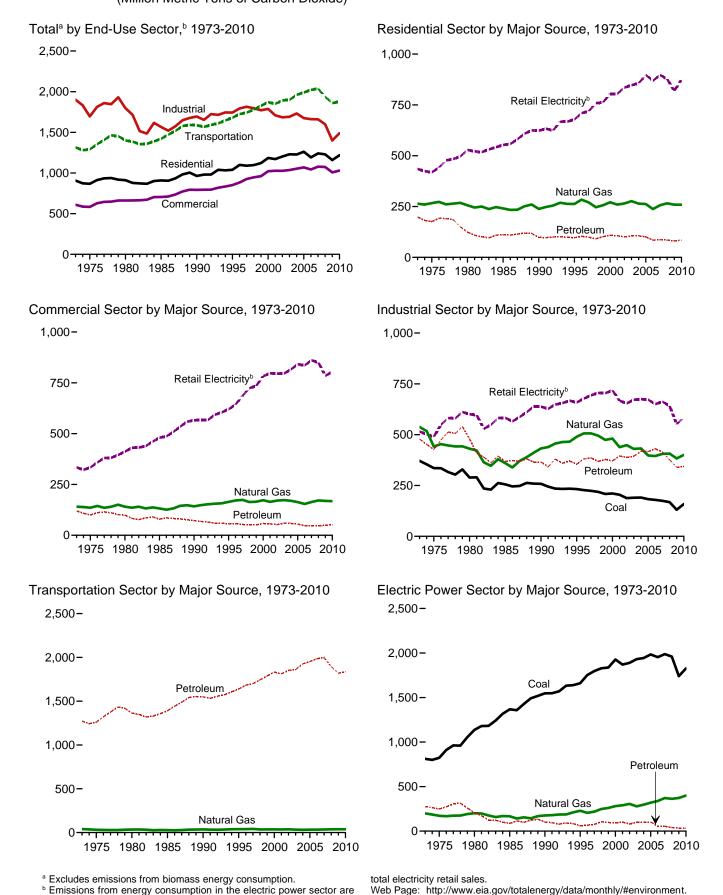
Finished motor gasoline, excluding fuel ethanol.

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

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

Excludes emissions from biomass energy consumption. See Table 12.7.

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



Sources: Tables 12.2-12.6.

allocated to the end-use sectors in proportion to each sector's share of

Table 12.2 Carbon Dioxide Emissions From Energy Consumption: Residential Sector

				Petrole	eum			
	Coal	Natural Gas <sup>b</sup>	Distillate Fuel Oil <sup>c</sup>	Kerosene	<b>LPG</b> <sup>d</sup>	Total	Retail Elec- tricity <sup>e</sup>	Total <sup>f</sup>
1973 Total 1975 Total 1980 Total	9 6 3	264 266 256	147 132 96	16 12 8	36 32 20	199 176 124	435 419 529	907 867 911
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 1997 Total	2 2	284 270	68 64	6 7	30 29	104 99	710 719	1,099 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 2002 Total	1	259 R 265	66 63	7 4	33 34	106 101	805 835	1,172 R 1.203
2003 Total	i	276	66	5	34	106	847	1,230
2004 Total	1	264	68	6	32	106	856	1,228
2005 Total	1	262	62	6	32	101	897	1,261
2006 Total 2007 Total	1	237 257	52 53	5 3	28 31	85 87	869 897	1,192 R 1,241
2008 Total	i	266	49	2	35	85	878	1,229
						•		,
2009 January	(s) (s)	51 41	6 5	(s) (s)	3 3	9 8	85 67	146 116
February March	(s)	33	5	(s)	3	8	62	102
April	(s)	21	4	(s)	3	6	53	80
May	(s)	11	3	(s)	3	5	56	72
June	(s)	8	2 3	(s)	2 3	5 5	70	82 95
July August	(s) (s)	6 6	3	(s) (s)	3	5 6	83 85	95 97
September	(s)	6	3	(s)	3	6	66	78
October	(s)	14	3	(s)	3	6	59	79
November	(s)	20 41	3	(s)	3 4	7 9	57	84
December Total	(s) <b>1</b>	259	5 <b>44</b>	(s) <b>2</b>	35	81	78 <b>819</b>	129 <b>1,159</b>
<b>2010</b> January	(s)	R 51	7	(s)	4	10	91	R 152
February	(s)	R 43	6	(s)	3	10	74	R 126
March	(s)	R 31	4	(s)	3	7	65	R <sub>104</sub>
April	(s)	R 17	3	(s)	3	5	51	R 73
May June	(s) (s)	11 7	3 3	(s) (s)	3	6 6	59 79	<sup>R</sup> 75 93
July	(s)	6	3	(s)	3	6	97	R 108
August	(s)	6	2	(s)	3	5	96	107
September	(s)	R 6	2 3	(s)	3 3	5 7	72	<sup>R</sup> 83 <sup>R</sup> 73
October November	(s) (s)	11 <sup>R</sup> 24	3 4	(s) (s)	3	7	56 56	R 87
December	(s)	R 46	6	(s)	4	10	81	R 138
Total	`1	R 259	46	2	37	85	874	R 1,219
2011 January	(s)	53	5	(s)	4	9	88	149
February	(s)	42	5	(s)	3	8 7	68	118
March	(s)	33 19	4	(s)	3	7	60	100
April May	(s) (s)	19 11	2 2	(s) (s)	3	5 5	54 59	78 74
June	(s)	7	2	(s)	3	5 5	76	89
July	(s)	6	2	(s)	3	5	97	108
August	(s)	6	3	(s)	3	6	93	105
September October	(s) (s)	7 12	3 4	(s) (s)	3 3	6 7	69 54	82 73
10-Month Total	1	196	33	1	30	64	717	9 <b>77</b>
	4							
2010 10-Month Total 2009 10-Month Total	1 1	189 197	36 36	1 2	30 27	67 65	738 685	995 948

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

b Natural gas, excluding supplemental gaseous fuels.

c Distillate fuel oil, excluding biodiesel.

d Liquefied petroleum gases.

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

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

Sources: See end of section.

Equation performs gases.

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.

Excludes emissions from biomass energy consumption. See Table 12.7.

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

Table 12.3 Carbon Dioxide Emissions From Energy Consumption: Commercial Sector

				<b>-</b>							
	Coal	Natural Gas <sup>b</sup>	Distillate Fuel Oil <sup>c</sup>	Kerosene	LPG <sup>d</sup>	Motor Gasoline <sup>e</sup>	Petroleum Coke	Residual Fuel Oil	Total	Retail Elec- tricity <sup>f</sup>	Total <sup>g</sup>
1973 Total	15 14 11 13 12 11 12 12 9 9 9 9 9 8 10 9 6 7	141 136 141 132 142 164 171 174 165 173 164 R 170 173 170 163 154 164 171	47 43 38 46 39 35 32 31 32 36 37 32 35 32 36 37 32 35 32 36 37 32 32 35 32 36 37 37 32 38 38 38 39 39 30 30 30 30 30 30 30 30 30 30 30 30 30	5 4 3 2 1 2 2 2 2 2 2 2 2 1 1 1 1 1 2 1	9 8 6 6 6 7 8 8 7 9 9 9 10 10 8 8 8	6 6 8 7 8 1 2 3 3 3 2 3 3 3 4 4 3 3	NA NA NA NA (S)	52 39 44 18 18 11 11 9 7 6 7 6 9	120 100 98 79 73 56 57 54 51 51 58 57 52 59 48 47 46	334 333 412 480 566 620 643 686 724 735 783 797 795 796 816 842 836 861 850	609 583 662 704 793 851 883 926 947 960 1,022 1,027 R 1,026 1,036 1,043 R 1,043
2009 January	1 1 (s) (s) (s) (s) (s) (s) (s) (s)	28 23 19 14 9 7 7 7 7 11 14 23	4 3 3 2 2 2 2 2 2 2 2 2 2 4 30	(S) (S) (S) (S) (S) (S) (S) (S) (S) (S)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	(s) (s) (s) 0 0 0 (s) (s) (s) (s)	1 1 (s) (s) (s) (s) (s) (s) (s) (s) (s)	6 5 5 4 3 3 3 3 4 4 4 6 <b>49</b>	69 58 60 58 62 70 73 76 66 65 60 68 <b>785</b>	103 87 85 75 75 80 84 86 77 80 78 98 <b>1,008</b>
2010 January February March April May June July August September October November December Total	1 1 (s) (s) (s) (s) (s) (s) (s) (s) (s)	R 27 R 24 R 18 12 9 7 R 6 7 7 10 R 25 R 168	4 4 3 2 2 2 2 2 2 1 2 3 4 32	(S) (S) (S) (S) (S) (S) (S) (S) (S) (S)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	(s) (s) (s) (s) (o) (o) (s) (s) (s) (s) (s)	1 1 (s) (s) (s) (s) (s) (s) (s) (s) (s)	7 6 4 3 3 4 3 3 4 4 6 51	66 60 59 57 66 74 80 69 62 61 68 <b>804</b>	R 101 R 91 R 82 73 78 R 85 90 91 79 77 R 81 R 100 R 1,029
2011 January	1 1 (s) (s) (s) (s) (s) (s) (s) (s)	29 24 20 13 9 7 7 7 8 12 134	4 3 3 2 1 2 2 2 2 2 3 <b>22</b>	(s) (s) (s) (s) (s) (s) (s) (s) (s)	1 1 1 1 1 1 1 1 1 1 8	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	(s) (s) (s) 0 0 0 0 0 0 (s)	1 1 (s) (s) (s) (s) (s) (s) (s)	6 5 4 3 2 3 3 4 4 4 4 38	65 56 59 57 64 71 79 78 66 62 <b>657</b>	100 85 83 73 76 82 89 89 78 78
2010 10-Month Total 2009 10-Month Total	4 5	127 132	25 25	(s) (s)	8 7	3 3	(s) (s)	5 5	41 40	675 655	847 832

a Metric tons of carbon dioxide can be converted to metric tons of carbon Metric tons of carbon dioxide can be converted equivalent by multiplying by 12/44.
 B Natural gas, excluding supplemental gaseous fuels.
 C Distillate fuel oil, excluding biodiesel.
 d Liquefied petroleum gases.
 e Finished motor gasoline, excluding fuel ethanol.

Liquefied petroleum gases.
 Finished motor gasoline, excluding fuel ethanol.
 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.
 Excludes emissions from biomass energy consumption. See Table 12.7.
 R=Revised. NA=Not available. (s)=Less than 0.5 million metric tons.

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

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

Sources: See end of section.

Table 12.4 Carbon Dioxide Emissions From Energy Consumption: Industrial Sector

		Coal						Petroleun	n					
	Coal	Coke Net Imports	Natural Gas <sup>b</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	Retail Elec- tricity <sup>9</sup>	Total <sup>h</sup>
1973 Total	371 336 289 256 258 233 227 224 219 208 211 204 188 190 191 183 179 175 168	-1 2 -4 -4 -2 1 1 7 7 3 5 8 8 7 7 7 3 7 6 6 5 5 7 3 5 5	538 442 431 360 432 490 506 506 495 474 481 439 R 448 430 8 439 8 398 R 395 8 405	106 97 96 81 84 82 86 88 88 86 87 95 88 83 88 92 92 92 93	11 9 13 3 1 1 1 1 1 2 2 1 1 2 2 3 2 2 1 (s)	43 39 61 58 39 45 46 48 39 48 56 49 55 51 55 51 54 42	7 6 7 6 7 7 7 7 7 7 6 6 6 6 6 6 6 6 6 6	18 16 11 15 13 14 14 15 14 11 21 22 23 26 25 26 21	49 48 45 54 67 70 68 77 81 77 76 76 82 80 82 80	144 117 105 57 31 24 24 21 16 14 17 14 13 15 17 20 16 13	100 97 142 93 127 114 132 138 125 130 117 132 127 140 142 141 150	478 427 480 369 366 355 381 386 378 370 395 388 394 419 417 435 377	515 490 601 583 638 659 678 694 706 704 719 667 667 675 673 652 662 642	1,902 1,996 1,797 1,566 1,695 1,745 1,795 1,815 1,772 1,788 1,772 1,685 1,692 1,675 1,675 1,675 1,675 1,661 1,799
Pebruary September October November Total	12 12 12 10 10 10 10 11 11 11 11 11	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	36 32 33 31 30 29 30 31 30 32 33 36 383	11 8 8 5 6 6 4 4 6 7 8 8 80	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	5 4 4 3 3 3 3 3 3 4 5 5 <b>46</b>	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	1 1 1 1 1 1 1 1 1 1 1 1 1	6 6 7 7 8 5 6 7 5 6 <b>7</b>	1 1 1 1 1 (s) 1 (s) 1 1 1 7	11 10 9 8 9 8 10 9 10 9 111	36 30 29 26 27 27 25 25 28 28 31 339	47 41 43 42 45 46 47 50 46 47 46 49 <b>551</b>	130 115 117 109 111 111 112 117 115 119 118 127 <b>1,401</b>
Pebruary February April May June July August September October November December Total	12 13 13 13 13 13 13 14 13 14 13 14	(s) (s) (s) (s) (s) (s) (s) (s) (s) -1	R 37 R 34 35 32 R 32 R 31 R 32 R 32 R 32 R 32 R 37 R 37 R 401	6 6 9 8 6 5 4 7 9 7 8 9 8 8 9	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	5 4 3 3 3 3 3 4 4 6 47	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3 4 6 5 5 5 5 6 6 5 6 5 6 5 6 2	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 7	9 9 11 11 10 10 10 11 10 9 9 10	27 26 32 30 27 27 25 30 31 27 30 32 344	46 44 46 45 51 52 54 55 48 47 48 50 <b>587</b>	R 122 118 127 R 120 R 123 R 123 R 124 131 R 124 R 120 R 124 R 133 R 1,489
Pebruary February March April May June July August September October 10-Month Total	13 14 13 13 13 13 R 12 R 13 13 14	(s) (s) (s) (s) (s) (s) (s) (s) (s)	39 35 R 36 34 34 R 32 33 34 33 34 345	10 7 10 7 8 8 4 7 8 8 7	(s) (s) (s) (s) (s) (s) (s) (s) (s)	5 4 4 3 3 3 3 3 4 36	(S) (S) (S) (S) (S) (S) (S) (S) (S)	1 1 1 1 1 1 1 1 1 1 1 1 1	5 3 5 5 6 5 5 7 5 6 6 5 5 2	1 1 1 1 1 (s) (s) (s) (s) 1 (s)	10 9 12 10 9 10 11 10 9 8	33 26 33 28 28 28 26 29 27 28 28	48 42 46 45 48 50 54 53 47 47 <b>481</b>	R 133 R 116 R 129 120 124 124 R 125 R 130 120 124 <b>1,245</b>
2010 10-Month Total 2009 10-Month Total	132 108	1 -2	329 314	67 65	(s) (s)	37 35	5 4	14 14	52 62	6 6	101 94	282 280	488 455	1,231 1,156

a Metric tons of carbon dioxide can be converted to metric tons of carbon Metric toris of carbon disorder can be converted equivalent by multiplying by 12/44.
 Natural gas, excluding supplemental gaseous fuels.
 Distillate fuel oil, excluding biodiesel.

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

Notes: • Data are estimates for carbon dioxide emissions from energy including the nonfuel use of fossil fuels. See "Section 12 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

and the District of Columbia.

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

Liquefied petroleum gases. Finished motor gasoline, excluding fuel ethanol.

Finished motor gasoline, excluding fuel ethanol.

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.

Be 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.

Excludes emissions from biomass energy consumption. See Table 12.7.

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

			Petroleum									
	Coal	Natural Gas <sup>b</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	Retail Elec- tricity <sup>f</sup>	Total <sup>g</sup>
1973 Total 1975 Total 1980 Total 1985 Total 1990 Total 1995 Total 1995 Total 1996 Total 1997 Total 1997 Total 1998 Total 1998 Total 1999 Total 2000 Total 2001 Total 2002 Total 2003 Total 2004 Total 2005 Total 2006 Total 2007 Total 2007 Total	(s) (h) (h) (h) (h) (h) (h) (h) (h) (h) (h	39 32 34 28 36 38 39 41 35 36 35 37 33 32 33 33 35 37	6 5 4 4 3 3 3 3 3 3 2 2 2 2 2 2 2 2 2 2 2 2	163 155 204 232 268 307 327 342 352 366 378 387 394 414 434 444 469 472 440	152 145 155 178 223 222 234 238 245 254 243 237 231 240 240 248 226	3 3 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	6666766665655655	886 889 881 908 967 1,029 1,047 1,057 1,195 1,121 1,127 1,158 1,161 1,185 1,186 1,194 1,201 1,146	57 56 110 62 80 72 67 56 53 52 70 46 53 45 58 66 71 78 72	1,273 1,258 1,363 1,391 1,548 1,639 1,683 1,689 1,743 1,789 1,833 1,813 1,851 1,926 1,926 1,953 1,999 1,895	222333333344455555555555555555555555555	1,315 1,292 1,400 1,421 1,588 1,681 1,725 1,744 1,782 1,828 1,872 1,852 1,892 1,892 1,899 1,962 1,991 2,022 2,040 1,937
Pebruary September October November Total	(	R 5 R 4 R 4 R 3 R 3 R 3 R 3 R 3 R 3 R 3 R 3	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	32 29 33 33 35 35 36 36 34 35 33 33	16 15 18 17 17 19 18 17 16 17	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	93 86 96 94 98 95 99 100 92 96 92 95 <b>1,137</b>	7 4 7 8 4 6 3 5 3 6 5 7 <b>64</b>	149 135 154 152 154 157 157 159 147 155 147 153 1,818	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	R 154 139 158 R 156 157 157 160 162 150 158 150 158 R 1,860
2010 January	( h ) ( h )	4 4 3 3 8 3 8 3 8 3 8 3 8 3 8 3 8 3 8 3	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	31 29 35 36 36 36 37 39 37 37 34 35	17 15 18 17 18 19 19 19 18 17 17	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	91 82 94 98 96 99 98 94 96 90 94	65676566655 <b>69</b>	145 133 154 159 156 162 161 155 157 149 153	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	150 137 157 157 161 159 165 165 R 158 160 152 R 158 R 1,879
2011 January	(h) (h) (h) (h) (h) (h) (h) (h) (h)	R 5 4 R 4 3 3 R 3 3 R 3 3 R 3 3 3 3 3 3 3 3 3 3 3	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	33 30 36 35 37 37 37 39 36 37	17 15 17 17 18 19 18 19 17 17	(s) (s) (s) (s) (s) (s) (s) (s) (s)	(S) (S) 1 (S) (S) (S) (S) (S) (S) (S) (S)	89 83 93 90 93 93 96 94 90 91	7 7 7 7 6 5 3 3 6 5 5 5	147 135 153 150 155 155 155 156 149 151 <b>1,507</b>	(s) (s) (s) (s) (s) (s) (s) (s) (s)	152 R 140 157 154 158 R 158 158 160 152 154 <b>1,542</b>
2010 10-Month Total 2009 10-Month Total	(h)	31 31	2 2	352 338	176 171	2 1	4 4	941 950	58 52	1,535 1,517	4 4	1,569 1,552

<sup>&</sup>lt;sup>a</sup> Metric tons of carbon dioxide can be converted to metric tons of carbon Metric tons of carbon dioxide can be converted equivalent by multiplying by 12/44.
 B Natural gas, excluding supplemental gaseous fuels.
 C Distillate fuel oil, excluding biodiesel.
 d Liquefied petroleum gases.
 e Finished motor gasoline, excluding fuel ethanol.

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

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

Web Page: See http://www.eia.gov/totalenergy/data/monthly/#environment for

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

Finished indior gasoline, excluding fuel ethanol.

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

 <sup>9</sup> Excludes emissions from biomass energy consumption. See Table 12.7.
 h Beginning in 1978, the small amounts of coal consumed for transportation are reported as industrial sector consumption.

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

				Petro	leum				
	Coal	Natural Gas <sup>b</sup>	Distillate Fuel Oil <sup>c</sup>	Petroleum Coke	Residual Fuel Oil	Total	Geo- thermal	Non- Biomass Waste <sup>d</sup>	Total <sup>e</sup>
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	i	79	86	NA NA	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
	1,984	319	8	25 25	69	102	(s) (s)	11	2,352 2,417
2005 Total	1,964	338	5	25 22	28	56		12	2,417
2006 Total			7	17		56 55	(s)		
2007 Total	1,987	372	5		31		(s)	11	2,426
2008 Total	1,959	362	9	16	19	40	(s)	12	2,374
2009 January	169	26	1	1	3	5	(s)	1	201
February	138	25	(s)	1	1	3	(s)	1	167
March	134	23 27	1	1	1	3	(s)	1	165
April	125	24	(s)	1	1	2	(s)	1	153
	131	28	(s)	1	1	3	(s) (s)	1	163
May	147	35	(s)	1	1	3	(s)	1	186
June	157	42	(s)	1	1	3	(s)	1	203
July	162	46		1	1	3		1	203
August	137		(s)	1	1		(s)	1	178
September		37	(s)		•	3	(s)	-	
October	139	29	(s)	1	1	2	(s)	1	171
November	136	25	(s)	1	1	2	(s)	1	164
Total	165 <b>1,741</b>	28 <b>373</b>	(s) 5	14	14	2 <b>34</b>	(s) <b>(s)</b>	11	196 <b>2,159</b>
2010 January	160	30	1	1	1	4	(0)	1	204
2010 January	169 150	30 26	1	1	1 1	2	(s)	1	204 179
February			(s)		•		(s)	-	
March	143	25	(s)	1	1	2	(s)	1	171
April	125	25	(s)	1	1	2	(s)	1	154
May	142	30	(s)	1	1	3	(s)	1	176
June	163	38	1 1	1	2	4	(s)	1	206
July	177	48	1	2	2	4	(s)	1	230
August	177	51	(s)	1	2	3	(s)	1	232
September	148	38	(s)	1	1	2	(s)	1	189
October	132	31	(s)	1	1	2	(s)	1	166
November	136	27	(s)	1	1	2	(s)	1	165
December	165	31	1	1	1	3	(s)	1	200
Total	1,827	399	6	15	12	33	(s)	11	2,270
2011 January	460	29	_	2	4	3	(2)	4	201
2011 January	168 137	29 26	1 (0)		1	2	(s)	1	166
February			(s)	1	1		(s)	1	
March	135	26	(s)	1	1	2	(s)	1	164
April	125	28	(s)	1	1	2	(s)	1	156
May	137	31	(s)	1	1	2	(s)	1	171
June	157	38	(s)	1	1	2	(s)	1	198
July	176	51	(s)	1	1	3	(s)	1	230
August	172	50	(s)	1	1	2	(s)	1	225
September	143	37	(s)	1	1	2	(s)	1	183
October	129	31	(s)	.1	(s)	2	(s)	1	163
10-Month Total	1,478	349	4	12	6	22	(s)	9	1,858
2010 10-Month Total 2009 10-Month Total	1,526 1,440	342 320	5 4	13 12	11 13	28 30	(s) (s)	9 9	1,905 1,799

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

b Natural gas, excluding supplemental gaseous fuels.
c Distillate fuel oil, excluding biodiesel.

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

Municipal soin waste from informace 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 to the content of the co

consumption. See "Section 12 Methodology and Sources" at end of section.

<sup>•</sup> See "Carbon Dioxide" in Glossary. • See Note 1, "Emissions of Carbon Dioxide and Other Greenhouse Gases," at end of section. • Data exclude emissions from biomass energy consumption. See Table 12.7 and Note 2, "Accounting for Carbon Dioxide Emissions From Biomass Energy Combustion," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

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

Table 12.7 Carbon Dioxide Emissions From Biomass Energy Consumption

			By Source			By Sector						
	Woodb	Biomass Waste <sup>c</sup>	Fuel Ethanol <sup>d</sup>	Bio- diesel	Total	Resi- dential	Com- mercial <sup>e</sup>	Indus- trial <sup>f</sup>	Trans- portation	Electric Power <sup>9</sup>	Total	
1973 Total	143 140 232 252 208 222 229 222 205 208 212 188	(s) (s) (s) 14 24 30 32 30 30 29 27	NA NA NA 3 4 8 6 7 8 9	NA NA NA NA NA NA NA NA NA NA	143 141 232 270 237 260 266 259 242 245 248 231	33 40 80 95 54 49 51 40 36 37 39 35	1 1 2 2 8 9 10 10 9 9	109 100 150 168 147 166 170 172 160 161 161	NA NA NA 3 4 8 6 7 8 8 9	(s) (s) (s) 1 23 28 30 30 30 30 29	143 141 232 270 237 260 266 259 242 245 248 231	
2002 Total 2003 Total 2004 Total 2005 Total 2006 Total 2007 Total 2008 Total	187 188 199 200 198 197 192	36 36 35 37 36 37 40	12 16 20 23 31 39 55	(s) (s) (s) 1 2 3	235 240 255 261 267 277 289	36 38 38 40 37 40 42	9 9 10 10 9 9	144 141 151 150 151 146 140	12 16 20 23 33 41 57	35 37 36 37 38 39 40	235 240 255 261 267 277 289	
2009 January	15 14 15 14 14 15 16 15 15 15	3 4 3 3 3 4 3 3 4 4 4 4	5 4 5 5 5 5 6 6 6 5 6 6 6 6 6 6 2	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	23 21 23 22 23 25 25 24 25 24 25 24 25 28	3333333333333340	1 1 1 1 1 1 1 1 1 1 1 1	11 10 10 10 10 10 11 11 11 11 11 11	5455556666666 <b>64</b>	3 3 3 3 3 4 4 4 3 3 3 4 4 4 4 4 4 4 4 4	23 21 23 22 23 25 25 24 25 24 25 24 25 28	
Page 2010 January February March April May June July August September October November December Total	16 14 16 15 15 16 16 16 16 15 16	4 3 4 4 4 4 4 3 4 4 4 4 4 4 4 4 4 4 4 4	6 5 6 6 6 6 6 6 6 6 6 73	(s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	25 23 25 25 25 26 26 26 25 26 27 304	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	12 11 12 11 11 11 12 12 12 12 12 12 139	6 5 6 6 6 6 6 6 6 6 6 7	4 3 4 3 3 4 4 4 4 3 3 4 4 4 4 4 4 4 4 4	25 23 25 25 25 25 26 26 25 26 25 27 304	
Pebruary February March April May June July August September October 10-Month Total	16 14 15 15 15 16 16 16 15 15	4 3 4 3 4 4 4 4 4 4 4 3 6	6 6 6 6 6 7 6 6 <b>6</b> 6	(s) (s) (s) (s) (s) 1 1 1 1 5	26 24 26 24 25 26 26 27 26 26 25	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	1 1 1 1 1 1 1 1 1 1 8	12 11 12 11 11 12 12 12 12 11 11	6 6 6 7 7 7 7 7 7	3 3 3 3 3 4 4 4 3 3 <b>3</b>	26 24 26 24 25 26 26 27 26 26 25	
2010 10-Month Total 2009 10-Month Total	154 146	36 34	60 51	2 2	252 233	33 34	8 9	115 105	61 52	35 34	252 233	

 <sup>&</sup>lt;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)

NA=Not available. (s)=Less than 0.5 million metric tons.

Notes: • Carbon dioxide emissions from biomass energy consumption are excluded from the energy-related carbon dioxide emissions reported in Tables 12.1–12.6. See Note 2, "Accounting for Carbon Dioxide Emissions From Biomass Energy Combustion," at end of section. • Data are estimates. See "Section 12 Methodology and Sources" at end of section. • See "Carbon Dioxide" in Glossary. See Note 1, "Emissions of Carbon Dioxide and Other Greenhouse Gases," at end of section.

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

Geographic coverage is the 50 States and the District of Columbia.

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

Sources: See end of section.

d Fuel ethanol minus denaturant.
e Commercial sector, including commercial combined-heat-and-power (CHP)
and commercial electricity-only plants.
f Industrial sector, including industrial combined-heat-and-power (CHP) and
industrial electricity-only plants.
g The electric power sector comprises electricity-only and
combined-heat-and-power (CHP) plants within the NAICS 22 category whose
primary business is to sell electricity, or electricity and heat, to the public.

# **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 (shortwave) 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/.

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 nonenergy 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 nonfossil 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.

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\_coeffs\_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 "Methodolology for Allocating Municipal Solid Waste to Biogenic and Non-Biogenic Energy," Table 1 at http://www.eia.gov/cneaf/solar.renewables/page/mswaste/msw.pdf.



### **Appendix**

#### **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)

Define leaves Due done		Definal arms Director of	
Petroleum Product	Heat Content	Petroleum Product	Heat Content
Asphalt	6.636	Pentanes Plus	4.620
Aviation Gasoline	5.048	Petrochemical Feedstocks	
Butane	4.326	Naptha Less Than 401°F	5.248
Butane-Propane Mixture <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 Gasolined		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>&</sup>lt;sup>a</sup> 60 percent butane and 40 percent propane.

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.

<sup>&</sup>lt;sup>b</sup> Does not include biodiesel. See Table A3 for biodiesel heat contents.

<sup>° 70</sup> percent ethane and 30 percent propane.

<sup>&</sup>lt;sup>d</sup> See Table A3 for motor gasoline weighted heat contents beginning in 1994, and for fuel ethanol heat contents.

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

	Pro	duction		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
1973	5.800	4.049	5.817	5.983	5.897	5.800	5.752	5.752
1974	5.800	4.011	5.827	5.959	5.884	5.800	5.773	5.774
1975	5.800	3.984	5.821	5.935	5.858	5.800	5.747	5.748
1976	5.800	3.964	5.808	5.980	5.856	5.800	5.743	5.745
1977	5.800	3.941	5.810	5.908	5.834	5.800	5.796	5.797
1978	5.800	3.925	5.802	5.955	5.839	5.800	5.814	5.808
979	5.800	3.955	5.810	5.811	5.810	5.800	5.864	5.832
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
	5.800	3.872	5.826	5.664	5.775	5.800	5.829	5.820
1982								
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
985	5.800	3.815	5.832	5.572	5.736	5.800	5.819	5.814
986	5.800	3.797	5.903	5.624	5.808	5.800	5.839	5.832
987	5.800	3.804	5.901	5.599	5.820	5.800	5.860	5.858
988	5.800	3.800	5.900	5.618	5.820	5.800	5.842	5.840
989	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
991	5.800	3.807	5.948	5.636	5.873	5.800	5.827	5.823
992	5.800	3.804	5.953	5.623	5.877	5.800	5.774	5.777
993	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
995	5.800	3.796	5.938	5.483	5.855	5.800	5.740	5.746
996	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
998	5.800	3.769	5.953	5.462	5.861	5.800	5.710	5.720
999	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
2007	5.800	3.701	5.990	5.503 5.479	5.862 5.866	5.800	5.749 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 <sup>E</sup>	5.800	3.674	5.989	5.557	5.894	5.800	5.670	5.672

<sup>&</sup>lt;sup>a</sup> Includes lease condensate.

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 A3. Approximate Heat Content of Petroleum Consumption and Biofuels Production (Million Btu per Barrel)

		Total Pe	troleum <sup>a</sup> C	onsumption b	y Sector		Liquefied	Matan		Fuel		Diadiasal
	Resi- dential	Com- mercial <sup>b</sup>	Indus- trial <sup>b</sup>	Trans- portation <sup>b,c</sup>	Electric Power <sup>d,e</sup>	Total <sup>b,c</sup>	Petroleum Gases Con- sumption <sup>f</sup>	Motor Gasoline Con- sumption <sup>9</sup>	Fuel Ethanol <sup>h</sup>	Ethanol Feed- stock Factor <sup>i</sup>	Biodiesel	Biodiesel Feed- stock Factor
1973	5.258	5.689	5.557	5.396	6.245	5.515	3.746	5.253	NA	NA	NA	NA
1974		5.683	5.525	5.394	6.238	5.504	3.730	5.253	NA NA	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 NA	NA
1976	5.277	5.672	5.523	5.396	6.251	5.504	3.711	5.253	NA	NA	NA	NA
1977	5.285	5.682	5.539	5.401	6.249	5.518	3.677	5.253	NA	NA	NA	NA
1978	5.287	5.665	5.536	5.405	6.251	5.519	3.669	5.253	NA	NA	NA	NA
1979		5.717	5.409	5.429	6.258	5.494	3.680	5.253	NA	NA	NA	NA
1980	5.321	5.751	5.366	5.441	6.254	5.479	3.674	5.253	3.563	6.586	NA	NA
1981	5.283	5.693	5.299	5.433	6.258	5.448	3.643	5.253	3.563	6.562	NA	NA
1982	5.266	5.698	5.247	5.423	6.258	5.415	3.615	5.253	3.563	6.539	NA	NA
1983	5.140	5.591	5.254	5.416	6.255	5.406	3.614	5.253	3.563	6.515	NA	NA
1984	5.307	5.657	5.207	5.418	6.251	5.395	3.599	5.253	3.563	6.492	NA	NA
1985	5.263	5.598	5.199	5.423	6.247	5.387	3.603	5.253	3.563	6.469	NA	NA
1986	5.268	5.632	5.269	5.426	6.257	5.418	3.640	5.253	3.563	6.446	NA	NA
1987	5.239	5.594	5.233	5.429	6.249	5.403	3.659	5.253	3.563	<i>6.4</i> 23	NA	NA
1988		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	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		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 2000	4.902	5.291	5.092	5.413	6.205	5.328	3.616	5.211	3.563	6.167	NA NA	NA NA
2000 2001	4.908 4.937	5.316 5.325	5.057 5.142	5.422 5.412	6.189 6.199	5.326 5.345	3.607 3.614	5.210 5.210	3.563 3.563	6.159 6.151	NA 5.359	5.433
2001	4.886	5.293	5.142	5.411	6.173	5.324	3.613	5.210	3.563		5.359	5.433 5.433
2002 2003	4.886	5.293	5.093	5.411	6.182	5.340	3.629	5.208	3.563	6.143 6.116	5.359	5.433 5.433
2003 2004	4.953	5.328	5.142	5.421	6.192	5.350	3.618	5.207	3.563	6.089	5.359	5.433 5.433
2004		5.364	5.178	5.427	6.188	5.365	3.620	5.218	3.563	6.063	5.359	5.433 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		5.298	5.100	5.434	6.151	5.346	3.591	5.219	3.563	6.009	5.359	5.433
2008	4.732	5.175	5.149	5.426	6.123	5.339	3.600	5.218	3.563	5.983	5.359	5.433
2009		5.266	5.018	<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	_	E 5.267	E 4.995	E 5.420	P 6.085	5.297	3.557	5.218	3.561	5.930	5.359	5.433
2011		E 5.267	E 4.995	E 5.420	E 6.085	E 5.297	E 3.557	E 5.218	E 3.561	5.904	5.359	5.433

<sup>&</sup>lt;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.

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: http://www.eia.gov/totalenergy/data/monthly/#appendices.

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

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

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

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

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

f Quantity-weighted averages of the major components of liquefied petroleum gases are calculated by using heat content values shown in Table A1.

<sup>&</sup>lt;sup>9</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.

h Includes denaturant (petroleum added to ethanol to make it undrinkable). Fuel ethanol factors are weighted average heat contents for undenatured ethanol (3.539).

<sup>&</sup>quot;Includes denaturant (petroleum added to ethanol to make it undrinkable). Fuel ethanol factors are weighted average heat contents for undenatured ethanol (3.539 million Btu per barrel), pentanes plus used as denaturant (4.620 million Btu per barrel), and conventional motor gasoline and motor gasoline blending components used as denaturant (5.253 million Btu per barrel). The factor for 2009 is used as the estimated factor for 1980-2008.

i Corn input to the production of undenatured ethanol (million Btu corn per barrel undenatured ethanol), used as the factor to estimate total biomass inputs to the production of undenatured ethanol. Observed ethanol yields (gallons undenatured ethanol per bushel of corn) are 2.5 in 1980, 2.666 in 1998, 2.68 in 2002, and 2.764 in 2009; yields in other years are estimated. Corn is assumed to have a gross heat content of 0.392 million Btu per bushel. Undenatured ethanol is assumed to have a gross heat content of 3.539 million Btu per barrel.

j Soybean oil input to the production of biodiesel (million Btu soybean oil per barrel biodiesel), used as the factor to estimate total biomass inputs to the production of biodiesel. It is assumed that 7.65 pounds of soybean oil are needed to produce one gallon of biodiesel, and 5.433 million Btu of soybean oil are needed to produce one barrel of biodiesel. Soybean oil is assumed to have a gross heat content of 16,909 Btu per pound, or 5.483 million Btu per barrel. Biodiesel is assumed to have a gross heat content of 17,253 Btu per pound, or 5.359 million Btu per barrel.

Table A4. Approximate Heat Content of Natural Gas

(Btu per Cubic Foot)

	Produ	uction		Consumption <sup>a</sup>			
	Marketed	Dry	End-Use Sectors <sup>b</sup>	Electric Power Sector <sup>c</sup>	Total	Imports	Exports
973	1,093	1,021	1,020	1,024	1,021	1,026	1,023
974	1,097	1,024	1,024	1,022	1,024	1,027	1,016
975	1,095	1,021	1,020	1,026	1,021	1,026	1,014
976	1.093	1.020	1.019	1.023	1.020	1,025	1,013
977	1,093	1,021	1,019	1,029	1,021	1,026	1,013
978	1.088	1,019	1,016	1,034	1,019	1,030	1,013
79	1,092	1,021	1,018	1,035	1,021	1,037	1,013
980	1.098	1.026	1.024	1.035	1.026	1.022	1.013
81	1,103	1,027	1,025	1,035	1,027	1,014	1,011
982	1,107	1,028	1,026	1,036	1,028	1,018	1,011
983	1,115	1,031	1,031	1,030	1,031	1,024	1,010
984	1.109	1.031	1.030	1,035	1.031	1.005	1.010
985	1,112	1,032	1,031	1,038	1,032	1,002	1,011
986	1,110	1,030	1,029	1,034	1,030	997	1,008
987	1,112	1,031	1,031	1,032	1,031	999	1,011
988	1.109	1,029	1,029	1.028	1,029	1,002	1,018
89	1,107	1,031	1,031	c1,028	1,031	1,004	1,019
990	1.105	1,029	1,030	1,027	1,029	1,012	1,018
91	1,108	1,030	1,031	1,025	1,030	1,014	1,022
92	1.110	1.030	1.031	1.025	1.030	1.011	1,018
93	1,106	1,027	1,028	1,025	1,027	1,020	1,016
94	1,105	1,028	1,029	1,025	1,028	1,022	1,011
95	1,106	1,026	1,027	1,021	1,026	1,021	1,011
96	1.109	1.026	1.027	1.020	1.026	1.022	1,011
997	1.107	1,026	1,027	1,020	1,026	1,023	1,011
98	1,109	1,031	1,033	1,024	1,031	1,023	1,011
99	1,107	1,027	1,028	1,022	1,027	1,022	1,006
00	1,107	1,025	1,026	1,021	1,025	1,023	1,006
01	1.105	1.028	1.029	1.026	1.028	1.023	1,010
02	R 1,103	R 1.024	R 1.025	1,020	R 1,024	1,022	1,008
03	R 1,103	1,028	1,029	1,025	1,028	1,025	1,009
04	1,104	1,026	1,026	1,027	1,026	1,025	1,009
05	1.104	1,028	1,028	1,028	1.028	1,025	1,009
06	1,103	1,028	1,028	1,028	1.028	1,025	1,009
07	R 1,102	R 1,027	R 1,027	1,027	R 1,027	1,025	1,009
008	1,100	1,027	1,027	1,027	1,027	1,025	1,009
009	1,101	1,025	1,025	1,025	1.025	1,025	1,009
010	R 1,097	R 1.023	R 1.023	1,022	R 1,023	1,025	1,009
011	RE 1,097	RE 1,023	RE 1,023	E 1,022	RE 1,023	E 1,025	E 1,009

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

 <sup>&</sup>lt;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.
 R=Revised. E=Estimate.
 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 A5. Approximate Heat Content of Coal and Coal Coke

(Million Btu per Short Ton)

					Coal					Coal Coke
				С	onsumption					
		Wests	Residential	Industrial	Sector	Floatria				Immente
	Production <sup>a</sup>	Waste Coal Supplied <sup>b</sup>	and Commercial Sectors	Coke Plants	Other <sup>c</sup>	Flectric Power Sector <sup>d,e</sup>	Total	Imports	Exports	Imports and Exports
1973	23.376	NA	22.831	26.780	22.586	22.246	23.057	25.000	26.596	24.800
1974	23.072	NA	22.479	26.778	22.419	21.781	22.677	25.000	26.700	24.800
1975	22.897	NA	22.261	26.782	22.436	21.642	22.506	25.000	26.562	24.800
1976	22.855	NA	22.774	26.781	22.530	21.679	22.498	25.000	26.601	24.800
1977	22.597	NA	22.919	26.787	22.322	21.508	22.265	25.000	26.548	24.800
1978	22.248	NA	22.466	26.789	22.207	21.275	22.017	25.000	26.478	24.800
	22.454		22.242				22.100			
1979		NA NA		26.788	22.452	21.364 21.295		25.000	26.548	24.800
1980	22.415		22.543	26.790	22.690		21.947	25.000	26.384	24.800
1981 1982	22.308	NA	22.474	26.794	22.585	21.085	21.713	25.000	26.160	24.800
	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>d</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
2004			22.324							
2005	20.348	12.093 12.080	22.066	26.279 26.271	22.178 22.050	19.988	20.246	25.000	25.494	24.800 24.800
2006	20.310			26.271		19.931	20.181	25.000	25.453	
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	21.887	26.281	22.348	19.713	19.977	25.000	25.399	24.800
2009	19.969	11.862	22.059	26.334	21.893	19.521	19.742	25.000	25.633	24.800
2010 <sup>P</sup>	20.192	11.755	21.254	26.296	21.909	19.612	19.858	25.000	25.713	24.800
2011 <sup>E</sup>	20.192	11.755	21.254	26.296	21.909	19.612	19.858	25.000	25.713	24.800

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

materials).

b Waste coal (including fine coal, coal obtained from a refuse bank or slurry dam, anthracite culm, bituminous gob, and lignite waste) consumed by the electric power and a country dam, anthracite culm, bituminous gob, and lignite waste) consumed by the electric power and a country dam, anthracite culm, bituminous gob, and lignite waste) consumed by the electric power and a country dam and the same amount of waste coal included in "Consumption."

<sup>&</sup>lt;sup>c</sup> Includes transportation. Excludes coal synfuel plants.

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

<sup>&</sup>lt;sup>e</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: http://www.eia.gov/totalenergy/data/monthly/#appendices.
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)

		Approx	imate Heat Rates	a for Electricity Net Ge	eneration		
		Fossil	Fuelsb				
	Coal <sup>c</sup>	Petroleum <sup>d</sup>	Natural Gas <sup>e</sup>	Total Fossil Fuels <sup>f,g</sup>	Nuclear <sup>h</sup>	Noncombustible Renewable Energy <sup>g,i</sup>	Heat Content <sup>j</sup> of Electricity <sup>k</sup>
1973	NA	NA	NA	10,389	10.903	10,389	3,412
1974		NA	NA	10.442	11.161	10.442	3.412
1975		NA	NA	10,406	11.013	10.406	3.412
1976		NA	NA	10,373	11.047	10,373	3,412
1977		NA	NA	10,435	10.769	10,435	3,412
1978		NA	NA	10,361	10,941	10,361	3,412
1979		NA	NA	10,353	10,879	10,353	3,412
1980		NA	NA	10,388	10.908	10,388	3,412
1981		NA	NA	10,453	11,030	10,453	3,412
1982		NA	NA	10,454	11,073	10,454	3,412
1983		NA	NA	10,520	10.905	10,520	3,412
1984		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	10,419	10.442	10,419	3,412
1988		NA NA	NA	10,324	10,602	10,324	3,412
1989		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 NA	10,436	10,484	10,436	3,412
1992	NA	NA NA	NA NA	10,342	10,471	10,342	3,412
1993		NA NA	NA NA	10,309	10.504	10,309	3,412
1994		NA NA	NA NA	10,316	10,452	10,316	3,412
1995		NA NA	NA NA	10,312	10.507	10.312	3.412
1996		NA NA	NA NA	10,340	10,507	10,340	3,412
1997		NA NA	NA NA	10,213	10,494	10,213	3.412
1998		NA NA	NA NA	10,197	10,491	10,197	3,412
1999		NA NA	NA NA	10,137	10,450	10,137	3,412
2000		NA NA	NA NA	10,220	10,429	10,201	3,412
2001		10.742	10,051	b <sub>10,333</sub>	10,429	10,333	3,412
2002		10,742	9,533	10,173	10,443	10,333	3,412
		,	9,333	10,173	10,442	10,173	3,412
2003		10,610 10,571	9,207 8,647	10,241	10,421	10,241	3,412
		,	,	9,999	· '	9.999	3,412
2005		10,631	8,551	9,999 9,919	10,436	9,999 9,919	3,412
2006		10,809	8,471		10,436	,	· '
2007		10,794	8,403	9,884	10,485	9,884	3,412
2008		11,015	8,305	9,854	10,453	9,854	3,412
2009		10,923	8,160	9,760	10,460	9,760	3,412
2010		10,984	8,185	9,756 F 0, 750	10,452	9,756	3,412
2011	<sup>E</sup> 10,415	<sup>E</sup> 10,984	<sup>E</sup> 8,185	<sup>E</sup> 9,756	E 10,452	<sup>E</sup> 9,756	3,412

a The values in columns 1-6 of this table are for net heat rates. See "Heat Rate" in Glossary.

Web Page: http://www.eia.gov/totalenergy/data/monthly/#appendices.

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

This table has been modified to include columns for "Coal," "Petroleum," "Natural Gas," and "Noncombustible Renewable Energy"; and to exclude a column for "Geothermal."

<sup>&</sup>lt;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.

c Includes anthracite, bituminous coal, subbituminous coal, lignite, and, beginning in 2002, waste coal and coal synfuel.

d Includes distillate fuel oil, residual fuel oil, jet fuel, kerosene, petroleum coke, and waste oil.

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

f Includes coal, petroleum, natural gas, and, beginning in 2001, other gases (blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels).

<sup>&</sup>lt;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.

h Used as the thermal conversion factor for nuclear electricity net generation.

<sup>&</sup>lt;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.

See "Heat Content" in Glossary.

k The value of 3,412 Btu per kilowatthour is a constant. It is used as the thermal conversion factor for electricity retail sales, and electricity imports and exports. E=Estimate.

# 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. 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 1973–1980, 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.** 1973–1993: 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, 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, 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, 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/states/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/states/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/states/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/states/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**. 1973–1979: 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.** 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**. Calculated annually by EIA by dividing the heat content of natural gas imported by the quantity imported. For 1973–1995, data are from Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas." Beginning in 1996, data are from U.S. Department of Energy, Office of Fossil Energy, *Natural Gas Imports and Exports*.

**Natural Gas Production, Dry**. Assumed by EIA to be equal to the thermal conversion factor for dry natural gas consumed. See **Natural Gas Consumption, Total**.

Natural Gas Production, Marketed. Calculated annually by EIA by dividing the heat content of dry natural gas produced (see Natural Gas Production, Dry) and natural gas plant liquids produced (see Natural Gas Plant Liquids Production) by the total quantity of marketed natural gas produced.

# Approximate Heat Content of Coal and Coal Coke

**Coal Coke Imports and Exports**. EIA adopted the Bureau of Mines estimate of 24.800 million Btu per short ton.

**Coal Consumption, Electric Power Sector**. Calculated annually by EIA by dividing the heat content of coal consumed by the electric power sector by the quantity consumed. Data are from Form EIA-923, "Power Plant Operations Report," and predecessor forms.

Coal Consumption, Industrial Sector, Coke Plants. Calculated annually by EIA by dividing the heat content of coal consumed by coke plants by the quantity consumed. Data are from Form EIA-5, "Quarterly Coal Consumption and Quality Report—Coke Plants."

Coal Consumption, Industrial Sector, Other. Calculated annually by EIA by dividing the heat content of coal

consumed by manufacturing plants by the quantity consumed. Data are from Form EIA-3, "Quarterly Coal Consumption and Quality Report—Manufacturing Plants."

Coal Consumption, Residential and Commercial Sectors. Calculated annually by EIA by dividing the heat content of coal consumed by the residential and commercial sectors by the quantity consumed. Through 1999, data are from Form EIA-6, "Coal Distribution Report." Beginning in 2000, data are for commercial combined-heat-and-power (CHP) plants from Form EIA-923, "Power Plant Operations Report," and predecessor forms.

**Coal Consumption, Total**. Calculated annually by EIA by dividing the total heat content of coal consumed by all sectors by the total quantity consumed.

**Coal Exports**. Calculated annually by EIA by dividing the heat content of steam coal and metallurgical coal exported by the quantity exported. Data are from U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545."

**Coal Imports**. Assumed by EIA to be 25.000 million Btu per short ton.

**Coal Production**. Calculated annually by EIA to balance the heat content of coal supply (production and imports) and the heat content of coal disposition (exports, stock change, and consumption).

Waste Coal Supplied. Calculated annually by EIA by dividing the total heat content of waste coal supplied by the quantity supplied. For 1989–1997, data are from Form EIA-867, "Annual Nonutility Power Producer Report." For 1998–2000, data are from Form EIA-860B, "Annual Electric Generator Report—Nonutility." For 2001 forward, data are from Form EIA-3, "Quarterly Coal Consumption and Quality Report—Manufacturing Plants"; Form EIA-923, "Power Plant Operations Report"; and predecessor forms.

#### **Approximate Heat Rates for Electricity**

Electricity Net Generation, Coal. 2001 forward: Calculated annually by EIA by using fuel consumption and net generation data reported on Form EIA-923, "Power Plant Operations Report," and predecessor forms. The computation includes data for 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 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. 1973–1984: 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), and the net generation data reported on Form EIA-923, "Power Plant Operations 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 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. 1973-1988: 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 the 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. 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 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**

# 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. However, because U.S. commerce involves other nations, most of which use metric units of measure, the U.S. Government is committed to the transition to the metric system, as stated in the Metric Conversion Act of 1975 (Public Law 94–168), amended by the Omnibus Trade and Competitiveness Act of 1988 (Public Law 100–418), and Executive Order 12770 of July 25, 1991.

The metric conversion factors presented in Table B1 can be used to calculate the metric-unit equivalents of values expressed in U.S. Customary units. For example, 500 short

tons are the equivalent of 453.6 metric tons (500 short tons x 0.9071847 metric tons/short ton = 453.6 metric tons).

In the metric system of weights and measures, the names of multiples and subdivisions of any unit may be derived by combining the name of the unit with prefixes, such as deka, hecto, and kilo, meaning, respectively, 10, 100, 1,000, and deci, centi, and milli, meaning, respectively, one-tenth, one-hundredth, and one-thousandth. Common metric prefixes can be found in Table B2.

The conversion factors presented in Table B3 can be used to calculate equivalents in various physical units commonly used in energy analyses. For example, 10 barrels are the equivalent of 420 U.S. gallons (10 barrels x 42 gallons/barrel = 420 gallons).

**Table B1. Metric Conversion Factors** 

Type of Unit	U.S. Unit		Equivalent in	Metric Units
Mass	1 short ton (2,000 lb)	=	0.907 184 7	metric tons (t)
	1 long ton	=	1.016 047	metric tons (t)
	1 pound (lb)	=	0.453 592 37 <sup>a</sup>	kilograms (kg)
	1 pound uranium oxide (lb U₃O <sub>8</sub> )	=	0.384 647 <sup>b</sup>	kilograms uranium (kgU)
	1 ounce, avoirdupois (avdp oz)	=	28.349 52	grams (g)
Volume	1 barrel of oil (bbl)	=	0.158 987 3	cubic meters (m³)
	1 cubic yard (yd³)	=	0.764 555	cubic meters (m³)
	1 cubic foot (ft³)	=	0.028 316 85	cubic meters (m³)
	1 U.S. gallon (gal)	=	3.785 412	liters (L)
	1 ounce, fluid (fl oz)	=	29.573 53	milliliters (mL)
	1 cubic inch (in³)	=	16.387 06	milliliters (mL)
Length	1 mile (mi)	=	1.609 344ª	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)
Area	1 acre	=	0.404 69	hectares (ha)
	1 square mile (mi <sup>2</sup> )	=	2.589 988	square kilometers (km²)
	1 square yard (yd²)	=	0.836 127 4	square meters (m²)
	1 square foot (ft²)	=	0.092 903 04 <sup>a</sup>	square meters (m²)
	1 square inch (in²)	=	6.451 6ª	square centimeters (cm <sup>2</sup> )
Energy	1 British thermal unit (Btu)°	=	1,055.055 852 62ª	joules (J)
	1 calorie (cal)	=	4.186 8 <sup>a</sup>	joules (J)
	1 kilowatthour (kWh)	=	3.6ª	megajoules (MJ)
Temperature <sup>d</sup>	32 degrees Fahrenheit (°F)	=	O <sup>a</sup>	degrees Celsius (°C)
-	212 degrees Fahrenheit (°F)	=	100°	degrees Celsius (°C)

<sup>&</sup>lt;sup>a</sup>Exact conversion.

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.

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

<sup>&</sup>lt;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.

**Table B2. Metric Prefixes** 

Unit Multiple	Prefix	Symbol	Unit Subdivision	Prefix	Symbol
10¹	deka	da	10 <sup>-1</sup>	deci	d
10 <sup>2</sup>	hecto	h	10-2	centi	С
10 <sup>3</sup>	kilo	k	10 <sup>-3</sup>	milli	m
10 <sup>6</sup>	mega	M	10 <sup>-6</sup>	micro	μ
10 <sup>9</sup>	giga	G	10-9	nano	n
10 <sup>12</sup>	tera	Т	10 <sup>-12</sup>	pico	р
10 <sup>15</sup>	peta	Р	10 <sup>-15</sup>	femto	f
10 <sup>18</sup>	exa	E	10 <sup>-18</sup>	atto	а
10 <sup>21</sup>	zetta	Z	10 <sup>-21</sup>	zepto	Z
10 <sup>24</sup>	yotta	Υ	10 <sup>-24</sup>	yocto	у

Web Page: http://www.eia.gov/totalenergy/data/monthly/#appendices. Source: U.S. Department of Commerce, National Institute of Standards and Technology, *The International System of Units (SI)*, NIST Special Publication 330, 1991 Edition (Washington, DC, August 1991), p.10.

**Table B3. Other Physical Conversion Factors** 

Energy Source	Original Unit		Equivalent in Final Units		
Petroleum	1 barrel (bbl)	=	42ª	U.S. gallons (gal)	
Coal	1 short ton	=	2,000ª	pounds (lb)	
	1 long ton	=	2,240 <sup>a</sup>	pounds (lb)	
	1 metric ton (t)	=	1,000°	kilograms (kg)	
Wood	1 cord (cd)	=	1.25 <sup>b</sup>	shorts tons	
	1 cord (cd)	=	128ª	cubic feet (ft3)	
				·	

<sup>&</sup>lt;sup>a</sup>Exact conversion.

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.

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

Web Page: http://www.eia.gov/totalenergy/data/monthly/#appendices.

### 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 sov diesel fuel); electricity (including electricity from solar energy); and "... any other fuel the Secretary determines, by rule, is substantially not petroleum and would yield substantial energy security benefits and substantial environmental benefits." The term "alternative fuel" does not include alcohol or other blended portions of primarily petroleum-based fuels used as oxygenates or extenders, i.e., MTBE, ETBE, other ethers, and the 10-percent ethanol portion of gasohol.

Alternative-Fuel Vehicle (AFV): A vehicle designed to operate on an alternative fuel (e.g., compressed natural gas, methane blend, or electricity). The vehicle could be either a dedicated vehicle designed to operate exclusively on alternative fuel or a nondedicated vehicle designed to operate on alternative fuel and/or a traditional fuel.

Anthracite: The highest rank of coal; used primarily for residential and commercial space heating. It is a hard, brittle, and black lustrous coal, often referred to as hard coal, containing a high percentage of fixed carbon and a low percentage of volatile matter. The moisture content of fresh-mined anthracite generally is less than 15 percent. The heat content of anthracite ranges from 22 to 28 million Btu per short ton on a moist, mineral-matter-free basis. The heat content of anthracite coal consumed in the United States averages 25 million Btu per short ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter). *Note:* Since the 1980's, anthracite refuse or mine waste has been used for steam-electric power generation. This fuel typically has a heat content of 15 million Btu per ton or less.

**Anthropogenic:** Made or generated by a human or caused by human activity. The term is used in the context of global **climate change** to refer to gaseous emissions that are the result of human activities, as well as other potentially climate-altering activities, such as deforestation.

**Asphalt:** A dark-brown-to-black cement-like material containing bitumens as the predominant constituents obtained by petroleum processing. The definition includes crude asphalt as well as the following finished products: cements, fluxes, the asphalt content of emulsions (exclusive of water), and petroleum distillates blended with asphalt to make cutback asphalts.

**ASTM:** The American Society for Testing and Materials.

Aviation Gasoline Blending Components: Naphthas that will be used for blending or compounding into finished aviation gasoline (e.g., straight run gasoline, alkylate, reformate, benzene, toluene, and xylene). Excludes oxygenates (alcohols, ethers), butane, and pentanes plus.

**Aviation Gasoline, Finished:** A complex mixture of relatively volatile hydrocarbons with or without small quantities of additives, blended to form a fuel suitable for use in aviation reciprocating engines. Fuel specifications are provided in ASTM Specification D 910 and Military Specification MIL-G-5572. *Note:* Data on blending components are not counted in data on finished aviation gasoline.

**Barrel (Petroleum):** A unit of volume equal to 42 U.S. Gallons.

**Base Gas:** The volume of gas needed as a permanent inventory to maintain adequate underground storage reservoir pressures and deliverability rates throughout the withdrawal season. All native gas is included in the base gas volume.

**Biodiesel:** A fuel typically made from soybean, canola, or other vegetable oils; animal fats; and recycled grease. It can serve as a substitute for **petroleum**-derived **diesel fuel** or **distillate fuel oil**. For U.S. Energy Information Administration reporting, it is a fuel composed of mono-alkyl esters of long chain fatty acids derived from vegetable oils or animal fats, designated B100, and meeting the requirements of ASTM (American Society for Testing & Materials) D 6751.

**Biofuels:** Liquid fuels and blending components produced from **biomass** (plant) feedstocks, used primarily for transportation. See **Biodiesel** and **Fuel Ethanol**.

**Biogenic:** Produced by biological processes of living organisms. Note: EIA uses the term "biogenic" to refer only to organic nonfossil material of biological origin.

**Biomass:** Organic non-fossil material of biological origin constituting a **renewable energy** source. See **Biodiesel**,

Biofuels, Biomass Waste, Fuel Ethanol, and Wood and Wood-Derived Fuels.

Biomass Waste: Organic non-fossil material of biological origin that is a byproduct or a discarded product. "Biomass waste" includes municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural crop byproducts, straw, and other biomass solids, liquids, and gases; but excludes wood and wood-derived fuels (including black liquor), biofuels feedstock, biodiesel, and fuel ethanol. Note: EIA "biomass waste" data also include energy crops grown specifically for energy production, which would not normally constitute waste.

Bituminous Coal: A dense coal, usually black, sometimes dark brown, often with well-defined bands of bright and dull material, used primarily as fuel in steamelectric 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<sub>4</sub>H<sub>8</sub>) recovered from refinery processes.

**Capacity Factor:** The ratio of the electrical energy produced by a generating unit for a given period of time to the electrical energy that could have been produced at continuous full-power operation during the same period.

Carbon Dioxide (CO<sub>2</sub>): A colorless, odorless, non-poisonous gas that is a normal part of Earth's atmosphere. Carbon dioxide is a product of **fossil-fuel** combustion as well as other processes. It is considered a **greenhouse gas** as it traps heat (infrared energy) radiated by the Earth into the atmosphere and thereby contributes to the potential for **global warming**. The **global warming potential** (GWP) of other greenhouse gases is measured in relation to that of carbon dioxide, which by international scientific convention is assigned a value of one (1).

Chained Dollars: A measure used to express real prices. Real prices are those that have been adjusted to remove the effect of changes in the purchasing power of the dollar; they usually reflect buying power relative to a reference year. Prior to 1996, real prices were expressed in constant dollars, a measure based on the weights of goods and services in a single year, usually a recent year. In 1996, the U.S. Department of Commerce introduced the chained-dollar measure. The new measure is based on the average weights of goods and services in successive pairs of years. It is "chained" because the second year in each pair, with its weights, becomes the first year of the next pair. The advantage of using the chained-dollar measure is that it is more closely related to any given period and is therefore subject to less distortion over time.

CIF: See Cost, Insurance, Freight.

**City Gate:** 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 abovementioned commercial establishments. Various EIA programs differ in sectoral coverage-for more information see <a href="http://www.eia.gov/neic/datadefinitions/Guideforwebcom.htm">http://www.eia.gov/neic/datadefinitions/Guideforwebcom.htm</a>. 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 Gasoline:** Finished motor gasoline not included in the oxygenated or reformulated gasoline categories. *Note*: This category excludes reformulated gasoline blendstock for oxygenate blending (RBOB) as well as other blendstock.

Conventional Hydroelectric Power: Hydroelectric power generated from flowing water that is not created by hydroelectric pumped storage.

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 and 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. Degreeday 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° 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 (C2H4) recovered from refinery processes or petrochemical processes.

**Exploratory Well:** A well drilled to find and produce oil or gas in an area previously considered an unproductive area, to find a new reservoir in a known field (i.e., one previously found to be producing oil or gas in another reservoir), or to extend the limit of a known oil or gas reservoir.

**Exports:** Shipments of goods from within the 50 States and the District of Columbia to U.S. possessions and territories or to foreign countries.

**Extraction Loss:** The reduction in volume of natural gas due to the removal of natural gas liquid constituents, such as ethane, propane, and butane, at natural gas processing plants.

**Federal Energy Administration (FEA):** A predecessor of the U.S. Energy Information Administration.

**Federal Energy Regulatory Commission (FERC):** The Federal agency with jurisdiction over interstate electricity sales, wholesale electric rates, hydroelectric licensing, natural gas pricing, oil pipeline rates, and gas pipeline certification. FERC is an independent regulatory agency within the U.S. Department of Energy and is the successor to the Federal Power Commission.

**Federal Power Commission (FPC):** The predecessor agency of the Federal Energy Regulatory Commission. The Federal Power Commission was created by an Act of Congress under the Federal Water Power Act on June 10, 1920. It was charged originally with regulating the electric power and natural gas industries. It was abolished on September 30, 1977, when the U.S. Department of Energy was created. Its functions were divided between the U.S. Department of Energy and the Federal Energy Regulatory Commission, an independent regulatory agency.

**First Purchase Price:** The price for domestic crude oil reported by the company that owns the crude oil the first time it is removed from the lease boundary.

**Flared Natural Gas:** Natural gas burned in flares on the base site or at gas processing plants.

**F.O.B.** (Free on Board): A sales transaction in which the seller makes the product available for pick up at a specified port or terminal at a specified price and the buyer pays for the subsequent transportation and insurance.

Footage Drilled: Total footage for wells in various categories, as reported for any specified period, includes (1) the deepest total depth (length of well bores) of all wells drilled from the surface, (2) the total of all bypassed footage drilled in connection with reported wells, and (3) all new footage drilled for directional sidetrack wells. Footage reported for directional sidetrack wells does not include footage in the common bore, which is reported as footage for the original well. In the case of old wells drilled deeper, the reported footage is that which was drilled below the total depth of the old well.

Former U.S.S.R.: See Union of Soviet Socialist Republics (U.S.S.R.).

Fossil Fuel: An energy source formed in the Earth's crust from decayed organic material, such as petroleum, coal, and natural gas.

**Fossil-Fueled Steam-Electric Power Plant:** An electricity generation plant in which the prime mover is a turbine rotated by high-pressure steam produced in a boiler by heat from burning fossil fuels.

Fuel Ethanol: Ethanol intended for fuel use. Fuel ethanol in the United States must be anhydrous (less than 1 percent water). Fuel ethanol is denatured (made unfit for human consumption), usually prior to transport from the ethanol production facility, by adding 2 to 5 volume percent petroleum, typically pentanes plus or conventional motor gasoline. Fuel ethanol is used principally for blending in low concentrations with motor gasoline as an oxygenate or octane enhancer. In high concentrations, it is used to fuel alternative-fuel vehicles specially designed for its use. See Alternative-Fuel Vehicle, Denaturant, E85, Ethanol, Fuel Ethanol Minus Denaturant, and Oxygenates.

Fuel Ethanol Minus Denaturant: An unobserved quantity of anhydrous, biomass-derived, undenatured ethanol for fuel use. The quantity is obtained by subtracting the estimated denaturant volume from fuel ethanol volume. Fuel ethanol minus denaturant is counted as renewable energy, while denaturant is counted as nonrenewable fuel. See Denaturant, Ethanol, Fuel Ethanol, Nonrenewable Fuels, Oxygenates, and Renewable Energy.

**Full-Power Operation:** Operation of a nuclear generating unit at 100 percent of its design capacity. Full-power operation precedes commercial operation.

**Gasohol:** A blend of finished motor gasoline containing alcohol (generally **ethanol** but sometimes methanol) at a concentration between 5.7 percent and 10 percent by volume. See **Motor Gasoline**, **Oxygenated**.

**Gas Well:** A well completed for the production of natural gas from one or more gas zones or reservoirs. (Wells producing both crude oil and natural gas are classified as oil wells.)

Geothermal Energy: Hot water or steam extracted from geothermal reservoirs in the earth's crust and used for geothermal heat pumps, water heating, or electricity generation.

Global Warming: An increase in the near-surface temperature of the Earth. Global warming has occurred in the distant past as the result of natural influences, but the term is today most often used to refer to the warming some scientists predict will occur as a result of increased anthropogenic emissions of greenhouse gases. See Climate Change.

Global Warming Potential (GWP): An index used to compare the relative radiative forcing of different gases without directly calculating the changes in atmospheric concentrations. GWPs are calculated as the ratio of the radiative forcing that would result from the emission of one kilogram of a greenhouse gas to that from the emission of one kilogram of carbon dioxide over a fixed period of time, such as 100 years.

**Greenhouse Gases:** Those gases, such as water vapor, **carbon dioxide**, nitrous oxide, **methane**, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride, that are transparent to solar (short-wave) radiation but opaque to long-wave (infrared) radiation, thus preventing long-wave radiant energy from leaving Earth's atmosphere. The net effect is a trapping of absorbed radiation and a tendency to warm the planet's surface.

Gross Domestic Product (GDP): The total value of goods and services produced by labor and property located in the United States. As long as the labor and property are located in the United States, the supplier (that is, the workers and, for property, the owners) may be either U.S. residents or residents of foreign countries.

**GT/IC:** Gas turbine and internal combustion plants.

**Heat Content:** The amount of heat energy available to be released by the transformation or use of a specified physical unit of an energy form (e.g., a ton of coal, a barrel of oil, a kilowatthour of electricity, a cubic foot of natural gas, or a pound of steam). The amount of heat energy is commonly expressed in **British thermal units (Btu)**. *Note*: Heat content of combustible energy forms can be expressed in terms of either gross heat content (higher or upper heating value) or net heat content (lower heating value), depending upon whether or not the available heat energy includes or

excludes the energy used to vaporize water (contained in the original energy form or created during the combustion process). The U.S. Energy Information Administration typically uses gross heat content values.

**Heat Rate:** A measure of generating station thermal efficiency commonly stated as **Btu** per **kilowatthour**. *Note:* Heat rates can be expressed as either gross or net heat rates, depending whether the electricity output is gross or net generation. Heat rates are typically expressed as net heat rates.

**Hydrocarbon:** An organic chemical compound of hydrogen and carbon in the gaseous, liquid, or solid phase. The molecular structure of hydrocarbon compounds varies from the simplest (methane, the primary constituent of natural gas) to the very heavy and very complex.

**Hydroelectric Power:** The production of electricity from the kinetic energy of falling water.

**Hydroelectric Power Plant:** A plant in which the turbine generators are driven by falling water.

Hydroelectric Pumped Storage: Hydroelectricity that is generated during peak load periods by using water previously pumped into an elevated storage reservoir during off-peak periods when excess generating capacity is available to do so. When additional generating capacity is needed, the water can be released from the reservoir through a conduit to turbine generators located in a power plant at a lower level.

**Hydrogen (H):** The lightest of all gases, hydrogen occurs chiefly in combination with oxygen in water. It also exists in acids, bases, **alcohols**, **petroleum**, and other **hydrocarbons**.

**Imports:** Receipts of goods into the 50 States and the District of Columbia from U.S. possessions and territories or from foreign countries.

**Independent Power Producer:** A corporation, person, agency, authority, or other legal entity or instrumentality that owns or operates facilities for the generation of electricity for use primarily by the public, and that is not an **electric utility**.

Industrial Sector: An energy-consuming sector that consists of all facilities and equipment used for producing, processing, or assembling goods. The industrial sector encompasses the following types of activity: manufacturing (NAICS codes 31-33); agriculture, forestry, fishing and hunting (NAICS code 11); mining, including oil and gas extraction (NAICS code 21); and construction (NAICS code 23). Overall energy use in this sector is largely for process heat and cooling and powering machinery, with lesser amounts used for facility heating, air conditioning, and lighting. Fossil fuels are also used as raw material inputs to manufactured products. *Note:* This sector includes generators that produce electricity and/or useful thermal output primarily to support the

above-mentioned industrial activities. Various EIA programs differ in sectoral coverage-for more information see

http://www.eia.gov/neic/datadefinitions/Guideforwebind.htm. See End-Use Sectors and Energy-Use Sectors.

**Injections (Natural Gas):** Natural gas injected into storage reservoirs.

**Isobutane:** A normally gaseous branch-chain hydrocarbon. It is a colorless paraffinic gas that boils at a temperature of 10.9° F. It is extracted from natural gas or refinery gas streams. See **Butane**.

**Isobutylene:** An olefinic hydrocarbon recovered from refinery processes or petrochemical processes.

**Isopentane:** A saturated branched-chain hydrocarbon obtained by fractionation of natural gasoline or isomerization of normal pentane.

**Jet Fuel:** A refined petroleum product used in jet aircraft engines. It includes kerosene-type jet fuel and naphtha-type jet fuel.

**Jet Fuel, Kerosene-Type:** A kerosene-based product with a maximum distillation temperature of 400° F at the 10-percent recovery point and a final maximum boiling point of 572° F. Fuel specifications are provided in ASTM Specification D 1655 and Military Specifications MIL-T-5624P and MIL-T-83133D (Grades JP-5 and JP-8). It issued primarily for commercial turbojet and turboprop aircraft engines.

**Jet Fuel, Naphtha-Type:** A fuel in the heavy naphtha boiling range, with an average gravity of 52.8 degrees API, 20 to 90 percent distillation temperatures of 290° to 470° F and meeting Military Specification MIL-T-5624L (Grade JP-4). It is used by the military for turbojet and turboprop engines.

**Kerosene:** A petroleum distillate having a maximum distillation temperature of 401° F at the 10-percent recovery point, a final boiling point of 572° F, and a minimum flash point of 100° F. Included are the two grades designated in ASTM D3699 (No. 1-K and No. 2-K) and all grades of kerosene called range or stove oil. Kerosene is used in space heaters, cook stoves, and water heaters; it is suitable for use as an illuminant when burned in wick lamps.

**Kilowatt:** A unit of electrical power equal to 1,000 watts.

**Kilowatthour (kWh):** A measure of electricity defined as a unit of work or energy, measured as 1 **kilowatt** (1,000 **watts**) of power expended for 1 hour. One kilowatthour is equivalent to 3,412 Btu. See **Watthour**.

**Landed Costs:** The dollar-per-barrel price of crude oil at the port of discharge. Included are the charges associated

with the purchase, transporting, and insuring of a cargo from the purchase point to the port of discharge. Not included are charges incurred at the discharge port (e.g., import tariffs or fees, wharfage charges, and demurrage charges).

**Lease and Plant Fuel:** Natural gas used in well, field, and lease operations (such as gas used in drilling operations, heaters, dehydrators, and field compressors) and used as fuel in natural gas processing plants.

**Lease Condensate:** A mixture consisting primarily of pentanes and heavier hydrocarbons, which is recovered as a liquid from natural gas in lease or field separation facilities. Note: This category excludes natural gas liquids, such as butane and propane, which are recovered at natural gas processing plants or facilities.

**Lignite:** The lowest rank of **coal**, often referred to as brown coal, used almost exclusively as fuel for steam-electric power generation. It is brownish-black and has a high inherent moisture content, sometimes as high as 45 percent. The heat content of lignite ranges from 9 to 17 million **Btu** per **short ton** on a moist, mineral-matter-free basis. The heat content of lignite consumed in the United States averages 13 million Btu per short ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter).

**Liquefied Natural Gas (LNG):** Natural gas (primarily methane) that has been liquefied by reducing its temperature to -260° F at atmospheric pressure.

**Liquefied Petroleum Gases (LPG):** Ethane, ethylene, propane, propylene, normal butane, butylene, and isobutane produced at refineries or natural gas processing plants, including plants that fractionate new natural gas plant liquids.

**Low-Power Testing:** The period of time between a nuclear generating unit's initial fuel loading date and the issuance of its operating (full-power) license. The maximum level of operation during that period is 5 percent of the unit's design thermal rating.

Lubricants: Substances used to reduce friction between bearing surfaces or as process materials either incorporated into other materials used as processing aids in the manufacturing of other products or as carriers of other materials. Petroleum lubricants may be produced either from distillates or residues. Other substances may be added to impart or improve certain required properties. Excluded are byproducts of lubricating oil refining, such as aromatic extracts derived from solvent extraction or tars derived from deasphalting. Included are all grades of lubricating oils from spindle oil to cylinder oil and those used in greases. Lubricant categories are paraffinic and naphthenic.

Marketed Production (Natural Gas): Gross withdrawals less gas used for repressuring, quantities vented and

flared, and nonhydrocarbon gases removed in treating or processing operations. Includes all quantities of gas used in field and processing operations.

**Methane:** A colorless, flammable, odorless, hydrocarbon gas (CH<sub>4</sub>) that is the principal constituent of natural gas. It is also an important source of hydrogen in various industrial processes.

**Methyl Tertiary Butyl Ether (MTBE):** An ether, (CH<sub>3</sub>)<sub>3</sub>COCH<sub>3</sub>, intended for motor gasoline blending. See **Oxygenates**.

**Methanol:** A light, volatile alcohol (CH<sub>3</sub>OH) eligible for motor gasoline blending. See **Oxygenates**.

**Miscellaneous Petroleum Products:** All finished petroleum products not classified elsewhere-for example, petrolatum, lube refining byproducts (aromatic extracts and tars), absorption oils, ram-jet fuel, petroleum rocket fuels, synthetic natural gas feedstocks, and specialty oils.

Motor Gasoline Blending: Mechanical mixing of motor gasoline blending components and oxygenates as required, to produce finished motor gasoline. Finished motor gasoline may be further mixed with other motor gasoline blending components or oxygenates, resulting in increased volumes of finished motor gasoline and/or changes in the formulation of finished motor gasoline (e.g., conventional motor gasoline mixed with MTBE to produce oxygenated motor gasoline).

Motor Gasoline Blending Components: Naphtha (e.g., straight-run gasoline, alkylate, reformate, benzene, toluene, xylene) used for blending or compounding into finished motor gasoline. These components include reformulated gasoline blendstock (RBOB) but exclude oxygenates (alcohols, ethers), butane, and pentanes plus. *Note*: oxygenates are reported as individual components and are included in the total for other hydrocarbons, hydrogens, and oxygenates.

Motor Gasoline, Finished: A complex mixture of relatively volatile hydrocarbons with or without small quantities of additives, blended to form a fuel suitable for use in sparkignition. Motor gasoline, as defined in ASTM Specification D-4814 or Federal Specification VV-G-1690C, is characterized as having a boiling range of 122°F to 158°F at the 10-percent recovery point to 365°F to 374°F at the 90-percent recovery point. "Motor gasoline" includes conventional gasoline, all types of oxygenated gasoline including gasohol, and reformulated gasoline, but excludes aviation gasoline. Note: Volumetric data on blending components, as well as oxygenates, are not counted in data on finished motor gasoline until the blending components are blended into the gasoline.

Motor Gasoline Grades: The classification of gasoline by octane ratings. Each type of gasoline (conventional, oxygenated, and reformulated) is classified by three

grades: regular, midgrade, and premium. *Note*: Gasoline sales are reported by grade in accordance with their classification at the time of sale. In general, automotive octane requirements are lower at high altitudes. Therefore, in some areas of the United States, such as the Rocky Mountain States, the octane ratings for the gasoline grades may be 2 or more octane points lower.

Regular Gasoline: Gasoline having an antiknock index, i.e., octane rating, greater than or equal to 85 and less than 88. Note: Octane requirements may vary by altitude. See **Motor Gasoline Grades**.

Midgrade Gasoline: Gasoline having an antiknock index, i.e., octane rating, greater than or equal to 88 and less than or equal to 90. Note: Octane requirements may vary by altitude. See **Motor Gasoline Grades**.

*Premium Gasoline*: Gasoline having an antiknock index, i.e., octane rating, greater than 90. Note: Octane requirements may vary by altitude. See **Motor Gasoline Grades**.

Motor Gasoline, Oxygenated: Finished motor gasoline, other than reformulated gasoline, having an oxygen content of 2.7 percent or higher by weight and required by the U.S. Environmental Protection Agency (EPA) to be sold in areas designated by EPA as carbon monoxide (CO) nonattainment areas. Note: Oxygenated gasoline excludes oxygenated fuels program reformulated gasoline (OPRG) and reformulated gasoline blendstock for oxygenate blending (RBOB). Data on gasohol that has at least 2.7 percent oxygen, by weight, and is intended for sale inside CO nonattainment areas are included in data on oxygenated gasoline. Other data on gasohol are included in data on conventional gasoline.

Motor Gasoline, Reformulated: Finished motor gasoline formulated for use in motor vehicles, the composition and properties of which meet the requirements of the reformulated gasoline regulations promulgated by the U.S. Environmental Protection Agency under Section 211(k) of the Clean Air Act. Note: This category includes oxygenated fuels program reformulated gasoline (OPRG) but excludes reformulated gasoline blendstock for oxygenate blending (RBOB).

Motor Gasoline Retail Prices: Motor gasoline prices calculated each month by the Bureau of Labor Statistics (BLS) in conjunction with the construction of the Consumer Price Index (CPI). Those prices are collected in 85 urban areas selected to represent all urban consumers-about 80 percent of the total U.S. population. The service stations are selected initially, and on a replacement basis, in such a way that they represent the purchasing habits of the CPI population. Service stations in the current sample include those providing all types of service (i.e., full-, mini-, and self-service.

Motor Gasoline (Total): For stock level data, a sum including finished motor gasoline stocks plus stocks of

motor gasoline blending components but excluding stocks of oxygenates.

MTBE: See Methyl Tertiary Butyl Ether.

NAICS (North American Industry Classification System): A coding system developed jointly by the United States, Canada, and Mexico to classify businesses and industries according to the type of economic activity in which they are engaged. NAICS replaces the Standard Industrial Classification (SIC) codes. For additional information on NAICS, go to http://www.census.gov/eos/www/naics/.

**Naphtha:** A generic term applied to a petroleum fraction with an approximate boiling range between 122 and 400° F.

**Natural Gas:** A gaseous mixture of hydrocarbon compounds, primarily methane, used as a fuel for electricity generation and in a variety of ways in buildings, and as raw material input and fuel for industrial processes.

**Natural Gas, Dry:** Natural gas which remains after: 1) the liquefiable hydrocarbon portion has been removed from the gas stream (i.e., gas after lease, field, and/or plant separation); and 2) any volumes of nonhydrocarbon gases have been removed where they occur in sufficient quantity to render the gas unmarketable. *Note:* Dry natural gas is also known as consumer-grade natural gas. The parameters for measurement are cubic feet at 60 degrees Fahrenheit and 14.73 pounds per square inch absolute.

Natural Gas (Dry) Production: The process of producing consumer-grade natural gas. Natural gas withdrawn from reservoirs is reduced by volumes used at the production (lease) site and by processing losses. Volumes used at the production site include 1) the volume returned to reservoirs in cycling, repressuring of oil reservoirs, and conservation operations; and 2) gas vented and flared. Processing losses include 1) nonhydrocarbon gases (e.g., water vapor, carbon dioxide, helium, hydrogen sulfide, and nitrogen) removed from the gas stream; and 2) gas converted to liquid form, such as lease condensate and plant liquids. Volumes of dry gas withdrawn from gas storage reservoirs are not considered part of production. Dry natural gas production equals marketed production less extraction loss.

Natural Gas Marketed Production: Gross withdrawals of natural gas from production reservoirs, less gas used for reservoir repressuring; nonhydrocarbon gases removed in treating and processing operations; and quantities vented and flared.

**Natural Gas Plant Liquids (NGPL):** Natural gas liquids recovered from natural gas in processing plants and, in some situations, from natural gas field facilities, as well as those extracted by fractionators. Natural gas plant

liquids are defined according to the published specifications of the Gas Processors Association and the American Society for Testing and Material as follows: ethane, propane, normal butane, isobutane, pentanes plus, and other products from natural gas processing plants (i.e., products meeting the standards for finished petroleum products produced at natural gas processing plants, such as finished motor gasoline, finished aviation gasoline, special naphthas, kerosene, distillate fuel oil, and miscellaneous products).

Natural Gas Wellhead Price: The wellhead price of natural gas is calculated by dividing the total reported value at the wellhead by the total quantity produced as reported by the appropriate agencies of individual producing States and the U.S. Minerals Management Service. The price includes all costs prior to shipment from the lease, including gathering and compression costs, in addition to State production, severance, and similar charges.

**Natural Gasoline:** A mixture of hydrocarbons (mostly pentanes and heavier) extracted from natural gas that meets vapor pressure, end-point, and other specifications for natural gasoline set by the Gas Processors Association. Includes isopentane, which is a saturated branch-chain hydrocarbon obtained by fractionation of natural gasoline or isomerization of normal pentane.

**Net Summer Capacity:** The maximum output, commonly expressed in **kilowatts** (kW) or megawatts (MW), that generating equipment can supply to system load, as demonstrated by a multi-hour test, at the time of summer peak demand (period of June 1 through September 30). This output reflects a reduction in capacity due to electricity use for station service or auxiliaries.

**Neutral Zone:** A 6,200 square-mile area shared equally between Kuwait and Saudi Arabia under a 1992 agreement. The Neutral Zone contains an estimated 5 billion barrels of oil and 8 trillion cubic feet of natural gas.

**Nominal Dollars:** A measure used to express **nominal price**.

**Nominal Price:** The price paid for a product or service at the time of the transaction. Nominal prices are those that have not been adjusted to remove the effect of changes in the purchasing power of the dollar; they reflect buying power in the year in which the transaction occurred.

**Non-Biomass Waste:** Material of non-biological origin that is a byproduct or a discarded product. "Non-biomass waste" includes municipal solid waste from non-biogenic sources, such as plastics, and tire-derived fuels.

**Nonhydrocarbon Gases:** Typical nonhydrocarbon gases that may be present in reservoir natural gas are carbon dioxide, helium, hydrogen sulfide, and nitrogen.

**Nonrenewable Fuels:** Fuels that cannot be easily made or "renewed," such as **crude oil**, **natural gas**, and **coal**.

**Nuclear Electric Power (Nuclear Power):** Electricity generated by the use of the thermal energy released from the fission of nuclear fuel in a reactor.

**Nuclear Electric Power Plant:** A single-unit or multiunit facility in which heat produced in one or more reactors by the fissioning of nuclear fuel is used to drive one or more steam turbines.

**Nuclear Reactor:** An apparatus in which a nuclear fission chain reaction can be initiated, controlled, and sustained at a specific rate. A reactor includes fuel (fissionable material), moderating material to control the rate of fission, a heavy-walled pressure vessel to house reactor components, shielding to protect personnel, a system to conduct heat away from the reactor, and instrumentation for monitoring and controlling the reactor's systems.

### **OECD:** See Organization for Economic Cooperation and Development.

**Offshore:** That geographic area that lies seaward of the coastline. In general, the coastline is the line of ordinary low water along with that portion of the coast that is in direct contact with the open sea or the line marking the seaward limit of inland water.

Oil: See Crude Oil.

**OPEC:** See Organization of the Petroleum Exporting Countries.

**Operable Unit (Nuclear):** In the United States, a nuclear generating unit that has completed low-power testing and been issued a full-power operating license by the Nuclear Regulatory Commission, or equivalent permission to operate.

Organization for Economic Cooperation and Development (OECD): An international organization helping governments tackle the economic, social and governance challenges of a globalized economy. Its membership comprises about 30 member countries. With active relationships with some 70 other countries, non-governmental organizations (NGOs) and civil society, it has a global reach. For details about the organization, see http://www.oecd.org.

**Organization of the Petroleum Exporting Countries (OPEC):** An intergovernmental organization whose stated objective is to "coordinate and unify the petroleum policies of member countries." It was created at the Baghdad Conference on September 10–14, 1960. Current members (with years of membership) include Algeria (1969–present), Angola (2007–present), Ecuador (1973–1992 and 2007–present), Iran (1960–present), Iraq (1960–present), Kuwait (1960–present), Libya (1962–present), Nigeria

(1971–present), Qatar (1961–present), Saudi Arabia (1960–present), United Arab Emirates (1967–present), and Venezuela (1960–present). Countries no longer members of OPEC include Gabon (1975–1994) and Indonesia (1962–2008).

Oxygenates: Substances which, when added to gasoline, increase the amount of oxygen in that gasoline blend. Ethanol, Methyl Tertiary Butyl Ether (MTBE), Ethyl Tertiary Butyl Ether (ETBE), and methanol are common oxygenates.

**PAD Districts:** Petroleum Administration for Defense Districts. Geographic aggregations of the 50 States and the District of Columbia into five districts for the Petroleum Administration for Defense in 1950. The districts were originally instituted for economic and geographic reasons as Petroleum Administration for War (PAW) Districts, which were established in 1942.

**Pentanes Plus:** A mixture of hydrocarbons, mostly pentanes and heavier, extracted from natural gas. Includes isopentane, natural gasoline, and plant condensate.

**Petrochemical Feedstocks:** Chemical feedstocks derived from petroleum principally for the manufacture of chemicals, synthetic rubber, and a variety of plastics.

**Petroleum:** A broadly defined class of liquid hydrocarbon mixtures. Included are crude oil, lease condensate, unfinished oils, refined products obtained from the processing of crude oil, and natural gas plant liquids. Note: Volumes of finished petroleum products include nonhydrocarbon compounds, such as additives and detergents, after they have been blended into the products.

Petroleum Coke: See Coke, Petroleum.

**Petroleum Consumption:** See **Products Supplied** (Petroleum).

**Petroleum Imports:** Imports of petroleum into the 50 States and the District of Columbia from foreign countries and from Puerto Rico, the Virgin Islands, and other U.S. territories and possessions. Included are imports for the Strategic Petroleum Reserve and withdrawals from bonded warehouses for onshore consumption, offshore bunker use, and military use. Excluded are receipts of foreign petroleum into bonded warehouses and into U.S. territories and U.S. Foreign Trade Zones.

**Petroleum Products:** Products obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds. Petroleum products include unfinished oils, liquefied petroleum gases, pentanes plus, aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, petrochemical feedstocks, special naphthas,

lubricants, waxes, petroleum coke, asphalt, road oil, still gas, and miscellaneous products.

**Petroleum Stocks, Primary:** For individual products, quantities that are held at refineries, in pipelines, and at bulk terminals that have a capacity of 50,000 barrels or more, or that are in transit thereto. Stocks held by product retailers and resellers, as well as tertiary stocks held at the point of consumption, are excluded. Stocks of individual products held at gas processing plants are excluded from individual product estimates but are included in other oils estimates and total.

**Photovoltaic Energy:** Direct-current electricity generated from sunlight through solid-state semiconductor devices that have no moving parts.

**Pipeline Fuel:** Gas consumed in the operation of pipelines, primarily in compressors.

**Plant Condensate:** One of the natural gas liquids, mostly pentanes and heavier hydrocarbons, recovered and separated as liquid at gas inlet separators or scrubbers in processing plants.

**Primary Energy: Energy** in the form that it is first accounted for in a statistical energy balance, before any transformation to secondary or tertiary forms of energy. For example, **coal** can be converted to synthetic gas, which can be converted to **electricity**; in this example, coal is primary energy, synthetic gas is secondary energy, and electricity is tertiary energy. See **Primary Energy Production** and **Primary Energy Consumption**.

**Primary Energy Consumption:** Consumption of primary energy. (Energy sources that are produced from other energy sources-e.g., coal coke from coal-are included in primary energy consumption only if their energy content has not already been included as part of the original energy source. Thus, U.S. primary energy consumption does include net imports of coal coke, but not the coal coke produced from domestic coal.) The U.S. Energy Information Administration includes the following in U.S. primary energy consumption: coal consumption; coal coke net imports; petroleum consumption (petroleum products supplied, including natural gas plant liquids and crude oil burned as fuel); dry natural gas—excluding supplemental gaseous fuels—consumption; nuclear electricity net generation (converted to **Btu** using the nuclear plants **heat rate**); hydroelectricity conventional net generation (converted to Btu using the fossil-fueled plants heat rate); geothermal electricity net generation (converted to Btu using the geothermal plants heat rate), and geothermal heat pump energy and geothermal direct use energy; solar thermal and photovoltaic electricity net generation (converted to Btu using the fossil-fueled plants heat rate), and solar thermal direct use energy; wind electricity net generation (converted to Btu using

the fossil-fueled plants heat rate); wood and wood-derived fuels consumption; biomass waste consumption; fuel ethanol and biodiesel consumption; losses and co-products from the production of fuel ethanol and biodiesel; and electricity net imports (converted to Btu using the electricity heat content of 3,412 Btu per kilowatthour). See Total Energy Consumption.

Primary Energy Production: Production of primary 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 geothermal 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<sub>3</sub>H<sub>6</sub>) recovered from refinery or petrochemical processes.

**Real Dollars:** These are dollars that have been adjusted for inflation. See **Real Price**.

**Real Price:** A price that has been adjusted to remove the effect of changes in the purchasing power of the dollar. Real prices, which are expressed in constant dollars, usually reflect buying power relative to a base year.

**Refiner Acquisition Cost of Crude Oil:** The cost of crude oil to the refiner, including transportation and fees. The composite cost is the weighted average of domestic and imported crude oil costs.

Refinery and Blender Net Inputs: Raw materials, unfinished oils, and blending components processed at refineries, or blended at refineries or petroleum storage terminals to produce finished petroleum products. Included are gross inputs of crude oil, natural gas plant liquids, other hydrocarbon raw materials, hydrogen, oxygenates (excluding fuel ethanol), and renewable fuels (including fuel ethanol). Also included are net inputs of unfinished oils, motor gasoline blending components, and aviation gasoline blending components. Net inputs are calculated as gross inputs minus gross production. Negative net inputs indicate gross inputs are less than gross production. Examples of negative net inputs include reformulated gasoline blendstock for oxygenate blending (RBOB) produced at refineries for shipment to blending terminals, and unfinished oils produced and added to inventory in advance of scheduled maintenance of a refinery crude oil distillation unit.

Refinery and Blender Net Production: Liquefied refinery gases, and finished petroleum products produced at a refinery or petroleum storage terminal blending facility. Net production equals gross production minus gross inputs. Negative net production indicates gross production is less than gross inputs for a finished petroleum product. Examples of negative net production include reclassification of one finished product to another finished product, or reclassification of a finished product to unfinished oils or blending components.

**Refinery (Petroleum):** An installation that manufactures finished petroleum products from crude oil, unfinished oils, natural gas liquids, other hydrocarbons, and alcohol.

**Refuse Mine:** A surface site where **coal** is recovered from previously mined coal. It may also be known as a silt bank, culm bank, refuse bank, slurry dam, or dredge operation.

**Refuse Recovery:** The recapture of **coal** from a **refuse mine** or the coal recaptured by that process. The resulting product has been cleaned to reduce the concentration of noncombustible materials.

Renewable Energy: Energy obtained from sources that are essentially inexhaustible (unlike, for example, the fossil fuels, of which there is a finite supply). Renewable sources of energy include conventional hydrolectric 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, refinery gas, biomass gas, air injected for Btu stabilization, and manufactured gas commingled and distributed with natural gas.

Synthetic Natural Gas (SNG): (Also referred to as substitute natural gas) A manufactured product, chemically similar in most respects to **natural gas**, resulting from the conversion or reforming of **hydrocarbons** that may easily be substituted for or interchanged with pipeline-quality natural gas.

Thermal Conversion Factor: A factor for converting data between physical units of measure (such as barrels, cubic feet, or short tons) and thermal units of measure (such as British thermal units, calories, or joules); or for converting data between different thermal units of measure. See Btu Conversion Factor.

Total Energy Consumption: Primary energy consumption in the end-use sectors, plus electricity retail sales and electrical system energy losses.

**Transportation Sector:** An energy-consuming sector that consists of all vehicles whose primary purpose is transporting people and/or goods from one physical location to another. Included are automobiles; trucks; buses; motorcycles; trains, subways, and other rail vehicles; aircraft; and ships, barges, and other waterborne vehicles. Vehicles whose primary purpose is not transportation (e.g., construction cranes and bulldozers, farming vehicles, and warehouse tractors and forklifts) are classified in the sector of their primary use. Note: Various EIA programs differ in sectoral coverage-for more information see

http://www.eia.gov/neic/datadefinitions/Guideforwebtrans.htm See End-Use Sectors and Energy-Use Sectors.

**Underground Storage:** The storage of natural gas in underground reservoirs at a different location from which it was produced.

**Unfinished Oils:** All oils requiring further refinery processing except those requiring only mechanical blending. Includes naphthas and lighter oils, kerosene and light gas oils, heavy gas oils, and residuum.

**Unfractionated Stream:** Mixtures of unsegregated natural gas liquid components, excluding those in plant condensate. This product is extracted from natural gas.

Union of Soviet Socialist Republics (U.S.S.R.): A political entity that consisted of 15 constituent republics: Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan. The U.S.S.R. ceased to exist as of December 31, 1991.

United States: The 50 States and the District of Columbia. Note: The United States has varying degrees of jurisdiction over a number of territories and other political entities outside the 50 States and the District of Columbia, including Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, Johnston Atoll, Midway Islands, Wake Island, and the Northern Mariana Islands. EIA data programs may include data from some or all of these areas in U.S. totals. For these programs, data products will contain notes explaining the extent of geographic coverage included under the term "United States."

**Useful Thermal Output:** The thermal energy made available in a combined-heat-and-power system for use in any industrial or commercial process, heating or cooling application, or delivered to other end users, i.e., total thermal energy made available for processes and applications other than electrical generation.

U.S.S.R.: See Union of Soviet Socialist Republics (U.S.S.R.).

**Vented Natural Gas:** Gas released into the air on the production site or at processing plants.

**Vessel Bunkering:** Includes sales for the fueling of commercial or private boats, such as pleasure craft, fishing boats, tugboats, and ocean-going vessels, including vessels operated by oil companies. Excluded are volumes sold to the U.S. Armed Forces.

Waste Coal: Usable material that is a byproduct of previous coal processing operations. Waste coal is usually composed of mixed coal, soil, and rock (mine waste). Most waste coal is burned as-is in unconventional fluidized-bed combustors. For some uses, waste coal may be partially cleaned by removing some extraneous noncombustible constituents. Examples of waste coal include fine coal, coal obtained from a refuse bank or slurry dam, anthracite culm, bituminous gob, and lignite waste.

Waste: See Biomass Waste and Non-Biomass Waste.

**Watt (W):** The unit of electrical power equal to one ampere under a pressure of one volt. A watt is equal to 1/746 horsepower.

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 volume of gas in a reservoir that is in addition to the base gas. It may or may not be completely withdrawn during any particular withdrawal season. Conditions permitting, the total working capacity could be used more than once during any season.