DOE/EIA-0035(95/10)

# Monthly Energy Review

# Monthly Energy Review

The Monthly Energy Review (MER) presents an overview of the Energy Information Administration's recent monthly energy statistics. The statistics cover the major activities of U.S. production, consumption, trade, stocks, and prices for petroleum, natural gas, coal, electricity, and nuclear energy. Also included are international energy and thermal and metric conversion factors.

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The Monthly Energy Review (ISSN 0095-7356) is published monthly by the Energy Information Administration, 1000 Independence Avenue, S.W., Washington, DC 20585, and sells for \$87.00 per year (price is subject to change without advance notice). Second-class postage rates are paid at Washington, DC 20066-9998, and at additional mailing offices. POSTMASTER: Send address changes to Monthly Energy Review, Energy Information Administration, EI-231, 1000 Independence Avenue, S.W., Washington, DC 20585.



# **Monthly Energy Review**

**April 1996** 

**Energy Information Administration** 

Office of Energy Markets and End Use U.S. Department of Energy Washington, DC 20585

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# **Section 1. Energy Overview**

Energy production during January 1996 totaled 5.8 quadrillion Btu, a 0.9-percent decrease from the level of production during January 1995. Coal production decreased 4.6 percent, crude oil and natural gas plant liquids decreased 1.8 percent, and production of natural gas increased 0.5 percent. All other forms of energy production combined were up 5.3 percent from the level of production during January 1995.

Energy consumption during January 1996 totaled 8.5 quadrillion Btu, 6.3 percent above the level of consumption during January 1995. Consumption of natural gas increased 6.8 percent, consumption of coal was up 7.1

percent, and petroleum products consumption rose 6.1 percent. Consumption of all other forms of energy combined increased 4.1 percent from the level 1 year earlier.

Net imports of energy during January 1996 totaled 1.6 quadrillion Btu, 14.3 percent above the level of net imports 1 year earlier. Net imports of petroleum increased 17.2 percent, and net imports of natural gas were down 3.7 percent. Net exports of coal was unchanged from the level in January 1995.

Table 1.1 Energy Summary for January 1996

(Quadrillion Btu)

			January		
	1996	1996 Daily Rate	1995	1995 Daily Rate	Percent Change <sup>a</sup>
Production <sup>b</sup>	5.824	0.188	5.878	0.190	-0.9
Coal	1.799	.058	1.886	.061	-4.6
Natural Gas (Dry)	1.678	.054	1.669	.054	.5
Crude Oil <sup>c</sup> and Natural Gas Plant Liquids	1.370	.044	1.395	.045	-1.8
Other <sup>d</sup>	.977	.032	.928	.030	5.3
Consumption <sup>b</sup>	8.477	.273	7.976	.257	6.3
Coal	1.813	.058	1.693	.055	7.1
Natural Gase	2.639	.085	2.472	.080	6.8
Petroleum Products <sup>f</sup>	3.025	.098	2.851	.092	6.1
Other <sup>g</sup>	.999	.032	.960	.031	4.1
Net Imports	1.600	.052	1.399	.045	14.3
Coal <sup>h</sup>	149	005	149	005	.0
Natural Gas	.234	.008	.243	.008	-3.7
Petroleum <sup>i</sup>	1.493	.048	1.274	.041	17.2
Other <sup>j</sup>	.022	.001	.031	.001	-30.1

<sup>&</sup>lt;sup>a</sup> Based on daily rates prior to rounding.

b Due to a lack of consistent historical data, some renewable energy sources are not included. For example, in 1992, 3.0 quadrillion Btu of renewable energy consumed by U.S. electric utilities to generate electricity for distribution is included, but an estimated 3.0 quadrillion Btu of renewable energy used by other sectors is not included.

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

d "Other" is hydroelectric and nuclear electric power, and electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy.

e Includes supplemental gaseous fuels.

f Products obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds.

<sup>&</sup>lt;sup>g</sup> "Other" is hydroelectric and nuclear electric power; electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy; and net imports of electricity and coal coke.

h Minus sign indicates exports are greater than imports.

<sup>&</sup>lt;sup>i</sup> Crude oil, lease condensate, petroleum products, pentanes plus, unfinished oils, gasoline blending components, and imports of crude oil for the Strategic Petroleum Reserve.

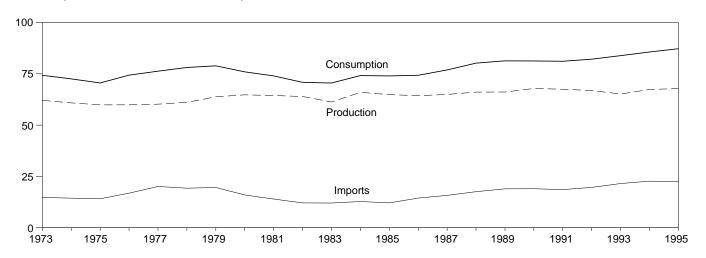
j "Other" is net imports of electricity and coal coke.

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

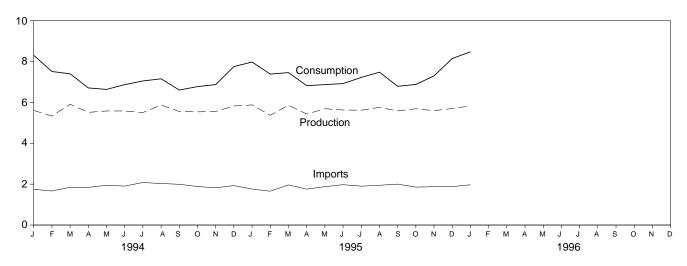
Sources: Tables 1.3, 1.4, and 1.5.

Figure 1.1 Energy Overview

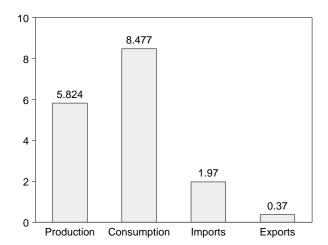
Consumption, Production, and Imports, 1973-1995



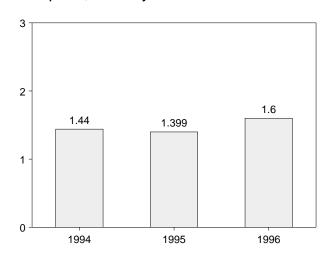
### Consumption, Production, and Imports, Monthly



#### Overview, January 1996



#### Net Imports, January



Note: Because vertical scales differ, graphs should not be compared. Source: Table 1.2.

**Table 1.2 Energy Overview** 

	Production <sup>a</sup>	Consumption <sup>a,b</sup>	Imports	Exports	Net Imports
973 Total	62.060	74.282	14.731	2.051	12.680
974 Total	60.835	72.543	14.413	2.223	12.190
1975 Total		70.546	14.111	2.359	11.752
976 Total	59.892	74.362	16.837	2.188	14.648
977 Total	60.219	76.288	20.090	2.071	18.019
978 Total		78.089	19.254	1.931	17.323
979 Total		78.898	19.616	2.870	16.746
980 Total		75.955	15.971	3.723	12.247
981 Total	64.421	73.990	13.975	4.329	9.646
982 Total	63.962	70.848	12.092	4.633	7.460
983 Total	61.279	70.524	12.027	3.717	8,310
984 Total		74.144	12.767	3.804	8.963
985 Total		73.981	12.103	4.231	7.872
986 Total	64.350	74.297	14.438	4.055	10.382
		76.894	15.764	3.853	11.911
987 Total					
988 Total		80.218	17.564	4.415	13.149
989 Total	66.129	81.325	18.947	4.765	14.181
990 Total		81.265	18.987	4.910	14.077
991 Total	67.484	81.116	18.577	5.220	13.357
992 Total	66.853	82.144	19.650	5.017	14.633
993 Total	65.163	83.862	21.530	4.350	17.180
<b>994</b> January	5.606	8.306	1.748	.307	1.440
February	5.334	7.512	1.666	.275	1.391
March	5.909	7.399	1.847	.349	1.498
April	5.512	6.708	1.845	.296	1.549
May		6.636	1.943	.326	1.617
June	5.579	6.868	1.906	.374	1.532
	5.504	7.050	2.079		1.750
July				.329	
August		7.154	2.032	.360	1.672
September		6.605	1.993	.366	1.626
October	5.536	6.772	1.884	.363	1.521
November	5.557	6.872	1.822	.362	1.460
December	5.825	7.753	1.931	.418	1.513
Total	67.372	<sup>R</sup> <b>85.636</b>	22.695	4.125	18.570
995 January	<sup>R</sup> 5.878	7.976	1.760	.360	1.399
February	<sup>R</sup> 5.370	<sup>R</sup> 7.385	1.656	.346	1.310
March	_	7.458	1.964	.380	1.584
April		R 6.820	1.756	R .381	R 1.376
May		6.870	1.877	.391	1.486
		<sup>R</sup> 6.921			
June	D		1.974	.395	1.579
July		R 7.222	1.901	.356	1.545
August		<sup>R</sup> 7.481	1.945	.362	1.583
September		<sup>R</sup> 6.789	2.003	.366	1.637
October		<sup>R</sup> 6.878	<sup>R</sup> 1.856	.396	<sup>R</sup> 1.460
November	<sup>R</sup> 5.594	<sup>R</sup> 7.299	<sup>R</sup> 1.875	R .389	1.486
December	R 5.703	<sup>R</sup> 8.147	<sup>R</sup> 1.879	R .453	R 1.426
Total	_	R 87.245	R 22.446	R 4.575	R 17.871
996 January	5.824	8.477	1.970	.370	1.600

<sup>&</sup>lt;sup>a</sup> Due to a lack of consistent historical data, some renewable energy sources are not included. For example, in 1992, 3.0 quadrillion Btu of renewable energy consumed by U.S. electric utilities to generate electricity for distribution is included, but an estimated 3.0 quadrillion Btu of renewable energy used by other sectors is not included.

Forces in Europe; and adjustments to account for discrepancies between reporting systems.

R=Revised data.

energy used by other sectors is not included.

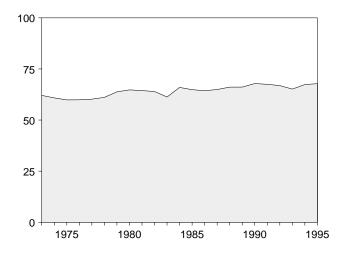
<sup>b</sup> The sum of domestic energy production and net imports of energy does not equal domestic energy consumption. The difference is attributed to stock changes; losses and gains in conversion, transportation, and distribution; the addition of blending compounds; shipments of anthracite to U.S. Armed

Notes: • For definitions, see Notes 1 through 4 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.

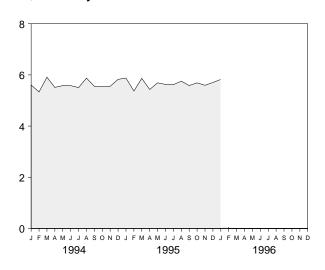
Sources: • Production: Table 1.3. • Consumption: Table 1.4. • Imports and Exports: Tables 3.1b, 4.2, 6.1, A2-A8, and Section 2, "Energy Consumption Notes and Sources," Notes 8 and 9. • Net Imports: Table 1.5.

Figure 1.2 Energy Production

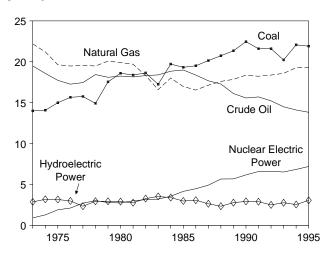
Total, 1973-1995



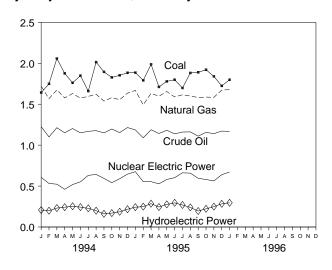
Total, Monthly



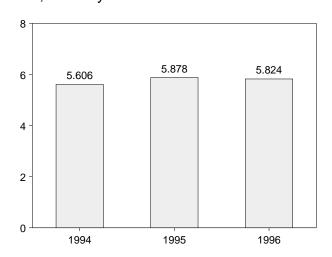
By Major Sources, 1973-1995



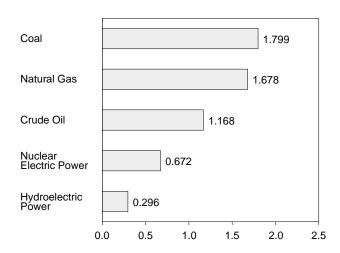
By Major Sources, Monthly



Total, January



By Major Sources, January 1996



Note: Because vertical scales differ, graphs should not be compared. Source: Table 1.3.

**Table 1.3 Energy Production by Source** 

	Coal	Natural Gas (Dry)	Crude Oil <sup>a</sup>	Natural Gas Plant Liquids	Nuclear Electric Power	Hydro- electric Power <sup>b</sup>	Geothermal Energy	Other <sup>c</sup>	Total <sup>d</sup>
1973 Total	13.993	22.187	19.493	2.569	0.910	2.861	0.043	0.003	62.060
1974 Total	14.074	21,210	18.575	2.471	1,272	3.177	.053	.003	60.835
1975 Total	14.990	19.640	17.729	2.374	1.900	3.155	.070	.002	59.860
1976 Total	15.654	19.480	17.262	2.327	2.111	2.976	.078	.003	59.892
1977 Total	15.755	19.565	17.454	2.327	2.702	2.333	.077	.005	60.219
1978 Total	14.910	19.485	18.434	2.245	3.024	2.937	.064	.003	61.103
1979 Total	17.539	20.076	18.104	2.286	2.776	2.931	.084	.005	63.801
1980 Total	18.597	19.908	18.249	2.254	2.739	2.900	.110	.005	64.761
1981 Total	18.376	19.699	18.146	2.307	3.008	2.758	.123	.004	64.421
1982 Total	18.639	18.319	18.309	2.191	3.131	3.266	.105	.003	63.962
1983 Total	17.246	16.593	18.392	2.184	3.203	3.527	.129	.004	61.279
1984 Total	19.719	18.008	18.848	2.274	3.553	3.386	.165	.009	65.962
1985 Total	19.325	16.980	18.992	2.241	4.149	2.970	.198	.015	64.871
1986 Total	19.510	16.541	18.376	2.149	4.471	3.071	.219	.012	64.350
1987 Total	20.142	17.136	17.675	2.215	4.906	2.635	.229	.016	64.952
1988 Total	20.737	17.599	17.279	2.260	5.661	2.334	.217	.017	66.105
1989 Total	21.345	17.847	16.117	2.158	5.677	2.767	.197	.020	66.129
1990 Total	22.456	18.362	15.571	2.175	6.161	2.926	.181	.021	67.853
1991 Total	21.594	18.229	15.701	2.306	6.579	2.885	.170	.021	67.484
1992 Total	21.593	18.375	15.223	2.363	6.607	2.501	.170	.022	66.853
1993 Total	20.221	18.584	14.494	2.408	6.519	2.757	.158	.021	65.163
<b>1994</b> January	1.642	1.720	1.226	.190	.607	.207	.013	.002	5.606
February	1.749	1.568	1.100	.174	.532	.199	.012	.002	5.334
March	2.058	1.675	1.213	.196	.523	.231	.012	.002	5.909
April	1.877	1.577	1.151	.191	.461	.242	.012	.002	5.512
May	1.761	1.631	1.203	.201	.518	.253	.012	.002	5.581
June	1.849	1.574	1.150	.197	.552	.243	.011	.002	5.579
July	1.660	1.596	1.169	.206	.631	.228	.012	.002	5.504
August	2.014	1.621	1.177	.207	.642	.199	.013	.002	5.874
September	1.895	1.538	1.150	.204	.594	.161	.012	.002	5.555
October	1.827	1.581	1.197	.206	.541	.170	.012	.002	5.536
November	1.853	1.555	1.153	.207	.590	.186	.012	.002	5.557
December	1.884	1.635	1.215	.213	.646	.217	.012	.002	5.825
Total	22.068	19.272	14.103	2.391	6.837	2.536	.145	.020	67.372
1995 January	1.886	R 1.669	1.186	.209	.676	.242	.009	.001	R 5.878
February	1.791	<sup>R</sup> 1.492	1.089	.189	.554	.249	.006	.001	<sup>R</sup> 5.370
March	1.987	<sup>R</sup> 1.633	1.188	.209	.554	.285	.007	.001	<sup>R</sup> 5.864
April	1.711	<sup>R</sup> 1.597	1.142	.204	.527	.244	.006	.002	<sup>R</sup> 5.431
May	1.779	<sup>R</sup> 1.655	1.182	.210	.581	.276	.005	.001	R 5.690
June	1.799	<sup>R</sup> 1.589	1.138	.198	.602	.295	.006	.001	R 5.628
July	1.698	<sup>R</sup> 1.615	1.160	.206	.662	.269	.006	.002	<sup>R</sup> 5.618
August	1.882	<sup>R</sup> 1.600	1.162	.204	.658	.239	.011	.002	<sup>R</sup> 5.757
September	1.890	R 1.582	1.110	.202	.595	.195	.008	.002	R 5.583
October	1.921	R 1.587	1.156	.208	.580	.222	.013	.002	R 5.689
November	1.840	R 1.584	1.140	.204	.563	.249	.012	.002	R 5.594
December	1.724	R 1.673	1.172	.199	.639	.283	.011	.001	R 5.703
Total	21.910	R 19.276	13.824	2.441	7.189	R 3.049	.099	.017	R 67.806
1996 January	1.799	1.678	1.168	.202	.672	.296	.007	.002	5.824

a Includes lease condensate.

R=Revised data.

Notes: • See Note 1 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.

Sources: • Coal: Tables 6.1 and A5-A7. • Natural Gas (Dry): Tables 4.1 and A4. • Crude Oil and Natural Gas Plant Liquids: Tables 3.1a and A2. • Nuclear Electric Power: Tables 7.1 and A8. • Hydroelectric Power: Table 7.1; Section 2, "Energy Consumption Notes and Sources," Note 8; and Table A8. • Geothermal Energy and Other: Section 2, "Energy Consumption Notes and Sources," Note 7, and Table A8.

b Electric utility and industrial generation.

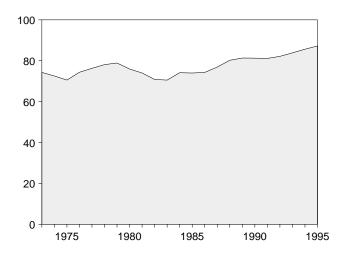
c "Other" production is electricity generated for distribution from wood,

waste, wind, photovoltaic, and solar thermal energy.

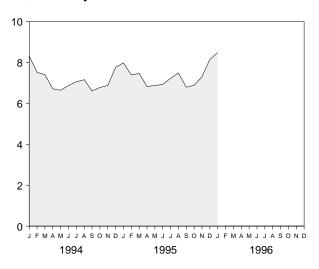
d Due to a lack of consistent historical data, some renewable energy sources are not included. For example, in 1992, 3.0 quadrillion Btu of renewable energy consumed by U.S. electric utilities to generate electricity for distribution is included, but an estimated 3.0 quadrillion Btu of renewable energy used by other sectors is not included.

Figure 1.3 Energy Consumption

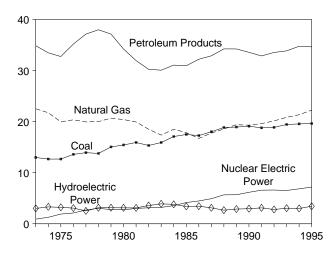
Total, 1973-1995



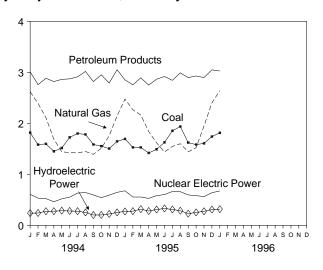
# Total, Monthly



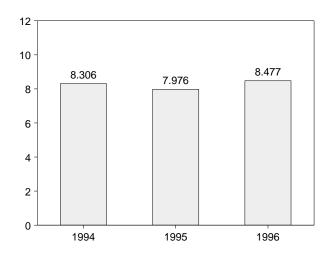
By Major Sources, 1973-1995



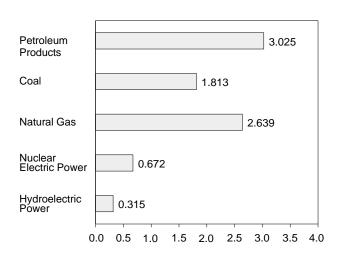
By Major Sources, Monthly



Total, January



By Major Sources, January 1996



Note: Because vertical scales differ, graphs should not be compared. Source: Table 1.4.

**Table 1.4 Energy Consumption by Source** 

	Coal	Natural Gas <sup>a</sup>	Petroleum Products <sup>b</sup>	Nuclear Electric Power	Hydro- electric Power <sup>c</sup>	Geothermal Energy	<b>Other</b> <sup>d</sup>	Total <sup>e</sup>
1973 Total	12.971	22.512	34.840	0.910	3.010	0.043	-0.004	74.282
1974 Total	12.663	21.732	33.455	1.272	3.309	.053	.059	72.543
1975 Total	12.663	19.948	32.731	1.900	3.219	.070	.016	70.546
1976 Total	13.584	20.345	35.175	2.111	3.066	.078	.003	74.362
1977 Total	13.922	19.931	37.122	2.702	2.515	.077	.020	76.288
1978 Total	13.765	20.000	37.965	3.024	3.141	.064	.128	78.089
1979 Total	15.039	20.666	37.123	2.776	3.141	.084	.068	78.898
1980 Total	15.423	20.394	34.202	2.739	3.118	.110	031	75.955
1981 Total	15.907	19.928	31.931	3.008	3.105	.123	012	73.990
1982 Total	15.322	18.505	30.231	3.131	3.572	.105	018	70.848
1983 Total	15.894	17.357	30.054	3.203	3.899	.129	012	70.524
1984 Total	17.071	18.507	31.051	3.553	3.800	.165	002	74.144
1985 Total	17.478	17.834	30.922	4.149	3.398	.198	.001	73.981
1986 Total	17.261	16.708	32.196	4.471	3.446	.219	004	74.297
1987 Total	18.008	17.744	32.865	4.906	3.117	.229	.024	76.894
1988 Total	18.846	18.552	34.222	5.661	2.662	.217	.057	80.218
1989 Total	18.925	19.384	34.211	5.677	2.881	.197	.051	81.325
1990 Total	19.101	19.296	33.553	6.161	2.946	.181	.026	81.265
1991 Total	18.770	19.606	32.845	6.579	3.115	.170	.030	81.116
1992 Total	18.868	20.131	33.527	6.607	2.793	.170	.049	82.144
1993 Total	19.430	20.826	33.841	6.519	3.050	.158	.038	83.862
1994 January	1.816	2.618	3.009	.607	.237	.013	.006	8.306
February	1.580	2.390	2.758	.532	.240	.012	.001	7.512
March	1.596	2.109	2.883	.523	.274	.012	.003	7.399
April	1.450	1.688	2.818	.461	.275	.012	.004	6.708
May	1.515	1.441	2.861	.518	.286	.012	.003	6.636
June	1.724	1.425	2.871	.552	.280	.011	.004	6.868
July	1.799	1.419	2.911	.631	.275	.012	.002	7.050
August	1.781	1.447	3.016	.642	.251	.013	.003	7.154
September	1.584	1.392	2.818	.594	.201	.012	.004	6.605
October	1.551	1.509	2.950	.541	.202	.012	.007	6.772
November	1.503	1.754	2.790	.590	.221	.012	.001	6.872
December	1.645	2.144	3.050	.646	.252	.012	.004	7.753
Total	19.544	<sup>R</sup> 21.337	34.735	6.837	2.994	.145	.044	<sup>R</sup> <b>85.636</b>
1995 January	1.693	R 2.472	2.851	.676	.270	.009	.005	7.976
February	R 1.527	2.266	2.754	.554	.276	.006	.003	<sup>R</sup> 7.385
March	R 1.526	2.161	2.891	.554	.316	.007	.004	_ 7.458
April	<sup>R</sup> 1.418	_ 1.839	2.749	.527	.279	.006	.003	<sup>R</sup> 6.820
May	R 1.490	<sup>R</sup> 1.616	2.864	.581	.308	.005	.006	_ 6.870
June	<sup>R</sup> 1.626	1.438	2.917	.602	.329	.006	.002	R 6.921
July	1.852	<sup>R</sup> 1.547	2.842	.662	.309	.006	.003	<sup>R</sup> 7.222
August	<sup>R</sup> 1.936	R 1.599	2.989	.658	.285	.011	.003	<sup>R</sup> 7.481
September	1.620	R 1.441	2.895	.595	.227	.008	.004	<sup>R</sup> 6.789
October	<sup>R</sup> 1.582	<sup>R</sup> 1.521	2.928	.580	.251	.013	.004	<sup>R</sup> 6.878
November	R 1.606	1.946	2.896	.563	.273	.012	.004	<sup>R</sup> 7.299
December	R 1.739	R 2.400	3.048	.639	.307	.011	.003	R 8.147
Total	R 19.614	R 22.246	34.624	7.189	R 3.429	.099	.044	R 87.245
1996 January	1.813	2.639	3.025	.672	.315	.007	.005	8.477

<sup>&</sup>lt;sup>a</sup> Includes supplemental gaseous fuels.

energy used by other sectors is not included.

R=Revised data.

Notes: • See Note 2 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.

States and the District of Columbia.

Sources: • Coal: Tables 6.1 and A5-A7.

and A4. • Petroleum: Tables 3.1a and A3. • Nuclear Electric Power:
Tables 7.1 and A8. • Hydroelectric Power: Table 7.1; Section 2, "Energy Consumption Notes and Sources," Note 8; and Table A8. • Geothermal Energy and Other: Section 2, "Energy Consumption Notes and Sources," Note 7, and Table A8.

b Products obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds.

Electric utility and industrial generation and net imports of electricity.
 "Other" consumption is net imports of coal coke and electricity generated for distribution from wood, waste, wind, photovoltaic, and solar thermal

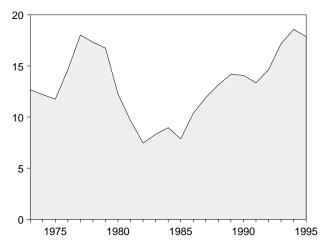
energy.

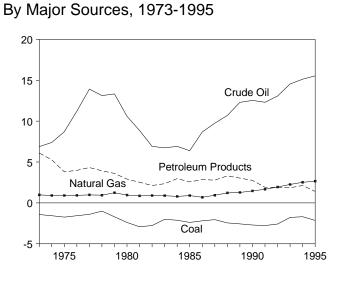
Due to a lack of consistent historical data, some renewable energy sources are not included. For example, in 1992, 3.0 quadrillion Btu of renewable energy consumed by U.S. electric utilities to generate electricity for distribution is included, but an estimated 3.0 quadrillion Btu of renewable

Figure 1.4 Energy Net Imports

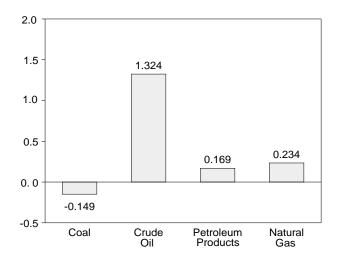
(Quadrillion Btu, Except as Noted)

#### Total, 1973-1995



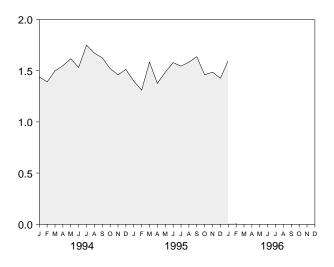


# By Major Sources, January 1996

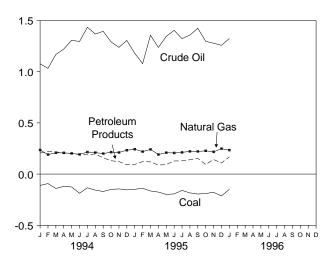


Note: Because vertical scales differ, graphs should not be compared. Sources: Tables 1.4 and 1.5.

# Total, Monthly



# By Major Sources, Monthly



As Share of Consumption,

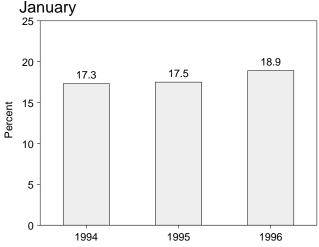


Table 1.5 Energy Net Imports by Source

		Natural	Crude	Petroleum		Coal	
	Coal	Gas	Oila	Productsb	Electricity <sup>C</sup>	Coke	Total
973 Total	-1.422	0.981	6.883	6.097	0.148	-0.007	12.680
1974 Total	-1.568	.907	7.389	5.273	.133	.056	12.190
975 Total	-1.738	.904	8.708	3.800	.064	.014	11.752
976 Total	-1.567	.922	11,221	3.982	.089	(s)	14.648
977 Total	-1.401	.981	13.921	4.321	.182	.015	18.019
978 Total	-1.004	.941	13.125	3.932	.204	.125	17.323
979 Total	-1.702	1.243	13.328	3.603	.211	.063	16.746
	-1.702 -2.391		10.586	2.912	.217		12.247
980 Total		.957				035	
981 Total	-2.918	.857	8.854	2.522	.347	016	9.646
982 Total	-2.768	.898	6.917	2.128	.306	022	7.460
983 Total	-2.013	.885	6.731	2.351	.372	016	8.310
984 Total	-2.119	.792	6.918	2.970	.414	011	8.963
985 Total	-2.389	.896	6.381	2.570	.428	013	7.872
986 Total	-2.193	.686	8.676	2.855	.375	017	10.382
987 Total	-2.049	.937	9.748	2.784	.483	.009	11.911
988 Total	-2.446	1.221	10.698	3.308	.328	.040	13.149
989 Total	-2.566	1.278	12.296	3.029	.113	.030	14.181
990 Total	-2.705	1.464	12.536	2.757	.020	.005	14.077
991 Total	-2.769	1.666	12.308	1.912	.231	.009	13.357
992 Total	-2.587	1.941	13.065	1.895	.292	.027	14.633
993 Total	-1.780	2.255	14.542	1.854	.292	.017	17.180
<b>994</b> January	111	.235	1.077	.205	.030	.004	1.440
February	093	.190	1.033	.221	.041	001	1.391
March	141	.208	1.168	.218	.044	.002	1.498
April	120	.207	1.221	.205	.033	.003	1.549
May	126	.202	1.307	.201	.032	.002	1.617
June	187	.192	1.295	.192	.037	.002	1.532
	134	.215	1.434	.188	.047		1.750
July		.210	1.368		.053	(s)	1.672
August	157			.197		.002	
September	170	.200	1.394	.159	.040	.003	1.626
October	150	.214	1.291	.130	.032	.005	1.521
November	145	.211	1.238	.122	.035	001	1.460
December	154	.233	1.305	.091	.035	.002	1.513
Total	-1.689	2.518	15.131	2.128	.459	.024	18.570
995 January	149	.243	1.180	.094	E .028	.004	1.399
February	139	.219	1.079	.121	E .027	.002	1.310
March	165	.241	1.356	.119	E .031	.003	1.584
April	176	R .191	1.237	.088	E .035	.001	<sup>R</sup> 1.376
May	198	.209	1.345	.093	E .032	.004	1.486
June	194	.206	1.404	.128	E.034	.001	1.579
July	160	.212	1.323	.129	E.039	.002	1.545
August	184	.222	1.358	.140	E.046	.001	1.583
September	195	.221	1.424	.153	E .032	.002	1.637
October	190	R .227	1.297	.094	E .029	.003	R 1.460
November	178	.217	1.278	.142	E .024	.002	1.486
December	176 214	R .248	1.258	.142	E .024	.002	R 1.426
Total	∠14 <b>-2.140</b>	R <b>2.655</b>	15.540	1.409	E .381	.002 . <b>026</b>	R <b>17.871</b>
10tal	-2.140	2.033	13.340	1.403		.020	17.071
996 January	149	.234	1.324	.169	E.018	.004	1.600

<sup>&</sup>lt;sup>a</sup> Crude oil, lease condensate, and imports of crude oil for the Strategic

R=Revised data. E=Estimate. (s)=Less than +0.5 trillion Btu and greater

than -0.5 trillion Btu.

Notes: • See Notes 3 and 4 at end of section. • Net imports equal imports minus exports. Minus sign indicates exports are greater than imports.

Petroleum Reserve.

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

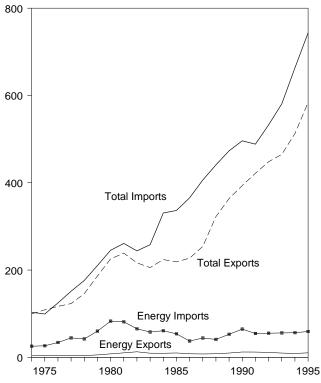
<sup>&</sup>lt;sup>c</sup> Assumed to be hydroelectricity and estimated at the average input heat rate for fossil-fuel steam-electric power plant generation, which has ranged from 10.2 thousand Btu to 10.5 thousand Btu per kilowatthour since 1973. Actual heat rates applied in converting kilowatthours to Btu are listed by year in Table A8.

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

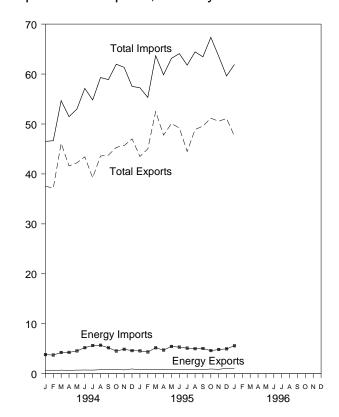
Sources: • Coal: Tables 6.1 and A5-A7. • Natural Gas: Tables 4.2 and A4. • Crude Oil and Petroleum Products: Tables 3.1b and A2. • Electricity: Section 2, "Energy Consumption Notes and Sources," Note 8, and Table A8. • Coal Coke: Section 2, "Energy Consumption Notes and Sources," Note 9, and Table A7.

Figure 1.5 Merchandise Trade Value (Billion Dollars)

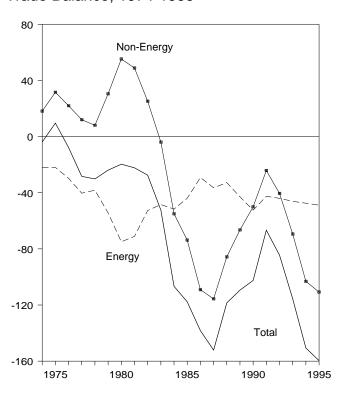
Imports and Exports, 1974-1995



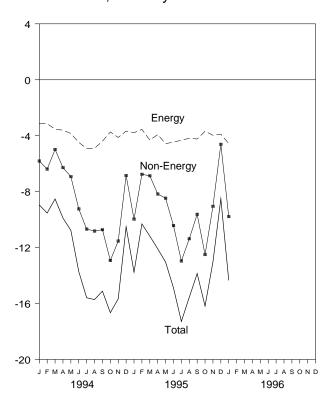
# Imports and Exports, Monthly



Trade Balance, 1974-1995



Trade Balance, Monthly



Note: Because vertical scales differ, graphs should not be compared. Source: Table 1.6.

Table 1.6 Merchandise Trade Value

(Million Dollars)

		Petroleun	n <sup>a</sup>		Energy		Non-	Т	otal Merchan	dise
	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		25,197	-24,289	4,470	26,476	-22,006	31,557	108,856	99,305	9,551
1976 Total		32,226	-31,228	4,226	33,996	-29,770	21,950	116,794	124,614	-7,820
1977 Total		42,368	-41,093	4,184	44,537	-40,354	12,001	123,182	151,534	-28,353
1978 Total		39,526	-37,965	3,881	42,096	-38,215	8,010	145,847	176,052	-30,205
1979 Total		56,715	-54,801	5,621	59,998	-54,377	30,455	186,363	210,285	-23,922
1980 Total		78,637	-75,803	7,982	82,924	-74,942	55,246	225,566	245,262	-19,696
1981 Total		76,659	-72,963	10,279	81,360	-71,081	48,814	238,715	260,982	-22,267
1982 Total		60.458	-54.511	12,729	65.409	-52,680	25,170	216,442	243.952	-27,510
1983 Total		53,217	-48,659	9,500	57,952	-48,452	-3,957	205,639	258,048	-52,409
1984 Total		56,924	-52,454	9,311	60,980	-51,669	-55,033	223,976	330,678	-106,703
1985 Total	4,707	50,475	-45,768	9,971	53,917	-43,946	-73,765	218,815	336,526	-117,712
1986 Total		35.142	-31,503	8,115	37,310	-29.195	-109.084	227,159	365,438	-138,279
1987 Total	-,	42,285	-38,363	7,713	44,220	-36,506	-115,613	254,122	406,241	-152,119
1988 Total		38,787	-35,094	8,235	41,042	-32,806	-85,720	322,426	440,952	-118,526
1989 Total		49,704	-44,683	9,869	52,779	-42,910	-66,490	363,812	473,211	-109,399
1990 Total		61,583	-54,682	12,233	64,661	-52,428	-50,068	393,592	496,088	-102,496
1991 Total		51,350	-44.396	12,233	54,629	-32, <del>42</del> 8	-24.175	421,730	488,453	-66.723
1992 Total		51,330	-44,805	11,254	55,256	-44,002	-40,500	448,164	532,665	-84,501
1993 Total		51,046	-44,831	9,756	55,900	-46,144	-69,425	465,091	580,659	-115,568
1994 January	450	3,272	-2,822	674	3,815	-3,141	-5,813	37,561	46,514	-8,954
February		3,243	-2,862	594	3,735	-3,141	-6,387	37,126	46,654	-9,528
March		3,695	-3,255	710	4,249	-3,141	-4,985	46,139	54,663	-8,524
April		3,790	-3,364	659	4,263	-3,604	-6,281	41,587	51,472	-9,885
May		4,115	-3,632	717	4,562	-3,845	-6,927	42,215	52,987	-10,772
June		4,794	-4,381	736	5,213	-3,643 -4,477	-9,237	43,425	57,139	-13,714
		5.168	-4,718	718	5.629	-4,47 <i>1</i> -4,911	-10.678	39,218	54.807	-15,589
July		-,	-4,716 -4,726	718	5,629	-4,898	-10,878	43,589	- ,	-15,715
August		5,225 4,773	-4,720 -4,301	793 792	5,185		-10,817	,	59,304	-15,715
September					,	-4,393		43,766	58,880	
October		4,153	-3,623 -3.997	809 764	4,543 4.890	-3,734	-12,923	45,314 45,674	61,970	-16,657
November		4,475	- ,		,	-4,126	-11,534	45,674	61,334	-15,660
December Total		4,135 <b>50,835</b>	-3,498 <b>-45,176</b>	944 <b>8,911</b>	4,615 <b>56,391</b>	-3,671 <b>-47,480</b>	-6,847 <b>-103,149</b>	47,013 <b>512,626</b>	57,531 <b>663,256</b>	-10,518 <b>-150,629</b>
1995 January	488	4,129	-3,641	783	4,568	-3,785	-9,967	43,496	57,249	-13,752
February		3,909	-3,381	798	4,345	-3,763	-6,761	45,010	55,318	-10,308
March		3,909 4,712	-3,361 -4,159	879	5,188	-3,547 -4,309	-6,867	52,503	63,679	-10,306
April		4,712	-3,839	814	4,732	-3,918	-8,170	47,761	59,848	-12,088
May		5,060	-4,520	886	5,453	-4,567	-8,470	50,099	63,136	-13,037
June		4,957	-4,444	863	5,322	-4,459	-10,427	49,210	64,096	-14,886
		4,937	-4, <del>444</del> -4,248	794	5,322	-4,439	-10,427 -12,959	44,495	61,776	-17,281
July		4,724	-4,246 -4,119	794 816	5.003	-4,322 -4,187	-12,959 -11,368	44,495 48,888	64,443	-17,261 -15,555
August		4,566 4,661	-4,119 -4,220	806	5,003 5,041	-4,167 -4,235	-11,366 -9,622	,	63,441	-13,857
September					,	,		49,584	,	,
October	587 528	4,263	-3,676	941 870	4,622	-3,681	-12,502	51,162	67,345	-16,183
November		4,464	-3,936		4,838	-3,968	-9,053 R 4,617	50,552 R 51 102	63,573 R 50,611	-13,021
December Total		4,573 <b>54,374</b>	-3,880 <b>-48,061</b>	1,087 <b>10,338</b>	4,978 <b>59,206</b>	-3,891 <b>-48,868</b>	R -4,617 R <b>-110,783</b>	<sup>R</sup> 51,103 <sup>R</sup> <b>583,863</b>	<sup>R</sup> 59,611 <sup>R</sup> <b>743,515</b>	R -8,508 R <b>-159,651</b>
<b>1996</b> January	NA	NA	NA	1,026	5,587	-4,561	-9,785	47,574	61,920	-14,346

<sup>&</sup>lt;sup>a</sup> Crude oil, petroleum preparations, liquefied propane and butane, and other mineral fuels.

b Petroleum, coal, natural gas, and electricity.

R=Revised data. NA=Not available.

Notes: • Monthly data are not adjusted for seasonal variations. • See Note 5 at end of section. • Totals may not equal sum of components due to independent rounding. • The U.S. import statistics reflect both government

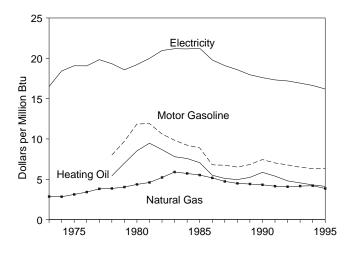
and nongovernment imports of merchandise from foreign countries into the U.S. customs territory, which comprises the 50 States, the District of Columbia, Puerto Rico, and the Virgin Islands.

Sources: • U.S. Department of Commerce, Bureau of the Census, Foreign Trade Division. For details, see "Sources for Table 1.6" at the end of

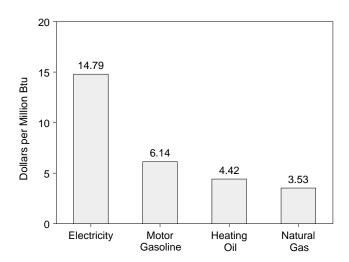
this section.

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

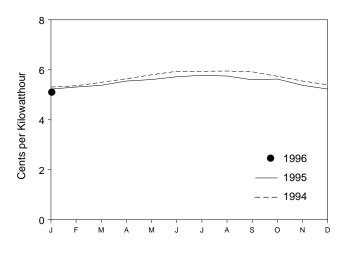
#### Costs, 1973-1995



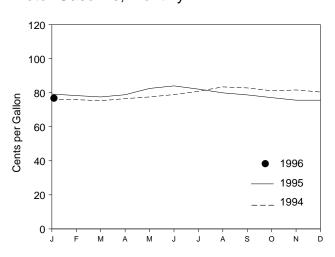
# Costs, January 1996



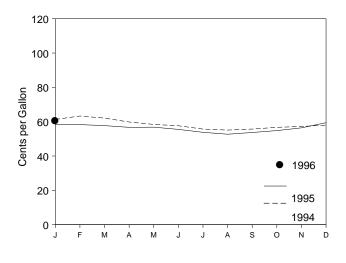
# Electricity, Monthly



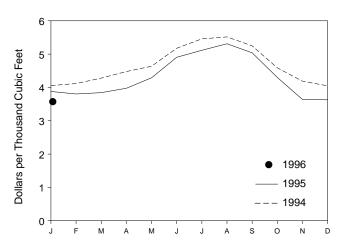
#### Motor Gasoline, Monthly



# Heating Oil, Monthly



# Natural Gas, Monthly



Source: Table 1.7.

Table 1.7 Cost of Fuels to End Users in Constant (1982-84) Dollars

	Consumer Price Index (Urban) <sup>a</sup>		Sasoline (ypes)		lential ng Oil		ential al Gas	Resid Elect	
	Index 1982-1984=100	Cents per Gallon	Dollars per Million Btu	Cents per Gallon	Dollars per Million Btu	Cents per Thousand Cubic Feet	Dollars per Million Btu	Cents per Kilowatthour	Dollars per Million Btu
1973 Average	44.4	NA	NA	NA	NA	290.5	2.85	5.6	16.50
	49.3	NA	NA NA	NA	NA NA	290.1	2.83	6.3	18.43
1974 Average	53.8	NA NA	NA NA	NA NA	NA NA	317.8	2.63 3.12	6.5	19.07
1975 Average 1976 Average	56.9	NA NA	NA NA	NA NA	NA NA	348.0	3.41	6.5	19.06
1977 Average	60.6	NA NA	NA NA	NA NA	NA NA	387.8	3.81	6.8	19.83
1978 Average	65.2	100.0	8.00	75.2	5.42	392.6	3.86	6.6	19.33
1979 Average	72.6	121.5	9.71	97.0	6.99	410.5	4.03	6.3	18.57
1980 Average	82.4	148.2	11.85	118.2	8.52	446.6	4.36	6.6	19.21
1981 Average	90.9	148.8	11.90	131.4	9.47	471.9	4.60	6.8	19.99
1982 Average	96.5	132.7	10.61	120.2	8.67	535.8	5.22	7.2	20.96
1983 Average	99.6	123.0	9.83	108.2	7.80	608.4	5.90	7.2	21.19
1984 Average	103.9	115.3	9.22	105.0	7.57	589.0	5.72	7.2	21.16
1985 Average	107.6	111.2	8.89	97.9	7.06	568.8	5.52	7.2	21.25
1986 Average	109.6	84.9	6.79	76.3	5.50	531.9	5.17	6.8	19.79
1987 Average	113.6	84.2	6.74	70.7	5.10	487.7	4.73	6.5	19.09
1988 Average	118.3	81.4	6.51	68.7	4.96	462.4	4.49	6.3	18.58
1989 Average	124.0	85.5	6.83	72.6	5.23	454.8	4.41	6.1	17.96
1990 Average	130.7	93.1	7.44	81.3	5.86	443.8	4.31	6.01	17.60
1991 Average	136.2	87.8	7.02	74.8	5.39	427.3	4.14	5.91	17.32
1992 Average	140.3	84.8	6.78	66.6	4.80	419.8	4.07	5.87	17.19
1993 Average	144.5	81.2	6.49	63.0	4.55	426.3	4.15	5.77	16.92
1994 January	146.2	75.9	6.06	61.3	4.42	405.6	3.94	5.31	15.56
February	146.7	75.9	6.07	63.3	4.57	411.7	4.00	5.36	15.70
March	147.2	75.3	6.02	62.1	4.48	428.0	4.16	5.50	16.13
April	147.4	76.5	6.12	59.8	4.31	447.8	4.35	5.64	16.54
May	147.5	77.5	6.20	58.4	4.21	463.7	4.51	5.80	16.99
June	148.0	78.9	6.30	57.6	4.15	517.6	5.03	5.94	17.41
July	148.4	80.8	6.46	55.7	4.02	545.8	5.30	5.94	17.42
August	149.0	83.4	6.67	55.1	3.97	551.7	5.36	5.95	17.45
September	149.4	82.8	6.62	55.7	4.02	524.8	5.10	5.92	17.36
October	149.5	81.1	6.48	56.7	4.09	458.9	4.46	5.74	16.82
November	149.7	81.6	6.53	57.2	4.13	418.8	4.07	5.55	16.27
December	149.7	80.4	6.43	58.0	4.18	404.8	3.93	5.40	15.82
Average	148.2	79.2	6.33	59.6	4.30	432.5	R <b>4.20</b>	5.67	16.63
1995 January	150.3	79.2	6.33	58.2	4.19	387.9	3.77	<sup>R</sup> 5.23	R 15.33
February	150.9	78.3	6.26	58.3	4.20	380.4	3.70	<sup>R</sup> 5.31	<sup>R</sup> 15.58
March	151.4	77.5	6.19	57.7	4.16	384.4	3.74	<sup>R</sup> 5.38	<sup>R</sup> 15.78
April	151.9	78.8	6.30	56.7	4.09	397.6	<sup>R</sup> 3.86	5.55	16.27
May	152.2	82.5	6.60	56.8	4.09	429.0	4.17	<sup>R</sup> 5.61	R 16.45
June	152.5	84.0	6.72	55.5	4.00	490.5	4.77	<sup>R</sup> 5.72	<sup>R</sup> 16.78
July	152.5	82.1	6.56	53.8	3.88	511.5	4.97	5.78	16.93
August	152.9	79.9	6.39	52.7	3.80	531.1	5.16	5.75	16.85
September	153.2	78.7	6.29	53.7	3.87	503.9	4.90	5.60	16.41
October	153.7	77.1	6.16	54.8	3.95	430.1	4.18	5.63	16.51
November	153.6	75.6	6.04	56.4	4.07	363.9	3.54	5.38	15.78
December	153.5	75.6	6.04	R 59.4	R 4.28	362.9	3.53	5.23	15.33
Average	152.4	79.1	6.32	57.2	<sup>R</sup> 4.12	397.6	3.86	5.52	<sup>R</sup> 16.19
1996 January	154.4	76.8	6.14	61.3	4.42	363.3	3.53	5.05	14.79

 $<sup>^{\</sup>rm a}$  Consumer Price Index, All Urban Consumers, All Items, 1982-1984 = 100.0.

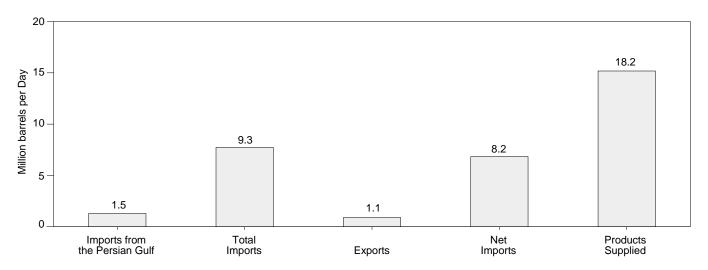
Notes: • Fuel costs are calculated by using the Urban Consumer Price Index (CPI) developed by the Bureau of Labor Statistics. • Annual averages may not equal average of months due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Sources: • Annual Data: Annual prices in Tables 9.4 (All Types), 9.8c, 9.11, and 9.9 (Monthly Series), adjusted by the CPI. • Monthly Data: Monthly prices in Tables 9.4 (All Types), 9.8c, 9.11, and 9.9 (Monthly Series), adjusted by the CPI. • CPI: 1973-1993—Economic Report of the President, February 1996, Table B-59. 1994 forward—Council of Economic Advisers, Economic Indicators, March 1996, "Consumer Prices - All Urban Consumers." • Conversion Factors: Tables A1, A4, and A8.

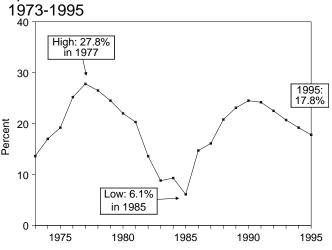
R=Revised data. NA=Not available.

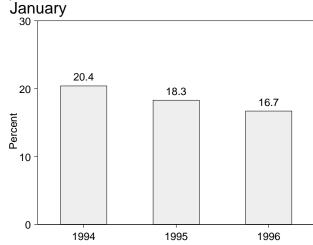
Figure 1.7 Overview of U.S. Petroleum Trade (Quadrillion Btu)

#### Overview, January 1996

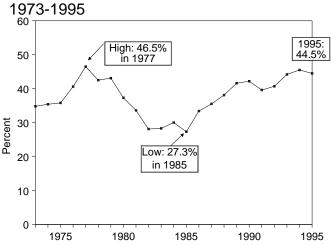


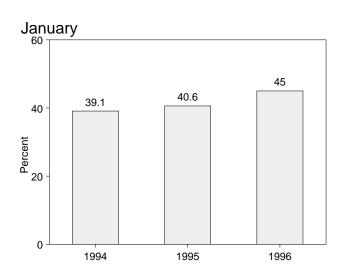
Imports from the Persian Gulf as a Share of Total Imports





Net Imports as Share of Product Supplied





Note: Because vertical scales differ, graphs should not be compared. Source: Table 1.8.

Table 1.8 Overview of U.S. Petroleum Trade

	Imports	· 1 1			As Share of Pi	oducts Sup	plied	Imports from	
	from the Persian Gulf <sup>a</sup>	Total Imports	Exports	Net Imports	Products Supplied	Imports from the Persian Gulf <sup>a</sup>	Total Imports	Net Imports	the Persian Gulf <sup>a</sup> as a Share of Total Imports
		Thous	and Barrels p	er Day			Per	cent	
1973 Average	848	6,256	231	6,025	17,308	4.9	36.1	34.8	13.6
1974 Average	1,039	6,112	221	5,892	16,653	6.2	36.7	35.4	17.0
1975 Average	1,165	6.056	209	5.846	16,322	7.1	37.1	35.8	19.2
1976 Average	1,840	7,313	223	7,090	17,461	10.5	41.9	40.6	25.2
1977 Average	2,448	8,807	243	8,565	18,431	13.3	47.8	46.5	27.8
1978 Average	2,219	8,363	362	8,002	18,847	11.8	44.4	42.5	26.5
1979 Average	2,069	8,456	471	7,985	18,513	11.2	45.7	43.1	24.5
1980 Average	1,519	6,909	544	6,365	17,056	8.9	40.5	37.3	22.0
1981 Average	1,219	5,996	595	5,401	16,058	7.6	37.3	33.6	20.3
1982 Average	696	5,113	815	4,298	15,296	4.5	33.4	28.1	13.6
_	442			,		2.9	33.4	28.3	8.8
1983 Average	506	5,051	739	4,312	15,231		33.2 34.6		9.3
1984 Average		5,437	722	4,715	15,726	3.2		30.0	
1985 Average	311	5,067	781	4,286	15,726	2.0	32.2	27.3	6.1
1986 Average	912	6,224	785	5,439	16,281	5.6	38.2	33.4	14.7
1987 Average	1,077	6,678	764	5,914	16,665	6.5	40.1	35.5	16.1
1988 Average	1,541	7,402	815	6,587	17,283	8.9	42.8	38.1	20.8
1989 Average	1,861	8,061	859	7,202	17,325	10.7	46.5	41.6	23.1
1990 Average	1,966	8,018	857	7,161	16,988	11.6	47.2	42.2	24.5
1991 Average	1,845	7,627	1,001	6,626	16,714	11.0	45.6	39.6	24.2
1992 Average	1,778	7,888	950	6,938	17,033	10.4	46.3	40.7	22.5
1993 Average	1,782	8,620	1,003	7,618	17,237	10.3	50.0	44.2	20.7
994 January	1,630	7,993	927	7,066	18,072	9.0	44.2	39.1	20.4
February	1,493	8,539	882	7,657	18,337	8.1	46.6	41.8	17.5
March	1,617	8,574	936	7,638	17,313	9.3	49.5	44.1	18.9
April	1,851	8,968	868	8,100	17,489	10.6	51.3	46.3	20.6
May	1.800	9.213	929	8,284	17,181	10.5	53.6	48.2	19.5
June	1,650	9,305	867	8,438	17,815	9.3	52.2	47.4	17.7
July	1,812	9,779	877	8,902	17,485	10.4	55.9	50.9	18.5
August	1.669	9,510	913	8,597	18.117	9.2	52.5	47.5	17.5
September	1,887	9,693	891	8,802	17,490	10.8	55.4	50.3	19.5
	,	,		,	,			44.0	
October	1,804	8,788	997	7,791	17,719	10.2	49.6		20.5
November	1,726	8,707	1,000	7,707	17,315	10.0	50.3	44.5	19.8
December  Average	1,781 <b>1,728</b>	8,863 <b>8,996</b>	1,208 <b>942</b>	7,655 <b>8,054</b>	18,319 <b>17,718</b>	9.7 <b>9.8</b>	48.4 <b>50.8</b>	41.8 <b>45.5</b>	20.1 <b>19.2</b>
_			070	,		0.5	40.0		40.0
1 <b>995</b> January	1,459	7,955	978	6,977	17,167	8.5	46.3	40.6	18.3
February	1,550	8,358	1,062	7,296	18,355	8.4	45.5	39.8	18.5
March	1,788	9,020	948	8,073	17,403	10.3	51.8	46.4	19.8
April	1,547	8,486	998	7,488	17,102	9.0	49.6	43.8	18.2
May	1,490	8,736	876	7,860	17,241	8.6	50.7	45.6	17.1
June	1,558	9,585	919	8,666	18,149	8.6	52.8	47.8	16.3
July	1,460	8,845	894	7,950	17,113	8.5	51.7	46.5	16.5
August	1,530	9,024	821	8,203	17,993	8.5	50.2	45.6	17.0
September	1,680	9,726	805	8,921	18,011	9.3	54.0	49.5	17.3
October	1,524	8,576	962	7,614	17,626	8.6	48.7	43.2	17.8
November	1,699	9,052	1.002	8,050	18,018	9.4	50.2	44.7	18.8
December	1,587	8,624	1.135	7,489	18,351	8.6	47.0	40.8	18.4
Average	1,572	8,832	949	7,883	17,704	8.9	49.9	44.5	17.8
- 1 <b>996</b> January	1,546	9,272	1,070	8,202	18,212	8.5	50.9	45.0	16.7

<sup>&</sup>lt;sup>a</sup> Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and the United Arab Emirates.

due to independent rounding. • U.S. geographic coverage is the 50 States and the District of Columbia. U.S. exports include shipments to U.S. territories, and imports include receipts from U.S. territories.

Notes: • Readers of Table 1.8 may be interested in a feature article, "Measuring Dependence on Imported Oil," that was published in the August 1995 Monthly Energy Review. • Petroleum is crude oil, lease condensate, unfinished oils, petroleum products, natural gas plant liquids, anonhydrocarbon compounds blended into finished petroleum products. • Beginning in October 1977, petroleum imported for the Strategic Petroleum Reserves is included. • Annual averages may not equal average of months

Sources: • Column 1: Table 3.3b. • Columns 2 - 4: Table 3.1b. • Column 5: Table 3.1a. • Column 6: Column 1 divided by column 5 times 100. • Column 7: Column 2 divided by column 5 times 100. • Column 8: Column 4 divided by column 5 times 100. • Column 9: Column 1 divided by column 2 times 100.

Figure 1.8 Energy Consumption per Dollar of Gross Domestic Product

(Thousand Btu per Chained (1992) Dollar)

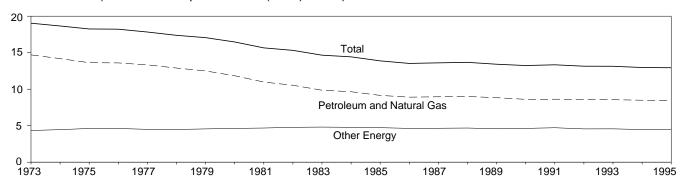


Table 1.9 Energy Consumption per Dollar of Gross Domestic Product

(Seasonally Adjusted at Annual Rates)

	Ene	ergy Consumption	1		Energy Consumption per Dollar of GDP			
	Petroleum and Natural Gas	Other Energy	Totala	Gross Domestic Product (GDP)	Petroleum and Natural Gas	Other Energy	Total	
		Quadrillion Btu		Billion Chained (1992) Dollars	Thousand Bt	u per Chained (19	92) Dollar	
973 Year	57.352	16.930	74.282	3,902.3	14.70	4.34	19.04	
974 Year	57.332 55.187	17.356	74.262	3,888.2	14.70	4.46	18.66	
975 Year	52.678	17.867	70.546	3,865.1	13.63	4.62	18.25	
976 Year	55.520	18.842	74.362	4,081.1	13.60	4.62	18.23	
977 Year	57.053	19.236	76.288	4,279.3	13.33	4.50	17.83	
978 Year	57.966	20.123	78.089	4,279.3 4,493.7	12.90	4.48	17.03	
979 Year	57.789	21.108	78.898	4,624.0	12.50	4.46 4.56	17.36	
980 Year	54.596	21.359	75.955	4,624.0 4,611.9	11.84	4.63	16.47	
981 Year	51.859	22.131	73.990	4,724.9	10.98	4.68	15.66	
982 Year	48.736	22.131	70.848	4,623.6	10.54	4.78	15.32	
983 Year	46.736 47.411	23.114	70.524	4,823.0 4,810.0	9.86	4.76 4.81	14.66	
984 Year	49.558	23.114	70.524 74.144	4,610.0 5,138.2	9.65	4.61	14.66	
985 Year	49.556 48.756	25.225	73.981	5,329.5	9.05 9.15	4.76 4.73	13.88	
	48.904	25.225 25.393	73.961 74.297	5,329.5 5,489.9	9.15 8.91	4.73 4.63	13.53	
986 Year	48.904 50.609	25.393 26.285	74.297 76.894	5,469.9 5,648.4	8.96	4.65	13.53	
987 Year 988 Year	50.609 52.774	26.265 27.443	76.694 80.218	5,862.9	9.00	4.65 4.68	13.68	
				,				
989 Year	53.595	27.731	81.325	6,060.4	8.84	4.58	13.42	
990 Year	52.849	28.416	81.265	6,138.7	8.61	4.63	13.24	
991 Year	52.452	28.665	81.116	6,079.0	8.63	4.72	13.34	
992 Year	53.657	28.487	82.144	6,244.4	8.59	4.56	13.15	
993 Year	54.667	29.195	83.862	6,383.8	8.56	4.57	13.14	
<b>994</b> 1 <sup>st</sup> Quarter	57.900	29.944	87.845	6,504.6	8.90	4.60	13.50	
2 <sup>nd</sup> Quarter	55.837	29.918	85.756	6,581.5	8.48	4.55	13.03	
3 <sup>rd</sup> Quarter	55.655	29.174	84.829	6,639.5	8.38	4.39	12.78	
4 <sup>th</sup> Quarter	54.924	29.235	84.159	6,691.3	8.21	4.37	12.58	
Year	R 56.072	29.565	R <b>85.636</b>	6,604.2	8.49	4.48	12.97	
<b>995</b> 1 <sup>st</sup> Quarter	56.496	R 29.843	R 86.338	6,701.6	8.43	<sup>R</sup> 4.45	R 12.88	
2 <sup>nd</sup> Quarter	R 57.160	R 30.229	R 87.389	6,709.4	8.52	4.51	13.02	
3 <sup>rd</sup> Quarter	R 56.915	R 30.589	R 87.504	6.768.3	R 8.41	4.52	R 12.93	
4 <sup>th</sup> Quarter	R 56.902	R 30.829	R 87.731	R 6,776.5	R 8.40	R 4.55	R 12.95	
Year	R 56.870	R 30.376	R 87.245	<sup>R</sup> 6,739.0	R <b>8.44</b>	4.51	R 12.95	

<sup>&</sup>lt;sup>a</sup> Excludes wood, waste, geothermal, wind, photovoltaic, and solar thermal energy, except for small amounts used by electric utilities to generate electricity for distribution.

R=Revised data.

Notes: • Quarterly data are seasonally adjusted and shown at annual rates. • Yearly data may not equal average of quarters due to seasonality adjustments and independent rounding. • Totals may not equal sum of

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

Sources: • Energy Consumption: Table 1.4. • Gross Domestic Product: 1973-1994—U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, January/February 1996, Table 2. 1995 forward—U.S. Department of Commerce, Bureau of Economic Analysis, *United States Department of Commerce News*, April 2, 1996, Table 2.

Figure 1.9 Passenger Car Efficiency

(Index, 1973 = 100)

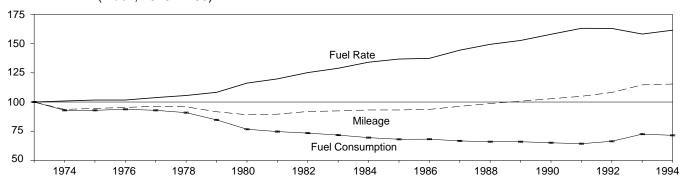


Table 1.10 Passenger Car Efficiency

	Mileage		Fuel Co	nsumption	Fuel Rate		
	Miles per Car	Index 1973=100.0	Gallons per Car	Index 1973=100.0	Miles per Gallon	Index 1973=100.0	
973	10,256	100.0	771	100.0	13.30	100.0	
974	9,606	93.7	716	92.9	13.42	100.9	
975	9,690	94.5	716	92.9	13.52	101.7	
976	9,785	95.4	723	93.8	13.53	101.7	
977	9,879	96.3	716	92.9	13.80	103.8	
978	9,835	95.9	701	90.9	14.04	105.6	
979	9,403	91.7	653	84.7	14.41	108.3	
980	9,141	89.1	591	76.7	15.46	116.2	
981	9,186	89.6	576	74.7	15.94	119.8	
982	9,428	91.9	566	73.4	16.65	125.2	
983	9,475	92.4	553	71.7	17.14	128.9	
984	9,558	93.2	536	69.5	17.83	134.1	
985	9,560	93.2	525	68.1	18.20	136.8	
986	9,608	93.7	526	68.2	18.27	137.4	
987	9,878	96.3	514	66.7	19.20	144.4	
988	10,121	98.7	509	66.0	19.87	149.4	
989	10,332	100.7	509	66.0	20.31	152.7	
990	10,548	102.8	502	65.1	21.02	158.0	
991	10,757	104.9	496	64.3	21.69	163.1	
992	11,100	108.2	512	66.4	21.68	163.0	
993	11,760	114.7	559	72.5	21.04	158.2	
994 <sup>a</sup>	11,839	115.4	551	71.5	21.48	161.5	

<sup>&</sup>lt;sup>a</sup> Preliminary data.

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

Sources: Indices are prepared from statistics published by the U.S.

Department of Transportation, Federal Highway Administration, Federal

Highway Statistics Division. • 1973-1985: Highway Statistics Summary to 1985, Table VM-201A. • 1986 forward: Highway Statistics, annual, Table VM-1.

Table 1.11 Heating Degree-Days by Census Division

		March	1 through M	larch 31		Cumulative July 1 through March 31						
Census				Percent	Change				Percent	Change		
Divisions	Normala	1995	1996	Normal to 1996	1995 to 1996	Normala	1995	1996	Normal to 1996	1995 to 1996		
New England Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	919	841	996	8.4	18.4	5,742	5,248	5,944	3.5	13.3		
Middle Atlantic New Jersey, New York, Pennsylvania	821	711	919	11.9	29.3	5,156	4,621	5,350	3.8	15.8		
East North Central Illinois, Indiana, Michigan, Ohio, Wisconsin	868	768	1,025	18.1	33.5	5,712	5,150	6,096	6.7	18.4		
West North Central lowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota	865	790	1,031	19.2	30.5	6,000	5,398	6,343	5.7	17.5		
South Atlantic Delaware, Florida, Georgia, Maryland and the District of Columbia, North Carolina, South Carolina, Virginia, West Virginia	379	315	487	28.5	54.6	2,687	2,356	2.961	10.2	25.7		
East South Central Alabama, Kentucky, Mississippi, Tennessee	455	370	594	30.5	60.5	3,355	2,922	3,688	9.9	26.2		
West South Central Arkansas, Louisiana, Oklahoma, Texas	277	283	387	39.7	36.7	2,233	1,878	2,276	1.9	21.2		
Mountain Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming	677	619	660	-2.5	6.6	4,602	4,228	4,299	-6.6	1.7		
Pacific <sup>b</sup> California, Oregon, Washington	432	396	374	-13.4	-5.6	2,686	2,635	2,398	-10.7	-9.0		
U.S. Average <sup>b</sup>	611	543	699	14.4	28.7	4,075	3,677	4,218	3.5	14.7		

<sup>&</sup>lt;sup>a</sup> "Normal" is based on calculations of data from 1961 through 1990.

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).

Sources: See end of section.

b Excludes Alaska and Hawaii.

Table 1.12 Cooling Degree-Days by Census Division

		March '	1 through M	larch 31	Cumulative January 1 through March 31					
Census				Percent	Change				Percent	Change
Divisions	Normal <sup>a</sup>	1995	1996	Normal to 1996	1995 to 1996	Normala	1995	1996	Normal to 1996	1995 to 1996
New England Connecticut, Maine, Massachusetts, New Hampshire,			2	(6)	(6)		0		(6)	(6)
Rhode Island, Vermont	0	0	0	(°)	(°)	0	0	0	(°)	(°)
Middle Atlantic New Jersey, New York, Pennsylvania	0	0	0	(°)	(°)	0	0	0	(°)	(°)
East North Central Illinois, Indiana, Michigan, Ohio, Wisconsin	1	0	0	(°)	(°)	1	0	0	(°)	(°)
West North Central lowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota	3	0	0	(°)	(°)	3	0	0	(°)	(°)
South Atlantic Delaware, Florida, Georgia, Maryland and the District of Columbia, North Carolina, South Carolina, Virginia, West Virginia	47	52	32	(°)	(°)	106	90	76	-28.3	-15.6
East South Central Alabama, Kentucky,										
Mississippi, Tennessee	19	9	2	(c)	(°)	30	9	8	(c)	(c)
West South Central Arkansas, Louisiana, Oklahoma, Texas	47	39	12	(c)	(°)	71	46	42	(°)	(°)
Mountain Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming	8	1	1	(°)	(°)	10	1	1	(°)	(°)
Pacific <sup>b</sup> California, Oregon, Washington	3	0	0	(c)	(°)	6	0	0	(c)	(°)
U.S. Average <sup>b</sup>	16	14	7	(°)	(°)	30	21	19	(°)	(°)

<sup>&</sup>lt;sup>a</sup> "Normal" is based on calculations of data from 1961 through 1990.

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).

Sources: See end of section.

b Excludes Alaska and Hawaii.

<sup>&</sup>lt;sup>c</sup> Percent change is not meaningful: normal is less than 100 or ratio is incalculable.

# **Energy Summary Notes**

- 1. Energy Production: Production of energy includes production of coal, crude oil and lease condensate, natural gas plant liquids, natural gas (dry), electric utility and industrial production of hydroelectric power, and electricity generated from nuclear power. Production also includes electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy but excludes other energy obtained from those sources because consistent historical data are not available. Approximate heat contents (Btu values) are derived by using the conversion factors provided in Appendix A.
- 2. Energy Consumption: Consumption of energy includes consumption of coal, natural gas (including supplemental gaseous fuels), petroleum products supplied, electric utility and industrial production of hydroelectric power, net imports of electricity (assumed to be hydroelectricity), net imports of coal coke, and electricity generated from nuclear power. Consumption also includes electricity generated for distribution from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy but excludes other energy obtained from those sources because consistent historical data are not available. Approximate heat contents (Btu values) are derived by using the conversion factors provided in Appendix A.
- **3. Energy Imports:** Energy imports include imports of coal, crude oil (including crude oil imported for the Strategic Petroleum Reserve), petroleum products, natural gas, electricity (assumed to be hydroelectricity), and coal coke. Approximate heat contents (Btu values) are derived by using the conversion factors provided in Appendix A. For further information on electricity, see "Note for imports and exports of electricity" under Note 8 of Section 2, Energy Consumption Section Notes and Sources.
- **4. Energy Exports:** Energy exports include coal, crude oil, petroleum products, natural gas, electricity produced from hydroelectric power, and coal coke. Approximate heat contents (Btu values) are derived by using the conversion factors provided in Appendix A. For more information on electricity, see "Note for imports and exports of electricity" under Note 8 of Section 2, Energy Consumption Section Notes and Sources.
- 5. Merchandise Trade Value: Import data presented are based on the customs value. That value does not include insurance and freight and is consequently lower than the cost, insurance, and freight (CIF) value, which is also reported by the Bureau of the Census. All export data, and import data prior to 1981, are on a free along-side 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 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.

#### Sources for Table 1.6

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

#### **Petroleum Exports**

**1974-1987:** "U.S. Exports," FT410, December issues. **1988:** "Report on U.S. Merchandise Trade, 1988 Final Revisions."

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

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

**1991:** "U.S. Merchandise Trade, 1991 Final Report," May 13, 1992.

**1992:** "U.S. Merchandise Trade, 1992 Final Report," May 12, 1993.

**1993:** "U.S. International Trade in Goods and Services, Annual Revision for 1993."

**1994:** "U.S. International Trade in Goods and Services, Annual Revision for 1994."

**1995:** "U.S. International Trade in Goods and Services," FT900, monthly.

#### **Petroleum Imports**

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

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

**1989:** "Report on U.S. Merchandise Trade, 1989 Revisions."

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

**1991:** "U.S. Merchandise Trade, 1991 Final Report," May 13, 1992, and "U.S. Merchandise Trade, October 1992," December 17, 1992, page 3.

**1992:** "U.S. Merchandise Trade, 1992 Final Report," May 12, 1993.

**1993:** "U.S. International Trade in Goods and Services, Annual Revision for 1993."

**1994:** "U.S. International Trade in Goods and Services, Annual Revision for 1994."

**1995:** "U.S. International Trade in Goods and Services," FT900, monthly.

#### **Energy Exports and Imports**

**1974-1987**: U.S. merchandise trade press releases and database printouts for adjustments.

**1988:** January-July, monthly FT900 supplement, 1989 issues. August-December, monthly FT900, 1989 issues.

1989: Monthly FT900, 1990 issues.

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

**1991:** "U.S. Merchandise Trade, 1991 Final Report," May 13, 1992, and "U.S. Merchandise Trade, October 1992," December 17, 1992, page 3.

**1992:** "U.S. Merchandise Trade, 1992 Final Report," May 12, 1993.

**1993:** "U.S. International Trade in Goods and Services, Annual Revision for 1993."

**1994:** "U.S. International Trade in Goods and Services, Annual Revision for 1994."

**1995:** "U.S. International Trade in Goods and Services," FT900, monthly.

#### **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.

**1992-1994:** "U.S. International Trade in Goods and Services, Annual Revision for 1994."

**1995:** "U.S. International Trade in Goods and Services," FT900, monthly.

#### Petroleum Balance, Energy Balance, and Non-Energy Balance

Calculated by the Energy Information Administration.

#### Sources for Tables 1.11 and 1.12

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 Analysis 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 1990 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) and 5-2 (cooling degree-days) developed by the National Climatic Center, Asheville, NC, which compiles data from some 8,000 weather stations.

# **Section 2. Energy Consumption**

U.S. total energy consumption in January 1996 was 8.5 quadrillion Btu. Petroleum products accounted for 36 percent of the energy consumed in January 1996, while natural gas accounted for 31 percent, and coal accounted for 21 percent.

Residential and commercial sector consumption was 3.7 quadrillion Btu in January 1996, up 11 percent from the January 1995 level. The sector accounted for 44 percent of January 1996 total consumption, up 2 percentage points from its 42-percent share in January 1995.

Industrial sector consumption was 2.8 quadrillion Btu in January 1996, up 3 percent from the January 1995 level. The industrial sector accounted for 33 percent of January 1996 total consumption, down 1 percentage point from its 34-percent share in January 1995.

Transportation sector consumption of energy was 2.0 quadrillion Btu in January 1996, up 3 percent from the January 1995 level. The sector accounted for 23 percent of January 1996 total consumption, down 1 percentage point from its 24-percent share in January 1995.

Electric utility consumption of energy totaled 2.8 quadrillion Btu in January 1996, up 6 percent from the January 1995 level. Coal contributed 56 percent of the energy consumed by electric utilities in January 1996, while nuclear electric power contributed 24 percent; hydroelectric 11 percent; natural gas 6 percent; petroleum 3 percent; and geothermal, wood, waste, wind, photovoltaic, and solar thermal energy, less than 1 percent.

**Energy Consumption Summary for January 1996** Table 2.1 (Quadrillion Btu)

		End-Us					
Energy Source	Residential and Commercial	Industrial	Transportation	Total <sup>a</sup>	Electric Utilities	Total	
Coal	0.017	0.220	(b)	0.239	1.574	1.813	
Natural Gas <sup>c</sup>	1.470	.912	.087	2.468	.171	2.639	
Petroleum Products <sup>d</sup>	.249	.827	1.864	2.940	.085	3.025	
Nuclear Electric Power	_	_	_	_	.672	.672	
Hydroelectric Powere	_	.003	_	.003	.312	.315	
Geothermal	_	_	_	_	.007	.007	
Net Imports of Coal Coke	_	.004	_	.004	_	.004	
Other <sup>†</sup>	_	_	_	_	.002	.002	
Primary Consumption	1.736	1.966	1.951	5.654	2.823	8.477	
Electricity	.642	.279	.001	.922	_	_	
Net Consumption	2.378	2.246	1.952	6.576	_	_	
Electrical System Energy Losses	1.322	.576	.002	1.900	_	_	
Total Consumptiong	3.700	2.821	1.955	8.477	_	_	

<sup>&</sup>lt;sup>a</sup> Totals for coal and natural gas may not equal sum of sectors due to the use of sector-specific conversion factors.

b Small amounts of coal consumed for transportation are reported as

industrial sector consumption.

<sup>&</sup>lt;sup>c</sup> Includes supplemental gaseous fuels. Transportation sector is pipeline

d Products obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds.

Includes net imports of electricity.

f "Other" is electricity generated for distribution from wood, waste, wind, photovoltaic, and solar thermal energy.

g Due to a lack of consistent historical data, some renewable energy sources are not included. For example, in 1992, 3.0 quadrillion Btu of renewable energy consumed by U.S. electric utilities to generate electricity for distribution is included, but an estimated 3.0 quadrillion Btu of renewable energy used by other sectors is not included.

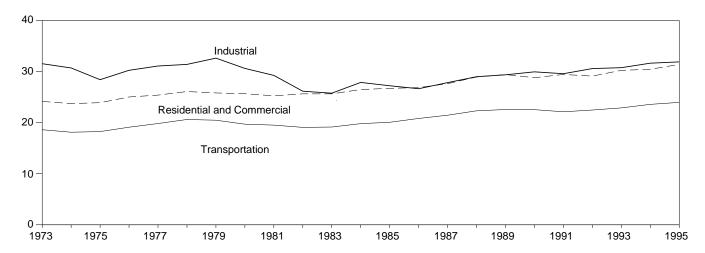
<sup>=</sup>Not applicable.

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

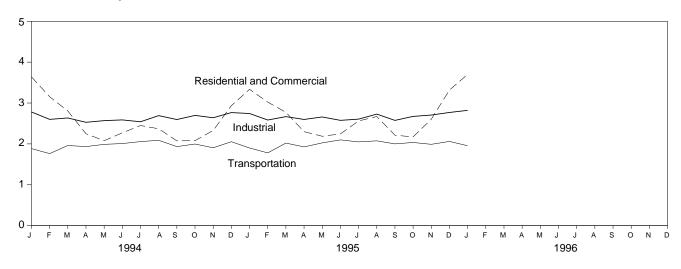
Additional Notes and Sources: See Tables 2.2-2.6 and end of section.

Figure 2.1 Energy Consumption by End-Use Sector

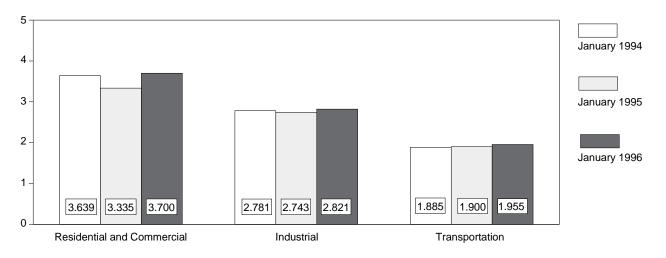
#### Overview, 1973-1995



### Overview, Monthly



#### Overview, January



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

Source: Table 2.2.

Table 2.2 Energy Consumption by End-Use Sector

	Residential a	nd Commercial	Ind	ustrial	Transp	ortation		
	Net	Total	Net	Total	Net	Total	Net	Totala
1973 Total	15.766	24.143	25.917	31.528	18.584	18.605	60.274	74.282
1974 Total	15.246	23.725	24.994	30.694	18.095	18.117	58.341	72.543
1975 Total	15.200	23.899	22.737	28.402	18.219	18.244	56.157	70.546
1976 Total	15.997	25.018	24.038	30.236	19.076	19.101	59.119	74.362
1977 Total	15.828	25.384	24.593	31.077	19.794	19.819	60.223	76.288
1978 Total	16.023	26.084	24.637	31.392	20.589	20.611	61.251	78.089
1979 Total	15.709	25.808	25.679	32.616	20.447	20.472	61.836	78.898
1980 Total	15.075	25.655	23.854	30.606	19.669	19.695	58.597	75.955
1981 Total	14.541	25.241	22.533	29.240	19.480	19.507	56.556	73.990
1982 Total	14.629	25.629	20.020	26.145	19.043	19.069	53.697	70.848
1983 Total	14.395	25.627	19.401	25.759	19.109	19.135	52.907	70.524
1984 Total	14.964	26.474	21.184	27.867	19.773	19.801	55.923	74.144
1985 Total	14.839	26.704	20.520	27.214	20.036	20.067	55.391	73.981
1986 Total	14.791	26.852	20.101	26.630	20.781	20.812	55.676	74.297
1987 Total	15.146	27.623	21.116	27.826	21.419	21.448	57.678	76.894
1988 Total	16.004	28.925	22.085	28.986	22.274	22.305	60.366	80.218
1989 Total	16.261	29.404	22.272	29.353	22.530	22.561	61.070	81.325
1990 Total	15.568	28.786	22.841	29.936	22.504	22.535	60.921	81.265
1991 Total	15.986	29.424	22.549	29.570	22.090	22.120	60.626	81.116
1992 Total	16.090	29.100	23.498	30.577	22.432	22.461	62.025	82.144
1993 Total	16.736	30.233	23.739	30.749	22.856	22.883	63.326	83.862
<b>1994</b> January	2.346	3.639	2.199	2.781	1.883	1.885	6.429	8.306
February	2.093	3.153	2.085	2.600	1.759	1.762	5.935	7.512
March	1.728	2.806	2.056	2.634	1.959	1.961	5.741	7.399
April	1.284	2.248	1.967	2.528	1.932	1.934	5.182	6.708
May	1.049	2.079	1.946	2.569	1.987	1.989	4.981	6.636
June	1.010	2.270	1.926	2.587	2.005	2.008	4.945	6.868
July	1.063	2.449	1.910	2.541	2.053	2.056	5.030	7.050
August	1.035	2.370	2.036	2.692	2.085	2.088	5.160	7.154
September	.984	2.074	2.023	2.596	1.932	1.934	4.940	6.605
October	1.067	2.079	2.103	2.697	1.994	1.997	5.164	6.772
November	1.316	2.329	2.043	2.640	1.903	1.905	5.259	6.872
December	1.784	2.936	2.167	2.766	2.051	2.053	6.000	7.753
Total	16.760	30.433	R 24.465	R 31.632	23.543	23.571	R 64.768	R 85.636
1995 January	R 2.117	R 3.335	R 2.166	R 2.743	1.897	<sup>R</sup> 1.900	<sup>R</sup> 6.180	7.976
February	R 1.974	R 3.023	R 2.061	R 2.584	1.778	1.780	R 5.811	R 7.385
March	1.700	R 2.772	R 2.085	R 2.667	2.018	2.020	<sup>R</sup> 5.801	7.458
April	R 1.333	R 2.299	R 2.030	R 2.598	1.924	1.926	R 5.284	R 6.820
May	R 1.117	2.187	2.026	2.659	2.023	2.025	R 5.165	6.870
June	R 1.041	R 2.245	R 1.942	R 2.576	2.095	2.098	R 5.081	<sup>R</sup> 6.921
July	R 1.080	R 2.561	1.944	R 2.606	2.046	2.049	R 5.077	R 7.222
August	1.124	2.670	R 2.057	R 2.729	2.072	2.075	R 5.261	R 7.481
September	1.064	R 2.213	R 2.023	R 2.575	1.998	2.000	R 5.086	R 6.789
October	R 1.104	R 2.171	R 2.078	R 2.673	2.032	2.035	<sup>R</sup> 5.214	R 6.878
November	R 1.529	R 2.604	2.121	2.706	1.988	1.990	R 5.636	R 7.299
December	R 2.072	R 3.318	2.163	2.769	R 2.058	R 2.060	R 6.292	R 8.147
Total	R 17.255	R 31.398	R 24.697	R 31.884	R 23.931	R 23.959	R 65.887	R 87.245
1996 January	2.378	3.700	2.246	2.821	1.952	1.955	6.576	8.477

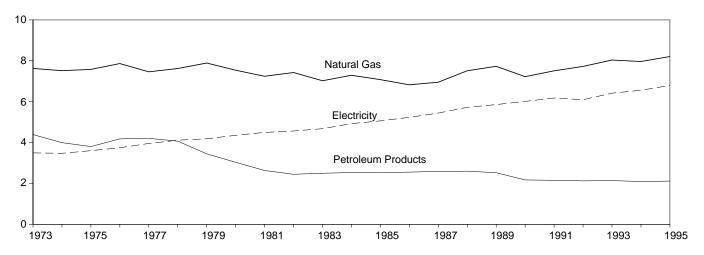
<sup>&</sup>lt;sup>a</sup> Due to a lack of consistent historical data, some renewable energy sources are not included. For example, in 1992, 3.0 quadrillion Btu of renewable energy consumed by U.S. electric utilities to generate electricity for distribution is included, but an estimated 3.0 quadrillion Btu of renewable energy used by other sectors is not included.

R=Revised data

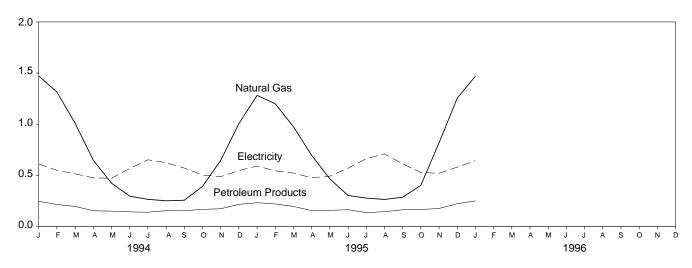
Notes: • Totals may not equal sum of components due to independent rounding and the use of sector-specific conversion factors for natural gas and coal. • Geographic coverage is the 50 States and the District of Columbia. Additional Notes and Sources: See end of section.

Figure 2.2 Residential and Commercial Energy Consumption

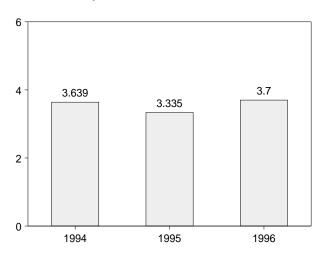
By Major Sources, 1973-1995



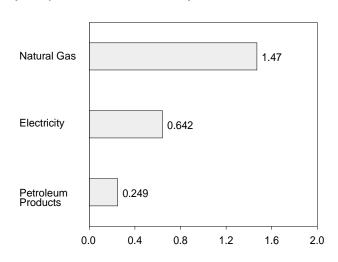
# By Major Sources, Monthly



Total, January



By Major Sources, January 1996



Note: Because vertical scales differ, graphs should not be compared. Source: Table 2.3.

**Table 2.3 Residential and Commercial Energy Consumption** 

	Coal	Natural Gas <sup>a</sup>	Petroleum Products <sup>b</sup>	Primary Consumption	Electricity	Net Consumption	Electrical System Energy Losses	Total Consumption <sup>c</sup>
1973 Total	0.254	7.626	4.391	12.270	3.495	15.766	8.377	24.143
1974 Total	.257	7.518	3.996	11.771	3.475	15.246	8.480	23.725
1975 Total	.209	7.581	3.805	11.595	3.604	15.200	8.700	23.899
1976 Total	.203	7.866	4.181	12.250	3.747	15.997	9.021	25.018
1977 Total	.205	7.461	4.206	11.873	3.955	15.828	9.556	25.384
1978 Total	.214	7.624	4.070	11.908	4.116	16.023	10.061	26.084
1979 Total	.187	7.891	3.448	11.525	4.184	15.709	10.100	25.808
1980 Total	.145	7.540	3.035	10.721	4.355	15.075	10.580	25.655
1981 Total	.167	7.243	2.634	10.043	4.497	14.541	10.700	25.241
1982 Total	.187	7.427	2.449	10.063	4.566	14.629	11.000	25.629
	.192	7.024	2.449	9.715	4.680	14.395	11.232	25.627
1983 Total		7.02 <del>4</del> 7.292	2.496 2.535		4.660 4.928	14.395	11.232	25.62 <i>1</i> 26.474
1984 Total 1985 Total	.209 .176	7.292 7.079	2.535 2.522	10.036 9.777	4.928 5.061	14.964 14.839	11.510 11.865	26.474 26.704
				9.777 9.556			11.865	26.704 26.852
1986 Total	.176	6.825	2.555		5.235	14.791		
1987 Total	.162	6.954	2.587	9.703	5.443	15.146	12.477	27.623
1988 Total	.168	7.513	2.600	10.280	5.724	16.004	12.920	28.925
1989 Total	.146	7.731	2.525	10.402	5.859	16.261	13.143	29.404
1990 Total	.156	7.225	2.173	9.553	6.015	15.568	13.218	28.786
1991 Total	.141	7.510	2.154	9.805	6.180	15.986	13.439	29.424
1992 Total	.142	7.726	2.126	9.993	6.096	16.090	13.010	29.100
1993 Total	.143	8.037	2.140	10.320	6.416	16.736	13.497	30.233
1994 January	.020	1.470	.245	1.735	.611	2.346	1.293	3.639
February	.015	1.315	.214	1.545	.548	2.093	1.060	3.153
March	.011	1.008	.195	1.214	.514	1.728	1.078	2.806
April	.011	.647	.152	.810	.474	1.284	.964	2.248
May	.008	.422	.149	.578	.471	1.049	1.029	2.079
June	.009	.295	.141	.446	.565	1.010	1.259	2.270
July	.011	.264	.138	.412	.651	1.063	1.386	2.449
August	.009	.250	.153	.412	.623	1.035	1.335	2.370
September	.007	.255	.152	.414	.570	.984	1.091	2.074
October	.008	.391	.166	.565	.502	1.067	1.012	2.079
November	.012	.645	.172	.830	.486	1.316	1.013	2.329
December	.018	1.005	.215	1.239	.545	1.784	1.152	2.936
Total	.139	7.967	2.094	10.200	6.560	16.760	13.673	30.433
100E lanuari	.015	1.281	.231	1.528	R .590	<sup>R</sup> 2.117	R 1.217	R 3.335
1995 January								
February	.013	1.199	.219	1.431	R .543	R 1.974	R 1.049	R 3.023
March	.010	.974	.195	1.179	.521	1.700	R 1.072	R 2.772
April	.010	.694	.153	.858	R .475	R 1.333	R .966	R 2.299
May	.007	.464	.156	.627	R .491	R 1.117	R 1.069	2.187
June	.007	.302	.163	.472	R .569	R 1.041	R 1.204	R 2.245
July	.009	.276	.134	.418	.662	R 1.080	R 1.481	R 2.561
August	.009	.263	.143	.415	.709	1.124	R 1.546	2.670
September	.006	.285	.162	.452	R .611	1.064	R 1.149	R 2.213
October	R .013	.401	.164	R .577	.527	R 1.104	1.068	R 2.171
November	R .018	.817	.175	R 1.010	.519	<sup>R</sup> 1.529	<sup>R</sup> 1.075	R 2.604
December	R .018	R 1.254	.221	R 1.493	.579	R 2.072	1.246	R 3.318
Total	.135	R <b>8.209</b>	2.116	<sup>R</sup> 10.460	<sup>R</sup> 6.795	<sup>R</sup> 17.255	R 14.143	R 31.398
1996 January	.017	1.470	.249	1.736	.642	2.378	1.322	3.700

sectors (primarily the residential sector) is not included.

 $<sup>^{\</sup>rm a}$  Includes supplemental gaseous fuels.  $^{\rm b}$  Products obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds.

<sup>&</sup>lt;sup>c</sup> Due to a lack of consistent historical data, some renewable energy sources are not included. For example, in 1992, an estimated 0.7 quadrillion Btu of renewable energy consumed by the U.S. residential and commercial

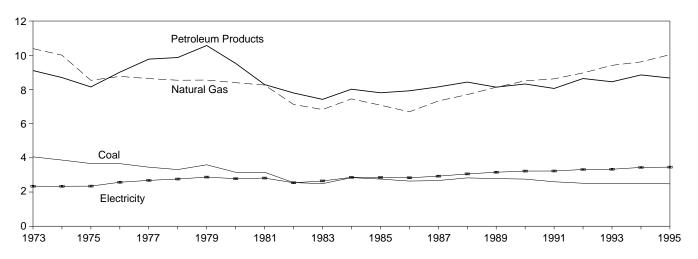
R=Revised data.

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

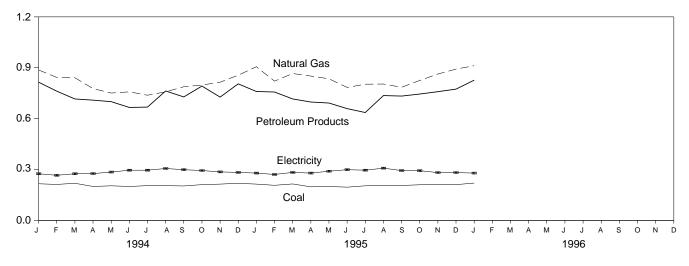
Additional Notes and Sources: See end of section.

Figure 2.3 Industrial Energy Consumption

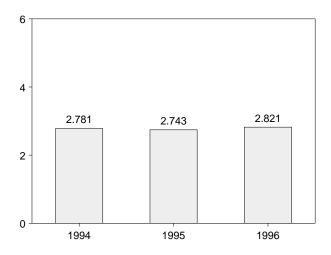
By Major Sources, 1973-1995



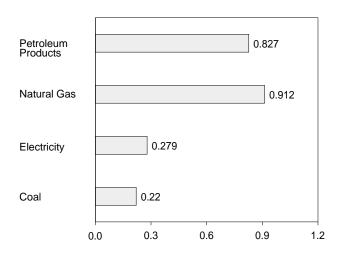
# By Major Sources, Monthly



Total, January



By Major Sources, January 1996



Note: Because vertical scales differ, graphs should not be compared. Source: Table 2.4.

**Table 2.4 Industrial Energy Consumption** 

	Coal	Natural Gas <sup>a</sup>	Petroleum Products <sup>b</sup>	Hydro- electric Power	Net Imports of Coal Coke	Primary Consumption	Electricity	Net Consumption	Electrical System Energy Losses	Total Consumption <sup>c</sup>
1973 Total	4.057	10.388	9.104	0.035	-0.007	23.576	2.341	25.917	5.611	31.528
1974 Total	3.870	10.366	9.104 8.694	.033	.056	22.657	2.341	24.994	5.700	30.694
1975 Total	3.667	8.532	8.146 9.010	.032	.014	20.391	2.346	22.737	5.665	28.402
1976 Total	3.661	8.762		.033	(s)	21.465	2.573	24.038	6.198	30.236
1977 Total	3.454	8.635	9.774	.033	.015	21.911	2.682	24.593	6.484	31.077
1978 Total	3.314	8.539	9.867	.032	.125	21.876	2.761	24.637	6.755	31.392
1979 Total	3.593	8.549	10.568	.034	.063	22.807	2.873	25.679	6.936	32.616
1980 Total	3.155	8.395	9.525	.033	035	21.073	2.781	23.854	6.752	30.606
1981 Total	3.157	8.257	8.285	.033	016	19.715	2.817	22.533	6.707	29.240
1982 Total	2.552	7.121	7.794	.033	022	17.479	2.542	20.020	6.125	26.145
1983 Total	2.490	6.826	7.420	.033	016	16.753	2.648	19.401	6.359	25.759
1984 Total	2.842	7.448	8.014	.033	011	18.325	2.859	21.184	6.683	27.867
1985 Total	2.760	7.080	7.805	.033	013	17.665	2.855	20.520	6.694	27.214
1986 Total	2.640	6.690	7.920	.033	017	17.267	2.834	20.101	6.529	26.630
1987 Total	2.673	7.323	8.150	.033	.009	18.188	2.928	21.116	6.710	27.826
1988 Total	2.828	7.696	8.430	.033	.040	19.026	3.059	22.085	6.901	28.986
1989 Total	2.787	8.131	8.133	.033	.030	19.113	3.158	22.272	7.082	29.353
1990 Total	2.756	8.502	8.319	.033	.005	19.615	3.226	22.841	7.095	29.936
1991 Total	2.601	8.619	8.057	.033	.009	19.319	3.230	22.549	7.021	29.570
1992 Total	2.515	8.967	8.638	.033	.027	20.180	3.319	23.498	7.079	30.577
1993 Total	2.496	9.410	8.449	.032	.017	20.405	3.334	23.739	7.010	30.749
1994 January	.216	.887	.815	.003	.004	1.925	.275	2.199	.581	2.781
February	.212	.843	.762	.003	001	1.819	.266	2.085	.515	2.600
March	.219	.841	.716	.003	.002	1.781	.275	2.056	.577	2.634
April	.200	.777	.709	.003	.003	1.692	.276	1.967	.560	2.528
May	.204	.751	.700	.003	.002	1.660	.285	1.946	.623	2.569
June	.200	.758	.666	.003	.003	1.630	.296	1.926	.661	2.587
July	.205	.738	.668	.003	(s)	1.613	.296	1.910	.631	2.541
August	.205	.758	.763	.002	.002	1.730	.306	2.036	.656	2.692
September	.203	.788	.728	.002	.003	1.724	.299	2.023	.572	2.596
October	.211	.798	.792	.002	.005	1.809	.294	2.103	.594	2.697
November	.214	.815	.727	.002	001	1.757	.286	2.043	.597	2.640
December	.219	.856	.805	.002	.002	1.884	.283	2.167	.599	2.766
Total	2.510	R 9.611	8.849	.032	.024	R 21.026	3.439	R 24.465	7.167	R 31.632
1005 January	R .214	.906	.760	.003	.004	1.887	R .279	<sup>R</sup> 2.166	R .576	R 2.743
1995 January	R .207					1.007 R 1.790	R .279	R 2.061	R .523	R 2.584
February	R .215	.821 .866	.757 .716	.003 .003	.002 .003	*1.790 R 1.802	R .283	R 2.061	.523 .582	R 2.584
March	R.198	.866 R .851	.698	.003		R 1.751	**.283 R .279	R 2.030		R 2.598
April	R .200				.001		R .279		.568	
May	n.200	.835	.692	.003	.004	1.736	R .290	2.026	.633	2.659 R 2.576
June	R .196	.784	.659	.003	.001	R 1.643		R 1.942	.633	R 2.576
July	.204	.803	.636	.003	.002	1.648	.296	1.944 R 0.057	R .662	R 2.606
August	.205	R .804	.736	.002	.001	R 1.749	.308	R 2.057	R .672	R 2.729
September	.206	R .785	.733	.002	.002	R 1.729	R .294	R 2.023	R .552	R 2.575
October	.210	R .825	.745	.002	.003	R 1.785	.293	R 2.078	.594	R 2.673
November	.212	.863	.759	.002	.002	1.839	.282	2.121	.585	2.706
December	.211	.892	.774	.002	.002	1.881	.282	2.163	.606	2.769
Total	2.480	R 10.034	8.668	.032	.026	R 21.240	R 3.457	R 24.697	7.187	R 31.884
1996 January	.220	.912	.827	.003	.004	1.966	.279	2.246	.576	2.821

<sup>&</sup>lt;sup>a</sup> Includes supplemental gaseous fuels.

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

Additional Notes and Sources: See end of section.

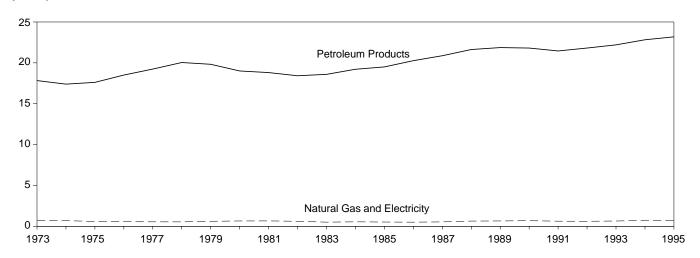
b Products obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds.

<sup>&</sup>lt;sup>c</sup> Due to a lack of consistent historical data, some renewable energy sources are not included. For example, in 1992, an estimated 2.3 quadrillion Btu of renewable energy consumed by the U.S. industrial sector (primarily the pulp and paper industry) is not included.

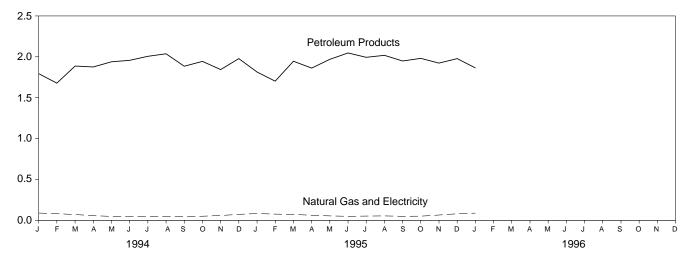
Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Figure 2.4 Transportation Energy Consumption

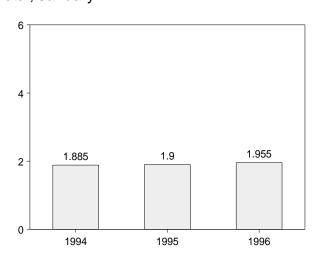
By Major Sources, 1973-1995



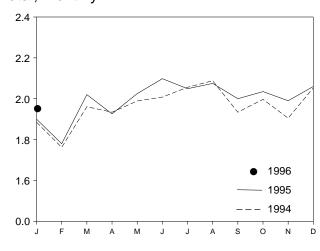
# By Major Sources, Monthly



Total, January



Total, Monthly



Note: Because vertical scales differ, graphs should not be compared. Source: Table 2.5.

**Table 2.5 Transportation Energy Consumption** 

	Coal	Natural Gas <sup>a</sup>	Petroleum Products <sup>b</sup>	Primary Consumption	Electricity	Net Consumption	Electrical System Energy Losses	Total Consumption <sup>c</sup>
1973 Total	0.003	0.743	17.831	18.576	0.008	18.584	0.020	18.605
1974 Total	.002	.685	17.399	18.086	.009	18.095	.022	18.117
1975 Total	.001	.595	17.614	18.209	.010	18.219	.025	18.244
1976 Total	(s)	.559	18.506	19.065	.010	19.076	.025	19.101
1977 Total	(s)	.543	19.241	19.784	.010	19.794	.025	19.819
1978 Total	(d)	.539	20.041	20.580	.009	20.589	.023	20.611
1979 Total	(a)	.612	19.825	20.436	.010	20.447	.025	20.472
1980 Total	(a)	.650	19.008	19.658	.011	19.669	.026	19.695
1981 Total	(a)	.658	18.811	19.469	.011	19.480	.026	19.507
1982 Total	\d\	.612	18.420	19.032	.011	19.043	.026	19.069
1983 Total	(a)	.505	18.593	19.098	.011	19.109	.026	19.135
1984 Total	(d)	.545	19.216	19.761	.012	19.773	.028	19.801
	(d)	.519	19.504	20.024	.012	20.036	.026	20.067
1985 Total 1986 Total	(d)	.499	20.269	20.768	.013	20.781	.030	20.812
	(d)				.013		.029	
1987 Total	(d)	.535	20.871	21.406		21.419		21.448
1988 Total	(d)	.632	21.629	22.260	.014	22.274	.031	22.305
1989 Total	(d)	.649	21.868	22.517	.014	22.530	.031	22.561
1990 Total	(d)	.680	21.810	22.490	.014	22.504	.031	22.535
1991 Total	(d)	.620	21.456	22.076	.014	22.090	.030	22.120
1992 Total	(°)	.606	21.812	22.418	.014	22.432	.029	22.461
1993 Total	(d)	.642	22.201	22.842	.013	22.856	.028	22.883
1994 January	( <sup>d</sup> )	.088	1.794	1.882	.001	1.883	.002	1.885
February	(d)	.080	1.678	1.758	.001	1.759	.002	1.762
March	(d)	.070	1.887	1.957	.001	1.959	.002	1.961
April	(d)	.056	1.876	1.931	.001	1.932	.002	1.934
May	(d)	.047	1.939	1.986	.001	1.987	.002	1.989
June	(d)	.047	1.957	2.004	.001	2.005	.003	2.008
July	(d)	.046	2.006	2.052	.001	2.053	.003	2.056
August	(d)	.047	2.037	2.084	.001	2.085	.003	2.088
September	(d)	.045	1.885	1.930	.001	1.932	.002	1.934
October	(d)	.049	1.944	1.993	.001	1.994	.002	1.997
November	(b)	.058	1.844	1.902	.001	1.903	.002	1.905
December	(dí	.072	1.978	2.049	.001	2.051	.002	2.053
Total	(d)	.705	22.824	23.529	.014	23.543	.028	23.571
1995 January	(d)	.082	1.814	1.896	.001	1.897	.002	<sup>R</sup> 1.900
	(d)	.062	1.702		.001			
February	(d)	.075 .071	1.702	1.777 2.017	.001	1.778 2.018	.002 .002	1.780 2.020
March	(d)							
April	(d)	.061	1.862	1.923	.001	1.924	.002	1.926
May	(d)	.053	1.969	2.022	.001	2.023	.002	2.025
June	(d)	.048	2.047	2.094	.001	2.095	.002	2.098
July	(d)	.051	1.994	2.045	.001	2.046	.003	2.049
August	(d)	.053	2.018	2.071	.001	2.072	.003	2.075
September	(d)	.048	1.949	1.997	.001	1.998	.002	2.000
October	( )	.050	1.981	2.031	.001	2.032	.002	2.035
November	(d)	.064	1.923	1.987	.001	1.988	.002	1.990
December	(d)	R .079	1.978	R 2.057	.001	R 2.058	.002	R 2.060
Total	(d)	R .735	23.182	<sup>R</sup> 23.917	.013	<sup>R</sup> 23.931	.028	R 23.959
1996 January	( <sup>d</sup> )	.087	1.864	1.951	.001	1.952	.002	1.955

R=Revised data. (s)=Less than 0.5 trillion Btu.

Additional Notes and Sources: See end of section.

Pipeline fuel only, including supplemental gaseous fuels.
 Products obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds.
 Due to a lack of consistent historical data, some renewable energy

sources are not included. For example, in 1992, an estimated 0.1 quadrillion Btu of renewable energy consumed by the U.S. transportation sector is not

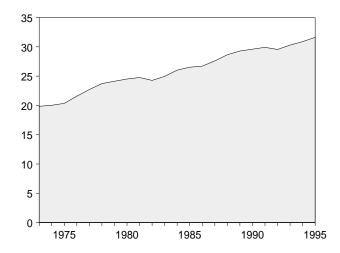
<sup>&</sup>lt;sup>d</sup> Since 1978, the small amounts of coal consumed for transportation are reported as industrial sector consumption.

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

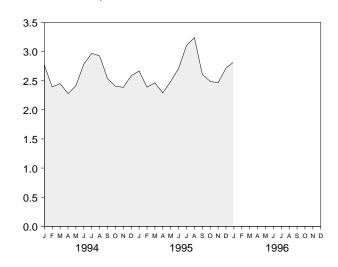
# Figure 2.5 Energy Input at Electric Utilities

(Quadrillion Btu)

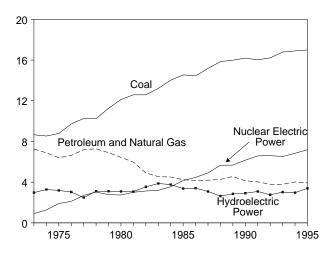
#### Total, 1973-1995



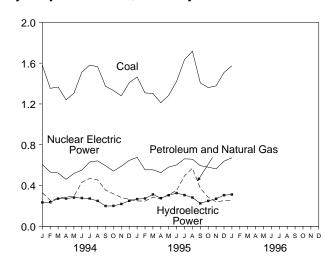
### Total, Monthly



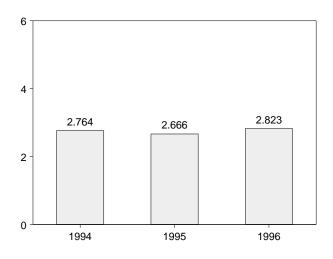
# By Major Sources, 1973-1995



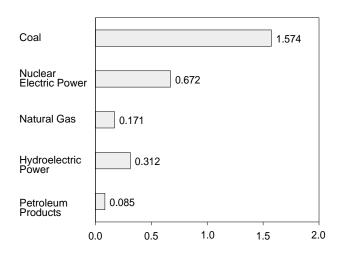
By Major Sources, Monthly



#### Total, January



By Major Sources, January 1996



Note: Because vertical scales differ, graphs should not be compared. Source: Table 2.6.

Table 2.6 Energy Input at Electric Utilities

	Coal	Natural Gas <sup>a</sup>	Petroleum Products <sup>b</sup>	Nuclear Electric Power	Hydro- electric Power <sup>c</sup>	Geothermal Energy	Otherd	Total
1973 Total	8.658	3.748	3.515	0.910	2.975	0.043	0.003	19.852
1974 Total	8.534	3.519	3.365	1.272	3.276	.053	.003	20.022
1975 Total	8.786	3.240	3.166	1.900	3.187	.070	.002	20.350
1976 Total	9.720	3.152	3.477	2.111	3.032	.078	.002	21.574
1977 Total	10.262	3.284	3.901	2.702	2.482	.077	.005	22.713
	10.238				3.110	.064	.003	23.724
1978 Total		3.297	3.987	3.024				
1979 Total	11.260	3.613	3.283	2.776	3.107	.084	.005	24.128
1980 Total	12.123	3.810	2.634	2.739	3.085	.110	.005	24.505
1981 Total	12.583	3.768	2.202	3.008	3.072	.123	.004	24.760
1982 Total	12.582	3.342	1.568	3.131	3.539	.105	.003	24.270
1983 Total	13.213	2.998	1.544	3.203	3.866	.129	.004	24.956
1984 Total	14.020	3.220	1.286	3.553	3.767	.165	.009	26.020
1985 Total	14.542	3.160	1.090	4.149	3.365	.198	.015	26.519
1986 Total	14.444	2.691	1.452	4.471	3.413	.219	.012	26.703
1987 Total	15.173	2.935	1.257	4.906	3.084	.229	.016	27.600
1988 Total	15.850	2.709	1.563	5.661	2.630	.217	.017	28,648
1989 Total	15.988	2.871	1.685	5.677	2.848	.197	.020	29.286
1990 Total	16.189	2.882	1.250	6.161	2.914	.181	.021	29.599
1991 Total	16.028	2.856	1.178	6.579	3.083	.170	.021	29.915
1992 Total	16.211	2.826	.951	6.607	2.760	.170	.021	29.547
1993 Total	16.790	2.741	1.052	6.519	3.017	.158	.022	30.299
<b>1994</b> January	1.579	.174	.155	.607	.234	.013	.002	2.764
February	1.353	.152	.103	.532	.237	.012	.002	2.392
March	1.366	.190	.084	.523	.271	.012	.002	2.449
April	1.241	.208	.081	.461	.272	.012	.002	2.277
May	1.304	.221	.074	.518	.282	.012	.002	2.413
June	1.512	.326	.106	.552	.277	.011	.002	2.786
July	1.581	.370	.100	.631	.272	.012	.002	2.968
August	1.565	.391	.064	.642	.249	.013	.002	2.925
September	1.374	.302	.053	.594	.199	.012	.002	2.535
October	1.332	.270	.048	.541	.200	.012	.002	2.405
November	1.279	.236	.047	.590	.219	.012	.002	2.385
December	1.409	.212	.052	.646	.250	.012	.002	2.583
	16.895				2.962			
Total	16.695	3.053	.968	6.837	2.902	.145	.020	30.881
1995 January	1.465	.203	.046	.676	.267	.009	.001	2.666
February	R 1.308	.172	.075	.554	.273	.006	.001	R 2.389
March	R 1.303	.251	.034	.554	.313	.007	.001	R 2.462
April	1.212	.234	.036	.527	.276	.006	.002	2.291
May	1.284	.263	.047	.581	.305	.005	.002	2.487
June	1.422	R .304	.048	.602	.326	.006	.001	R 2.709
	1.634	R .416						R 3.104
July			.079	.662	.306	.006	.002	
August	R 1.717	.478	.091	.658	.282	.011	.002	R 3.239
September	1.407	.323	.051	.595	.225	.008	.002	2.610
October	1.360	.245	R .038	.580	.249	.013	.002	2.486
November	_ 1.377	.202	.039	.563	.270	.012	.002	_ 2.465
December	<sup>R</sup> 1.508	.176	.075	.639	.305	.011	.001	<sup>R</sup> 2.716
Total	R 16.996	R <b>3.267</b>	.658	7.189	R 3.397	.099	.017	R 31.624
1996 January	1.574	.171	.085	.672	.312	.007	.002	2.823

R=Revised data.

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

Additional Notes and Sources: See end of section.

 $<sup>^{\</sup>rm a}$  Includes supplemental gaseous fuels.  $^{\rm b}$  Includes residual and distillate fuel oils, petroleum coke, and small

amounts of kerosene and jet fuel.

<sup>c</sup> Includes net imports of electricity.

<sup>d</sup> "Other" is electricity generated for distribution from wood, waste, wind, photovoltaic, and solar thermal energy.

# **Energy Consumption Notes** and Sources

The data in this section of the Monthly Energy Review (MER) are obtained initially from a group of energy-related surveys, typically called "supply surveys," conducted by the Energy Information Administration (EIA). Supply surveys are those surveys 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 the 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 the 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, Energy Information Administration, Washington, DC, April 6, 1990. The numbered notes that follow elaborate on essential information in Section 2.

- 1. Total Energy Consumed: Total energy consumed includes coal, natural gas (including supplemental gaseous fuels), petroleum products supplied, electric utility and industrial generation of hydroelectric power, net imports of electricity generated from hydroelectric power, and electricity generated from nuclear power. Total energy consumed also includes electricity generated from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy but excludes other energy obtained from those sources because consistent historical data are not available.
- **2. Economic Sectors:** Energy use is assigned to the major economic sectors according to the following guidelines as closely as possible:
  - Residential—All private residences, whether occupied or vacant, owned or rented, including single-family homes, multifamily housing units, and mobile homes. Secondary homes, such as summer homes, are also included. Institutional housing, such as school dormitories, hospitals, and military barracks, generally are not included in the residential sector; they are included in the commercial sector.
  - Commercial—Business establishments that are not engaged in transportation or in manufacturing or

other types of industrial activity (agriculture, mining, or construction). Commercial establishments include hotels, motels, restaurants, wholesale businesses, retail stores, laundries, and other service enterprises; religious and nonprofit organizations; health, social, and educational institutions; and Federal, State, and local governments. Street lights, pumps, bridges, and public services are also included if the establishment operating them is considered commercial.

- Industrial—Manufacturing industries, which make up the largest part of the sector, along with mining, construction, agriculture, fisheries, and forestry. Establishments in this sector range from steel mills to small farms to companies assembling electronic components.
- Transportation—Private and public vehicles that move people and commodities. Included are automobiles, trucks, buses, motorcycles, railroads and railways (including streetcars), aircraft, ships, barges, and natural gas pipelines.
- Electric Utility—Privately and publicly owned establishments that generate, transmit, distribute, and sell electricity primarily for use by the public and meet the definition of an electric utility. Nonutility power producers are not included in the electric utility sector.

Although the end-use allocations are made according to these aggregations as closely as possible, some data are collected by using different classifications. For example, data on agricultural use of natural gas are collected and reported in the commercial sector, rather than in the industrial sector. Since agricultural use of natural gas cannot be identified separately, it is included in the commercial sector in this report. Another example is master-metered condominiums and apartments, and buildings with a combination of residential and commercial units. In many cases, the metering and billing practices cause residential energy usage of electricity, natural gas, or fuel oil to be included in the commercial sector. No adjustments for these discrepancies were made.

- **3. Conversion Factors:** See the conversion factors listed in Appendix A.
- **4. Coal:** Coal is anthracite, bituminous coal (including subbituminous coal), and lignite. Sources:
  - 1973-October 1977: U.S. Department of the Interior (DOI), Bureau of Mines (BOM), *Minerals Yearbook* and *Minerals Industry Surveys*.
  - Electric Utilities—October 1977 forward: Energy Information Administration (EIA), Form EIA-759 (formerly Federal Power Commission (FPC) Form FPC-4), "Monthly Power Plant Report."
  - Other Industrial—October 1977-December 1979: EIA, Form EIA-3, "Monthly Coal Consumption Report -Manufacturing Plants"; January 1980 for-

- ward: EIA, Form EIA-3, "Quarterly Coal Consumption Report Manufacturing Plants," and Form EIA-6, "Coal Distribution Report," quarterly.
- Coke Plants—October 1977-December 1980: EIA, Form EIA-5/5A, "Coke and Coal Chemicals - Monthly/Annual"; January 1981-December 1984: EIA, Form EIA-5/5A, "Coke Plant Report - Quarterly/Annual Supplement"; January 1985 forward: EIA, Form EIA-5/5A, "Coke Plant Report - Quarterly."
- Residential and Commercial—October 1977-December 1979: EIA, Form EIA-2, "Monthly Coal Report, Retail Dealers Upper Lake Docks"; January 1980 forward: EIA, Form EIA-6, "Coal Distribution Report," quarterly.
- **5. Natural Gas:** Natural gas consumption by end use is based on data presented in Table 4.4 of this report. For Section 2 calculations, lease and plant fuel consumption are added to industrial deliveries, and pipeline fuel represents transportation use of natural gas. Values in Btu are derived by using the conversion factors provided in Appendix A. Sources:
  - 1973-1975: DOI, BOM, *Minerals Yearbook*, "Natural Gas" chapter.
  - 1976-1978: EIA, Energy Data Reports, "Natural Gas, Annual."
  - 1979: EIA, Natural Gas Production and Consumption 1979.
  - 1980-1994: EIA, *Natural Gas Annual*.
  - 1995: EIA, Natural Gas Monthly.
  - Electric Utilities—1973-1976: Form FPC-4, "Monthly Power Plant Report"; 1977-1981: Federal Energy Regulatory Commission (FERC), Form FPC-4, "Monthly Power Plant Report"; 1982 forward: EIA, Form EIA-759, "Monthly Power Plant Report."
  - American Gas Association, "Monthly Gas Utility Statistical Report," residential and commercial monthly sales data for 1973-1979, which are used to estimate monthly consumption values from EIA annual consumption values.
- **6. Petroleum:** Petroleum consumption by end use is the sum of all individual petroleum products estimated to be consumed in each end-use sector. First, total consumption by product is determined. Petroleum consumption in this section of the *Monthly Energy Review (MER)* is the series called "petroleum products supplied" in Section 3. Sources for petroleum products supplied by individual products are:
  - 1973-1975: DOI, BOM, *Mineral Industry Surveys*, "Petroleum Statement, Annual."
  - 1976-1980: EIA, *Energy Data Reports*, "Petroleum Statement, Annual."
  - 1981-1994: EIA, Petroleum Supply Annual.

• 1995: EIA, Petroleum Supply Monthly.

Specific petroleum products' end-use allocation procedures follow:

- Aviation Gasoline—All product supplied is assigned to the transportation sector.
- Asphalt—All product supplied is assigned to the industrial sector.
- Distillate Fuel—Product supplied is assigned to electric utilities and non-electric utilities as follows:

#### Electric Utilities, All Periods.

For 1973-1979, consumption of distillate fuel 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 forward, consumption of distillate fuel is assumed to be the amount of light oil (minus small amounts of kerosene deliveries through 1982) consumed at electric utilities. (See Table 7.3)

Sources: 1973-September 1977: FPC, Form FPC-4, "Monthly Power Plant Report"; October 1977-1981: FERC, Form FPC-4, "Monthly Power Plant Report"; 1982 forward: EIA, Form EIA-759, "Monthly Power Plant Report."

# Sectors Other Than Electric Utilities, Annual Estimates Through 1994.

The aggregate non-electric utility use of distillate fuel is total distillate fuel supplied minus the electric utility consumption. The non-electric utility annual consumption totals are allocated to the individual non-electric utility sectors (residential, commercial, industrial, and transportation) in proportion to the share of "adjusted sales" of each end-use sector, as reported in EIA's Fuel Oil and Kerosene Sales report series (DOE/EIA-0535), which is based primarily on data collected by Form EIA-821, previously Form EIA-172. "Adjusted sales" are sales that have been adjusted at the PAD district level to equal EIA volume estimates of petroleum products supplied in the U.S. market. Following are notes on the individual sector groupings:

- Since 1979, the residential sector adjusted 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 adjusted 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 adjusted sales total is the sum of the adjusted 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 adjusted sales total is the sum of the adjusted sales for railroad, vessel bunkering, on-highway diesel, and military uses for all years.

# Sectors Other Than Electric Utilities, Monthly Estimates Through 1994.

- Residential and commercial 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. The years' 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 1983-1992, 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. The remaining transportation use of distillate fuel (i.e., for railroads, vessel bunkering, and military use) is evenly distributed over the months, adjusted for the number of days per month.
- Industrial monthly estimates are made by subtracting the residential and commercial, transportation, and electric utility sector estimates from each month's total distillate fuel supplied.

# Sectors Other Than Electric Utilities, 1995 and 1996.

Each month's non-electric utility consumption subtotal is disaggregated into the major end-use sectors in proportion to the shares each sector held of the non-electric utility subtotal in the same month in 1994.

- Jet Fuel—Through 1982, small amounts of kerosene-type jet fuel were consumed by electric utilities. Kerosene-type jet fuel deliveries to electric utilities as reported on the Form FERC-423 (formerly Form FPC-423) were used as estimates of this consumption. All remaining jet fuel (kerosene-type and naphtha-type) is consumed by the transportation sector.
- Kerosene—Total product supplied monthly is allocated to the major end-use sectors in proportion to annual sales grouped into end-use sectors from EIA's Fuel Oil and Kerosene Sales reports (based primarily on data collected by Form EIA-821, previously Form EIA-172), as follows:
- Residential deliveries are taken directly from the *Sales* reports for 1979-1994. Sales for 1994 are used as estimates for succeeding periods. Prior to 1979, each year's sales category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares.
- Commercial sales are directly from the *Sales* reports for 1979-1994. Sales for 1994 are used as estimates for succeeding periods. Prior to 1979, each year's sales category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares.
- Industrial sales are directly from the *Sales* reports for 1979-1994. Sales for 1994 are used as estimates for succeeding periods. Prior to 1979, each year's sales category called "heating" is split into residential, commercial and industrial in proportion to the 1979 shares, and this 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 consumed by each end-use sector are applied to each month's total LPG consumption (i.e., product supplied) to create monthly end-use consumption estimates. The annual end-use shares are calculated in the following manner:
  - Sales of LPG to the residential and commercial sector are converted from thousand gallons per year to thousand barrels per year and are assumed to be the annual consumption of LPG by the 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 37 percent in 1987 to a high of 73 percent in 1994.

- LPG consumed annually by the industrial sector is estimated as the difference between LPG total supplied and the estimated consumption of LPG by the sum of the residential and commercial sector and the transportation sector. The industrial sector 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.

The sources of the annual sales data for creating annual end-use shares are:

- 1973-1982: EIA's "Sales of Liquefied Petroleum Gases and Ethane" reports, based primarily on data collected by Form EIA-174.
- 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.
- 1984-1994: 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.
- 1995: The 1994 source is used to estimate succeeding periods.
- Lubricants—Total product supplied 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—Total product supplied monthly is allocated to the major end-use 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—The portion consumed by electric utilities is from Form EIA-759, "Monthly Power Plant Report" (formerly Form FPC-4). The remaining petroleum coke is assigned to the industrial sector.
- Residual Fuel—Product supplied is assigned to electric utilities and non-electric utilities as follows:

#### Electric Utilities, All Periods.

For 1973-1979, consumption of residual fuel is assumed to be the amount of petroleum consumed in steam-electric power plants. For 1980 forward, consumption of residual fuel is assumed to be the amount of heavy oil consumed at electric utilities. (See Table 7.3)

Sources: 1973-September 1977: Form FPC-4, "Monthly Power Plant Report"; October 1977-1981: FERC, Form FPC-4, "Monthly Power Plant Report"; 1982 forward: EIA, Form EIA-759, "Monthly Power Plant Report."

# Sectors Other Than Electric Utilities, Annual Estimates Through 1994.

The aggregate non-electric utility use of residual fuel is total residual fuel supplied minus the electric utility consumption. The non-electric utility annual totals are allocated into the individual non-electric utility sectors in proportion to the amount of residual fuel sold to end users, grouped into sectors from EIA's *Fuel Oil and Kerosene Sales* reports (based primarily on data collected by Form EIA-821, previously Form EIA-172), as follows:

- 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 split into commercial and industrial 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 split into commercial and industrial in proportion to the 1979 shares, and this 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.

# Sectors Other Than Electric Utilities, Monthly Estimates Through 1994.

- Commercial 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. The years' 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 1983-1992, EIA, Form EIA-782A, "Refiners'/Gas Plant Operators' Monthly Petroleum Product Sales Report," No. 2 Fuel Oil Sales to End Users and for Resale.
- Transportation monthly estimates are made by evenly distributing the annual sector estimate over the months, adjusting for the number of days per month.
- Industrial monthly estimates are made by subtracting the commercial, transportation, and electric utility sector estimates from each month's total residual fuel supplied.

# Sectors Other Than Electric Utilities, 1995 and 1996.

Each month's non-electric utility consumption subtotal is disaggregated into the major end-use sectors in proportion to the shares each sector held of the non-electric utility subtotal in the same month in 1994.

- **Road Oil**—All product supplied is assigned to the industrial sector.
- All Other Petroleum Products—The product supplied of all remaining petroleum products is assigned to the industrial sector.
- 7. Nuclear Electric Power, Geothermal, and Wood, Waste, Wind, Photovoltaic, and Solar Thermal Energy Sources Connected to Electric Utility Distribution Systems: Sources:
  - 1973-1976: FPC, Form FPC-4, "Monthly Power Plant Report."
  - 1977-1981: FERC, Form FPC-4, "Monthly Power Plant Report."
  - 1982 forward: EIA, Form EIA-759, "Monthly Power Plant Report."
- **8. Hydroelectric Power:** Includes electricity generated by hydroelectric power at electric utilities, small amounts in the industrial sector, and net imports of electricity, which are assumed to be generated by hydroelectric power and are included in the electric utilities sector.

Sources for electric utilities sector:

- 1973-1976: FPC, Form FPC-4, "Monthly Power Plant Report."
- 1977-1981: FERC, Form FPC-4, "Monthly Power Plant Report."
- 1982 forward: EIA, Form EIA-759, "Monthly Power Plant Report."

#### Sources for industrial sector:

- 1973-1978: 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.
- 1979: FPC, Form FPC-4, "Monthly Power Plant Report," for plants with generating capacity exceeding 10 megawatts and EIA estimates for all other plants.
- 1980 forward: Annual generation estimated by EIA as the average generation over the 6-year period of 1974-1979; monthly generation estimated to be in proportion to each month's hydroelectricity generation in the electric utility industry in 1980.

Sources for imports and exports of electricity:

- 1973-September 1977: Unpublished Federal Power Commission data.
- October 1977-1980: Unpublished Economic Regulatory Administration (ERA) data.
- 1981: 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."
- 1989-1993: DOE, Assistant Secretary for Fossil Energy, Form FE-781-R, "Annual Report of International Electrical Export/Import Data."
- 1994 forward: EIA estimates based on preliminary data from the National Energy Board of Canada and DOE, Assistant Secretary for Fossil Energy.
- **9. Net Imports of Coal Coke:** Net imports means imports minus exports, and a minus sign indicates that exports are greater than imports. Sources:
  - 1973-1975: DOI, BOM, *Minerals Yearbook*, "Coke and Coal Chemicals" chapter.

- 1976-1980: EIA, Energy Data Report, "Coke and Coal Chemicals" annual.
- 1981: EIA, *Energy Data Report*, "Coke Plant Report," quarterly.
- 1982 forward: EIA, Quarterly Coal Report.
- 10. Electricity: End-use consumption of electricity is based on Table 7.2 sales data. "Other," which is primarily for use in government buildings, is added to the commercial sector, except for approximately 4 percent used by railroads and railways and attributed to the transportation sector. For 1973-1983 and 1995, "Monthly Series" data are used directly. For 1984-1993, monthly estimates are created by dividing each month's "Monthly Series" value by the "Monthly Series" total for the year and multiplying by the "Annual Series" value for the year. Kilowatthours are converted to Btu at the rate of 3,412 Btu per kilowatthour. See Table 7.2 for sources of the electricity sales data.
- 11. Electrical System Energy Losses: Electrical system energy losses are calculated as the difference between total energy input at electric utilities and the to-

tal energy content of electricity sold to end-use consumers. Most of those losses occur at steam-electric power plants (conventional and nuclear) in the conversion of heat energy into mechanical energy to turn electric generators. The loss is a thermodynamically necessary feature of the steam-electric cycle. Part of the energy input-to-output losses is a result of imputing fossil energy equivalent inputs for hydroelectric 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, approximately 67 percent of total energy input is lost in conversion; of electricity generated, approximately 5 percent is lost in plant use and 9 percent is lost in transmission and distribution. Calculated electrical system energy losses may be less than actual losses, because primary consumption does not include the energy equivalent of utility purchases of electricity from nonelectric utilities and from Canada and Mexico, although they are included in electricity sales.

# Section 3. Petroleum

Total petroleum imports<sup>1</sup> averaged 8.2 million barrels per day in February 1996, 12 percent lower than the previous month's rate and 2 percent lower than the February 1995 rate.

In February 1996, 18.5 million barrels per day of petroleum products were supplied for domestic use, 1 percent higher than the February 1995 rate. Motor gasoline accounted for 41 percent of the total; distillate fuel oil, 20 percent; and residual fuel oil, 5 percent.

Motor gasoline supplied during February 1996 averaged 7.6 million barrels per day, 5 percent higher than the previous month's rate and 2 percent higher than the February 1995 rate. Total motor gasoline stocks were 214 million barrels at the end of February 1996, the same as the stock level in the previous month but 11 million barrels below the stock level 1 year earlier.

Distillate fuel oil supplied during February 1996 averaged 3.8 million barrels per day, 3 percent higher than the previous month's rate and 2 percent higher than the February 1995 rate. Distillate fuel oil ending stocks for February 1996 were 97 million barrels, 16 million barrels below the stock level in the previous month and 25 million barrels below the level 1 year earlier.

Residual fuel oil supplied in February 1996 averaged 1.0 million barrels per day, 3 percent lower than the previous month's rate and 7 percent lower than the February 1995 rate. Residual fuel oil stocks measured 32 million barrels at the end of February 1996, 4 million barrels below the stock level in both the previous month and 1 year earlier.

Estimates (except of crude production) for the most current month are based on Energy Information Administration (EIA) weekly data and will be revised to conform with data from the EIA Petroleum Reporting System as available. For the most recent month, crude production is an EIA estimate based on historical and provisional data through November 1995.

<sup>&</sup>lt;sup>1</sup>Total import data include imports into the Strategic Petroleum Reserve.

Table 3.1a Petroleum Overview: Field Production, Stock Change, Petroleum Products Supplied, and Ending Stocks

		Field Productio	n	Stock	Change <sup>a</sup>		Ending Stocks
	Total Domestic <sup>c</sup>	Crude Oil	Natural Gas Plant Liquids	Crude Oil <sup>d</sup>	Petroleum Products	Petroleum Products Supplied	Crude Oil <sup>d</sup> and Petroleum Products
			Thousand Ba	rrels per Day			Million Barrels
973 Average	10,975	9,208	1,738	-11	146	17,308	1,008
973 Average	10,975	9,206 8,774	1,688	62	117	16,653	e1,074
974 Average			1,633	e17	e <sub>15</sub>		
975 Average	10,045	8,375				16,322	1,133
976 Average	9,774	8,132	<sup>†</sup> 1,604	39	-96	17,461	1,112
977 Average	9,913	8,245	1,618	170	378	18,431	1,312
978 Average	10,328	8,707	1,567	78	-172	18,847	1,278
979 Average	10,179	8,552	1,584	148	25	18,513	1,341
980 Average	10,214	8,597	1,573	98	42	17,056	<sup>e</sup> 1,392
981 Average	10,230	8,572	1,609	e <b>290</b>	e-130	16,058	1,484
982 Average	10,252	8,649	1,550	136	-283	15,296	<sup>e</sup> 1,430
983 Average	10,299	8,688	1,559	<sup>e</sup> 214	e-234	15,231	1,454
984 Average	10,554	8,879	1,630	199	81	15,726	1,556
985 Average	10,636	8,971	1,609	50	-153	15,726	1,519
986 Average	10,289	8,680	1,551	78	124	16,281	1,593
987 Average	10,008	8,349	1,595	128	-87	16,665	1,607
988 Average	9,818	8,140	1,625	1	-29	17,283	1,597
989 Average	9,219	7,613	1,546	86	-129	17,325	1,581
990 Average	8,994	7,355	1,559	-35	142	16,988	1,621
991 Average	9,168	7,417	1,659	-42	32	16,714	1,617
992 Average	8,996	7,171	1,697	-1	-68	17,033	<sup>e</sup> 1,592
993 Average	9 <b>8,836</b>	6,847	1,736	81	<sup>e</sup> 70	17,237	1,647
<b>994</b> January	8,694	6,817	1,615	90	-906	18,072	1,622
February	8,611	6,770	1,633	-97	-1,190	18,337	1,586
March	8,675	6,746	1,668	324	-379	17,313	1,584
April	8,524	6,612	1,679	-68	284	17,489	1,591
May	8,614	6,688	1,711	-253	954	17,181	1,612
	8,586	6,611	1,733	-104	497	17,815	1,624
June	,	,	,				
July	8,550	6,501	1,753	148	824	17,485	1,654
August	8,526	6,544	1,760	-129	291	18,117	1,659
September	8,670	6,609	1,792	227	579	17,490	1,684
October	8,683	6,658	1,748	255	-607	17,719	1,673
November	8,758	6,628	1,815	102	380	17,315	1,687
December	8,842	6,760	1,807	-292	-813	18,319	1,653
Average	8,645	6,662	1,727	18	-2	17,718	1,653
<b>995</b> January	E 8,664	E 6,596	1,773	-279	-117	17,167	1,641
February	E 8,832	E 6,703	1,774	-48	-1,315	18,355	1,603
March	E 8,625	E 6,606	1,773	344	-484	17,403	1,599
April	E 8,680	E 6,561	1,789	-101	123	17,102	1,600
May	E 8,663	E 6.572	1,785	-111	494	17,102	1,611
June	E 8,568	E 6,540	1,740	-135	39	18,149	1,609
	E 8.500	E 6.449	,				
July			1,751	-415	885	17,113	1,623
August	E 8,511	E 6,462	1,730	-247	-71	17,993	1,613
September	E 8,444	E 6,380	1,773	-62	222	18,011	1,618
October	E 8,519	E 6,429	1,771	112	-534	17,626	1,605
November	E 8,633	<sup>E</sup> 6,554	1,795	286	-378	18,018	1,602
December	E 8,526	E 6,520	1,687	-490	-831	18,351	1,561
Average	E 8,595	<sup>E</sup> 6,530	1,761	-97	-156	17,704	1,561
<b>996</b> January	RE 8,561	RE 6,495	R 1,718	<sup>R</sup> 51	R -629	R 18,212	R 1,543
February	<sup>E</sup> 8,580	PE 6,500	<sup>E</sup> 1,794	<sup>E</sup> -288	E -1,218	<sup>E</sup> 18,546	<sup>E</sup> 1,510
2-Month Average	E 8,570	PE 6,497	E 1,755	<sup>E</sup> -113	<sup>E</sup> -914	E 18,373	E 1,510
995 2-Month Average	<sup>E</sup> 8,744	<sup>E</sup> 6,647	1,774	-169	-685	17,731	1,603
994 2-Month Average	8,655	6,795	1,624	1	-1,041	18,198	1,586

<sup>&</sup>lt;sup>a</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase.

b Stocks are totals

gasoline and oxygenate production from merchant MTBE (methyl tertiary butyl ether) plants.

PE=Preliminary estimate. R=Revised data. E=Estimate.

Notes: • Crude oil includes lease condensate. • Geographic coverage is the 50 States and the District of Columbia.

Stocks are totals as of end of period.

<sup>&</sup>lt;sup>c</sup> Includes crude oil, natural gas plant liquids, and other liquids.

d Includes stocks located in the Strategic Petroleum Reserve.

<sup>&</sup>lt;sup>e</sup> See Note 4 at end of section.

f See Note 6 at end of section.

<sup>&</sup>lt;sup>g</sup> Beginning in 1993, includes fuel ethanol blended into finished motor

Table 3.1b Petroleum Overview: Imports, Exports, and Net Imports

		Imports			Exports		]	
	Total	Crude Oil <sup>a</sup>	Petroleum Products	Total	Crude Oil	Petroleum Products	Net Imports <sup>t</sup>	
		•	Tho	usand Barrels p	er Day			
73 Average	6,256	3,244	3,012	231	2	229	6,025	
74 Average	6,112	3,477	2,635	221	3	218	5,892	
75 Average	6,056	4,105	1,951	209	6	204	5,846	
76 Average	7,313	5,287	2,026	223	8	215	7,090	
77 Average	8,807	6,615	2,193	243	50	193	8,565	
78 Average	8,363	6,356	2,008	362	158	204	8,002	
79 Average	8,456	6,519	1,937	<sup>c</sup> 471	235	<sup>c</sup> 236	<sup>c</sup> 7,985	
80 Average	6,909	5,263	1,646	544	287	258	6,365	
81 Average	5,996	4,396	1,599	595	228	367	5,401	
82 Average	5,113	3,488	1,625	815	236	579	4,298	
83 Average	5,051	3,329	1,722	739	164	575	4,312	
84 Average	5,437	3,426	2,011	722	181	541	4,715	
85 Average	5,067	3,201	1,866	781	204	577	4,286	
86 Average	6,224	4,178	2,045	785	154	631	5,439	
87 Average	6,678	4,674	2,004	764	151	613	5,914	
88 Average	7,402	5,107	2,295	815	155	661	6,587	
89 Average	8,061	5,843	2,217	859	142	717	7,202	
90 Average	8,018	5,894	2,123	857	109	748	7,161	
91 Average	7,627	5,782	1,844	1,001	116	885	6,626	
92 Average	7,888	6,083	1,805	950	89	861	6,938	
93 Average	8,620	6,787	1,833	1,003	98	904	7,618	
<b>94</b> January	7,993	5,945	2,048	927	110	817	7,066	
February	8,539	6,313	2,226	882	116	766	7,657	
March	8,574	6,372	2,202	936	40	896	7,638	
April	8,968	6,955	2,013	868	120	749	8,100	
May	9,213	7,198	2,015	929	118	812	8,284	
June	9,305	7,358	1,947	867	107	760	8,438	
July	9,779	7,857	1,922	877	84	793	8,902	
August	9,510	7,488	2,022	913	72	841	8,597	
September	9,693	7,868	1,825	891	61	830	8,802	
October	8,788	7,136	1,651	997	138	859	7,791	
November	8,707	7,034	1,674	1,000	102	898	7,707	
December	8,863	7,193	1,670	1,208	118	1,090	7,655	
Average	8,996	7,063	1,933	942	99	843	8,054	
95 January	7,955	6,503	1,452	978	113	865	6,977	
February	8,358	6,565	1,793	1,062	95	967	7,296	
March	9,020	7,409	1,612	948	68	880	8,073	
April	8,486	7,073	1,413	998	155	842	7,488	
May	8,736	7,354	1,382	876	73	803	7,860	
June	9,585	7,957	1,629	919	101	818	8,666	
July	8,845	7,265	1,579	894	103	792	7,950	
August	9,024	7,415	1,609	821	61	759	8,203	
September	9,726	8,041	1,685	805	75	731	8,921	
October	8,576	7,075	1,501	962	50	912	7,614	
November	9,052	7,269	1,783	1,002	118	884	8,050	
December Average	8,624 <b>8,832</b>	6,938 <b>7,240</b>	1,686 <b>1,592</b>	1,135 <b>949</b>	126 <b>95</b>	1,008 <b>855</b>	7,489 <b>7,883</b>	
-	•	•					•	
96 January	<sup>R</sup> 9,272 <sup>E</sup> 8,198	<sup>R</sup> 7,260 <sup>E</sup> 6,447	<sup>R</sup> 2,013 <sup>E</sup> 1,751	<sup>R</sup> 1,070 <sup>E</sup> 926	<sup>R</sup> 89 <sup>E</sup> 88	<sup>R</sup> 981 <sup>E</sup> 838	<sup>R</sup> 8,202 <sup>E</sup> 7,272	
February	E <b>8,753</b>	E <b>6,867</b>			E 88	E <b>912</b>		
2-Month Average	- 0,733	- 0,001	E 1,886	E 1,000	- 00	- 912	<sup>E</sup> 7,753	
95 2-Month Average	8,146	6,532	1,614	1,018	104	913	7,129	

<sup>&</sup>lt;sup>a</sup> Includes crude oil for storage in the Strategic Petroleum Reserve.

Notes: • Crude oil includes lease condensate. • Totals may not equal sum

b Net imports equals imports minus exports.

<sup>&</sup>lt;sup>c</sup> See Note 6 at end of section.

R=Revised data. E=Estimate.

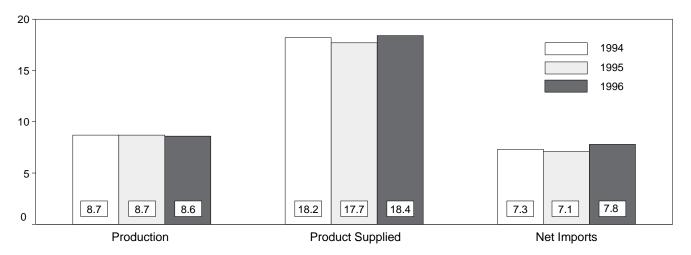
of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Sources: • 1973-1980: Energy Information Administration (EIA), Petroleum Supply Monthly, February 1993, Table S1. • 1981 forward: EIA, Petroleum Supply Monthly, March 1996, Table S1.

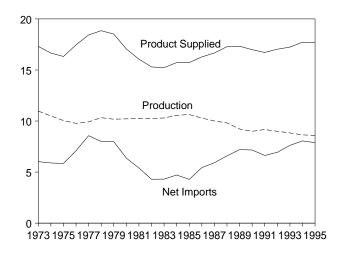
#### Figure 3.1 Petroleum Overview

(Million Barrels per Day)

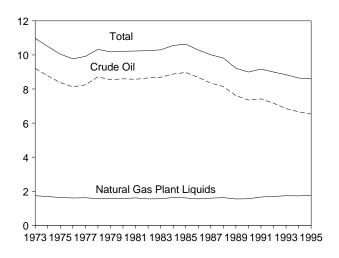
### Overview, January and February



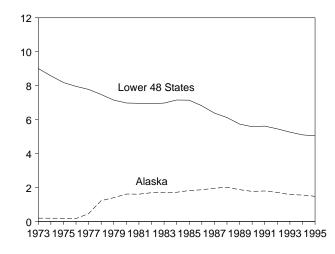
#### Overview, 1973-1995



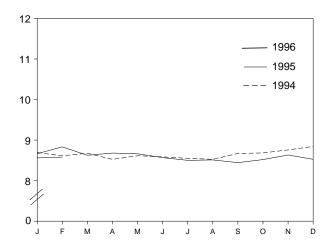
#### Production, 1973-1995



#### Crude Oil Production, 1973-1995



#### Total Production, Monthly



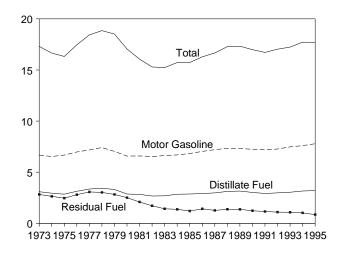
Note: Because vertical scales differ, graphs should not be compared. Sources: Tables 3.1a, 3.1b, and 3.2a.

44

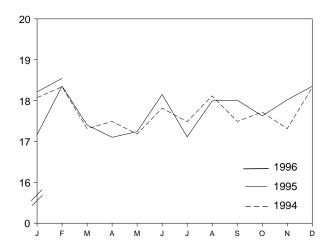
Figure 3.1 Petroleum Overview (Continued)

(Million Barrels per Day, Except as Noted)

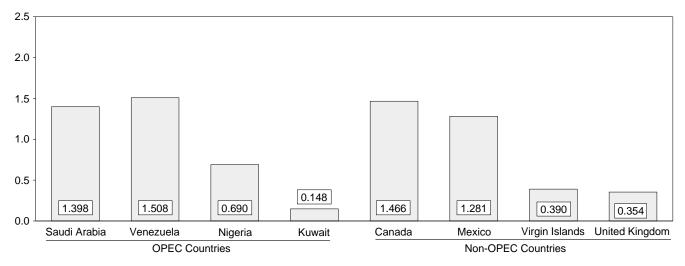
#### Product Supplied, 1973-1995



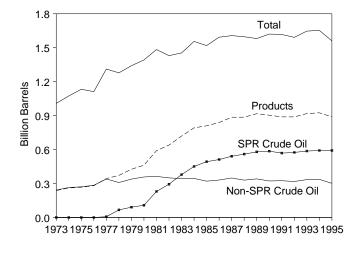
#### Product Supplied, Monthly



#### Imports from Selected Countries, January 1996

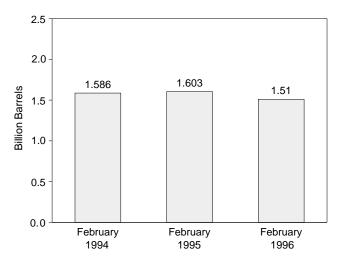


#### Stocks, End of Year, 1973-1995



Notes: • OPEC = Organization of Petroleum Exporting Countries. • SPR = Strategic Petroleum Reserve. • Because vertical scales differ, graphs should not be compared.

#### Total Stocks, End of Month



Sources: Tables 3.1a, 3.2b, 3.3a, 3.3b, 3.3d-3.3h, 3.4, 3.5, and 3.6.

Table 3.2a Crude Oil Supply and Disposition: Supply

				Supply			
	Field Pr	oduction		Imports			Crudo Oi
	Total Domestic	Alaskan	Total	SPR <sup>a</sup>	Other	Unaccounted- for Crude Oil <sup>b</sup>	Crude Oi Used Directly <sup>0</sup>
			Tho	ousand Barrels per	Day		
973 Average	9,208	198	3,244	_	3,244	3	-19
974 Average	8,774	193	3,477	_	3,477	-25	-15
975 Average	8,375	191	4,105	_	4,105	17	-17
976 Average	8,132	173	5,287	_	5,287	77	d -19
977 Average	8,245	464	6,615	21	6,594	-6	-14
<del>-</del>	8,707	1,229	6,356	d <b>161</b>	6,195	-57	d -15
978 Average	•	•	•		•		d -14
979 Average	8,552	1,401	6,519	67	6,452	-11	
980 Average	8,597	1,617	5,263	44	5,219	34	d -14
981 Average	8,572	1,609	4,396	256	4,141	83	-58
982 Average	8,649	1,696	3,488	165	3,323	71	-59
983 Average	8,688	1,714	3,329	234	3,096	114	-
984 Average	8,879	1,722	3,426	197	3,229	185	_
985 Average	8,971	1,825	3,201	118	3,083	145	_
986 Average	8,680	1,867	4,178	48	4,130	139	_
987 Average	8,349	1,962	4,674	73	4,601	145	_
988 Average	8,140	2,017	5,107	51	5,055	196	_
989 Average	7,613	1,874	5,843	56	5,787	200	_
990 Average	7,355	1,773	5,894	27	5,867	258	_
991 Average	7,417	1,798	5,782	0	5,782	195	_
992 Average	7,171	1,714	6,083	10	6,073	258	_
993 Average	6,847	1,582	6,787	15	6,772	168	_
<b>994</b> January	6,817	1,658	5,945	0	5,945	734	_
February	6,770	1,597	6,313	0	6,313	77	_
	,	,	,	99		242	_
March	6,746	1,583	6,372		6,273		
April	6,612	1,504	6,955	31	6,925	302	_
May	6,688	1,578	7,198	0	7,198	260	_
June	6,611	1,517	7,358	17	7,341	393	_
July	6,501	1,495	7,857	0	7,857	226	_
August	6,544	1,500	7,488	0	7,488	409	_
September	6,609	1,514	7,868	0	7,868	54	_
October	6,658	1,604	7,136	0	7,136	136	_
November	6,628	1,518	7,034	0	7,034	516	_
December	6,760	1,636	7,193	0	7,193	-165	_
Average	6,662	1,559	7,063	12	7,051	266	-
995 January	E 6,596	E 1,575	6,503	0	6,503	352	_
February	E 6,703	E 1,578	6,565	0	6,565	155	_
March	E 6,606	E 1,525	7,409	0	7,409	-117	_
April	<sup>E</sup> 6,561	E 1,511	7,073	Õ	7,073	243	_
May	E 6,572	E 1,518	7,354	Ő	7,354	343	_
June	E 6.540	E 1,484	7,957	0	7,957	42	_
	E 6,449	E 1,401	7,957 7,265	0	7,957 7,265	360	_
July	E 6,462	E 1,432		0			_
August		- 1,432 E 4 077	7,415	-	7,415	189	_
September	E 6,380	E 1,377	8,041	0	8,041	(s)	_
October	E 6,429	E 1,475	7,075	0	7,075	291	_
November	<sup>E</sup> 6,554	E 1,472	7,269	0	7,269	426	_
December  Average	E 6,520 E <b>6,530</b>	E 1,466 E <b>1,484</b>	6,938 <b>7,240</b>	0 <b>0</b>	6,938 <b>7,240</b>	184 <b>206</b>	- -
_	•	·					
996 January	RE 6,495	RE 1,444	R 7,260	0	R 7,260	R 105	_
February  2-Month Average	PE 6,500 PE <b>6,497</b>	PE 1,480 PE <b>1,462</b>	E 6,447 E <b>6,867</b>	<b>E 0</b>	E 6,447 E <b>6,867</b>	E 439 E <b>266</b>	_
-	•		,	-	·		
995 2-Month Average	<sup>E</sup> 6,647 6 795	E 1,576	6,532 6.120	0 0	6,532 6.120	258 422	_
994 2-Month Average	6,795	1,629	6,120	U	6,120	422	_

<sup>&</sup>lt;sup>a</sup> Strategic Petroleum Reserve.

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

Sources: • 1973-1980: Energy Information Administration (EIA), Petroleum Supply Monthly, February 1993, Table S2. • 1981 forward: EIA, Petroleum Supply Monthly, March 1996, Table S2.

Strategic Petroleum Reserve.
 A balancing item.
 Beginning in January 1983, crude oil used directly as fuel is shown as product supplied.
 See Note 6 at end of section.
 DE—Preliminary estimate. R=Revised data. — =Not applicable. E=Estimate.

Table 3.2b Crude Oil Supply and Disposition: Disposition and Ending Stocks

			Dis	position				Ending Stock	s <sup>a</sup>
	Crude	Stock (	Change <sup>b</sup>	Refinery		Product			Other
	Losses	SPR <sup>c</sup>	Other	Inputs	Exports	Suppliedd	Total	SPR <sup>c</sup>	Primar
			Thousand	Barrels per Day				Million Barrels	3
973 Average	13	_	-11	12,431	2	_	242	_	242
974 Average	13	_	62	12,133	3	_	265	_	265
975 Average	13	_	17	12,442	6	_	271	_	271
976 Average	e 14	_	39	13,416	8	_	285	_	285
977 Average	16	20	150	14,602	50	_	348	7	340
978 Average	16	163	-84	14,739	158	_	376	67	309
979 Average	16	67	81	14,648	235	_	430	91	339
980 Average	e 14	45	52	13,481	287	_	f 466	108	f 358
981 Average	5	336	f -46	12,470	228	_	594	230	363
	3	174	-38	11,774	236	_	g <b>644</b>	294	g 350
82 Average			g <b>-20</b>	•					
983 Average	2	234		11,685	164	66 64	723 706	379 454	344
984 Average	2	195	4	12,044	181	64	796	451	345
85 Average	_1	117	-67	12,002	204	60	814	493	321
86 Average	(s)	50	28	12,716	154	49	843	512	331
87 Average	(s)	80	49	12,854	151	34	890	541	349
88 Average	(s)	52	-51	13,246	155	40	890	560	330
89 Average	(s)	56	30	13,401	142	28	921	580	341
90 Average	(s)	16	-51	13,409	109	24	908	586	323
91 Average	(s)	-47	5	13,301	116	18	893	569	325
92 Average	(s)	17	-18	13,411	89	13	893	575	318
93 Average	(s)	34	47	13,613	98	10	922	587	335
<b>94</b> January	0	4	87	13,286	110	10	925	587	338
February	0	(s)	-97	13,130	116	12	923	587	335
March	(s)	99	226	12,985	40	10	933	590	342
April	(s)	31	-98	13,809	120	9	931	591	339
May	0		-253	14,272	118	9	923	591	332
		(s) 16	-120	,		7	920	592	328
June	(s)			14,351	107				
July	0	(s)	148	14,344	84	8	924	592	333
August	0	(s)	-129	14,491	72	7	920	592	329
September	0	0	227	14,234	61	9	927	592	335
October	0	0	255	13,529	138	8	935	592	343
November	0	(s)	102	13,968	102	7	938	592	346
December	0	(s)	-292	13,951	118	10	929	592	337
Average	(s)	13	5	13,866	99	9	929	592	337
95 January	0	(s)	-279	13,610	113	7	920	592	328
February	0	(s)	-48	13,367	95	8	919	592	327
March	(s)	(s)	344	13,478	68	7	929	592	338
April	`ó	(s)	-101	13,816	155	7	926	592	335
May	Ö	(s)	-110	14,299	73	7	923	592	33′
June	(s)	(s)	-135	14,568	101	5	919	592	327
July	(s)	(s)	-415	14,380	103	7	906	592	314
August	(s)	(s)	-247	14,245	61	6	898	592	307
September	(s)	(s)	-62	14,402	75	6	897	592 592	30
	(s)								
October		(s)	112	13,626	50	8	900	592	308
November	0	-1 (-)	287	13,838	118	7	909	592	317
December  Average	0 <b>(s)</b>	(s) <b>(s)</b>	-490 <b>-97</b>	13,999 <b>13,972</b>	126 <b>95</b>	6 <b>7</b>	893 <b>893</b>	592 <b>592</b>	302 <b>30</b> 2
<b>G</b>			<sup>R</sup> 52	•	R 89	R 11	R 895		R 303
96 January	0 F 0	(s) E (s)	. 52 F 222	R 13,708				592	
February	E O	- (s)	E -288	E 13,579	E 88	E 7	E 890	E 592	E 298
2-Month Average	<sup>E</sup> 0	E (s)	<sup>E</sup> -112	E 13,646	E 88	E 9	<sup>E</sup> 890	<sup>E</sup> 592	<sup>E</sup> 298
95 2-Month Average94 2-Month Average	0 0	(s) 2	-169 -1	13,495 13,212	104 113	8 11	919 923	592 587	327 335

 <sup>&</sup>lt;sup>a</sup> Stocks are totals as of end of period.
 <sup>b</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase.
 <sup>c</sup> Strategic Petroleum Reserve.
 <sup>d</sup> Beginning in January 1983, crude oil used directly as fuel is shown as

product supplied.

e See Note 6 at end of section.

f Stocks of Alaskan crude oil in transit are included from January 1981

forward. See Note 5 at end of section.

 <sup>&</sup>lt;sup>9</sup> See Note 4 at end of section.
 R=Revised data. - =Not applicable. E=Estimate. (s)=Less than +500 barrels per day and greater than -500 barrels per day.
 Notes: • Crude oil includes lease condensate. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.
 Sources: • 1973-1980: Energy Information Administration (EIA), Petroleum Supply Monthly, February 1993, Table S2. • 1981 forward: EIA, Petroleum Supply Monthly, March 1996, Table S2.

Table 3.3a Petroleum Imports: Bahrain, Iran, Iraq, and Kuwait

Bahrain   Iraq   Kuwait   Total   Crude Oil   Total					Persia	n Gulf <sup>a</sup>		ı	
1973 Average		Bah	nrain	ı	ran	lr	aq	Ku	wait <sup>b</sup>
1974 Average		Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1974 Average	1973 Average	11	0	223	216	4	4	47	42
1975 Average		12	0	469	463	0	0	5	5
1976 Average	•								
1977 Average									1
1978 Average									-
1979 Average									
1980 Average (s) 0 9 8 28 28 28 27 27 27 37 381 4 381									
1981 Average 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0									
1982 Average				-					
1983 Average		-	-	•	•		-	-	-
1984 Average									
1985 Average		_	-						-
1986 Average         2         0         19         19         81         81         68         28           1987 Average         0         0         98         98         83         82         84         70           1988 Average         2         0         0 (s)         0 (s)         345         343         92         80           1989 Average         1         0         0         0         449         441         157         155           1990 Average         1         0         0         0         0         6         6         6           1992 Average         2         0         32         32         0         0         6         6         6         6         93         344         1994         344         86         79         344         342         342         342         342         342         342         342         342         342         344         344         344         344         342         342         342         342         342         342         342         342         342         342         342         342         342         342         342         342         342		-	-						
1987 Average	1985 Average	•	-						•
1988 Average         2         0         C(s)         345         343         92         80           1989 Average         0         0         0         0         449         441         157         155           1990 Average         1         0         0         0         518         514         86         79           1991 Average         2         0         32         32         0         0         6         6         6           1992 Average         0         0         0         0         0         0         353         344           1994 January         0         0         0         0         0         0         309         309           February         0         0         0         0         0         0         0         309         309           February         0         0         0         0         0         0         0         423         423           March         8         0         0         0         0         0         476         476         476         476         476         476         476         476         497         497         <	1986 Average		0				81	68	
1898 Average	1987 Average		0			83	82	84	70
1990 Average	1988 Average	2	0	<sup>c</sup> (s)	<sup>c</sup> (s)	345	343	92	80
1990 Average         1         0         0         0         518         514         86         79           1991 Average         2         0         32         32         0         0         0         51         39           1993 Average         1         0         0         0         0         0         51         39           1994 January         0         0         0         0         0         0         309         309           February         0         0         0         0         0         0         0         423         423           March         8         0         0         0         0         0         476         476         476         476         476         476         A9ril         0         0         0         0         0         423	1989 Average	0	0	Ò	Ò	449	441	157	155
1991 Average         2         0         32         32         0         0         6         6           1992 Average         0         0         0         0         0         0         51         39           1994 January         0         0         0         0         0         0         309         309           February         0         0         0         0         0         0         0         423         423           March         8         0         0         0         0         0         476         478         423 </td <td> <del>.</del></td> <td>1</td> <td>0</td> <td>0</td> <td>0</td> <td>518</td> <td>514</td> <td>86</td> <td>79</td>	<del>.</del>	1	0	0	0	518	514	86	79
1992 Average         0         0         0         0         0         51         39           1993 Average         1         0         0         0         0         0         353         344           1994 January         0         0         0         0         0         0         309         309           February         0         0         0         0         0         0         423         423           March         8         0         0         0         0         0         476         476           April         0         0         0         0         0         0         261         238           May         0         0         0         0         0         0         261         238           Jule         0         0         0         0         0         0         362		2	0	32	32	0	0	6	6
1993 Average         1         0         0         0         0         353         344           1994 January         0         0         0         0         0         0         309         309           February         0         0         0         0         0         0         423         424         424         424         424         424         4			-			-	-	-	-
February         0         0         0         0         0         0         423         423           March         8         0         0         0         0         0         476         476           April         0         0         0         0         0         0         261         238           May         0         0         0         0         0         0         362         362         362         June         0         0         0         0         0         362         362         June         0         0         0         0         0         0         255         255         255         July         0         0         0         0         0         0         345         345         345         August         0         0         0         0         0         361 <td></td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td></td> <td></td>		-	-	-	-	-	-		
February         0         0         0         0         0         423         423           March         8         0         0         0         0         476         476           April         0         0         0         0         0         261         238           May         0         0         0         0         0         0         362         362           June         0         0         0         0         0         0         255         255           July         0         0         0         0         0         0         345         345           August         0         0         0         0         0         0         361         361           August         0         0         0         0         0         0         361         361           August         0         0         0         0         0         0         3361         361           October         0         0         0         0         0         0         361         361           November         0         0         0         0	1994 January	0	0	0	0	0	0	309	309
March         8         0         0         0         0         476         476           April         0         0         0         0         0         261         238           May         0         0         0         0         0         362         362           June         0         0         0         0         0         0         255         255           July         0         0         0         0         0         0         255         255           July         0         0         0         0         0         0         345         345           August         0         0         0         0         0         0         306         361         361           September         0         0         0         0         0         0         361		0	0	0	0	0	0	423	423
April         0         0         0         0         0         261         238           May         0         0         0         0         0         0         362         362           June         0         0         0         0         0         0         255         255           July         0         0         0         0         0         0         345         345           August         0         0         0         0         0         0         306         306           September         0         0         0         0         0         361         361           October         0         0         0         0         0         0         361         361           November         0         0         0         0         0         0         249         240           December         0         0         0         0         0         0         249         240           Average         1         0         0         0         0         0         0         312         307           1995         January         0 <td></td> <td>8</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>476</td> <td></td>		8	0	0	0	0	0	476	
May         0         0         0         0         0         362         362           June         0         0         0         0         0         0         255         255           July         0         0         0         0         0         0         345         345           August         0         0         0         0         0         0         306         306           September         0         0         0         0         0         0         361         361           October         0         0         0         0         0         0         165         148           November         0         0         0         0         0         0         249         240           December         0         0         0         0         0         0         249         240           December         0         0         0         0         0         0         249         240           December         0         0         0         0         0         0         249         240           December         0         0<			-	-	-	-	-		
June         0         0         0         0         0         0         255         255           July         0         0         0         0         0         0         345         345           August         0         0         0         0         0         0         306         306           September         0         0         0         0         0         0         361         361           October         0         0         0         0         0         0         165         148           November         0         0         0         0         0         0         0         249         240           December         0         0         0         0         0         0         0         249         240           2ecember         1         0         0         0         0         0         0         249         240           2ecember         0         0         0         0         0         0         312         307           195         January         0         0         0         0         0         0         346 <td></td> <td>-</td> <td></td> <td>-</td> <td>-</td> <td></td> <td></td> <td></td> <td></td>		-		-	-				
July         0         0         0         0         0         345         345           August         0         0         0         0         0         0         306         306           September         0         0         0         0         0         0         361         361           October         0         0         0         0         0         0         148         0         0         0         0         0         148         0         0         0         0         0         0         148         0         0         0         0         0         0         0         0         148         0 <td></td> <td></td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td></td> <td></td>			-	-	-	-	-		
August         0         0         0         0         0         306         306           September         0         0         0         0         0         0         361         361           October         0         0         0         0         0         0         165         148           November         0         0         0         0         0         0         249         240           December         0         0         0         0         0         0         249         240           December         0         0         0         0         0         0         240         227           Average         1         0         0         0         0         0         240         227           Average         1         0         0         0         0         0         0         240         227           Average         1         0         0         0         0         0         0         346         324           Average         1         0         0         0         0         0         346         324				-					
September         0         0         0         0         0         361         361           October         0         0         0         0         0         0         165         148           November         0         0         0         0         0         0         0         249         240           December         0         0         0         0         0         0         249         240           December         0         0         0         0         0         0         249         240           December         0         0         0         0         0         0         249         240           December         0         0         0         0         0         0         240         227           Average         1         0         0         0         0         0         0         130         120           1995         January         0         0         0         0         0         0         346         324           March         0         0         0         0         0         0         0         171 <t< td=""><td>,</td><td>-</td><td>-</td><td>-</td><td>-</td><td></td><td></td><td></td><td></td></t<>	,	-	-	-	-				
October         0         0         0         0         0         165         148           November         0         0         0         0         0         0         249         240           December         0         0         0         0         0         0         240         227           Average         1         0         0         0         0         0         0         240         227           Average         1         0         0         0         0         0         0         312         307           1995 January         0         0         0         0         0         0         0         312         307           1995 January         0         0         0         0         0         0         0         346         324           March         0         0         0         0         0         0         346         324           March         0         0         0         0         0         0         252         252         252           April         0         0         0         0         0         0				-					
November         0         0         0         0         0         249         240           December         0         0         0         0         0         0         249         240           Average         1         0         0         0         0         0         0         240         227           Average         1         0         0         0         0         0         0         240         227           Average         1         0         0         0         0         0         0         312         307           1995         January         0         0         0         0         0         0         312         307           1995         January         0         0         0         0         0         0         346         324           Bernard         11         0         0         0         0         0         0         346         324           March         0         0         0         0         0         0         0         171         164           May         0         0         0         0         0 <td>•</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td></td> <td></td>	•	-	-	-	-	-	-		
December					-				
Average         1         0         0         0         0         312         307           1995 January         0         0         0         0         0         0         130         120           February         11         0         0         0         0         0         346         324           March         0         0         0         0         0         0         252         252         252           April         0         0         0         0         0         0         171         164           May         0         0         0         0         0         0         171         164           May         0         0         0         0         0         0         0         208         204           June         0         0         0         0         0         0         208         204           June         0         0         0         0         0         0         260         259           July         0         0         0         0         0         0         195         195           August				-					
1995 January       0       0       0       0       0       0       130       120         February       11       0       0       0       0       0       324         March       0       0       0       0       0       0       252       252         April       0       0       0       0       0       0       171       164         May       0       0       0       0       0       0       171       164         May       0       0       0       0       0       0       0       208       204         June       0       0       0       0       0       0       0       208       204         June       0       0       0       0       0       0       0       260       259         July       0       0       0       0       0       0       0       195       195         August       0       0       0       0       0       0       0       180       175         September       0       0       0       0       0       0       0		-	-	-	-	-	-		
February         11         0         0         0         0         346         324           March         0         0         0         0         0         0         252         252           April         0         0         0         0         0         0         171         164           May         0         0         0         0         0         0         0         208         204           June         0         0         0         0         0         0         260         259           July         0         0         0         0         0         0         260         259           July         0         0         0         0         0         0         195         195           August         0         0         0         0         0         0         180         175           September         0         0         0         0         0         0         187         182           October         0         0         0         0         0         0         250         244           November         0	Average	1	0	0	0	0	0	312	307
March         0         0         0         0         0         252         252           April         0         0         0         0         0         0         171         164           May         0         0         0         0         0         0         208         204           June         0         0         0         0         0         0         259         259           July         0         0         0         0         0         0         260         259           July         0         0         0         0         0         0         195         195           August         0         0         0         0         0         0         180         175           September         0         0         0         0         0         0         187         182           October         0         0         0         0         0         0         187         182           October         0         0         0         0         0         0         250         244           November         0         0									
April       0       0       0       0       0       171       164         May       0       0       0       0       0       0       208       204         June       0       0       0       0       0       0       260       259         July       0       0       0       0       0       0       195       195         August       0       0       0       0       0       0       180       175         September       0       0       0       0       0       0       187       182         October       0       0       0       0       0       0       187       182         October       0       0       0       0       0       0       250       244         November       0       0       0       0       0       0       238       238         December       0       0       0       0       0       0       215       215         Average       1       0       0       0       0       0       0       218       213	•		-	-	-	-	-		
May         0         0         0         0         0         208         204           June         0         0         0         0         0         0         260         259           July         0         0         0         0         0         0         195         195           August         0         0         0         0         0         0         180         175           September         0         0         0         0         0         187         182           October         0         0         0         0         0         0         250         244           November         0         0         0         0         0         0         238         238           December         0         0         0         0         0         215         215           Average         1         0         0         0         0         0         218         213									
June       0       0       0       0       0       260       259         July       0       0       0       0       0       0       195       195         August       0       0       0       0       0       0       180       175         September       0       0       0       0       0       0       187       182         October       0       0       0       0       0       0       250       244         November       0       0       0       0       0       238       238         December       0       0       0       0       0       0       215       215         Average       1       0       0       0       0       0       218       213	April	-		-	-				
July       0       0       0       0       0       195       195         August       0       0       0       0       0       0       180       175         September       0       0       0       0       0       0       187       182         October       0       0       0       0       0       0       250       244         November       0       0       0       0       0       0       238       238         December       0       0       0       0       0       215       215         Average       1       0       0       0       0       0       218       213	May	0	0	0	0	0	0	208	204
July       0       0       0       0       0       195       195         August       0       0       0       0       0       0       180       175         September       0       0       0       0       0       0       187       182         October       0       0       0       0       0       0       250       244         November       0       0       0       0       0       0       238       238         December       0       0       0       0       0       215       215         Average       1       0       0       0       0       0       218       213	June	0	0	0	0	0	0	260	259
August       0       0       0       0       0       180       175         September       0       0       0       0       0       0       187       182         October       0       0       0       0       0       0       250       244         November       0       0       0       0       0       0       238       238         December       0       0       0       0       0       215       215         Average       1       0       0       0       0       0       218       213		0	0	0	0	0	0	195	195
September       0       0       0       0       0       187       182         October       0       0       0       0       0       0       250       244         November       0       0       0       0       0       0       238       238         December       0       0       0       0       0       0       215       215         Average       1       0       0       0       0       0       0       218       213	•	0		0	0				
October       0       0       0       0       0       250       244         November       0       0       0       0       0       0       238       238         December       0       0       0       0       0       0       215       215         Average       1       0       0       0       0       0       218       213				-					
November		-		-	-				
December         0         0         0         0         0         215         215           Average         1         0         0         0         0         0         218         213		-		-	-				
Average 1 0 0 0 0 0 0 218 213		-	-	-	-		-		
<b>1996</b> January 0 0 0 0 0 0 449 445		-		-	-				
	1996 January	0	0	0	0	0	0	148	145

a Excludes petroleum imported into the United States indirectly from members of the Organization of Petroleum Exporting Countries (OPEC), primarily from Caribbean and West European areas, as petroleum products that were refined from crude oil produced by OPEC.

b Imports from the Neutral Zone between Kuwait and Saudi Arabia are

included in Saudi Arabia.

<sup>C</sup> A small amount of Iranian crude oil entered the United States in January 1988 from the Virgin Islands. The oil originated in Iran and was exported to the Virgin Islands prior to the signing of Executive Order 12613 on October

<sup>(</sup>s)=Less than 500 barrels per day.

Notes: • Beginning in October 1977, Strategic Petroleum Reserve imports are included. • U.S. geographic coverage is the 50 States and the District of Columbia.

Sources: • Bahrain: Energy Information Administration (EIA), Form EIA-814, "Monthly Imports Report." • All Other Data: 1973-1980—EIA, Petroleum Supply Monthly, February 1993, Table S3. 1981 forward—EIA, Petroleum Supply Monthly, March 1996, Table S3.

Table 3.3b Petroleum Imports: Qatar, Saudi Arabia, U.A.E., and Total Persian Gulf (Thousand Barrels per Day)

				Persiar	n Gulf <sup>a</sup>			
	Q	atar	Saudi	Arabia <sup>b</sup>	United Ar	ab Emirates	To	otala
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average	7	7	486	462	71	71	848	802
1974 Average	17	17	461	438	74	69	1,039	992
1975 Average	18	18	715	701	117	117	1,165	1,121
1976 Average	24	24	1,230	1,222	254	254	1,840	1,825
1977 Average	67	67	1,380	1,373	335	333	2,448	2,418
_	64	64	1,144	1,142	385	385	2,219	2,212
1978 Average			,	•			,	,
1979 Average	31	31	1,356	1,347	281	281	2,069	2,049
1980 Average	22	22	1,261	1,250	172	172	1,519	1,508
1981 Average	7	7	1,129	1,112	81	77	1,219	1,196
1982 Average	7	7	552	530	92	81	696	659
1983 Average	(s)	0	337	321	30	18	442	405
1984 Average	5	4	325	309	117	90	506	450
1985 Average	(s)	0	168	132	45	35	311	244
1986 Average	13	12	685	618	44	38	912	796
1987 Average	0	0	751	642	61	56	1,077	949
1988 Average	0	0	1.073	911	29	23	1.541	1.357
1989 Average	2	2	1,224	1.116	28	21	1,861	1,734
1990 Average	4	4	1,339	1,195	17	 9	1,966	1,801
1991 Average	Ö	Ö	1,802	1,703	3	2	1,845	1,743
1992 Average	1	Ŏ	1,720	1,597	6	0	1,778	1,636
1993 Average	1	ő	1,414	1,282	14	12	1,782	1,637
1994 January	0	0	1,320	1,175	0	0	1,630	1,484
February	0	0	1,071	1,023	0	0	1,493	1,446
March	0	0	1,132	1,055	0	0	1,617	1,531
April	0	0	1,586	1,428	4	0	1,851	1,666
May	Ö	0	1,438	1,394	0	0	1,800	1,757
June	0	0	1,395	1,277	ő	0	1,650	1,533
July	0	0	1,414	1,310	53	53	1,812	1,708
-	0	0	1,363	1,271	0	0	1,669	,
August	-	-	,	,	-		,	1,577
September	0	0	1,486	1,364	40	40	1,887	1,766
October	0	0	1,601	1,500	38	23	1,804	1,671
November	0	0	1,477	1,357	0	0	1,726	1,597
December	0	0	1,526	1,388	15	15	1,781	1,631
Average	0	0	1,402	1,297	13	11	1,728	1,615
1995 January	0	0	1,309	1,251	20	20	1,459	1,391
February	0	0	1,181	1.134	13	13	1,550	1,471
March	0	0	1,535	1.410	0	0	1.788	1.662
April	0	0	1,375	1,321	0	0	1,547	1,485
May	0	0	1,281	1,237	0	0	1,490	1,441
•	0	0	,	1,237	12	1	,	,
June			1,287	,	0	0	1,558	1,481
July	0	0	1,265	1,165			1,460	1,360
August	0	0	1,340	1,245	10	10	1,530	1,430
September	0	0	1,464	1,357	29	0	1,680	1,539
October	0	0	1,260	1,181	14	0	1,524	1,426
November	0	0	1,451	1,326	10	10	1,699	1,574
December	0	0	1,372	1,263	0	0	1,587	1,478
Average	0	0	1,344	1,260	9	4	1,572	1,478
1996 January	0	0	1,398	1,334	0	0	1,546	1,479

<sup>&</sup>lt;sup>a</sup> Excludes petroleum imported into the United States indirectly from members of the Organization of Petroleum Exporting Countries (OPEC), primarily from Caribbean and West European areas, as petroleum products that were refined from crude oil produced by OPEC.

Notes: • Beginning in October 1977, Strategic Petroleum Reserve imports are included. • Totals may not equal sum of components due to independent rounding. • U.S. geographic coverage is the 50 States and the District of Columbia.

that were refined from crude oil produced by OPEC.

b Imports from the Neutral Zone between Kuwait and Saudi Arabia are included in Saudi Arabia.

<sup>(</sup>s)=Less than 500 barrels per day.

Table 3.3c Petroleum Imports: Algeria, Ecuador, Gabon, Indonesia, and Libya

					Other	OPECa				
	Alç	geria	Ecu	ador <sup>b</sup>	Ga	bon	Indo	nesia	Li	bya
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
973 Average	136	120	48	47	0	0	213	200	164	133
974 Average	190	180	42	42	23	23	300	284	4	4
975 Average	282	264	57	57	27	27	390	379	232	223
976 Average	432	408	51	51	28	26	539	537	453	444
977 Average	559	544	57	55	42	35	541	507	723	704
978 Average	649	634	54	38	41	38	573	533	654	638
979 Average	636	608	42	30	42	42	420	380	658	642
980 Average	488	456	27	17	26	25	348	314	554	548
981 Average	311	261	48	38	35	35	366	318	319	317
982 Average	170	90	42	32	40	40	248	226	26	23
983 Average	240	176	61	56	59	59	338	315	0	0
984 Average	323	194	55	47	58	57	343	304	1	0
	187	84	67	56	52	51	314	292	4	0
985 Average									-	-
986 Average	271	78	77	64	26	25	318	297	0	0
987 Average	295	115	29	23	35	35	285	262	0	0
988 Average	300	58	47	33	16	15	205	186	0	0
989 Average	269	60	89	80	50	49	183	158	0	0
990 Average	280	63	49	38	64	64	114	98	0	0
991 Average	253	44	63	53	84	84	111	102	0	0
992 Average	196	24	_65	<b>_62</b>	124	123	78	70	0	0
993 Average	220	24	(b)	(b)	152	151	81	65	0	0
<b>994</b> January	224	8	( b )	( b )	144	144	140	81	0	0
February	226	20	(b)	(b)	212	208	103	59	0	0
March	278	0	(b)	(b)	91	91	112	50	0	0
April	245	30	(b)	(b)	288	288	88	88	0	0
Мау	261	0	įbj	įbή	187	187	94	76	0	0
June	178	2	ìbί	ìbί	223	223	155	155	0	0
July	301	38	ìbί	ζbí	216	216	178	178	0	0
August	282	39	}b∖	}b ⟨	142	142	119	112	0	0
September	237	20	b\	}b	194	194	61	61	0	0
October	217	38	\b \	}b	235	235	96	89	0	0
	203	20	(b)	(b)	254	254	71	56	0	0
November			(b)	(b)						0
Average	259 <b>243</b>	39 <b>21</b>	(b)	(b)	154 <b>194</b>	154 <b>194</b>	113 <b>111</b>	95 <b>92</b>	0 <b>0</b>	0
Average	243	21	. ,	( )	134	134		32	Ū	Ū
<b>995</b> January	168	0	( b )	( b )	224	224	38	38	0	0
February	358	64	(b)	( b )	186	186	129	87	0	0
March	196	19	(b)	(b)	159	159	51	29	0	0
April	251	31	įbj	ìbί	163	163	95	87	0	0
May	163	36	ìb΄	ìb;	206	206	65	36	0	0
June	277	39	ζb′	(b)	357	357	96	51	0	0
July	257	11	(b)	(b)	296	296	104	96	0	0
August	298	65	) b (	) b (	246	246	122	95	0	0
September	250	20	(b)	(b)	216	216	94	66	0	0
•	250 229	39	(b)	(b)	270				0	0
October			(b)	(b)		270	87 107	68	-	-
November	241	0	(b)	(b)	271	271	107	73	0	0
December	152	0	(.)	(.)	171	171	72	41	0	0
Average	235	27	(b)	(b)	231	231	88	64	0	0
			(b)	(b)						

a Excludes petroleum imported into the United States indirectly from members of the Organization of Petroleum Exporting Countries (OPEC), primarily from Caribbean and West European areas, as petroleum products that were refined from crude oil produced by OPEC.

Notes: • Beginning in October 1977, Strategic Petroleum Reserve imports are included. • U.S. geographic coverage is the 50 States and the District of Columbia.

that were refined from crude oil produced by OPEC.

b Ecuador withdrew from OPEC on December 31, 1992. As of January 1993, imports from Ecuador appear on Table 3.3f under "Non-OPEC."

Table 3.3d Petroleum Imports: Nigeria, Venezuela, Total Other OPEC, and Total OPEC

			Other	OPEC <sup>a</sup>				
	Nig	geria	Ven	ezuela	Т	otal		otal PECb
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
973 Average	459	448	1,135	344	2,156	1.293	2,993	2.095
974 Average	713	697	979	319	2,253	1,549	3,280	2,540
975 Average	762	746	702	395	2,452	2,091	3,601	3,211
1976 Average	1.025	1.014	702	241	3,229	2,721	5.066	4,545
	1,143	1,130	690	250	3,754	3,225	6.193	5,643
977 Average	, -	,			,	-, -	-,	
978 Average	919	910	646	181	3,536	2,972	5,751 5,637	5,184
979 Average	1,080	1,069	690	293	3,569	3,063	5,637	5,112
980 Average	857	841	481	156	2,781	2,356	4,300	3,864
981 Average	620	611	406	147	2,106	1,726	3,323	2,922
982 Average	514	510	412	155	1,451	1,075	2,146	1,734
983 Average	302	301	422	164	1,422	1,072	1,862	1,477
984 Average	216	207	548	253	1,544	1,062	2,049	1,512
985 Average	293	280	605	306	1,522	1,069	1,830	1,312
986 Average	440	437	793	416	1,926	1,317	2,837	2,113
987 Average	535	529	804	488	1,983	1,451	3,060	2,400
988 Average	618	607	794	439	1,981	1,339	3,520	2,696
989 Average	815	800	873	495	2,279	1,642	4,140	3,376
990 Average	800	784	1.025	666	2.332	1.713	4,296	3.514
991 Average	703	683	1.035	668	2,249	1,634	4.092	3.377
992 Average	681	665	1,170	826	2,313	1,770	4,092	3,406
993 Average	740	722	1,300	1,010	2,493	1,972	4,273	3,609
994 January	310	274	1,211	901	2,030	1,408	3,660	2,892
February	576	557	1,224	946	2,341	1,790	3,834	3,237
March	441	402	1,261	932	2,182	1,474	3,790	3,006
April	631	621	1,303	1,035	2,556	2,062	4,408	3,728
May	732	730	1,334	1,022	2,608	2.014	4,409	3,771
June	842	837	1.469	1,088	2,868	2.305	4,518	3,838
	703	694	1,296	1.029	2.694	2,303	4.506	3.861
July	1,037	1.010	1,255	982	2.834	2,134	4,503	3,861
August	578	578	1,428	1.106	2,498	1.959	4,386	3,725
September				,				
October	569	559	1,385	1,101	2,501	2,022	4,304	3,693
November	485	478	1,432	1,084	2,445	1,891	4,171	3,488
December Average	739 <b>637</b>	739 <b>624</b>	1,405 <b>1,334</b>	1,183 <b>1,034</b>	2,671 <b>2,520</b>	2,210 <b>1,965</b>	4,451 <b>4,247</b>	3,840 <b>3,580</b>
Average	637	024	1,334	1,034	2,320	1,965	4,241	3,360
995 January	583	575	1,355	1,059	2,369	1,897	3,828	3,288
February	463	463	1,439	1,083	2,575	1,883	4,114	3,354
March	687	676	1,499	1.209	2,591	2.092	4,379	3.754
April	467	458	1,374	1,100	2,350	1,840	3,897	3,324
May	603	592	1,498	1,193	2,535	2,064	4,025	3,505
June	696	696	1,479	1,209	2,905	2,352	4.463	3.833
	711	711	1,536	1,162	2,903	2,276	4,363	3,636
July	482	463	1,447	,		2.030	4,303	3,460
August				1,162	2,596	,	, -	
September	851	841	1,655	1,288	3,067	2,431	4,747	3,970
October	649	649	1,453	1,159	2,688	2,184	4,212	3,610
November	646	637	1,507	1,140	2,772	2,122	4,471	3,695
December	652	652	1,459	1,074	2,505	1,937	4,092	3,416
Average	625	618	1,475	1,153	2,654	2,093	4,226	3,571
996 January	690	663	1,508	1,148	2,734	2,063	4,281	3,542

<sup>&</sup>lt;sup>a</sup> Excludes petroleum imported into the United States indirectly from members of the Organization of Petroleum Exporting Countries (OPEC), primarily from Caribbean and West European areas, as petroleum products that were refined from crude oil produced by OPEC.

that were refined from crude oil produced by OPEC.

b OPEC includes the Persian Gulf nations that are displayed on Tables 3.3a and 3.3b except Bahrain, which is not a member of OPEC, and the nations displayed under "Other OPEC" on Tables 3.3c and 3.3d. Ecuador withdrew from OPEC on December 31, 1992; as of January 1993, imports from Ecuador appear on Table 3.3f under "Non-OPEC." Imports from Bahrain

are accounted for under "Other Non-OPEC" on Table 3.3h.

Notes: • Beginning in October 1977, Strategic Petroleum Reserve imports are included. • Totals may not equal sum of components due to independent rounding. • U.S. geographic coverage is the 50 States and the District of Columbia.

Sources: • 1973-1980: Energy Information Administration (EIA), Petroleum Supply Monthly, February 1993, Table S3. • 1981 forward: EIA, Petroleum Supply Monthly, March 1996, Table S3.

Table 3.3e Petroleum Imports: Angola, Australia, Bahama Islands, Brazil, Canada, and China

						Non-O	PECa					
	A	ngola	Au	stralia		hama lands	В	razil	Ca	ınada	C	China
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average	49	49	2	0	174	0	9	0	1,325	1,001	(s)	0
1974 Average	49	48	1	0	164	0	2	0	1,070	791	Ò	0
1975 Average	75	71	5	0	152	0	5	0	846	600	0	0
1976 Average	12	7	2	0	118	0	0	0	599	371	0	0
1977 Average	24	17	3	0	171	0	0	0	517	279	0	0
1978 Average	20	6	5	0	160	0	0	0	467	248	0	0
1979 Average	43	39	6	0	147	0	1	0	538	271	13	13
1980 Average	42	37	1	0	78	0	3	1	455	199	(s)	0
1981 Average	49	45	5	0	74	0	23	14	447	164	`18	Ō
1982 Average	44	42	5	(s)	65	Ö	47	19	482	214	40	8
1983 Average	78	71	4	0	125	Ŏ	41	2	547	274	34	6
1984 Average	90	85	38	25	88	ő	60	(s)	630	341	46	15
1985 Average	110	104	37	21	40	ŏ	61	0	770	468	59	36
1986 Average	112	102	41	30	37	0	50	0	807	570	90	68
	192	180	58	49	37	0	84	0	848	608	82	63
1987 Average	212	203	64	59	32	0	98	0	999	681	88	82
1988 Average						-		-				
1989 Average	284	279	36	31	34	0	82	0	931	630	80	76
1990 Average	237	236	53	47	37	0	49	0	934	643	80	77
1991 Average	254	254	26	21	35	0	22	0	1,033	743	91	87
1992 Average	336	336	19	17	36	0	20	0	1,069	797	90	84
1993 Average	336	336	19	18	28	0	33	0	1,181	900	51	50
1994 January	338	338	12	0	28	0	11	0	1,242	905	81	78
February	295	282	0	0	79	0	12	0	1,374	994	44	44
March	291	265	11	11	52	0	10	0	1,326	987	112	104
April	284	284	0	0	39	0	42	0	1,194	930	70	67
May	354	331	32	32	58	0	96	0	1,160	905	80	80
June	278	278	11	11	14	0	62	0	1,206	973	37	36
July	304	299	44	44	18	0	53	0	1,237	994	92	92
August	358	347	13	13	20	Ö	38	Ö	1,357	1,059	64	64
September	455	448	35	35	17	Ö	21	Ö	1,300	1,031	63	63
October	286	286	22	22	15	0	18	0	1,238	982	18	18
November	328	328	22	22	8	0	0	0	1,251	988	79	79
December	402	380	0	0	6	0	8	8	1,388	1.054	40	40
Average	331	<b>322</b>	17	16	29	Ŏ	31	1	1,272	983	<b>65</b>	<b>64</b>
1005 1	070	000	04	04	0	0	0	0	4.040	4.000	64	00
1995 January	273	262	21	21	6	0	0	0	1,349	1,009	64	62
February	348	335	22	22	8	0	0	0	1,310	965	21	21
March	427	416	0	0	7	0	0	0	1,206	891	54	54
April	412	402	33	33	0	0	0	0	1,240	999	65	65
May	419	407	21	21	0	0	0	0	1,405	1,167	35	35
June	371	358	10	10	0	0	0	0	1,418	1,169	26	26
July	295	287	42	42	0	0	8	0	1,269	1,028	80	80
August	367	355	0	0	0	0	9	0	1,348	1,062	40	40
September	444	444	0	0	8	0	27	0	1,283	993	73	73
October	366	366	15	15	0	0	9	0	1,299	1,057	40	40
November	318	318	(s)	0	0	0	12	0	1,377	1,046	66	66
December	366	366	`23	23	0	0	12	0	1,467	1,099	73	73
Average	367	360	16	16	2	Ō	6	Ö	1,331	1,041	53	53
1996 January	312	312	21	21	0	0	1	0	1,466	1,094	86	86

<sup>&</sup>lt;sup>a</sup> Includes petroleum imported into the United States indirectly from members of the Organization of Petroleum Exporting Countries (OPEC), primarily from Caribbean and West European areas, as petroleum products that were refined from crude oil produced by OPEC.

(s)=Less than 500 barrels per day.

Notes: • Beginning in October 1977, Strategic Petroleum Reserve imports

are included.  $\bullet\,$  U.S. geographic coverage is the 50 States and the District of Columbia.

Table 3.3f Petroleum Imports: Colombia, Ecuador, Italy, Malaysia, Mexico, and Netherlands

						Non-OP	ECa					
	Col	ombia	Ecu	ıador <sup>b</sup>	ŀ	taly	Ma	alaysia	М	lexico	Netl	nerlands
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average	9	2	_	_	125	0	12	1	16	1	53	0
1974 Average	5	0	-	-	74	0	12	1	8	2	43	0
1975 Average	9	0	-	-	27	0	8	5	71	70	19	4
1976 Average	21	6	-	-	39	Ō	18	16	87	87	8	0
1977 Average	17	0	-	-	51	0	66	55	179	177	31	4
1978 Average	20	0	-	_	38	0	42	37	318	316	5	2
1979 Average	18	0	-	-	30	0	66	52	439	437	23	7
1980 Average	4	0	-	-	4	0	70	61	533	507	2	(s)
1981 Average	1	0	-	_	11	.0	36	33	522	469	30	(s)
1982 Average	5	0	-	-	18	(s)	20	18	685	645	35	(s)
1983 Average	10	0	-	_	18	(s)	4	3	826	766	65	3
1984 Average	8	0	-	_	45	(s)	1	0	748	659	65	3
1985 Average	23	0	-	_	60	(s)	3	1	816	715	58	0
1986 Average	87	57	-	_	76	0	12	11	699	621	54	0
1987 Average	148	115	-	_	54	1	13	12	655	602	60	0
1988 Average	134	106	-	-	65	5	19	19	747	674	61	0
1989 Average	172	136	-	_	34	3	39	39	767	716	49	0
1990 Average	182	140	-	_	58	2	41	40	755	689	55	0
1991 Average	163	123	-	_	47	3	24	24	807	759	29	0
1992 Average	126 171	102 141	- 04	- 78	55 31	0 0	10 11	10	830 919	787 863	26 10	0 0
1993 Average	171	141	81	70	31	U	11	10	919	003	10	U
<b>1994</b> January	182	149	128	128	8	0	11	11	971	945	37	0
February	184	131	96	96	35	0	19	15	967	926	43	0
March	188	167	37	37	16	0	13	0	1,067	1,014	43	0
April	241	197	52	52	13	0	3	0	987	963	24	0
May	105	75	85	85	19	0	0	0	975	934	79	0
June	112	101	72	72	12	0	10	10	1,040	974	38	0
July	127	127	144	144	35	0	36	36	926	889	35	0
August	181	181	115	115	52	0	13	7	894	852	33	0
September	144	144	63	63	34	0	9	0	1,043	963	34	0
October	215	215	110	110	21	0	0	0	940	881	18	0
November	134	134	97	97	17	0	0	0	1,037	981	1	0
December	124	124	96	96	9	0	6	0	963	944	4	0
Average	161	146	91	91	22	0	10	6	984	939	32	0
1995 January	191	181	130	130	4	0	21	21	942	909	0	0
February	158	148	107	107	1	0	0	0	919	888	17	0
March	257	238	104	104	8	0	0	0	1,006	961	29	0
April	193	193	146	146	13	0	7	0	993	963	3	0
May	171	153	128	128	0	0	0	0	1,118	1,063	24	0
June	243	220	149	149	13	0	7	0	1,138	1,076	37	0
July	223	223	87	87	4	0	0	0	1,188	1,166	0	0
August	330	311	116	104	0	0	0	0	1,185	1,156	21	0
September	252	236	61	61	0	0	14	14	1,305	1,238	0	0
October	199	190	12	12	11	0	13	5	894	854	31	0
November	240	229	102	102	4	0	16	16	1,114	1,060	20	0
December	200	190	51	51	3	Ō	17	11	1,018	1,000	0	Ō
Average	222	210	99	98	5	Ō	8	6	1,069	1,028	15	Ō
1996 January	186	183	106	101	2	0	0	0	1,281	1,245	16	0

<sup>&</sup>lt;sup>a</sup> Includes petroleum imported into the United States indirectly from members of the Organization of Petroleum Exporting Countries (OPEC), primarily from Caribbean and West European areas, as petroleum products that were refined from crude oil produced by OPEC.

b Through 1992, Ecuador was a member of OPEC. See Table 3.3c.

Notes: • Beginning in October 1977, Strategic Petroleum Reserve imports are included. • U.S. geographic coverage is the 50 States and the District of Columbia.

<sup>-=</sup> Not applicable. (s)=Less than 500 barrels per day.

Table 3.3g Petroleum Imports: Netherlands Antilles, Norway, Puerto Rico, Russia, Spain, and Trinidad and Tobago

1973 Average							Non-	OPEC <sup>a</sup>					
1973 Average				Norway		Pue	rto Rico	Ru	ıssia <sup>b</sup>	s	pain		
974 Average		Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
974 Average	1973 Average	585	0	1	0	99	0	26	0	26	0	255	60
976 Average	1974 Average	511	0	1	1	90	0	20	0	12	0	251	63
997 Average	1975 Average	332	0	17	12	90	0	14		1	0	242	115
978 Average	1976 Average	275	0			88	0			-	0	274	104
1979 Average	1977 Average	211	0	50	48	105	0	12	2	10	0	289	134
980 Average	1978 Average	229	0	104		94	-		1	3	0		142
981 Average	1979 Average		0	75					-	4		190	
982 Average	1980 Average	225	0	144	144	88	0		0	1	0	176	115
983 Average	1981 Average	197	0	119	114	62	0	5	(s)	1	(s)	133	102
984 Average	1982 Average	175	0	102	102	50	0	1	0	3	(s)	112	92
1985 Average	1983 Average	189	0	66	65	40	0	1	(s)	2	(s)	96	
1986 Average   25	1984 Average	188	0	114	112	42	0	13	(s)	11	0	94	87
1987 Average	1985 Average	40	0	32	31	28	0	8	(s)	29	1	113	98
1988 Average	1986 Average	25	0	60	53	21	0	18	(s)	53	0	125	93
988 Average	1987 Average	29	0	80	70	21	0	11	Ò	55	0	106	75
1989 Average		36	0	67	62	22	0	29	0	68	0	97	71
1990 Average		42	0	138	127	32	0	48	0	67	0	94	73
		31	Ó	102	96	32	0	45	1	47	Ō	96	76
		81	0	82	74	27	0	29	1	33	0	88	72
993 Average   82   0   142   137   29   0   55   36   37   0   74   55     994 January   189   0   101   96   26   0   11   0   26   0   90   60     February   119   0   199   166   19   0   14   0   31   0   92   80     March   112   0   108   108   21   0   34   34   37   0   68   54     April   73   0   205   184   17   0   0   0   0   45   0   76   56     May   70   0   159   159   21   0   32   32   53   0   68   58     June   69   0   176   158   42   0   133   133   50   0   106   79     July   121   0   276   257   43   0   82   82   25   0   69   55     September   95   0   347   336   17   0   6   0   56   0   64   56     October   77   0   310   300   20   0   30   30   35   0   79   65     December   43   0   125   123   10   0   0   0   22   0   59   55     December   43   0   125   123   10   0   0   0   22   0   59   55     March   68   0   241   209   13   0   0   0   0   7   0   91   91     February   58   0   194   164   7   0   0   0   0   7   0   91   91     February   58   0   263   256   17   0   41   32   10   0   73   54     August   62   0   279   264   26   0   136   98   17   0   74   53     Dupter   69   0   263   256   17   0   41   32   10   0   73   55      October   77   75   50   263   256   17   0   41   32   10   0   73   55      March   68   0   292   292   19   0   12   0   25   0   61   53      July   65   0   263   256   17   0   41   32   10   0   74   53      December   48   0   163   163   15   0   0   0   6   0   6   0   6    November   69   0   255   255   27   0   28   0   16   0   55   53   53      December   48   0   163   163   15   0   0   0   0   6   0   0   0   0   0		65	Ö	127	119	26	Ö		5		Ô		70
February         119         0         199         166         19         0         14         0         31         0         92         80           March         112         0         108         108         21         0         34         34         37         0         68         54           April         73         0         205         184         17         0         0         0         45         0         76         56           May         70         0         159         159         21         0         32         32         53         0         68         58           July         69         0         176         158         42         0         133         133         50         0         106         79           July         121         0         276         257         43         0         82         82         25         0         69         55           August         114         0         206         198         23         0         21         15         38         0         85         55           September         95         0 <td>1993 Average</td> <td></td>	1993 Average												
February	1994 January	189	0	101	96	26	0	11	0	26	0	90	60
March         112         0         108         108         21         0         34         34         37         0         68         54           April         73         0         205         184         17         0         0         0         45         0         76         56           May         70         0         159         159         159         21         0         32         32         53         0         68         58           June         69         0         176         158         42         0         133         133         50         0         106         79           July         121         0         276         257         43         0         82         82         25         0         69         55           August         114         0         206         198         23         0         21         15         38         0         85         55           September         95         0         347         336         17         0         6         0         56         0         64         56           October         77		119	0	199	166	19	0	14	0	31	0	92	80
April         73         0         205         184         17         0         0         0         45         0         76         56           May         70         0         159         159         21         0         32         32         53         0         68         58           Jule         69         0         176         158         42         0         133         133         50         0         106         79           July         121         0         276         257         43         0         82         82         25         0         69         55           August         114         0         206         198         23         0         21         15         38         0         85         55           September         95         0         347         336         17         0         6         0         56         0         64         56           October         77         0         310         300         20         0         30         30         35         0         79         65           November         96         0		112	0	108	108	21	0	34	34	37	0	68	54
May         70         0         159         159         21         0         32         32         53         0         68         58           June         69         0         176         158         42         0         133         133         50         0         106         79           July         121         0         276         257         43         0         82         82         25         0         69         55           August         1114         0         206         198         23         0         21         15         38         0         85         55           September         95         0         347         336         17         0         6         0         56         0         64         56           October         77         0         310         300         20         0         30         35         0         79         65           November         96         0         214         195         6         0         0         0         22         0         59         55           December         433         0         125	April		0	205	184	17	0	0	0	45	0	76	56
June         69         0         176         158         42         0         133         133         50         0         106         79           July         121         0         276         257         43         0         82         82         25         0         69         55           August         114         0         206         198         23         0         21         15         38         0         85         55           September         95         0         347         336         17         0         6         0         56         0         64         56           October         77         0         310         300         20         0         30         30         35         0         79         65           November         96         0         214         195         6         0         0         0         22         0         59         55           December         43         0         125         123         10         0         0         0         26         0         74         74         74           Average         98			0						32		0		
July         121         0         276         257         43         0         82         82         25         0         69         55           August         114         0         206         198         23         0         21         15         38         0         85         55           September         95         0         347         336         17         0         6         0         56         0         64         56           October         77         0         310         300         20         0         30         35         0         79         65           November         96         0         214         195         6         0         0         0         22         0         59         55           December         43         0         125         123         10         0         0         0         22         0         59         55           December         43         0         125         123         10         0         0         0         22         0         59         55           December         43         0         125													
August         114         0         206         198         23         0         21         15         38         0         85         55           September         95         0         347         336         17         0         6         0         56         0         64         56           October         77         0         310         300         20         0         30         30         35         0         79         65           November         96         0         214         195         6         0         0         0         22         0         59         55           December         43         0         125         123         10         0         0         0         26         0         74         74         Average         98         0         202         190         22         0         30         27         37         0         77         62           1995 January         75         0         200         170         6         0         0         0         7         0         91         91         91         9         0         0         0 <td></td>													
September         95         0         347         336         17         0         6         0         56         0         64         56           October         77         0         310         300         20         0         30         30         35         0         79         65           November         96         0         214         195         6         0         0         0         22         0         59         55           December         43         0         125         123         10         0         0         0         26         0         74         74           Average         98         0         202         190         22         0         30         27         37         0         77         62           1995 January         75         0         200         170         6         0         0         0         7         0         91         91         91           486         0         241         209         13         0         0         0         16         7         55         55         55           May         86													
October         77         0         310         300         20         0         30         30         35         0         79         65           November         96         0         214         195         6         0         0         0         22         0         59         55           December         43         0         125         123         10         0         0         0         26         0         74         74           Average         98         0         202         190         22         0         30         27         37         0         77         62           1995 January         75         0         200         170         6         0         0         0         7         0         91         91           February         58         0         194         164         7         0         0         0         9         0         60         60           March         68         0         241         209         13         0         0         0         16         0         70         70         70         70         70         70													
November         96         0         214         195         6         0         0         0         22         0         59         55           December         43         0         125         123         10         0         0         0         26         0         74         74           Average         98         0         202         190         22         0         30         27         37         0         77         62           1995         January         75         0         200         170         6         0         0         0         7         0         91         91           February         58         0         194         164         7         0         0         0         9         0         60         60           March         68         0         241         209         13         0         0         0         16         0         70         70           April         0         0         315         291         9         0         0         0         16         0         70         70           May         86 <th< 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></th<>	•		-				-		-		-		
December         43         0         125         123         10         0         0         0         26         0         74         74           Average         98         0         202         190         22         0         30         27         37         0         74         74           4 Average         98         0         202         190         22         0         30         27         37         0         74         74           4 Average         98         0         202         190         22         0         30         27         37         0         74         74           495         3         0         0         0         0         0         0         9         0         62           40         0         194         164         7         0         0         0         9         0         60         60         60           March         68         0         241         209         13         0         0         0         16         0         70         70           April         0         0         315         291         9													
Average         98         0         202         190         22         0         30         27         37         0         77         62           1995 January         75         0         200         170         6         0         0         0         7         0         91         91           February         58         0         194         164         7         0         0         0         9         0         60         60           March         68         0         241         209         13         0         0         0         16         0         70         70           April         0         0         315         291         9         0         0         0         16         7         55         55           May         86         0         292         292         19         0         12         0         25         0         61         53           June         50         0         370         370         16         0         15         0         27         0         78         74           July         65         0         26			-						-		-		
February         58         0         194         164         7         0         0         0         9         0         60         60           March         68         0         241         209         13         0         0         0         16         0         70         70           April         0         0         315         291         9         0         0         0         16         7         55         55           May         86         0         292         292         19         0         12         0         25         0         61         53           June         50         0         370         370         16         0         15         0         27         0         78         74           July         65         0         263         256         17         0         41         32         10         0         73         54           August         62         0         279         264         26         0         136         98         17         0         74         53           September         33         0         3													
February         58         0         194         164         7         0         0         0         9         0         60         60           March         68         0         241         209         13         0         0         0         16         0         70         70           April         0         0         315         291         9         0         0         0         16         7         55         55           May         86         0         292         292         19         0         12         0         25         0         61         53           June         50         0         370         370         16         0         15         0         27         0         78         74           July         65         0         263         256         17         0         41         32         10         0         73         54           August         62         0         279         264         26         0         136         98         17         0         74         53           September         33         0         3	1995 January	75	0	200	170	6	0	0	0	7	0	91	91
March         68         0         241         209         13         0         0         0         16         0         70         70           April         0         0         315         291         9         0         0         0         16         7         55         55           May         86         0         292         292         19         0         12         0         25         0         61         53           June         50         0         370         370         16         0         15         0         27         0         78         74           July         65         0         263         256         17         0         41         32         10         0         73         54           August         62         0         279         264         26         0         136         98         17         0         74         53           September         33         0         364         359         12         0         50         32         19         0         73         55           October         48         0 <t< 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></t<>			-										
April       0       0       315       291       9       0       0       0       16       7       55       55         May       86       0       292       292       19       0       12       0       25       0       61       53         June       50       0       370       370       16       0       15       0       27       0       78       74         July       65       0       263       256       17       0       41       32       10       0       73       54         August       62       0       279       264       26       0       136       98       17       0       74       53         September       33       0       364       359       12       0       50       32       19       0       73       55         October       48       0       163       163       15       0       0       0       6       0       86       70         November       69       0       255       255       27       0       28       0       16       0       53       53 <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>			-				-	-	-		-		
May       86       0       292       292       19       0       12       0       25       0       61       53         June       50       0       370       370       16       0       15       0       27       0       78       74         July       65       0       263       256       17       0       41       32       10       0       73       54         August       62       0       279       264       26       0       136       98       17       0       74       53         September       33       0       364       359       12       0       50       32       19       0       73       55         October       48       0       163       163       15       0       0       0       6       0       86       70         November       69       0       255       255       27       0       28       0       16       0       53       53         December       24       0       348       316       15       0       15       0       12       5       53       53			-					-	-		-		
June       50       0       370       370       16       0       15       0       27       0       78       74         July       65       0       263       256       17       0       41       32       10       0       73       54         August       62       0       279       264       26       0       136       98       17       0       74       53         September       33       0       364       359       12       0       50       32       19       0       73       55         October       48       0       163       163       15       0       0       0       6       0       86       70         November       69       0       255       255       27       0       28       0       16       0       53       53         December       24       0       348       316       15       0       15       0       12       5       53       53         Average       53       0       274       259       15       0       25       14       15       1       69       62 </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>		-	-						-				
July       65       0       263       256       17       0       41       32       10       0       73       54         August       62       0       279       264       26       0       136       98       17       0       74       53         September       33       0       364       359       12       0       50       32       19       0       73       55         October       48       0       163       163       15       0       0       0       6       0       86       70         November       69       0       255       255       257       0       28       0       16       0       53       53         December       24       0       348       316       15       0       15       0       12       5       53       53         Average       53       0       274       259       15       0       25       14       15       1       69       62			-						-		-		
August       62       0       279       264       26       0       136       98       17       0       74       53         September       33       0       364       359       12       0       50       32       19       0       73       55         October       48       0       163       163       15       0       0       0       6       0       86       70         November       69       0       255       255       27       0       28       0       16       0       53       53         December       24       0       348       316       15       0       15       0       12       5       53       53         Average       53       0       274       259       15       0       25       14       15       1       69       62			-						-		-		
September       33       0       364       359       12       0       50       32       19       0       73       55         October       48       0       163       163       15       0       0       0       6       0       86       70         November       69       0       255       255       27       0       28       0       16       0       53       53         December       24       0       348       316       15       0       15       0       12       5       53       53         Average       53       0       274       259       15       0       25       14       15       1       69       62			-				-				-		
October			-				-						
November			-				-				-		
December			-						-		-		
Average 53 0 274 259 15 0 25 14 15 1 69 62			-				-		-		-		
<b>996</b> January 50 0 199 178 6 0 0 0 31 0 92 71	Average	53	U	274	259	15	U	25	14	15	1	69	62
	1996 January	50	0	199	178	6	0	0	0	31	0	92	71

<sup>&</sup>lt;sup>a</sup> Includes petroleum imported into the United States indirectly from members of the Organization of Petroleum Exporting Countries (OPEC), primarily from Caribbean and West European areas, as petroleum products that were refined from crude oil produced by OPEC.

Notes: • Beginning in October 1977, Strategic Petroleum Reserve imports are included. • U.S. geographic coverage is the 50 States and the District of Columbia.

that were refined from crude oil produced by OPEC.

b Imports from other States in the former U.S.S.R. may be included in imports from Russia for the years 1973 through 1992.

<sup>(</sup>s)=Less than 500 barrels per day.

Table 3.3h Petroleum Imports: United Kingdom, Virgin Islands, Other Non-OPEC, **Total Non-OPEC, and Total Imports** 

				Non-C	PECa					
		nited gdom	Virgin	Islands	O Non-	ther OPEC <sup>b</sup>	To	tal <sup>b,c</sup>		otal ports
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average	15	0	329	0	153	36	3,263	1,149	6,256	3,244
1974 Average	8	0	391	0	122	30	2,832	937	6,112	3,477
1975 Average	14	(s)	406	0	120	14	2,454	893	6,056	4,105
1976 Average	31	13	422	0	203	101	2,247	742	7,313	5,287
1977 Average	126	97	466	0	287	157	2,614	971	8,807	6,615
1978 Average	180	169	428	0	239	146	2,612	1,172	8,363	6,356
1979 Average	202	197	431	0	269	192	2,819	1,407	8,456	6,519
1980 Average	176	173	388	0	219	162	2,609	1,399	6,909	5,263
1981 Average	375	369	327	0	236	163	2,672	1,474	5,996	4,396
1982 Average	456	441	316	0	306	174	2,968	1,754	5,113	3,488
1983 Average	382	365	282	0	378	215	3,189	1,853	5,051	3,329
1984 Average	402	378	294	0	411	210	3,388	1,914	5,437	3,426
1985 Average	310	278	247	0	394	137	3,237	1,888	5,067	3,201
1986 Average	350	317	244	0	426	144	3,387	2,065	6,224	4,178
1987 Average	352	304	272	0	459	196	3,617	2,274	6,678	4,674
1988 Average	315	254	242	0	487	196	3,882	2,411	7,402	5,107
1989 Average	215	160	321	0	457	197	3,921	2,467	8,061	5,843
1990 Average	189	155	282	0	417	180	3,721	2,381	8,018	5,894
1991 Average	138	106	243	0	282	137	3,535	2,405	7,627	5,782
1992 Average	230	200	249	0	335	149	3,796	2,676	7,888	6,083
1993 Average	350	312	254	0	452	240	<sup>c</sup> 4,347	°3,178	8,620	6,787
1994 January	205	161	276	0	361	181	4,333	3,053	7,993	5,945
February	290	232	351	0	441	111	4,705	3,077	8,539	6,313
March	459	394	325	0	453	191	4,784	3,366	8,574	6,372
April	377	282	325	0	496	212	4,561	3,227	8,968	6,955
May	404	345	312	0	643	390	4,805	3,427	9,213	7,198
June	537	485	361	0	423	209	4,787	3,520	9,305	7,358
July	678	578	294	0	635	400	5,273	3,996	9,779	7,857
August	514	473	356	0	513	249	5,007	3,627	9,510	7,488
September	736	717	360	0	409	287	5,307	4,143	9,693	7,868
October	370	323	313	0	350	212	4,484	3,444	8,788	7,136
November	618	507	292	0	257	159	4,536	3,545	8,707	7,034
December	305	255	369	0	414	254	4,411	3,352	8,863	7,193
Average	458	396	328	0	450	239	4,749	3,483	8,996	7,063
1995 January	256	228	283	0	209	131	4,126	3,215	7,955	6,503
February	382	359	322	Ö	300	143	4,244	3,211	8,358	6,565
March	663	621	298	Ö	174	91	4.641	3.655	9,020	7,409
April	491	450	284	Ö	314	143	4.589	3,748	8,486	7.073
May	405	366	203	Ö	286	165	4,711	3,849	8,736	7,354
June	520	418	268	Ö	368	253	5.123	4.123	9.585	7.957
July	137	97	240	Ö	441	277	4,482	3,630	8,845	7,265
August	288	249	264	Ö	336	261	4,898	3,954	9,024	7,415
September	427	386	223	Ö	312	180	4,979	4,072	9,726	8,041
October	528	479	299	0	331	214	4.364	3,465	8,576	7.075
November	284	284	317	0	263	145	4,582	3,574	9,052	7,269
December	238	177	334	0	262	156	4,532	3,522	8,624	6,938
Average	384	342	278	0	300	180	4,60 <b>7</b>	3,670	8,832	<b>7,240</b>
1996 January	354	238	390	0	391	188	4,992	3,717	9,272	7,260

a Includes petroleum imported into the United States indirectly from members of the Organization of Petroleum Exporting Countries (OPEC), primarily from Caribbean and West European areas, as petroleum products that were refined from crude oil produced by OPEC.

b Includes Bahrain, which is shown on Table 3.3a.

Notes: • Beginning in October 1977, Strategic Petroleum Reserve imports are included. • Totals may not equal sum of components due to independent rounding. • U.S. geographic coverage is the 50 States and the District of Columbia.

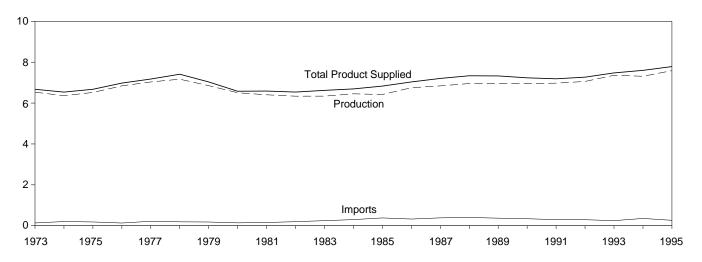
C As of January 1993, includes petroleum imported from Ecuador, which withdrew from OPEC on December 31, 1992.

<sup>(</sup>s)=Less than 500 barrels per day.

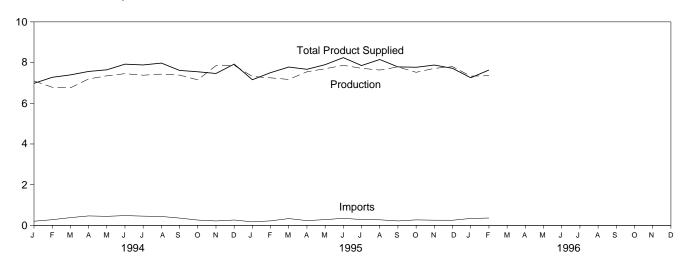
Figure 3.2 **Finished Motor Gasoline** 

(Million Barrels per Day, Except as Noted)

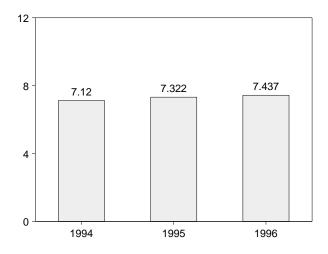
#### Overview, 1973-1995



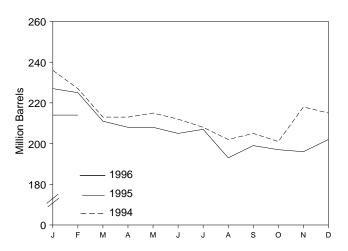
#### Overview, Monthly



Product Supplied, January and February



Stocks, End of Month



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

Source: Table 3.4.

**Table 3.4 Finished Motor Gasoline Supply and Disposition** 

	Sup	ply		Disposition			Gasoline   Stocks <sup>a</sup>	Oxygenates	
	Total Production	Imports <sup>b</sup>	Stock Change <sup>b,c</sup>	Exports	Product Supplied	Totald	Finished	Ending Stocks <sup>a</sup>	
		Tho	usand Barrels per	Day		Million Barrels			
1973 Average	6,535	134	-9	4	6,674	209	NA	NA	
1974 Average	6,360	204	24	2	6,537	<sup>e</sup> 218	NA	NA	
1975 Average	6,520	184	e <b>28</b>	2	6,675	235	NA	NA	
1976 Average	6,841	131	-10	3	6,978	231	NA	NA	
1977 Average	7,033	217	72	2	7,177	258	NA	NA	
978 Average	7,169	190	-54	1	7,412	238	NA	NA	
1979 Average	6,852	181	-2	(s)	7,034	237	NA	NA	
1980 Average	6,506	140 157	66 <sup>e</sup> -28	1 2	6,579	<sup>e</sup> 261 253	NA 203	NA NA	
981 Average <sup>†</sup>	6,405	197	-26 -25	20	6,588 6 520	e <b>23</b> 5	e194	NA NA	
1982 Average	6,338 6,340	247	-25 <sup>e</sup> -45	20 10	6,539 6,622	222	186	NA NA	
1983 Average	6,453	299	54	6	6,693	243	205	NA NA	
984 Average985 Average	6,455	299 381	-41	10	6,831	223	190	NA NA	
986 Average	6,752	326	11	33	7,034	233	194	NA NA	
1987 Average	6,841	384	-15	35 35	7,206	226	189	NA NA	
1988 Average	6,956	405	3	22	7,336	228	190	NA NA	
1989 Average	6.963	369	-35	39	7,328	213	177	NA NA	
1990 Average	6,959	342	10	55	7,235	220	181	NA NA	
1991 Average	6,975	297	3	82	7,188	219	182	NA NA	
1992 Average	7.058	294	-11	96	7,268	216	178	NA NA	
993 Average	<sup>9</sup> 7,360	247	26	105	9 <b>7,476</b>	226	187	<sup>h</sup> 13	
994 January	7,097	206	227	97	6,980	236	194	11	
February	6,790	281	-281	77	7,275	227	186	11	
March	6,760	382	-341	88	7,395	213	176	13	
April	7,195	467	26	73	7,564	213	176	15	
May	7,348	446	85	64	7,644	215	179	16	
June	7,455	483	-72	88	7,922	212	177	18	
July	7,380	455	-127	78	7,884	208	173	22	
August	7,432	439	-172	70	7,975	202	168	24	
September	7,385	360	55	74	7,615	205	169	25	
October	7,151	263	-244 496	110	7,548	201	162	23 20	
November December	7,849 7.867	219 265	-23	108 231	7,464 7,924	218 215	177 176	20 17	
Average	7,307 <b>7,312</b>	<b>356</b>	-23 -31	<b>97</b>	7,601	215	176 176	17	
<b>995</b> January	7.317	174	235	100	7.157	227	183	16	
February	7,317 7,250	223	-116	84	7,137	225	180	16	
March	7,171	336	-380	107	7,780	211	168	15	
April	7,547	235	-26	139	7,670	208	167	15	
May	7.697	286	18	67	7.898	208	168	15	
June	7.866	347	-121	91	8,243	205	164	14	
July	7,718	290	68	86	7,854	207	166	15	
August	7.634	276	-343	103	8.151	193	155	16	
September	7,785	219	122	94	7,788	199	159	15	
October	7,522	272	-98	121	7,770	197	156	14	
November	7,716	256	-24	118	7,878	196	155	12	
December	7,798	254	193	141	7,718	202	161	12	
Average	7,586	264	-39	104	7,785	202	161	12	
996 January	R 7,333	R 343	R 260	R 163	R 7,254	214	169	12	
February	E 7,357	E 362	E-10	E 95	E 7,634	E 214	E 169	NA	
2-Month Average	<sup>E</sup> 7,345	<sup>E</sup> 352	<sup>E</sup> 130	E 130	<sup>E</sup> 7,437	<sup>E</sup> 214	<sup>E</sup> 169	NA	
995 2-Month Average 994 2-Month Average	7,285 6,952	197 242	68 -14	93 87	7,322 7,120	225 227	180 186	16 11	

imbalance of motor gasoline blending components. See Note 2 at end of section.

Note: Geographic coverage is the 50 States and the District of Columbia. Sources: • 1973-1980: Energy Information Administration (EIA), Petroleum Supply Monthly, February 1993, Table S4. • 1981 forward: EIA, Petroleum Supply Monthly, March 1996, Table S4.

a Stocks are totals as of end of period.
 b From 1981 forward, blending components are excluded.
 c A negative number indicates a decrease in stocks and a positive number indicates an increase.

d Includes motor gasoline blending components and gasohol, but excludes

oxygenates, which are reported separately.

See Note 4 at end of section.

f See Note 2 at end of section.

g Beginning in 1993, motor gasoline production and product supplied include blending of fuel ethanol and an adjustment to correct for the

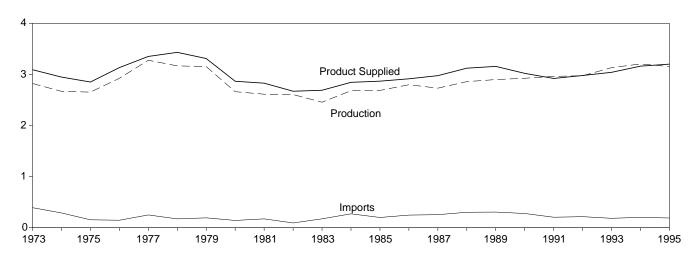
h See Note 1 at end of section.

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

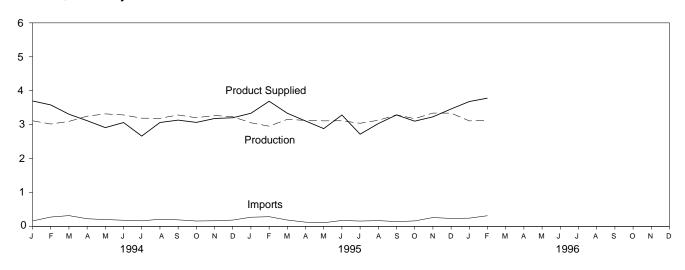
Figure 3.3 Distillate Fuel

(Million Barrels per Day, Except as Noted)

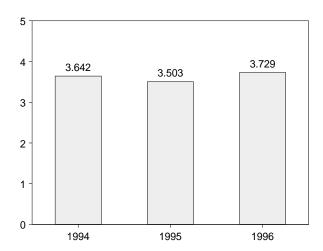
Overview, 1973-1995



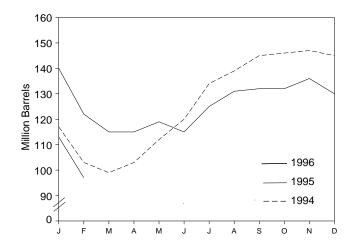
### Overview, Monthly



Product Supplied, January and February



Stocks, End of Month



Source: Table 3.5.

Table 3.5 Distillate Fuel Oil Supply and Disposition

		Supply			Disposition			Ending Stock	s <sup>a</sup>
			Crude Oil					Sulfur	Content
	Total Production	Imports	Used Directly <sup>b</sup>	Stock Change <sup>c</sup>	Exports	Product Supplied <sup>b</sup>	Total	0.05 Percent or Less <sup>d</sup>	Greater Than 0.05 Percent <sup>d</sup>
			Thousand Ba	rrels per Day				Million Barrel	S
1973 Average	2,822	392	2	115	9	3,092	196	NA	NA
1974 Average	2,669	289	2	e 10	2	2,948	<sup>f</sup> 200	NA	NA
1975 Average	2,654	155	2	<sup>e,f</sup> -41	1	2,851	209	NA	NA
1976 Average	2,924	146	1	-62	1	3,133	186	NA	NA
1977 Average	3,278	250	1	176	1	3,352	250	NA	NA
1978 Average	3,167	173	1	-93	3	3,432	216	NA	NA
1979 Average	3,153	193	1	34	3	3,311	, 229	NA	NA
1980 Average	2,662	142	1	<sub>,</sub> -64	3	2,866	† 205	NA	NA
1981 Average <sup>g</sup>	2,613	173	10	<sup>f</sup> -38	5	2,829	<sub>,</sub> 192	NA	NA
1982 Average	2,606	93	10	<sub>,</sub> -35	74	2,671	¹ 179	NA	NA
1983 Average	2,456	174	-	<sup>f</sup> -124	64	2,690	140	NA	NA
1984 Average	2,681	272	-	57	51	2,845	161	NA	NA
1985 Average	2,687	200	-	-48	67	2,868	144	NA	NA
1986 Average	2,798	247	-	31	100	2,914	155	NA	NA
1987 Average	2,731	255	-	-56	66	2,976	134	NA	NA
1988 Average	2,859	302	-	-30	69	3,122	124	NA	NA
1989 Average	2,899	306	-	-49	97	3,157	106	NA	NA
1990 Average	2,925	278	-	73	109	3,021	132	NA	NA
1991 Average	2,962	205	-	31	215	2,921	144	NA	NA
1992 Average	2,974	216	_	-8	219	2,979	141	NA	NA a==
1993 Average	3,132	184	-	1	274	3,041	141	9 <b>64</b>	9 <b>77</b>
<b>1994</b> January	3,114	161	_	-754	332	3,698	117	55	62
February	3,018	276	_	-521	235	3,581	103	49	54
March	3,096	318	_	-113	220	3,307	99	51	49
April	3,249	226	_	106	252	3,116	103	57	46
May	3,317	202	_	318	289	2,912	112	61	51
June	3,285	182	_	237	168	3,062	120	62	58 65
July	3,191	164	_	472	220	2,663	134	69	65
August	3,187	211	_	142	193	3,063	139	67	71
September	3,285	193	_	205	140	3,133	145	66 67	78 70
October	3,203	159	_	40	256	3,066	146	67	79 77
November	3,270	166	_	45	211	3,180	147	70	77
December Average	3,232 <b>3,205</b>	187 <b>203</b>	_	-68 <b>12</b>	284 <b>234</b>	3,203 <b>3,162</b>	145 <b>145</b>	73 <b>73</b>	73 <b>73</b>
_									
<b>1995</b> January	3,055	270	_	-152	141	3,335	140	69	71
February	2,954	287	_	-660	212	3,689	122	63	59
March	3,156	188	_	-208	216	3,336	115	59	56
April	3,125	125	_	-30	172	3,108	115	61	53
May	3,111	108	_	135	202	2,883	119	62	56
June	3,114	176	_	-132	137	3,284	115	59	56
July	3,041	157	_	332	148	2,718	125	61	64
August	3,130	171	_	186	84	3,031	131	61	70
September	3,288	142	_	28	116	3,286	132	63	68
October	3,176	162	_	-2	238	3,102	132	61	70 71
November	3,341	262	_	137	236	3,230	136	65 66	71
December Average	3,339 <b>3,153</b>	235 <b>190</b>	_	-186 <b>-42</b>	298 <b>183</b>	3,462 <b>3,201</b>	130 <b>130</b>	66 <b>66</b>	64 <b>64</b>
1996 January	<sup>R</sup> 3,110	R 243	_	<sup>R</sup> -544	<sup>R</sup> 216	<sup>R</sup> 3,681	<sup>R</sup> 113	<sup>R</sup> 58	<sup>R</sup> 55
February	E 3,132	E 315	_	E -538	E 204	E 3,781	E 97	E 54	E 42
2-Month Average	E 3,121	E 278	-	<sup>E</sup> -541	E 210	E 3,729	E 97	<sup>E</sup> 54	E 42
1995 2-Month Average	3,007	278	_	-393	175	3,503	122	63	59
1994 2-Month Average	3,069	216	_	-644	286	3,642	103	49	54

<sup>&</sup>lt;sup>a</sup> Stocks are totals as of end of period.

b Beginning in January 1983, crude oil used directly as distillate fuel oil is reported as crude oil product supplied on Table 3.2b rather than as distillate

fuel oil product supplied.

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

d By weight.
e See Note 6 at end of section.
f See Note 4 at end of section.

<sup>&</sup>lt;sup>g</sup> See Note 3 at end of section.

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

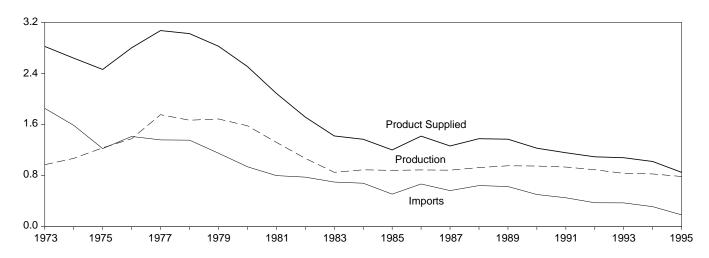
Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Sources: • 1973-1980: Energy Information Administration (EIA), Petroleum Supply Monthly, February 1993, Table S5. • 1981 forward: EIA, Petroleum Supply Monthly, March 1996, Table S5.

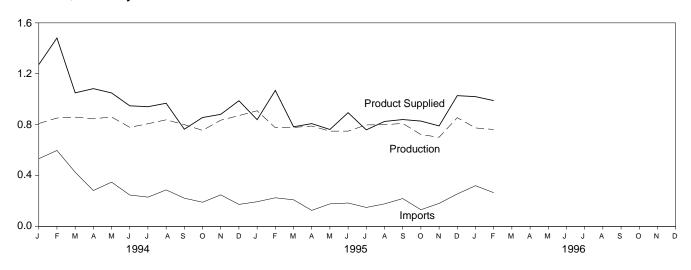
### Figure 3.4 Residual Fuel

(Million Barrels per Day, Except as Noted)

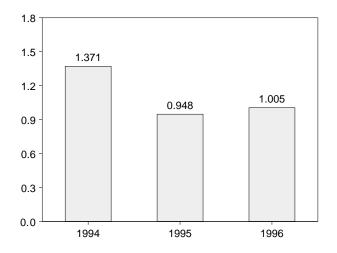
#### Overview, 1973-1995



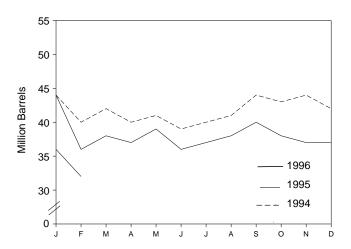
### Overview, Monthly



Product Supplied, January and February



Stocks, End of Month



Note: Because vertical scales differ, graphs should not be compared. Source: Table 3.6.

Table 3.6 Residual Fuel Oil Supply and Disposition

		Supply			Disposition		
	Total Production	Imports	Crude Oil Used Directly <sup>a</sup>	Stock Change <sup>b</sup>	Exports	Product Supplied <sup>a</sup>	Ending Stocks <sup>c</sup>
			Thousand Ba	arrels per Day	Million Barrels		
4070 4	074	4.050				2 222	
1973 Average	971	1,853	17	-5 47	23	2,822	53 d <b>60</b>
1974 Average	1,070	1,587	13	17 d -2	14	2,639	
1975 Average	1,235	1,223	15 47		15	2,462	74 72
1976 Average	1,377	1,413	17	-5 40	12 6	2,801	72 90
1977 Average	1,754	1,359	13	48		3,071	
1978 Average	1,667	1,355	13	1	13	3,023	90
1979 Average	1,687	1,151	12	15	9	2,826	96
1980 Average	1,580	939	12	-10 <sup>d</sup> -37	33	2,508	d <b>92</b>
1981 Average <sup>e</sup>	1,321	800	48		118	2,088	78
1982 Average	1,070	776	48	-32	209	1,716	d <b>66</b>
1983 Average	852	699	-	d -55	185	1,421	49
1984 Average	891	681	-	12	190	1,369	53
1985 Average	882	510	-	-7	197	1,202	50
1986 Average	889	669	-	-8 (a)	147	1,418	47
1987 Average	885	565	-	(s)	186	1,264	47
1988 Average	926	644	-	-8	200	1,378	45
1989 Average	954	629	-	-2	215	1,370	44
1990 Average	950	504	-	13	211	1,229	49
1991 Average	934	453	-	4	226	1,158	50
1992 Average	892	375	-	-20	193	1,094	43
1993 Average	835	373	-	4	123	1,080	44
1994 January	809	532	_	4	64	1,272	44
February	852	597	-	-159	127	1,481	40
March	859	426	-	61	175	1,050	42
April	846	282	_	-65	110	1,083	40
May	860	348	_	30	129	1,049	41
June	779	247	_	-43	122	948	39
July	807	230	_	12	83	941	40
August	838	287	_	37	120	968	41
September	800	222	_	117	141	764	44
October	755	190	_	-45	134	856	43
November	835	248	_	19	182	881	44
December	871	173	_	-58	115	988	42
Average	826	314	-	-6	125	1,021	42
1995 January	909	194	_	60	203	839	44
February	776	225	_	-275	208	1,069	36
March	778	209	_	50	154	783	38
April	789	126	_	-23	129	808	37
May	749	177	_	48	115	762	39
June	749	184	_	-82	120	894	36
July	798	149	_	25	164	759	37
August	799	177	_	28	122	825	38
September	810	219	_	64	124	840	40
October	722	131	_	-58	84	828	38
November	701	181	_	-19	111	790	37
December	855	255	_	-16	98	1,028	37
Average	<b>786</b>	185	_	-14	136	851	<b>37</b>
<b>1996</b> January	<sup>R</sup> 774	<sup>R</sup> 320	_	<sup>R</sup> -34	<sup>R</sup> 108	R 1,020	R 36
February	E 762	E 265	_	E-112	E 150	E 989	E 32
2-Month Average	E 768	E <b>294</b>	_	E -72	E 128	E 1,005	E 32
1995 2-Month Average	846	208	_	-99	205	948	36
1994 2-Month Average	829	563	_	-73	94	1,371	40

 <sup>&</sup>lt;sup>a</sup> Beginning in January 1983, crude oil used directly as residual fuel oil is reported as crude oil product supplied on Table 3.2b rather than as residual fuel oil product supplied.
 <sup>b</sup> A negative number indicates a decrease in stocks and a positive number indicates a decrease.

indicates an increase.

<sup>c</sup> Stocks are totals as of end of period.

<sup>d</sup> See Note 4 at end of section.

e See Note 3 at end of section.

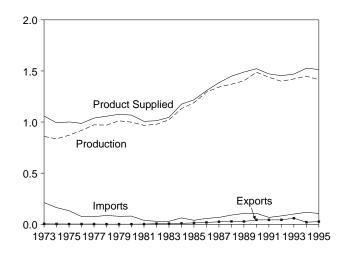
R=Revised data. — =Not applicable. E=Estimate. (s)=Less than +500 barrels per day and greater than -500 barrels per day.

Note: Geographic coverage is the 50 States and the District of Columbia. Sources: • 1973-1980: Energy Information Administration (EIA), Petroleum Supply Monthly, February 1993, Table S6. • 1981 forward: EIA, Petroleum Supply Monthly, March 1996, Table S6.

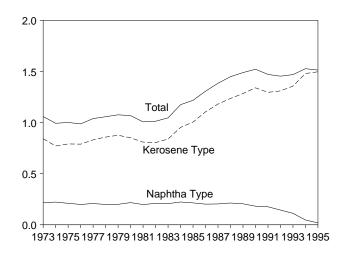
Figure 3.5 Jet Fuel

(Million Barrels per Day, Except as Noted)

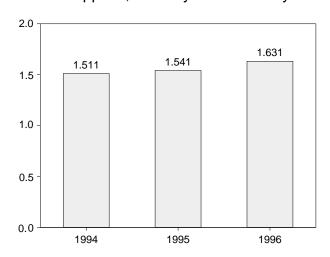
#### Overview, 1973-1995



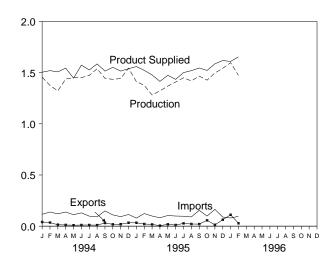
## Product Supplied by Type, 1973-1995



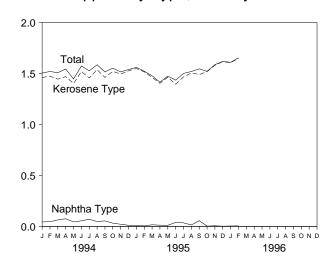
### Product Supplied, January and February



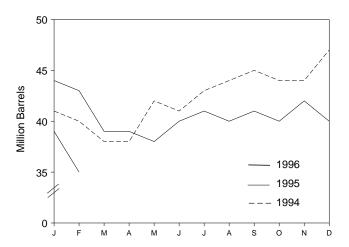
#### Overview, Monthly



#### Product Supplied by Type, Monthly



#### Stocks, End of Month



Source: Table 3.7.

Table 3.7 Jet Fuel Supply and Disposition

		Supply			Dis	sposition			
	Р	roduction		Stock		Prod	uct Supplied	End	ing Stocks <sup>a</sup>
	Total	Kerosene Type	Imports	Change <sup>b</sup>	Exports	Total	Kerosene Type	Total	Kerosene Type
			Thous	and Barrels p	er Day			Million Barrels	
1973 Average	859	679	212	8	4	1,059	842	29	23
1974 Average	836	641	163	2	3	993	771	c <b>29</b>	c <b>24</b>
1975 Average	871	691	133	c <b>2</b>	2	1,001	791	30	25
1976 Average	918	731	76	5	2	987	789	32	26
1977 Average	973	787	75	7	2	1,039	831	35	28
1978 Average	970	791	86	-2	1	1,057	858	34	28
1979 Average	1,012	835	78	13	1	1,076	876	39	33
1980 Average	999	811	80	10	1	1,068	851	c <b>42</b>	<sup>c</sup> 36
1981 Average	968	775	38	c <b>-4</b>	2	1,007	809	41	34
1982 Average	978	778	29	-12	6	1,013	804	<sup>c</sup> 37	<sup>c</sup> 31
1983 Average	1,022	817	29	<sup>c</sup> (s)	6	1,046	839	39	32
1984 Average	1,132	919	62	Ì9	9	1,175	953	42	35
1985 Average	1,189	983	39	-4	13	1,218	1,005	40	34
1986 Average	1,293	1,097	57	25	18	1,307	1,105	50	43
1987 Average	1,343	1,138	67	(s)	24	1,385	1,181	50	42
1988 Average	1,370	1,164	90	-17	28	1,449	1,236	44	38
1989 Average	1,403	1,197	106	-8	27	1,489	1,284	41	34
1990 Average	1,488	1,311	108	31	43	1,522	1,340	52	46
1991 Average	1,438	1,274	67	-9	43	1,471	1,296	49	44
1992 Average	1,399	1,254	82	-16	43	1,454	1,310	43	39
1993 Average	1,422	1,309	100	-7	59	1,469	1,357	40	38
1994 January	1,456	1,394	116	29	40	1,504	1,460	41	39
February	1,374	1,331	138	-43	35	1,519	1,473	40	38
March	1,322	1,272	120	-80	14	1,507	1,444	38	36
April	1,437	1,395	138	20	12	1,544	1,469	38	36
May	1,451	1,403	112	108	9	1,446	1,402	42	40
June	1,451	1,400	130	-2	11	1,573	1,518	41	40
	1,472	1,422	98	34	11	1,573		43	41
July	,		96 91	33	10		1,456	43 44	42
August	1,538	1,498				1,585	1,536		42 44
September	1,444	1,419	149	47	31	1,515	1,461	45	
October	1,434	1,409	110	-27	18	1,552	1,520	44	43
November	1,442	1,433	93	(s)	19	1,515	1,494	44	43
December	1,543	1,533	114	86	33	1,538	1,526	47	46
Average	1,448	1,410	117	18	20	1,527	1,480	47	46
1995 January	1,412	1,402	79	-101	33	1,559	1,548	44	43
February	1,376	1,366	123	-44	21	1,522	1,516	43	42
March	1,281	1,272	99	-113	17	1,477	1,461	39	38
April	1,322	1,318	82	-16	.5	1,414	1,403	39	38
May	1,368	1,356	104	-21	18	1,474	1,463	38	37
June	1,408	1,395	99	62	11	1,434	1,395	40	39
July	1,449	1,435	97	19	27	1,500	1,465	41	40
August	1,419	1,411	90	-32	21	1,519	1,505	40	39
September	1,466	1,460	155	56	20	1,545	1,489	41	41
October	1,426	1,422	99	-54	57	1,521	1,518	40	39
November	1,496	1,493	164	62	13	1,586	1,580	42	41
December  Average	1,542 <b>1,414</b>	1,538 <b>1,406</b>	89 <b>106</b>	-49 <b>-20</b>	63 <b>26</b>	1,618 <b>1,514</b>	1,616 <b>1,497</b>	40 <b>40</b>	39 <b>39</b>
ū	-	•				•	•		
1996 January	<sup>R</sup> 1,597 <sup>E</sup> 1,472	<sup>R</sup> 1,594 <sup>E</sup> 1,464	<sup>R</sup> 80 <sup>E</sup> 96	<sup>R</sup> -43 <sup>E</sup> -114	<sup>R</sup> 111 <sup>E</sup> 28	<sup>R</sup> 1,609 <sup>E</sup> 1,654	<sup>R</sup> 1,605 <sup>E</sup> 1,649	<sup>R</sup> 39 <sup>E</sup> 35	38 <sup>E</sup> 35
2-Month Average	E 1,536	E 1,531	E 88	E -78	E 71	E 1,631	E 1,626	E 35	E 35
1995 2-Month Average	1,395	1,385	100	-74	27	1,541	1,533	43	42
1994 2-Month Average	1,417	1,364	126	-5	38	1,511	1,466	40	38

<sup>&</sup>lt;sup>a</sup> Stocks are totals as of end of period.

greater than -500 barrels per day.

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

Sources: • 1973-1980: Energy Information Administration (EIA),

Petroleum Supply Monthly, February 1993, Table S7. • 1981 forward: EIA,

Petroleum Supply Monthly, March 1996, Table S7.

b A negative number indicates a decrease in stocks and a positive number indicates an increase.

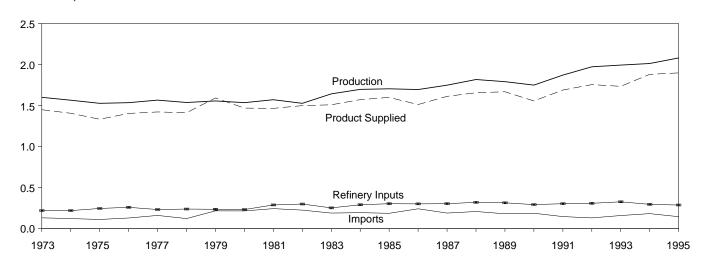
<sup>&</sup>lt;sup>c</sup> See Note 4 at end of section.

R=Revised data. E=Estimate. (s)=Less than +500 barrels per day and

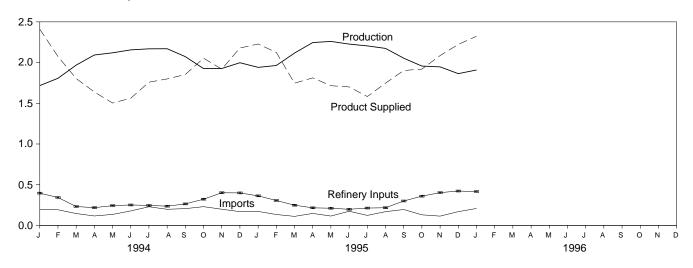
Figure 3.6 Liquefied Petroleum Gases

(Million Barrels per Day, Except as Noted)

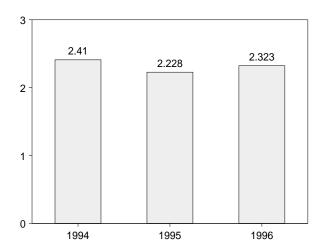
#### Overview, 1973-1995



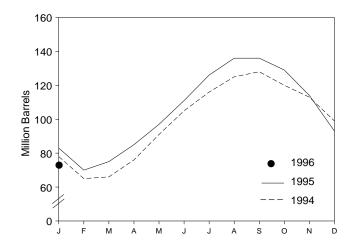
#### Overview, Monthly



Product Supplied, January



Stocks, End of Month



Note: Because vertical scales differ, graphs should not be compared. Source: Table 3.8.

**Table 3.8 Liquefied Petroleum Gases Supply and Disposition** 

	Sup	pply		Disposition						
	Total Production	Imports	Stock Change <sup>a</sup>	Refinery Inputs	Exports	Product Supplied	Ending Stocks <sup>b</sup>			
			Thousand Ba	arrels per Day			Million Barrels			
1973 Average	1,600	132	35	220	27	1,449	99			
1974 Average	1,565	123	38	220	25	1,406	<sup>c</sup> 113			
1975 Average	1,527	112	c 35	246	26	1,333	125			
1976 Average	1.535	130	-24	260	25	1,404	116			
1977 Average	1.566	161	55	233	18	1,422	136			
1978 Average	1,537	123	-12	239	20	1,413	° 132			
1979 Average	1,556	217	° -70	236	15	1,592	111			
1980 Average	1,535	216	27	233	21	1,469	° 120			
<del>-</del>	1,571	244	° 18	289	42	1,466	135			
1981 Average	d 1,527						<sup>c</sup> 94			
1982 Average		226	-111 ° -4	300	65	1,499				
1983 Average	1,642	190		253	73	1,509	<sup>c</sup> 101			
1984 Average	1,697	195	<sup>c</sup> -19	291	48	1,572	101			
1985 Average	1,704	187	-75	304	62	1,599	74			
1986 Average	1,695	242	80	302	42	1,512	103			
1987 Average	1,748	190	-15	304	38	1,612	97			
1988 Average	1,817	209	1	321	49	1,656	97			
1989 Average	1,791	181	-47	315	35	1,668	80			
1990 Average	1,749	188	48	293	40	1,556	98			
1991 Average	1,871	147	-15	304	41	1,689	92			
1992 Average	1,972	131	-10	309	49	1,755	89			
1993 Average	1,993	160	49	327	43	1,734	106			
1994 January	1,717	194	-923	396	28	2,410	78			
February	1,807	192	-463	343	44	2,075	65			
March	1,969	146	42	232	37	1,804	66			
April	2,093	116	323	218	29	1,639	76			
May	2,120	135	478	243	32	1,503	91			
June	2,156	178	480	251	41	1,562	105			
July	2,169	229	353	246	40	1,759	116			
August	2,170	198	296	236	37	1,799	125			
September	2,073	206	104	264	56	1,854	128			
October	1,926	230	-259	322	40	2.054	120			
	,	199			35	,				
November	1,927		-228	401 399		1,919	113 99			
December	1,998	169	-452		41	2,179				
Average	2,012	183	-19	296	38	1,880	99			
1995 January	1,941	172	-542	363	64	2,228	83			
February	1,964	134	-456	306	122	2,125	70			
March	2,117	111	175	248	57	1,747	75			
April	2,246	147	323	216	43	1,812	85			
May	2,260	115	386	211	62	1,716	97			
June	2,227	174	447	198	55	1,701	111			
	2,205	123	489	213	41	,	126			
July	,					1,583				
August	2,174	169	322	217	57	1,747	136			
September	2,054	195	17	300	29	1,903	136			
October	1,957	130	-228	359	35	1,920	129			
November	1,947	114	-491	403	63	2,086	114			
December	1,864	169	-679	422	67	2,223	93			
Average	2,080	146	-17	288	58	1,898	93			
1996 January	1,909	208	-671	416	49	2,323	73			

<sup>&</sup>lt;sup>a</sup> A negative number indicates a decrease in stocks and a positive number b Stocks are totals as of end of period.

See Note 4 at end of section.

See Note 6 at end of section.

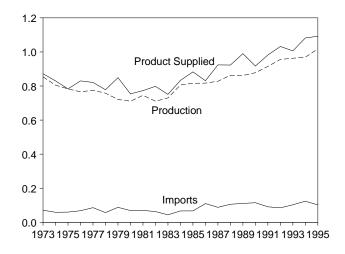
Notes: • Liquefied petroleum gases include ethane, ethylene, propane,

propylene, normal butane, butylene, isobutane and isobutylene. • Geographic coverage is the 50 States and the District of Columbia.

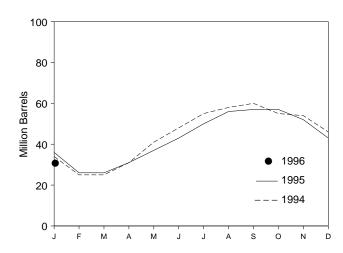
# Figure 3.7 Propane and Propylene

(Million Barrels per Day, Except as Noted)

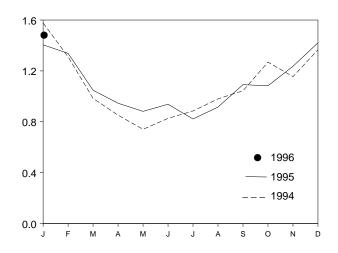
### Overview, 1973-1995



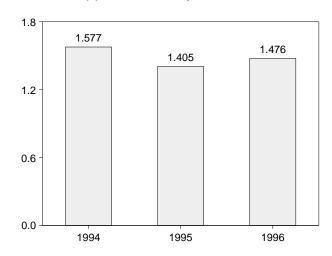
## Stocks, End of Month



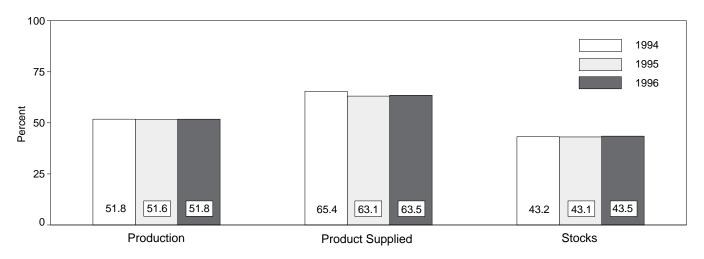
# Product Supplied, Monthly



Product Supplied, January



# Share of Liquefied Petroleum Gases, January



Note: Because vertical scales differ, graphs should not be compared. Sources: Table 3.9 and, for calculation of shares, data prior to rounding for publication in Tables 3.8 and 3.9.

Table 3.9 Propane and Propylene Supply and Disposition (A Subset of Table 3.8)

	Sup	ply		Dispo	sition		
	Total Production	Imports	Stock Change <sup>a</sup>	Refinery Inputs	Exports	Product Supplied	Ending Stocks <sup>b</sup>
			Thousand Ba	arrels per Day			Million Barrels
1973 Average	854	71	30	8	15	872	65
1974 Average	805	59	11	9	14	830	69
1975 Average	783	60	36	11	13	783	82
1976 Average	766	68	-22	12	13	830	74
	775	86	21	10	10	821	81
1977 Average1978 Average	773 758	57	15	13	9	778	c 87
	736 721	88	<sup>c</sup> -61	14	8	849	64
1979 Average	721 711		4	12	10		c 65
1980 Average		69	<sup>c</sup> 18			754 772	
1981 Average	745	70		5	18	773	76
1982 Average	711	63	-59	4	31	798	<sup>c</sup> 54
1983 Average	730	44	c <b>-24</b>	4	43	751	<sup>c</sup> 48
1984 Average	806	67	<sup>c</sup> 7	4	30	833	58
1985 Average	816	67	-50	3	48	883	39
1986 Average	817	110	64	4	28	831	63
1987 Average	828	88	-41	8	24	924	48
1988 Average	863	106	7	8	31	923	50
1989 Average	862	111	-52	11	24	990	32
1990 Average	878	115	48	(s)	28	917	49
1991 Average	915	91	-3	(s)	28	982	48
1992 Average	956	85	-24	(s)	33	1,032	39
1993 Average	963	103	34	(s)	26	1,006	51
1994 January	889	141	-566	0	19	1,577	34
February	905	128	-308	0	30	1,311	25
March	939	87	13	0	29	984	25
April	978	83	188	0	20	852	31
May	976	90	306	0	20	741	41
June	978	117	247	0	20	827	48
July	977	151	221	0	22	885	55
August	980	135	107	0	28	980	58
September	1,008	133	77	0	20	1,044	60
October	954	164	-175	Õ	24	1,269	55
November	1,002	137	-43	0	27	1,155	54
December	1,034	127	-233	0	29	1,366	46
Average	969	124	-13	<b>0</b>	29 24	1,082	46
1995 January	1,002	108	-350	0	55	1,405	36
February	983	94	-361	0	100	1,338	26
March	1.013	90	16	-	39	1,048	26
	,			(s) 0		,	
April	1,029	107	159	0	31	946	31
May	1,042	73	204	-	29	882	37
June	1,038	114	187	0	27	938	43
July	1,011	73	235	0	27	822	50
August	1,009	107	176	0	24	916	56
September	1,023	145	51	0	25	1,092	57
October	998	97	-18	0	30	1,083	57
November	1,042	76	-155	0	37	1,236	52
December	1,029	135	-287	0	31	1,421	43
Average	1,018	102	-10	(s)	38	1,092	43
1996 January	989	150	-367	0	30	1,476	32

<sup>&</sup>lt;sup>a</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase.

b Stocks are totals as of end of period.

(s)=Less than 500 barrels per day.

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

Sources: • 1973 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, "Petroleum Statement, Annual." • 1976 through 1980: Energy Information Administration (EIA), *Energy Data Reports*, Petroleum Statement, Annual." • 1981 forward: EIA, *Petroleum* Supply Monthly, March 1996, Table S8.

<sup>&</sup>lt;sup>c</sup> See Note 4 at end of section.

**Table 3.10 Other Petroleum Products Supply and Disposition** 

	Sup	ply		Dispo	sition		
	Total Production	Imports	Stock Change <sup>a</sup>	Refinery Inputs	Exports	Products Supplied	Ending Stocks <sup>b</sup>
			Thousand Ba	arrels per Day		•	Million Barrels
1973 Average	2.833	290	1	750	162	2,211	179
1974 Average	2,722	269	25	665	172	2,129	c 188
ū	2,547	144	°-6	537	158	2,001	188
1975 Average	2,547 2,725	129	-	524	172	2,158	188
1976 Average		130	(s)	514 514		,	
1977 Average	2,939		20		164	2,371	195
1978 Average	3,076	80	-12	492	165	2,511	191
1979 Average	3,141	116	24	352	208	2,673	200
1980 Average	2,957	130	15	310	197	2,566	<sup>c</sup> 205
1981 Average	2,771	188	<sup>c</sup> -42	723	197	2,081	241
1982 Average	2,475	305	-68	787	205	<sup>d</sup> 1,857	<sup>c</sup> 216
1983 Average	2,437	382	c <b>-6</b>	712	236	1,877	<sup>c</sup> 217
1984 Average	2,500	503	<sup>c</sup> -32	791	236	2,007	198
1985 Average	2,532	550	22	886	227	1,947	206
1986 Average	2,704	504	-15	888	291	2,045	201
1987 Average	2,737	543	-1	829	264	2,187	200
1988 Average	2,773	645	22	799	294	2,303	208
1989 Average	2,771	627	12	797	305	2,285	213
	,	705	-32			•	
1990 Average	2,842			887	289	2,402	201
1991 Average	2,826	675	18	936	277	2,269	208
1992 Average	2,928	707	-3	906	263	2,470	<sup>c</sup> 207
1993 Average	<sup>e</sup> 3,035	770	° <b>-2</b>	1,081	e300	<sup>e</sup> 2,426	206
1994 January	2,712	838	511	585	256	2,198	222
February	2,790	743	277	613	248	2,394	229
March	2,777	810	52	934	361	2,241	231
April	2,914	783	-126	1,016	272	2,534	227
May	3,078	773	-64	1,009	288	2,617	225
June	3,131	726	-103	887	331	2,742	222
July	3,158	746	80	759	361	2,704	225
August	3,093	797	-46	803	411	2,721	223
September	3,088	695	50	745	388	2,600	225
October	3,067	700	-72	902	300	2,636	223
November	3,001	749	47	1,013	344	2,347	224
December	2,852	762	-298	1,049	386	2,478	215
Average	2,973	761	24	861	329	2,518	215
1995 January	2.819	563	383	634	324	2,041	227
February	2.914	802	236	722	320	2,438	234
March	2,914	669	-8	873	329	2,430	234
	, -					,	
April	2,843	699	-106	1,008	355	2,283	231
May	2,955	592	-72	780	339	2,501	228
June	3,099	649	-135	893	403	2,588	224
July	3,276	763	-48	1,069	326	2,692	223
August	3,246	727	-233	1,119	372	2,714	216
September	3,216	756	-64	1,045	348	2,643	214
October	2,912	708	-93	860	376	2,476	211
November	2,883	806	-43	947	343	2,442	209
December	2.955	684	-93	1.095	341	2,296	207
	2,993	700	-93 - <b>24</b>	922	348	2,449	207 207
Average	2,333	700	-24	344	340	2,443	201
1996 January	2,848	819	403	615	335	2,314	219

<sup>&</sup>lt;sup>a</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase.

b Stocks are totals as of end of period.

Sources: • 1973-1980: Energy Information Administration (EIA), Petroleum Supply Monthly, February 1993, Table S9. • 1981 forward: EIA, Petroleum Supply Monthly, March 1996, Table S10.

<sup>&</sup>lt;sup>c</sup> See Note 4 at end of section.

d See Note 6 at end of section.

e Beginning in 1993, other petroleum products production, exports, and products supplied include an adjustment to oxygenates and motor gasoline blending components.

<sup>(</sup>s)=Less than +500 barrels per day and greater than -500 barrels per day.

Notes: • Other petroleum products include pentanes plus, other hydrocarbons and alcohol, unfinished oils, gasoline blending components, and all finished petroleum products except finished motor gasoline, distillate fuel oil, residual fuel oil, jet fuel, liquefied petroleum gases, and crude oil that is used as fuel. • Geographic coverage is the 50 States and the District of Columbia.

### **Petroleum Notes**

1. The 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 and 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, letters 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, the 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*. In order to continue to provide relevant information about U.S. and regional gasoline supply, the 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 Explanatory Note 7 in the *Petroleum Supply Monthly*.

2. Motor Gasoline: Beginning in January 1981, the 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, the EIA made adjustments to the product supplied series for finished motor gasoline. It was recognized that motor gasoline statistics published by the 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 has prepared a table of 1992 data adjusted according to the 1993 basis. See *Petroleum Supply Monthly*, March 1993, Table H3.

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 has been 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, the EIA modified its survey forms to account for redesignated product and discontinued the above-mentioned adjustment.

Beginning in January 1993, the end-of-month stocks of distillate fuel oil are split into two sulfur categories (0.05 percent sulfur or less and greater than 0.05 percent sulfur) to meet Environmental Protection Agency requirements effective in October 1992. For further details, see the EIA, *Petroleum Supply Monthly*.

- **4. 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 (Other Primary).
  - Crude Oil and Petroleum Products: 1974—1,121; 1980—1,425; and 1982—1,461.
  - Motor Gasoline: 1974—225; 1980—263 (Total) and 214 (Finished); 1982—244 (Total) and 202 (Finished).
  - Distillate Fuel Oil: 1974—224; 1980—205; and 1982—186.
  - Residual Fuel Oil: 1974—75; 1980—91; and 1982—69.
  - Jet Fuel: 1974—30 (Total) and 24 (Kerosene Type); 1980—42 (Total) and 36 (Kerosene Type); and 1982—39 (Total) and 32 (Kerosene Type).
  - Liquefied Petroleum Gases: 1974—113; 1978
     —136; 1980—128; and 1982—102.
  - Propane and Propylene: 1978—86; 1980—69; and 1982—57.
  - Other Petroleum Products: 1974—190; 1980
     —207; and 1982—219.

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, which was formerly included in the "Other Petroleum Products Supply and Disposition" table, is now reported on a component basis (ethane, propane, normal butane, isobutane, and pentanes plus). Most of these stocks now appear in the "Liquefied Petroleum Gases Supply and

Disposition" table. This change affects stocks reported and stock change calculations in each table. Under the new basis, end-of-year 1983 stocks, in million barrels, would have been:

• Liquefied Petroleum Gases: 1983—108.

• Propane and Propylene: 1983—55.

• Other Petroleum Products: 1983—210.

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.

- 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 (Other Primary).
- **6. Data Discrepancies**: Due to differences internal to EIA data processing systems, some small discrepancies exist between data in the *Monthly Energy Review (MER)* and the *Petroleum Supply Annual (PSA)* and *Petroleum Supply Monthly (PSM)*. The data that have discrepancies are footnoted in Section 3 tables and summarized here.

Table	Data Series	Year Average	<i>MER</i> Data	PSA and PSM Data
3.1a	Natural Gas Plant Production	1976	1,604	1,603
3.1b	Exports, Total	1979	471	472
3.1b	Exports, Petroleum Products	1979	236	237
3.1b	Net Imports	1979	7,985	7,984
3.2a	Crude Used Directly	1976	-19	-18
3.2a	Imports, SPR	1978	161	162
3.2a	Crude Used Directly	1978	-15	-14
3.2a	Crude Used Directly	1979	-14	-13
3.2a	Crude Used Directly	1980	-14	-13
3.2b	Crude Losses	1976	14	15
3.2b	Crude Losses	1980	14	15
3.5	Stock Change	1974	10	9
3.5	Stock Change	1975	-41	-40
3.8	Total Production	1982	1,527	1,525
3.10	Products Supplied	1982	1,857	1,856

# Section 4. Natural Gas

Total dry natural gas production in the United States during February 1996 was an estimated 1.5 trillion cubic feet, 1 percent higher than production during the previous February.

Consumption of natural and supplemental gas in February 1996 was 2.4 trillion cubic feet, 8 percent above the level in February 1995.

Deliveries to residential consumers in January 1996 (latest date for which data are available) were 938 billion cubic feet, 15 percent above the previous January's deliveries. Total deliveries to industrial customers during January 1996 were 779 billion cubic feet, 1 percent higher than the previous January's level.

Imports of natural gas in February 1996 were 236 billion cubic feet, 4 percent higher than imports in the previous February.

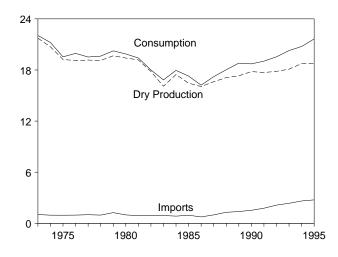
Stocks of working gas<sup>1</sup> in underground natural gas storage reservoirs at the end of February 1996 totaled 1.0 trillion cubic feet, 34 percent below the level of stocks available 1 year earlier. Net withdrawals from storage during February 1996 were 439 billion cubic feet, 12 percent lower than the amount of withdrawals during the previous February.

<sup>&</sup>lt;sup>1</sup>Gas available for withdrawal.

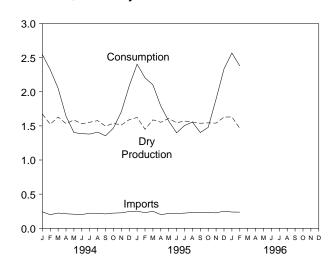
# Figure 4.1 Natural Gas

(Trillion Cubic Feet)

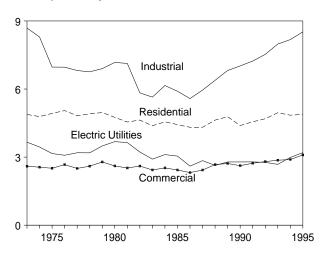
### Overview, 1973-1995



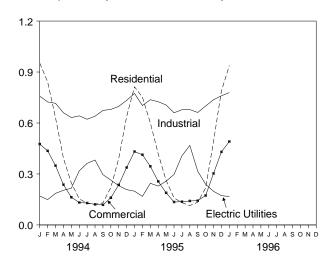
# Overview, Monthly



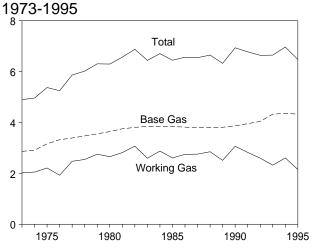
# Consumption by Sector, 1973-1995



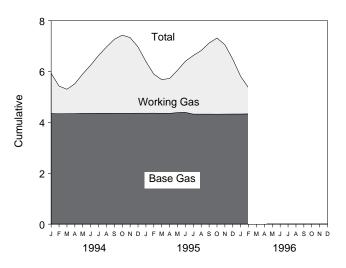
Consumption by Sector, Monthly



Underground Storage, End of Year,



Underground Storage, End of Month



Note: Because vertical scales differ, graphs should not be compared. Sources: Tables 4.2, 4.4, and 4.5.

**Table 4.1 Natural Gas Production** 

	Gross Withdrawals <sup>a</sup>	Repressuring <sup>b</sup>	Nonhydro- carbon Gases Removed <sup>c</sup>	Vented and Flared <sup>d</sup>	Marketed Production (Wet) <sup>e</sup>	Extraction Loss <sup>f</sup>	Total Dry Gas Production <sup>©</sup>
1973 Total	24.067	1,171	NA	248	<sup>h</sup> 22.648	917	<sup>h</sup> 21.731
1974 Total	22,850	1,080	NA NA	169	h 21,601	887	<sup>h</sup> 20,713
1975 Total	21,104	861	NA NA	134	h <b>20,109</b>	872	h 19,236
1976 Total	20,944	859	NA NA	132	h 19.952	854	h 19,098
1977 Total	21.097	935	NA NA	137	h 20.025	863	h 19,163
1978 Total	21,309	1,181	NA NA	153	h 19,974	852	h 19,122
1979 Total	21,883	1,161	NA NA	167	h 20.471	808	h 19,663
		,			- /		
1980 Total	21,870	1,365	199	125	20,180	777 775	19,403
1981 Total	21,587	1,312	222	98	19,956	775	19,181
1982 Total	20,272	1,388	208	93	18,582	762	17,820
1983 Total	18,659	1,458	222	95	16,884	790	16,094
1984 Total	20,267	1,630	224	108	18,304	838	17,466
1985 Total	19,607	1,915	326	95	17,270	816	16,454
1986 Total	19,131	1,838	337	98	16,859	800	16,059
1987 Total	20,140	2,208	376	124	17,433	812	16,621
1988 Total	20,999	2,478	460	143	17,918	816	17,103
1989 Total	21,074	2,475	362	142	18,095	785	17,311
1990 Total	21,523	2,489	289	150	18,594	784	17,810
1991 Total	21,750	2,772	276	170	18,532	835	17,698
1992 Total	22,132	2,973	280	168	18.712	872	17,840
1993 Total	22,726	3,103	414	227	18,982	886	18,095
1 <b>994</b> January	2,134	326	36	19	1,752	79	1,673
February	1.958	309	33	19	1,597	72	1,525
March	2,058	297	36	19	1,707	77	1,630
April	1,919	259	35	18	1,607	73	1,534
May	1,982	268	34	18	1,662	75 75	1,587
June	1,901	248	29	20	1.604	73 73	1,531
	,		33	20	,	73 74	,
July	1,927	248		19	1,626	74 75	1,553
August	1,977	273	34		1,652		1,577
September	1,888	266	35	20	1,567	71	1,496
October	1,957	290	37	19	1,611	73	1,538
November	1,898	260	35	19	1,584	72	1,512
December	2,010	288	37	19	1,666	75	1,591
Total	23,609	3,333	412	228	19,635	889	18,747
1995 January	R 2,072	327	32	10	R 1,703	79	R 1,624
February	R 1,859	300	28	9	R 1,522	71	<sup>R</sup> 1,451
March	R 2,017	312	30	9	<sup>R</sup> 1,666	78	<sup>R</sup> 1,589
April	<sup>R</sup> 1,971	302	30	10	<sup>R</sup> 1,629	76	<sup>R</sup> 1,553
May	R 2,043	<sup>R</sup> 313	31	10	<sup>R</sup> 1,689	<sup>R</sup> 79	<sup>R</sup> 1,610
June	<sup>R</sup> 1,956	292	29	13	R 1,621	<sup>R</sup> 76	R 1,546
July	<sup>R</sup> 1,981	289	30	14	R 1,647	R 77	R 1,571
August	<sup>R</sup> 1,971	296	29	<sup>R</sup> 13	R 1,633	76	<sup>R</sup> 1,557
September	R 1,940	R 284	29	13	R 1.614	R 75	R 1,539
October	R 1,977	R 313	31	R 13	R 1.619	R 75	R 1.544
November	R 1,975	R 315	30	14	R 1,616	75 75	R 1,541
December	R 2.088	R 335	R 31	15	R 1,707	RE 80	RE 1,628
Total	R <b>23,850</b>	R <b>3,677</b>	361	R <b>143</b>	R <b>19,668</b>	R <b>917</b>	R 18,751
1996 January	RE 2.092	RE 334	E 32	<sup>E</sup> 15	E 1.712	E 80	E 1.632
February	E 1.876	E 299	E 29	E 13	E 1,535	E 72	E 1,463
2-Month Total	E <b>3,968</b>	E <b>633</b>	E <b>61</b>	E 28	E <b>3,247</b>	E 151	E 3,096
1995 2-Month Total	3,930	627	60	19	3,225	150	3,075
1994 2-Month Total	4,091	635	68	38	3,350	152	3,198

a Gas withdrawn from gas and oil wells.

b The injection of natural gas into oil and gas formations for pressure maintenance and cycling purposes.

C See Note 1 at end of section.

d Vented: Natural gas released into the air on the base site or at processing plants. Flared: Natural gas burned in flares on the base site or at

gas processing plants.

e "Gross Withdrawals" minus "Repressuring," "Nonhydrocarbon Gases Removed," and "Vented and Flared." See Note 2 at end of section.

f See Note 3 at end of section.

g "Marketed Production (Wet)" minus "Extraction Loss."

h May include unknown quantities of nonhydrocarbon gases.
R=Revised data. NA=Not available. E=Estimate.

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

Sources: • 1973-1988: Energy Information Administration (EIA), Natural Gas Annual 1994, Volume 1, Table 99. • 1989 forward: EIA, Natural Gas Monthly, April 1996, Table 1.

**Table 4.2 Natural Gas Supply and Disposition** 

			Supply					Dispositio	n
	Total Dry Gas Production	Withdrawals from Storage <sup>a</sup>	Supplemental Gaseous Fuels <sup>b</sup>	Imports <sup>c</sup>	Balancing Item <sup>b</sup>	Total Supply/ Disposition <sup>d</sup>	Additions to Storage <sup>a</sup>	Exports	<b>Consumption</b> <sup>b</sup>
1973 Total	<sup>e</sup> 21,731	1,533	NA	1,033	-196	24,101	1,974	77	22,049
1974 Total	e 20,713	1,701	NA NA	959	-289	23,084	1,784	77	21,223
1975 Total	e 19,236	1,760	NA NA	953	-235	21,714	2,104	73	19,538
1976 Total	e 19,098	1,921	NA NA	964	-216	21,767	1,756	65	19,946
977 Total	e 19,163	1,750	NA NA	1,011	-41	21,883	2,307	56	19,521
978 Total	<sup>e</sup> 19,122	2,158	NA	966	-287	21,958	2,278	53	19,627
1979 Total	e 19,663	2.047	NA NA	1,253	-372	22,591	2,295	56	20,241
980 Total	19,403	1,972	155	985	-640	21,875	1,949	49	19,877
981 Total	19,181	1,930	176	904	-500	21,691	2,228	59	19,404
982 Total	17,820	2.164	145	933	-537	20,525	2,472	52	18,001
983 Total	16,094	2,270	132	918	f -703	18,712	1,822	55	16,835
984 Total	17,466	2,098	110	843	f -217	20,300	2,295	55	17,951
985 Total	16,454	2.397	126	950	-428	19,499	2,163	55	17,281
986 Total	16,059	1.837	113	750	-493	18,266	1,984	61	16,221
987 Total	16,621	1,905	101	993	-444	19,176	1,911	54	17,211
988 Total	17,103	2,270	101	1,294	-453	20,315	2,211	74	18,030
989 Total	17,311	2,854	107	1,382	-218	21,435	2,528	107	18,801
990 Total	17,810	1,986	123	1,532	-149	21,302	2,499	86	18,716
991 Total	17,698	2,752	113	1,773	-500	21,836	2,672	129	19,035
992 Total	17,840	2,772	118	2,138	-508	22,360	2,599	216	19,544
993 Total	18,095	2,799	119	2,350	-111	23,253	2,835	140	20,278
994 January	1,673	841	13	241	-182	2,586	29	11	2,546
February	1,525	598	11	199	48	2,381	44	13	2,324
March	1,630	243	10	223	65	2,170	100	19	2,051
April	1,534	61	9	212	130	1,945	294	9	1,642
May	1,587	17	8	206	38	1,857	447	8	1,402
June	1,531	30	8	201	26	1,796	397	13	1,386
July	1,553	19	8	221	19	1,820	429	11	1,380
August	1,577	22	8	219	-16	1,810	388	14	1,408
September	1,496	14	8	210	1	1,729	360	14	1,354
October	1,538	47	9	222	-105	1,710	229	13	1,468
November	1,512	204	9	226	-127	1,825	100	19	1,706
December Total	1,591 <b>18,747</b>	465 <b>2,562</b>	11 <b>111</b>	245 <b>2,624</b>	-161 R <b>-262</b>	2,152 R <b>23,782</b>	49 <b>2,865</b>	18 <b>162</b>	2,085 R <b>20,755</b>
	<sup>R</sup> 1,624			•	R -49	R 2.460	•		
995 January	R 1,451	621 544	14 12	251 228	R 25	2,260	42 43	14 13	2,404 2,204
February	R 1,589	316	12	250	R 52		101		,
March	R 1.553	122	9	250 199	R 87	2,218 <sup>R</sup> 1,971	169	15 <sup>R</sup> 13	2,102
April	R 1,610	32	10	217	R 68	1,937	352	13	1,789 <sup>R</sup> 1,572
May	R 1,546	32 45	10	217	R -11	,	392 392	16	,
June	R 1.571	45 53	10	217	R 8	1,807 <sup>R</sup> 1,865	392 345	15	1,399 <sup>R</sup> 1.505
July August	R 1,557	86	10	231	R -35	R 1,848	278	14	R 1,556
	R 1,539	29	9	228	R -67	R 1,738	324	12	R 1,402
September October	R 1,544	66	R 10	R 234	R -105	R 1,750	258	E 12	R 1,479
November	RE 1,541	357	E 12	R 225	R -143	R 1,992	236 87	E 13	1,893
December	RE 1,628	615	E 13	R 251	R -113	R 2.394	51	E 8	RE 2,335
Total	RE <b>18,751</b>	2,886	E 131	R 2,753	R <b>-284</b>	R <b>24,239</b>	2,442	R 157	R 21,640
1 <b>996</b> January	E 1,632	713	E 14	RE 238	<sup>R</sup> 25	R 2,622	45	E 10	R 2,568
February	E 1,463	530	<sup>E</sup> 12	E 236	235	2,477	90	E 9	E 2,378
2-Month Total	E 3,096	1,243	E 26	E 474	260	5,099	135	E 18	E 4,945
1995 2-Month Total	3,075 3,198	1,165 1,440	26 24	479 440	-25 -134	4,720 4,968	84 73	27 24	4,608 4,871

a Data for 1980-1994 include underground storage and liquefied natural gas storage. All other data include underground storage only. Computation procedures are discussed in Note 8 at end of section.
 b See Notes at end of section.
 c See Table 4.3.
 d Data for 1978 forward do not include in-transit receipts and deliveries.
 e Most include unknown quantities of peopled section gases.

e May include unknown quantities of nonhydrocarbon gases.

<sup>&</sup>lt;sup>f</sup> See Note 7 at end of section.

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

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

Sources: See end of section.

Table 4.3 Natural Gas Trade by Country

		Im	ports			Exp	orts	
	Canada <sup>a</sup>	Algeria <sup>b</sup>	Other <sup>c</sup>	Total	Canada <sup>a</sup>	Mexicoa	<b>Japan</b> b	Total
973 Total	1,028	3	2	1,033	15	14	48	77
974 Total	959	0	(s)	959	13	13	50	77
	948	5	(s) 0	953	10	9	53	73
975 Total		-						
976 Total	954	10	0	964	8	7	50	65
977 Total	997	11	2	1,011	(s)	4	52	56
978 Total	881	84	0	966	(s)	4	48	53
979 Total	1,001	253	0	1,253	(s)	4	51	56
980 Total	797	86	102	985	(s)	4	45	49
981 Total	762	37	105	904	(s)	3	56	59
982 Total	783	55	95	933	(s)	2	50	52
983 Total	712	131	75	918	(s)	2	53	55
984 Total	755	36	52	843	(s)	2	53	55
985 Total	926	24	0	950	(s)	2	53	55
	749	0	2	750	9	2	50	61
986 Total	993	0	0	993	3	2	49	54
987 Total		-	-		-			
988 Total	1,276	17	0	1,294	20	2	52	74
989 Total	1,339	42	0	1,382	38	17	51	107
990 Total	1,448	84	0	1,532	17	16	53	86
991 Total	1,710	64	0	1,773	15	60	54	129
992 Total	2,094	43	0	2.138	68	96	53	216
993 Total	2,267	82	2	2,350	45	40	56	140
<b>994</b> January	229	10	2	241	4	2	5	11
February	193	5	1	199	8	1	4	13
March	213	8	2	223	12	1	6	19
April	204	8	0	212	4	1	4	9
	199	5	2	206	3	2	4	8
May								
June	194	5	1	201	6	1	6	13
July	213	8	0	221	3	2	6	11
August	219	0	0	219	1	7	6	14
September	207	3	0	210	2	7	6	14
October	222	0	0	222	2	6	6	13
November	226	0	0	226	4	9	6	19
December	245	0	0	245	4	6	7	18
Total	2,566	51	7	2,624	53	47	63	162
<b>995</b> January	248	3	(s)	251	3	6	6	14
February	225	3	Ó	228	2	6	6	13
March	247	3	(s)	250	3	7	6	15
April	199	0	0	199	3	6	R 4	R 13
•	215	3	0	217	2	7	4	13
May								
June	217	0	0	217	3	8	6	16
July	222	0	0	222	3	7	6	15
August	227	3	1	231	3	3	8	14
September	224	0	_ 4	228	4	2	6	12
October	233	0	R <sub>2</sub>	R 234	3	6	4	12
November	223	2	R 0	<sup>R</sup> 225	R 2	4	8	<sup>R</sup> 13
December	R 248	3	0	R 251	R 1	1	6	R 8
Total	R 2,729	18	R <b>7</b>	R <b>2,753</b>	R <b>30</b>	61	R <b>65</b>	R 157
<b>996</b> January	R 236	2	0	<sup>R</sup> 238	3	1	6	10
February	234	3	Õ	236	2	2	6	9
2-Month Total	469	5	0	<b>474</b>	5	3	11	18
995 2-Month Total	473	5	0	479	5	11	11	27

 <sup>&</sup>lt;sup>a</sup> By pipeline, except for very small amounts of liquefied natural gas imported from Canada in 1973, 1977 and 1981. See Note 5 at end of section.
 <sup>b</sup> As liquefied natural gas.
 <sup>c</sup> Other imports are from Mexico, except for 1986, when they came from

Notes: • See Note 5 at end of section. • Totals may not equal sum of components due to independent rounding. • U.S. geographic coverage is the

Sources: • 1973-1988: Energy Information Administration (EIA), Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas." • 1989 forward: EIA, Natural Gas Monthly, April 1996, Tables 5 and 6.

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

Table 4.4 Natural Gas Consumption by End-Use Sector

				Deliv	rered to Consume	ers		
	Lease and Plant Fuel	Pipeline Fuel <sup>a</sup>	Residential	Commercial <sup>b</sup>	Industrial	Electric Utilities	Total	Total Consumption
1973 Total	1.496	728	4.879	2,597	8.689	3,660	19.825	22.049
1974 Total	1,477	669	4,786	2,556	8,292	3,443	19,077	21,223
1975 Total	1,396	583	4,924	2,508	6,968	3,158	17,558	19,538
1976 Total	1,634	548	5,051	2,668	6,964	3,081	17,764	19,946
1977 Total	1,659	533	4,821	2,501	6,815	3,191	17,329	19,521
1978 Total	1,648	530	4,903	2,601	6,757	3,188	17,449	19,627
1979 Total	1,499	601	4,965	2,786	6,899	3,491	18,141	20,241
1980 Total	1,026	635	4,752	2,611	7,172	3,682	18,216	19,877
1981 Total	928	642	4,546	2,520	7,128	3,640	17,834	19,404
1982 Total	1.109	596	4,633	2,606	5,831	3,226	16,295	18,001
1983 Total	978	490	4,381	2,433	5,643	2,911	15,367	16,835
1984 Total	1,077	529	4,555	2,524	6,154	3,111	16,345	17,951
1985 Total	966	504	4,433	2,432	5,901	3,044	15,811	17,281
1986 Total	923	485	4,314	2,318	5,579	2,602	14,814	16,221
1987 Total	1,149	519	4,315	2,430	5,953	2,844	15,542	17,211
1988 Total	1,096	614	4,630	2,670	6,383	2,636	16,320	18,030
1989 Total	1,070	629	4,781	2,718	6,816	2,787	17,102	18,801
1990 Total	1.236	660	4,391	2,623	7.018	2,787	16,820	18,716
1991 Total	1,129	601	4,556	2,729	7,231	2,789	17,305	19,035
1992 Total	1,171	588	4,690	2,803	7,527	2,766	17,786	19,544
1993 Total	1,172	624	4,956	2,862	7,981	2,682	18,482	20,278
<b>1994</b> January	104	85	953	476	758	170	2,357	2,546
February	96	78	842	436	724	149	2,151	2,324
March	101	68	631	349	716	186	1,882	2,051
April	95	54	392	237	660	204	1,493	1,642
May	98	46	247	163	632	216	1,258	1,402
June	94	45	154	132	642	319	1,247	1,386
July	95	45	127	129	622	362	1,240	1,380
August	97	46	122	121	640	382	1,264	1,408
September	93	44	130	118	674	296	1,217	1,354
October	96	48	221	160	680	264	1,324	1,468
November	93	56	391	236	698	231	1,557	1,706
December	99	69	638	338	733	208	1,917	2,085
Total	1,161	685	4,848	2,895	8,178	2,987	18,908	<sup>R</sup> 20,755
1995 January	<sup>R</sup> 107	79	813	432	774	<sup>R</sup> 199	2,218	2,404
February	95	73	752	413	703	R 168	2,036	2,204
March	104	69	601	345	737	R 245	1,928	2,102
April	102	59	418	256	725	R 229	1,628	1,789
May	R 106	52	262	189	706	R 258	1.414	R 1.572
June	101	46	159	135	660	R 297	1,251	1,399
July	103	50	131	137	678	R 407	R 1,352	R 1,505
August	102	51	114	141	679	R 468	1,402	R 1,556
September	R 101	46	134	143	662	316	1,255	R 1,402
October	R 101	49	217	173	700	R 240	1,329	R 1,479
November	101	63	491	303	737	R 198	1,729	1,893
December	107	R 77	R 788	R 430	760	R 172	R 2,151	RE 2.335
Total	R <b>1,231</b>	R 715	R <b>4,881</b>	3,096	8, <b>520</b>	R 3,197	R <b>19,694</b>	R <b>21,640</b>
10tai	1,231	710	4,001	3,090	0,320	3,18 <i>1</i>	13,034	Z1,04U
1996 January	107	85	938	491	779	167	2,376	2,568

 $<sup>^{\</sup>rm a}$  Natural gas consumed in the operation of pipelines, primarily in compressors.  $^{\rm b}$  Small quantities of natural gas delivered for use as vehicle fuel are

R=Revised data.

Notes: • Natural gas includes supplemental gaseous fuels. • Totals may

not equal sum of components due to independent rounding.  $\bullet$  Geographic coverage is the 50 States and the District of Columbia.

Sources: • 1973-1988: Energy Information Administration (EIA), Natural Gas Annual 1994, Volume 1, Table 101. • 1989 forward: EIA, Natural Gas Monthly, April 1996, Table 3.

<sup>&</sup>lt;sup>b</sup> Small quantities of natural gas delivered for use as vehicle fuel are included in the 1990-1994 annual totals but not in the monthly data.

Table 4.5 Natural Gas in Underground Storage

(Volumes in Billion Cubic Feet)

	U	Natural Gas in Inderground Storago End of Period	∍,	Change in W from Sam Previou	e Period		Storage Activity	
	Base Gas	Working Gas	Total <sup>a</sup>	Volume	Percent	Injectionsb	Withdrawalsb	Net <sup>c</sup>
1973 Total	2.864	2,034	4.898	305	17.6	1,974	1.533	442
1974 Total		2,050	4,962	16	.8	1,784	1,701	84
1975 Total		2,212	5,374	162	7.9	2,104	1,760	344
1976 Total		1,926	5,250	-286	-12.9	1,756	1,921	-165
1977 Total		2,475	5,866	549	28.5	2,307	1,750	557
1978 Total		2,547	6,020	72	2.9	2,278	2.158	120
1979 Total		2.753	6,306	207	8.1	2,295	2.047	248
1980 Total	- /	2,655	6,297	-99	-3.6	1.896	1,910	-14
1981 Total		2.817	6.569	162	6.1	2.180	1,887	293
1982 Total		3.071	6.879	255	9.0	2,399	2.094	306
1983 Total	3,847	2.595	6.442	-476	-15.5	1,700	2.142	-442
1984 Total	- / -	2,876	6.706	281	10.8	2,252	2,064	188
1985 Total		2,607	6.448	-270	-9.4	2,232	2,359	-231
1986 Total		2,749	6.567	142	5.5	1.952	1.812	140
1987 Total	3,792	2,749 2.756	6.548	7	3.3 .3	1,932	1,812	6
1988 Total	3,792	2,750	6,546 6.650	94	.s 3.4	2,174	2.244	-69
	- /	,	6.325	-337	-11.8		2,244	-313
1989 Total		2,513 3.068	6,325 6.936	-33 <i>1</i> 555	-11.6 22.1	2,491	2,804 1.934	-313 499
1990 Total	3,666 3.954	3,066 2.824	-,	-244	-8.0	2,433 2.608	,	-80
1991 Total		, -	6,778			,	2,689	
1992 Total	4,044	2,597	6,641	-227	-8.0	2,555	2,724	-168
1993 Total	4,327	2,322	6,649	-275	-10.6	2,760	2,717	43
<b>1994</b> January	4,348	1,579	5,927	-247	-13.5	35	792	-758
February	4,337	1,091	5,428	-212	-16.3	50	567	-517
March		958	5,301	-71	-6.9	106	240	-135
April		1,172	5,517	51	4.6	286	68	218
May		1,554	5,906	33	2.2	427	25	403
June		1,896	6,248	2	.1	381	37	344
July		2,273	6,629	33	1.5	410	26	384
August		2,607	6,961	52	2.1	373	30	343
September		2,912	7,266	28	1.0	345	21	324
October	4,354	3,075	7,429	97	3.3	224	54	170
November	,	2,978	7,331	215	7.8	105	204	-99
December	4,360	2,606	6,966	284	12.2	54	443	-389
Total	4,360	2,606	6,966	284	12.2	2,796	2,508	288
1995 January	4,359	2,034	6,393	455	28.8	42	621	-579
February	4,361	1,533	5,894	442	40.5	43	544	-501
March	4,355	1,325	5,680	367	38.3	101	316	-214
April		1,373	5,727	201	17.1	169	122	47
May	,	1,662	6,048	108	6.9	352	32	320
June		2,012	6,405	116	6.1	392	45	347
July	,	2,303	6,628	30	1.3	345	53	292
August		2,500	6,825	-106	-4.1	278	86	193
September	,	2,793	7,118	-119	-4.1	324	29	295
October	,	2.994	7,315	-81	-2.6	258	66	192
November		2.726	7.050	-252	-8.5	87	357	-271
December		2.152	6.480	-454	-17.4	51	615	-564
Total	4,328	2,152	6,480	-454	-17.4	2,442	2,886	-444
1996 January	4.328	1.481	5.809	-554	-27.2	45	713	-668
February	,	1,017	5.352	-515	-27.2 -33.6	90	530	-439
i Gordary	7,334	1,017	5,552	-010	-33.0	90	330	-+33

<sup>&</sup>lt;sup>a</sup> For total underground storage capacity at the end of each calendar year, see Note 8 at end of section.

b For 1980-1994, data differ from those shown on Table 4.2, which

includes liquefied natural gas storage for that period.

<sup>c</sup> Positive numbers indicate injections are greater than withdrawals.

Negative numbers indicate withdrawals are greater than injections. Net

injections or withdrawals may not equal the difference between applicable ending stocks. See Note 8 at end of section.

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

# **Natural Gas Notes**

1. Nonhydrocarbon Gases Removed: Annual data on nonhydrocarbon gases removed from marketed production—carbon dioxide, helium, hydrogen sulfide, and nitrogen—are from the Energy Information Administration (EIA) Natural Gas Annual (NGA) 1992. Data are not available prior to 1980. Monthly data are reported by three States and computed for six States. Monthly data are preliminary until after publication of the EIA NGA. Differences between annual data published in the EIA NGA and the sum of the preliminary monthly data (January-December) are allocated proportionally to the months to create final monthly data. For further information on methods of estimating preliminary monthly data, see the EIA Natural Gas Monthly (NGM).

#### 2. Production.

- Annual data: Final annual data are from the EIA NGA.
- Estimated monthly data: 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 *NGM*.
- Preliminary monthly data: 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.
- Final monthly data: 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.
- **3. 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 es-

timated by allocating annual extraction loss data to the months on the basis of total natural gas marketed production data from the EIA *NGA*.

4. Supplemental Gaseous Fuels: Any gaseous substance that, introduced into or commingled with natural gas, increases the volume available for disposition. Such substances include, but are not limited to, propaneair, refinery gas, coke oven gas, still gas, manufactured gas, biomass gas, or 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.

5. Imports and Exports: The United States imports natural gas via pipeline from Canada. Prior to 1985, it also imported natural gas via pipeline from Mexico. Liquefied natural gas (LNG) arrives via tanker from Algeria. One shipment of LNG was received from Indonesia in December 1986. 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 LNG via tanker to Japan.

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*.

**6. Consumption:** Consumption includes pipeline fuel use, lease and plant fuel use, and deliveries to consuming sectors.

Final data 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*.

7. 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 which 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 *NGM*, which was published in July 1985.

8. Natural Gas Storage: 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.

Monthly underground storage data are collected from the Federal Energy Regulatory Commission (FERC) Forms FERC-8 (interstate data) and 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 1980-1994 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.

Total underground storage capacity at the end of each calendar year since 1975 (first year data were available), in billion cubic feet, was:

,	***************************************		
1975	6,280	1985	8,087
1976	6,544	1986	8,145
1977	6,678	1987	8,124
1978	6,890	1988	8,124
1979	6,929	1989	8,124
1980	7,434	1990	8,125
1981	7,805	1991	7,993
1982	7,915	1992	7,932
1983	7,985	1993	7,989
1984	8,043	1994	8,043

Current capacity is 8,043 billion cubic feet.

### Sources for Table 4.2

#### 1973-1988

**Total Dry Gas Production**: Energy Information Administration (EIA), *Natural Gas Annual 1994, Volume 1*, Table 99.

Withdrawals from Storage, 1973-1975 and 1980-1988: EIA, *Natural Gas Annual 1994*, *Volume 1*, Table 100.

Withdrawals from Storage, 1976-1979: EIA, Natural Gas Production and Consumption 1979, Table 1.

**Supplemental Gaseous Fuels:** EIA, *Natural Gas Annual 1994, Volume 2*, Table 12.

Imports, Additions to Storage, Exports, and Consumption: EIA, Natural Gas Annual 1994, Volume 1, Table 100.

**Total Supply/Disposition**: Sum of disposition items. **Balancing Item**: Total supply/disposition minus all other supply items.

#### 1989 forward

EIA, Natural Gas Monthly, April 1996, Table 2.

### Sources for Table 4.5

#### **Storage Activity**

**1973-1975:** Energy Information Administration (EIA) *Natural Gas Annual 1994, Volume 2,* Table 9.

**1976-1979:** EIA, Natural Gas Production and Consumption 1979, Table 1.

**1980-1988:** EIA, *Natural Gas Annual 1994*, Volume 2 Table 11.

**1989 forward:** EIA, *Natural Gas Monthly*, April 1996, Table 9.

#### Other Data

**1973 and 1974:** American Gas Association (AGA), *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-O, "Underground Gas Storage Report," and Federal Power Commission (FPC), Form FPC-8, "Underground Gas Storage Report."

**1977 and 1978:** EIA, Form FEA-G-318-M-O, "Underground Gas Storage Report," and Federal Energy Regulatory Commission (FERC), Form FERC-8, "Underground Gas Storage Report.

**1979-1988:** EIA, Form EIA-191, "Underground Gas Storage Report," and FERC, Form FERC-8, "Underground Gas Storage Report."

**1989 forward:** EIA, *Natural Gas Monthly*, April 1996, Table 9.

# Section 5. Oil and Gas Resource Development

The March 1996 rotary rig count of 714 was 2 percent higher than the count in the previous month and 7 percent higher than the count in March 1995. Of the total number of rigs in operation, 618 were onshore and 96 were offshore. The number of onshore rigs and the number of offshore rigs were both up 7 percent from March 1995.

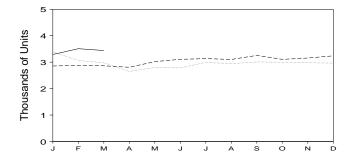
Total footage drilled in March 1996 was 9.51 million feet, up 22 percent from the footage drilled in February 1996 but down 5 percent from that drilled in March 1995.

The estimated number of exploratory and development oil and gas wells drilled during March 1996 was 1,191, 15 percent higher than the number drilled in February 1996, but 14 percent lower than the number drilled in March 1995. The estimated number of oil wells drilled was 606, and the estimated number of gas wells drilled was 585, less than 1 percent higher and 26 percent lower, respectively, than their March 1995 levels. The estimated number of dry holes drilled in March 1996 was 265, up 16 percent from the number drilled in February 1996 but 27 percent lower than the number drilled in March 1995.

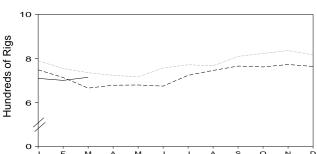
Seismic activity statistics are not available for this month. The Society of Exploration Geophysics, source of these data, is reorganizing its survey effort. An alternative source of seismic crew data is the *World Geophysical Report* by Petroleum Information Corporation.

Figure 5.1 Oil and Gas Resource Development Indicators

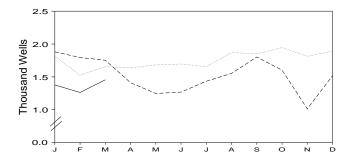
# Active Well Servicing Units



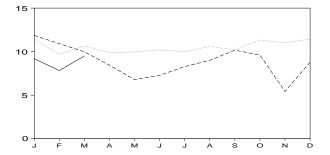
# Rotary Rigs in Operation



### Wells Drilled



# Footage Drilled



Sources: Tables 5.1 and 5.2.

- 1996 - 1995

..... 1994

**Table 5.1 Oil and Gas Drilling Activity Measurements** 

		ews Engaged smic Explora			Rotary R	igs in Ope	eration <sup>a</sup>			
				Ву	Site	Ву Т	уре		Total Footage	Active Well Servicing
	Offshore	Onshore	Total	Offshore	Onshore	Oil	Gas	Totalb	Drilled <sup>c</sup>	Unitsd
	Mo	onthly Avera	ge		Wee	kly Avera	ge		Thousand Feet	Number
1973 Average	23	227	250	84	1,110	NA	NA	1,194	139,427	NA
1974 Average	31	274	305	94	1,378	NA	NA	1,472	153,791	NA
1975 Average	30	254	284	106	1,554	NA	NA	1,660	181,046	NA
1976 Average	25	237	262	129	1,529	NA	NA	1,658	187,291	2,601
1977 Average	27	281	308	167	1,834	NA	NA	2,001	215,696	2,828
1978 Average	25	327	352	185	2,074	NA	NA	2,259	238,388	2,988
1979 Average	30	370	400	207	1,970	NA	NA	2,177	243,686	3,399
1980 Average	37	493	530	231	2,678	NA	NA	2,909	312,303	4,089
1981 Average	44	637	681	256	3,714	NA	NA	3,970	408,842	4,850
1982 Average	57	531	588	243	2,862	NA	NA	3,105	378,437	4,248
1983 Average	47	426	473	199	2,033	NA	NA	2,232	318,585	3,732
1984 Average	49	445	494	213	2,215	NA	NA	2,428	370,730	4,663
1985 Average	45	333	378	206	1,774	NA	NA	1,980	312,569	4,716
1986 Average	24	176	200	99	865	NA	NA	964	177,486	3,036
1987 Average	24	153	177	95	841	NA	NA	936	161,226	3,060
1988 Average	29	153	182	123	813	554	354	936	153,340	3,341
1989 Average	23	109	132	105	764	453	401	869	133,383	3,391
1990 Average	23	102	125	108	902	532	464	1,010	154,632	3,658
1991 Average	19	85	104	81	779	482	351	860	146,383	3,331
1992 Average	12	64	76	52	669	373	331	721	124,879	2,732
1993 Average	16	63	79	82	672	373	364	754	140,330	3,158
1994 January	18 18	60 69	78 87	99 95	690 659	356 337	425 405	789 754	11,434 9,698	3,386 3,063
February	19	75	94	99	636	323	403	734	R 10,646	2,977
March April	20	68	88	106	617	314	398	723	9,884	,
•	20	65	87	106	612	320	382	723 716	9,961	2,649 2,798
May June	20	69	89	113	643	331	408	716 756	10,206	2,785
	23	64	87	107	664	341	415	771	9,987	2,763
July August	NA	NA	NA	95	671	320	433	766	10,606	2,941
September	NA	NA NA	NA	97	712	325	471	809	10,195	3,010
October	NA	NA NA	NA	99	723	342	467	822	11,337	2,991
November	NA	NA NA	NA	106	729	361	460	835	11,006	2,977
December	NA	NA NA	NA	107	709	354	447	816	11,448	2,964
Average	NA	NA	NA	102	673	335	427	775	R 126,408	2,961
1995 January	NA	NA	NA	106	642	325	411	748	11,863	2,855
February	NA	NA	NA	100	613	326	375	713	10,921	2,877
March	NA	NA	NA	90	575	322	331	665	R 9,979	2,862
April	NA	NA	NA	91	587	328	336	678	8,437	2,806
May	NA	NA	NA	100	579	325	335	679	6,783	3,020
June	NA	NA	NA	96	578	301	352	674	7,281	3,107
July	NA	NA	NA	104	619	301	399	723	8,286	3,133
August	NA	NA	NA	103	642	327	399	745	9,004	3,103
September	NA	NA	NA	103	662	333	413	765	<sup>R</sup> 10,169	3,255
October	NA	NA	NA	105	656	332	414	761	9,608	3,105
November	NA	NA	NA	104	668	330	430	772	5,428	3,157
December	NA	NA	NA	109	654	325	427	763	8,789	3,239
Average	NA	NA	NA	101	622	323	385	723	<sup>R</sup> 106,548	3,043
<b>1996</b> January	NA	NA	NA	111	598	295	406	709	9,190	3,290
February	NA	NA	NA	102	598	283	411	700	7,826	R 3,509
March	NA	NA	NA	96	618	286	421	714	9,509	E 3,440
3-Month Average	NA	NA	NA	102	606	288	413	708	26,525	E 3,413
1995 3-Month Average	NA	NA	NA	98	607	324	369	705	32,763	2,865
1994 3-Month Average	18	68	86	97	660	337	410	757	31,778	3,142

a Monthly data are averages of 4- or 5-week reporting periods, not calendar months. Annual data are averages of 52- or 53-week reporting periods, not calendar years.
 b Sum of oil, gas, and miscellaneous other rigs, which is not shown.
 c Values shown are totals.
 d See Glossary.
 R=Revised data. NA=Not available.
 Note: Geographic coverage is the 50 States and the District of Columbia.

Exploration Geophysicists, Tulsa, Oklahoma, *Monthly Seismic Crew Count.*• 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. • Total Footage Drilled: Energy Information Administration computations, which are based on well reports submitted to the American Petroleum Institute by the Petroleum Information Corporation, Denver, Colorado. • Active Well Servicing Units: American Association of Oilwell Servicing Contractors. Dallas. Texas. *Well Servicing*. Oilwell Servicing Contractors, Dallas, Texas, Well Servicing.

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

Sources: • Crews Engaged in Seismic Exploration: Society of

Table 5.2 Oil and Gas Wells Drilled

(Number of Wells)

		Explo	ratory			Develo	pment			То	tal	
	Oil	Gas	Dry	Total	Oil	Gas	Dry	Total	Oil	Gas	Dry	Total
1973 Total	654	1,079	6,038	7,771	9,597	5,896	4,428	19,921	10,251	6,975	10,466	27,692
1974 Total	870	1,205	6,894	8,969	12,794	5,965	5,311	24,070	13,664	7,170	12,205	33,039
1975 Total	991	1,263	7,207	9,461	15,988	6,907	6,529	29,424	16,979	8,170	13,736	38,885
1976 Total	1.100	1,362	6,854	9,316	16,597	8,076	6,951	31,624	17,697	9,438	13,805	40,940
1977 Total	1,183	1,562	7,402	10,147	17,517	10,557	7,634	35,708	18,700	12,119	15,036	45,855
1978 Total	1,191	1,792	8,054	11,037	17,874	12,613	8,537	39,024	19,065	14,405	16,591	50,061
1979 Total	1,335	1,920	7,478	10,733	19,368	13,250	8,560	41,178	20,703	15,170	16,038	51,911
1980 Total	1,781	2,094	9,035	12,910	30,497	15,129	11,302	56,928	32,278	17,223	20,337	69,838
1981 Total	2,667	2,533	12,297	17,497	40,176	17,374	14,987	72,537	42,843	19,907	27,284	90,034
1982 Total	2,470	2,168	11,346	15,984	36,672	16,776	15,036	68,484	39,142	18,944	26,382	84,468
	,	•							37,199	14,556		
1983 Total	2,113	1,660	10,271	14,044	35,086	12,896	14,065	62,047			24,336	76,091
1984 Total	2,335	1,599	11,482	15,416	40,250	15,413	14,315	69,978	42,585	17,012	25,797	85,394
1985 Total	1,879	1,282	9,445	12,606	33,142	12,970	11,763	57,875	35,021	14,252	21,208	70,481
1986 Total	988	733	5,511	7,232	17,713	7,402	7,255	32,370	18,701	8,135	12,766	39,602
1987 Total	859	673	5,179	6,711	15,327	7,084	6,302	28,713	16,186	7,757	11,481	35,424
1988 Total	792	663	4,766	6,221	12,530	7,575	5,476	25,581	13,322	8,238	10,242	31,802
1989 Total	580	654	4,001	5,235	9,759	8,571	4,490	22,820	10,339	9,225	8,491	28,055
1990 Total	628	641	3,855	5,124	11,522	10,064	4,757	26,343	12,150	10,705	8,612	31,467
1991 Total	573	<sup>R</sup> 542	3,393	<sup>R</sup> 4,508	11,335	<sup>R</sup> 8,910	4,521	<sup>R</sup> 24,766	11,908	9,452	7,914	29,274
1992 Total	506	R <b>426</b>	2,656	R 3,588	8,517	R 7,665	3,991	R 20,173	9,023	8,091	6,647	23,761
1993 Total	482	R <b>502</b>	2,514	R 3,498	8,247	R <b>9,362</b>	4,214	R 21,823	8,729	9,864	6,728	25,321
1994 January	51	51	199	301	616	652	245	1,513	667	703	444	1,814
February	28	R 39	123	<sup>R</sup> 190	524	<sup>R</sup> 604	209	R 1,337	552	643	332	1,527
March	32	64	154	250	517	647	242	1,406	549	711	396	1,656
April	54	52	161	267	489	640	242	1,371	543	692	403	1,638
May	46	R 46	177	R 269	435	R 653	325	R 1,413	481	699	502	1,682
June	53	51	215	319	458	662	257	1,377	511	713	472	1,696
July	53	76	177	306	435	672	242	1,349	488	748	419	1,655
August	48	57	201	306	567	718	279	1,564	615	775	480	1,870
September	50	<sup>R</sup> 50	197	R 297	517	<sup>R</sup> 767	270	R 1,554	567	817	467	1,851
October	48	64	182	294	564	802	286	1,652	612	866	468	1,946
	64	77	200	341	507	728	238	1,473	571	805	438	1,814
November	R 79				R 533							
December		127	217	R 423		683	253	R 1,469	612	810	470	1,892
Total	<sup>R</sup> 606	<sup>R</sup> <b>754</b>	2,203	<sup>R</sup> 3,563	<sup>R</sup> 6,162	R <b>8,228</b>	3,088	<sup>R</sup> 17,478	6,768	8,982	5,291	21,041
1995 January	85	105	219	409	528	724	220	1,472	613	829	439	1,881
February	79 50	R 93	179	R 351	537 8 5 4 0	R 630	277	R 1,444	616 R 604	723	456	1,795
March	56	60	160	276	R 548	726	204	R 1,478	R 604	786	364	R 1,754
April	61	54	154	269	499	436	208	1,143	560	490	362	1,412
May	51	43	122	216	448	406	178	1,032	499	449	300	1,248
June	69	52	128	249	463	393	164	1,020	532	445	292	1,269
July	68	42	153	263	487	466	218	1,171	555	508	371	1,434
August	59	64	182	305	540	539	170	1,249	599	603	352	1,554
September	62	<sup>R</sup> 87	<sup>R</sup> 204	<sup>R</sup> 353	<sup>R</sup> 565	<sup>R</sup> 665	R 220	R 1,450	<sup>R</sup> 627	<sup>R</sup> 752	R 424	<sup>R</sup> 1,803
October	59	68	186	313	560	582	148	1,290	619	650	334	1,603
November	R 34	64	123	R 221	R 284	367	142	R 793	318	431	265	1,014
December	<sup>R</sup> 64	72	R 109	R 245	R 481	<sup>R</sup> 612	<sup>R</sup> 180	R 1,273	R 545	R 684	289	<sup>R</sup> 1,518
Total	R <b>747</b>	R <b>804</b>	R 1,919	R 3,470	<sup>R</sup> 5,940	<sup>R</sup> 6,546	R <b>2,329</b>	R 14,815	<sup>R</sup> 6,687	<sup>R</sup> 7,350	<sup>R</sup> <b>4,248</b>	R 18,285
1996 January	69	74	147	290	R 440	<sup>R</sup> 534	114	R 1,088	<sup>R</sup> 509	R 608	261	R 1,378
February	52	66	<sup>R</sup> 81	R 199	R 422	R 495	R 147	R 1,064	R 474	<sup>R</sup> 561	228	R 1,263
March	61	66	112	239	545	519	153	1,217	606	585	265	1,456
3-Month Total	182	206	340	728	1,407	1,548	414	3,369	1,589	1,754	754	4,097
1995 3-Month Total	220	258	558	1,036	1,613	2,080	701	4,394	1,833	2,338	1,259	5,430

R=Revised data

District of Columbia

Sources: Energy Information Administration computations, which are based on well reports submitted by the Petroleum Information Corporation, Denver, Colorado.

Notes: • Service wells, stratigraphic tests, and core tests are excluded.
• Due to the method of estimation, data shown on this page are frequently revised. See end of section. • Geographic coverage is the 50 States and the

# Oil and Gas Resource Development Notes

Three well types are considered in the *Monthly Energy Review (MER)* drilling statistics: "completed for oil," "completed for gas," and "dry hole." Wells that productively encounter both crude oil and natural gas are categorized as "completed for 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.

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 En-

ergy Information Administration-generated (EIA) estimates produced by statistically imputing well counts and footage based on the partial data available from the API.

Estimates for a given month are first published in the MER for that month. Revisions of the "oil," "gas," and "dry" components are made in the 6th, 12th, and 24th subsequent months, as newly reported data allow refinement of the estimates. Unscheduled revisions may also occur when the latest estimate differs by more than 15 percent during the first 5 months, more than 10 percent during the next 6 months, or more than 2 percent thereafter through 5 years. After 5 years, the reported API data are published in lieu of EIA-generated estimates. A comprehensive, one-time reestimation of Total Footage Drilled (Table 5.1) and Oil and Gas Wells Drilled (Table 5.2) from 1990 through March 1995 was published in the June 1995 MER.

Additional information about the EIA estimation methodology may be found in "Estimating Well Completions," the feature article published in the March 1985 *MER*.

# Section 6. Coal

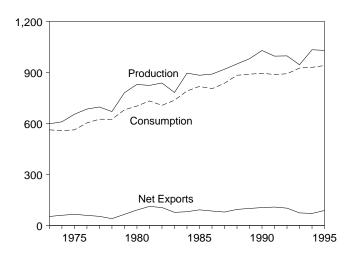
Coal production in February 1996 totaled 85 million short tons, 1 percent higher than the 81 million short tons produced in February 1995. During January and February of 1996 coal production totaled 170 thousand short tons, 2 percent lower than the 173 thousand short tons produced during January and February of 1995.

Electric utility coal consumption in January 1996 totaled 77 million short tons, 8 percent higher than the consumption level in January 1995. Electric utility coal stocks were 118 million short tons at the end of January 1996, 7 percent below the 126 million short tons at the end of January 1995.

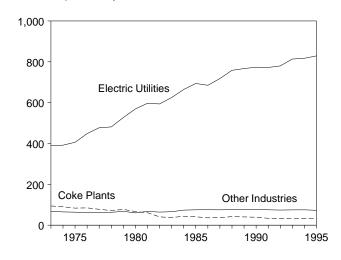
Figure 6.1 Coal

(Million Short Tons)

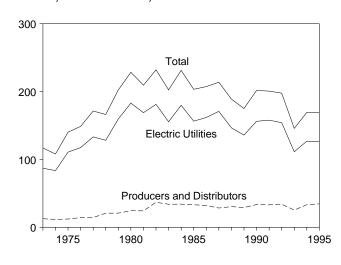
## Overview, 1973-1995



# Consumption by Sector, 1973-1995

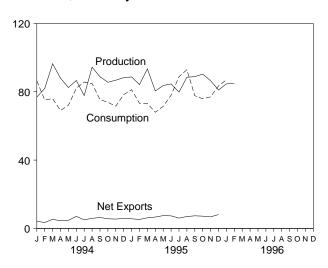


# Stocks, End of Year, 1973-1995

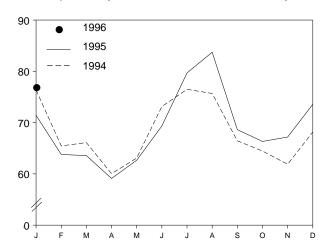


Note: Because vertical scales differ, graphs should not be compared. Sources: Tables 6.1, 6.2, and 6.3.

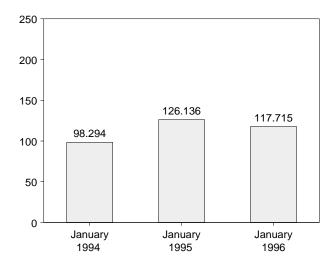
# Overview, Monthly



# Consumption by Electric Utilities, Monthly



### Stocks at Electric Utilities, End of Month



**Table 6.1 Coal Overview** 

(Thousand Short Tons)

	Production	Consumption	Imports <sup>a</sup>	Exports	Stocksb
973 Total	598,568	562,584	127	53,587	116,865
974 Total	610,023	558,402	2,080	60,661	107,957
75 Total	654,641	562,640	940	66,309	140,158
76 Total	684,913	603,790	1,203	60,021	148,659
	,		•		
977 Total	697,205	625,291	1,647	54,312	171,323
978 Total	670,164	625,225	2,953	40,714	166,246
979 Total	781,134	680,524	2,059	66,042	202,472
980 Total	829,700	702,730	1,194	91,742	228,407
981 Total	823,775	732,627	1,043	112,541	209,423
982 Total	838,112	706,911	742	106,277	232,038
983 Total	782,091	736,672	1,271	77,772	202,584
984 Total	895,921	791,296	1,286	81,483	231,300
985 Total	883,638	818,049	1,952	92,680	203,367
986 Total	890,315	804,231	2,212	85,518	207,319
987 Total	•		•	·	·
	918,762	836,941 883 642	1,747	79,607	213,780
988 Total	950,265	883,642	2,134	95,023	188,831
989 Total	980,729	889,699	2,851	100,815	175,087
990 Total	1,029,076	895,480	2,699	105,804	201,629
991 Total	995,984	887,621	3,390	108,969	200,682
992 Total	997,545	892,421	3,803	102,516	197,685
993 Total	945,424	925,944	7,309	74,519	145,742
<b>994</b> January	76,886	86,432	540	4,731	134,972
February	81,895	75,215	753	4,252	136,693
March	96,372	75,949	557	5,894	146,417
April	87,903	69,007	456	4,976	155,498
May	82,470	72,092	550	5,326	163,660
-	,	82,046	571		
June	86,591			7,637	162,451
July	77,758	85,644	833	5,882	152,748
August	94,338	84,791	731	6,670	151,381
September	88,757	75,385	740	7,152	154,180
October	85,538	73,799	434	6,110	158,738
November	86,756	71,556	601	6,098	165,592
December	88,240	78,285	819	6,630	169,358
Total	1,033,504	930,201	7,584	71,359	169,358
995 January	88,655	<sup>R</sup> 81,201	530	6,184	R 171,315
February	84,197	<sup>R</sup> 73,236	486	5,774	R 177,640
March	93,392	<sup>R</sup> 73,167	780	7,029	R 186,389
April	80,424	R 67,990	525	7,212	R 192,890
May	83,626	R 71,456	517	8,036	R 198,307
			567		
June	84,563	R 77,993		7,935	R 193,735
July	79,818	88,801	566	6,632	178,745
August	88,431	R 92,860	547	7,530	R 167,703
September	88,848	77,692	613	8,012	167,830
October	90,286	<sup>R</sup> 75,864	613	7,823	<sup>R</sup> 170,758
November	86,475	<sup>R</sup> 77,003	721	7,494	<sup>R</sup> 172,961
December	81,021	R 83,375	738	8,883	R 168,931
Total	1,029,737	R 940,638	7,201	88,547	R 168,931
996 January	84,571	E 86,958	NA	NA	<sup>E</sup> 161,259
February	85,037	NA	NA	NA	NA
2-Month Total	169,607	NA	NA NA	NA	NA
995 2-Month Total	172,852	154,436	1,016	11,959	177,640
994 2-Month Total	158,781	161,647	1,293	8,983	136,693

a Includes Puerto Rico.
 b Stocks held by electric utilities, coke plants, general industry, and coal producers and distributors at end of period. Excludes stocks held at retail dealers for consumption by the residential and commercial sector.
 R=Revised data. NA=Not available.
 Notes: • Data through 1994 are final. Subsequent data are preliminary.

<sup>•</sup> For methodology used to calculate production, consumption, and stocks, see Notes 1, 2, and 3 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.

Table 6.2 Coal Consumption by End-Use Sector

(Thousand Short Tons)

		In	dustrial		
	Residential		Other Industrial		
	and	Coke	Including	Electric	
	Commercial	Plants	Transportation	Utilities	Total
					•
973 Total	11,117	94,101	68,154	389,212	562,584
974 Total	11,417	90,191	64,983	391,811	558,402
975 Total	9,410	83,598	63,670	405,962	562,640
976 Total	8,916	84,704	61,799	448,371	603,790
977 Total	8,954	77,739	61,472	477,126	625,291
978 Total	9,511	71,394	63,085	481,235	625,225
979 Total	8,388	77,368	67,717	527,051	680,524
980 Total	6,452	66,657	60,347	569,274	702,730
981 Total	7,421	61,014	67,395	596,797	732,627
982 Total	8,240	40,908	64,097	593,666	706,911
983 Total	8,448	37.033	65.980	625,211	736,672
984 Total	9,130	44,022	73,745	664,399	791,296
985 Total	7,779	41,056	75,372	693,841	818,049
986 Total	7,667	35.924	75,583	685.056	804,231
987 Total	,	36,957	75,175	717.894	836.941
	6,914 7.130	36,957 41.888	75,175 76.252	,	/ -
988 Total	,	,	-, -	758,372	883,642
989 Total	6,167	40,508	76,134	766,888	889,699
990 Total	6,724	38,877	76,330	773,549	895,480
991 Total	6,094	33,854	75,405	772,268	887,621
992 Total	6,153	32,366	74,042	779,860	892,421
993 Total	6,221	31,323	74,892	813,508	925,944
994 January	854	2,619	6,598	76,362	86,432
February	669	2.481	6.610	65,455	75,215
March	493	2,654	6,703	66,098	75,949
April	455	2,632	5,880	60,040	69,007
May	334	2,742	5,931	63,084	72,092
-	398	2,742	•	73,130	82,046
June			5,928		
July	456	2,673	6,027	76,489	85,644
August	392	2,659	6,057	75,682	84,791
September	288	2,613	6,039	66,445	75,385
October	337	2,643	6,371	64,447	73,799
November	541	2,666	6,473	61,877	71,556
December	796	2,767	6,562	68,161	78,285
Total	6,013	31,740	75,179	817,270	930,201
995 January	638	<sup>R</sup> 2.758	6,374	71,431	<sup>R</sup> 81.201
February	572	R 2,549	6,333	<sup>R</sup> 63,782	<sup>R</sup> 73,236
March	428	R 2.833	6.337	R 63,569	<sup>R</sup> 73,167
April	449	R 2,769	5,663	59,110	R 67,990
	291	R 2,820	5,690	R 62,655	R 71,456
May					
June	292	R 2,702	5,656	69,342	R 77,993
July	396	2,739	5,978	79,688	88,801
August	399	2,787	5,954	R 83,720	R 92,860
September	268	2,804	5,995	68,624	77,692
October	<sup>R</sup> 541	2,715	6,283	66,326	<sup>R</sup> 75,864
November	<sup>R</sup> 776	2,770	6,272	67,185	R 77,003
December	<sup>R</sup> 774	2,766	6,262	R 73,574	R 83,375
Total	5,824	33,011	72,796	R <b>829,007</b>	<sup>R</sup> <b>940,638</b>
996 January	E 732	E 2,768	E 6,662	E 76,796	E 86,958

R=Revised data.

Notes: • For sector-specific reporting and estimating information, see Note 2 at end of section. • Data through 1994 are final. Subsequent data are preliminary. • Totals may not equal sum of components due to independent

rounding. • Geographic cov Columbia. Sources: See end of section. • Geographic coverage is the 50 States and the District of

Table 6.3 Coal Stocks, End of Period

(Thousand Short Tons)

		Cons	sumer		Dan dansara	
	Coke Plants	Other Industrial	Electric Utilities	Total <sup>a</sup>	Producers and Distributors	Total <sup>a</sup>
973 Year	6.998	10,370	86.967	104.335	12,530	116.865
974 Year	6,209	6,605	83,509	96,323	11,634	107,957
	,	•	,			
975 Year	8,797	8,529	110,724	128,050	12,108	140,158
976 Year	9,902	7,100	117,436	134,438	14,221	148,659
977 Year	12,816	11,063	133,219	157,098	14,225	171,323
978 Year	8,278	9,048	128,225	145,551	20,695	166,246
979 Year	10,155	11,777	159,714	181,646	20,826	202,472
980 Year	9,067	11,951	183,010	204,028	24,379	228,407
981 Year	6,475	9,906	168,893	185,274	24,149	209,423
982 Year	4,642	9,479	181,132	195,254	36,784	232,038
983 Year	4,346	8,710	155,598	168,654	33,931	202,584
984 Year	6,166	11,317	179,727	197,211	34,090	231,300
985 Year	3,420	10,438	156,376	170,234	33,133	203,367
986 Year	2,992	10,429	161,806	175,226	32,093	207,319
987 Year	3,884	10,777	170,797	185,459	28,321	213,780
988 Year	3,137	8,768	146,507	158,413	30,418	188,831
989 Year	2,864	7,363	135,860	146,087	29,000	175,087
990 Year	3,329	8,716	156,166	168,210	33,418	201,629
991 Year	2,773	7,061	157,876	167,711	32,971	200,682
992 Year	2,773	6,965	154,130	163,692	33,993	197,685
993 Year	2,401	6,716	111,341	120,458	25,284	145,742
<b>994</b> January	2,345	6,097	98,294	106,736	28,236	134,972
February	2.289	5.478	97,739	105.506	31.188	136.693
March	2,232	4,859	105,186	112,278	34,139	146,417
April	2,408	5,087	113,324	120,819	34,679	155,498
May	2,583	5.315	120.543	128.442	35.218	163,660
June	2,759	5,543	118,391	126,694	35,758	162,451
	2,741	5,764	109,419	117,925	34,823	152,748
July	2,741				33,889	
August	,	5,985	108,783	117,492	,	151,381
September	2,706	6,206	112,314	121,225	32,955	154,180
October	2,690	6,332	116,673	125,695	33,043	158,738
November	2,673	6,459	123,328	132,461	33,131	165,592
December	2,657	6,585	126,897	136,139	33,219	169,358
995 January	2,678	6,201	<sup>R</sup> 126,136	<sup>R</sup> 135,015	36,299	<sup>R</sup> 171,315
February	2,698	5,817	R 129,745	R 138,261	39,379	R 177,640
March	2.719	5.433	R 135,778	R 143,930	42.460	R 186.389
April	2,687	5,496	R 142.365	R 150.548	42,341	R 192.890
May	2,656	5,559	R 147.869	R 156.084	42,223	R 198,307
June	2,624	5,623	R 143,385	R 151.631	42,104	R 193.735
July	2,575	5,726	130,311	138,612	40,134	178,745
•	,	,	R 121,185	R 129,540	,	R 167,703
August	2,525	5,830			38,163	
September	2,476	5,934	123,227	131,637	36,193	167,830
October	2,528	5,806	R 126,814	R 135,148	35,610	R 170,758
November	2,580	5,678	R 129,676	R 137,934	35,027	R 172,961
December	2,632	5,550	<sup>R</sup> 126,304	<sup>R</sup> 134,487	34,444	R 168,931
996 January	E 2,152	E 6,392	117,715	E 126,259	E 35,000	E 161,259

 $<sup>^{\</sup>rm a}$  Excludes stocks held at retail dealers for consumption by the residential and commercial sector.

R=Revised data.

Notes: • For sector-specific reporting and estimating information, see Note 3 at end of section. • Data through 1994 are final. Subsequent data are

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

# **Coal Notes**

1. Production: Preliminary monthly estimates of national coal production are the sum of weekly estimates developed by the 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 data showing the number of railcars loaded with coal during the week by Class I and certain other railroads. This number is converted into tons of coal by EIA by using the average number of tons of coal per railcar loaded reported in the most recent "Quarterly Freight Commodity Statistics" from the Interstate Commerce Commission. If an average coal tonnage per railcar loaded is not available for a specific railroad, the national average is used. To derive the estimate of total weekly production, the total rail tonnage for the week is divided by the ratio of quarterly production shipped by rail and total quarterly production. Data for the corresponding quarter of previous years are used to derive this ratio. This method ensures that the seasonal variations are preserved in the production estimates.

When preliminary quarterly data become available, the monthly and weekly estimates are adjusted to conform to the quarterly figure. 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 9 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.

- 2. Consumption: Coal consumption data are reported by major end-use sector. Estimated data for the most recent months (designated by an "E") are derived from forecasted values shown in the EIA Short-Term Energy Outlook (DOE/EIA-0202) table titled "Supply and Disposition of Coal: Mid World Oil Price Case." The monthly estimates are one-third of the quarterly values shown in the then current issue of the publication, regularly released in February, May, October, and November. The estimates are revised quarterly as collected data become available from the data sources. Sector-specific information follows.
  - Residential and Commercial—Prior to 1980, monthly consumption estimates for the residential and commercial sector were derived by using reported data to modify baseline figures developed by the Bureau of Mines. From 1980-1987,

- monthly 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 on Form EIA-2. During 1981 and 1982, the estimates were also modified to reflect air temperature degree-days. Quarterly consumption data were taken directly from reported data and were defined as distribution to the residential and commercial sector as reported by coal producers and distributors on Form EIA-6. Beginning in January 1988, monthly residential and commercial consumption estimates are derived from reported quarterly data by using monthly national average population weighted heating/cooling degree-days obtained from the National Oceanic and Atmospheric Administration. The monthly ratios are the monthly national sum of heating and cooling degree-days as a proportion of the quarterly national sum. Quarterly consumption data are taken directly from reported data.
- Coke Plants—Prior to 1980, monthly coke plant consumption data were taken directly from reported data. From 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.
- Other Industrial—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. From 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. Quarterly consumption data were derived by adding beginning stocks at manufacturing plants to current receipts and subtracting ending stocks at manufacturing plants. In this calculation, current receipts were 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, mining, and construction consumption data were included where appropriate. Starting 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: foods, Standard Industrial Classification (SIC) 20; paper and products, SIC 26; chemicals and products, SIC 28; petroleum products, SIC 29; clay, glass, and stone products, SIC 32; and primary metals, SIC 33. 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.

- Electric Utilities—Monthly consumption data for electric utility plants are taken directly from reported data.
- 3. Stocks: Coal stocks data are reported by major enduse sector. Estimated data for the most recent months (designated by an "E") are derived from forecasted values shown in the EIA Short-Term Energy Outlook (DOE/EIA-0202) table titled "Supply and Disposition of Coal: Mid World Oil Price Case." The monthly estimates are one-third of the quarterly values shown in the then current issue of the publication, regularly released in February, May, October, and November. The estimates are revised quarterly as collected data become available from the data sources. Sector-specific information follows.
  - Coke Plants—Prior to 1980, monthly stocks at coke plants were taken directly from reported data.
     From 1980 forward, 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.
  - Other Industrial—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. From 1983 forward, 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 Utilities—Monthly stocks data at electric utility plants are taken directly from reported data.
  - Producers and Distributors—Quarterly stocks at producers and distributors are taken directly from reported data. Monthly data are estimated by using one-third of the current quarterly change to indicate the monthly change in stocks.
- **4. Imports and Exports:** All coal import and export figures are taken directly from data reported monthly by the Bureau of the Census.

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

### Sources for Table 6.1

#### Production

**1973-September 1977**—U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook* and *Minerals Industry Surveys*.

**October 1977 forward**—Energy Information Administration, *Weekly Coal Production*.

### Consumption

Table 6.2.

### **Imports and Exports**

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

#### **Stocks**

Table 6.3.

### Sources for Table 6.2

#### **Residential and Commercial**

**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—Energy Information Administration (EIA), Form EIA-2, "Monthly Coal Report, Retail Dealers-Upper Lake Docks."

**1980 forward**—EIA, Form EIA-6, "Coal Distribution Report," quarterly.

#### **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."

#### Other Industrial

**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 forward**—EIA, Form EIA-3, "Quarterly Coal Consumption Report-Manufacturing Plants," and Form EIA-6, "Coal Distribution Report," quarterly.

#### **Electric Utilities**

**1973-September 1977**—DOI, BOM, *Minerals Yearbook* and *Minerals Industry Surveys*.

**October 1977 forward**—EIA, Form EIA-759 (formerly Form FPC-4), "Monthly Power Plant Report."

### Sources for Table 6.3

#### **Coke Plants**

**1973-September 1977**—U.S. Department of the Interior (DOI), Bureau of Mines (BOM), *Minerals Yearbook* and *Minerals Industry Surveys*.

October 1977-1980—Energy Information Administration (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-Ouarterly."

#### **Other Industrial**

**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 forward**—EIA, Form EIA-3, "Quarterly Coal Consumption Report-Manufacturing Plants," and Form EIA-6, "Coal Distribution Report," quarterly.

### **Electric Utilities**

**1973-September 1977**—DOI, BOM, *Minerals Yearbook* and *Minerals Industry Surveys*.

**October 1977 forward**—EIA, Form EI-A759 (formerly Form FPC-4), "Monthly Power Plant Report."

#### **Producers and Distributors**

EIA, Form EIA-6, "Coal Distribution Report," quarterly.

# Section 7. Electricity

During January 1996, electric utilities generated 268 billion kilowatthours of electricity, 6 percent more than in January 1995. Coal-fired generation totaled 152 billion kilowatthours, 7 percent above the January 1995 level. Nuclear generation totaled 63 billion kilowatthours, 1 percent lower than the level 1 year earlier. Hydroelectric generation totaled 29 billion kilowatthours, 23 percent higher than the January 1995 level. Natural gas-fired generation was 16 billion kilowatthours, 17 percent lower than the January 1995 level. Petroleum-fired generation totaled 8 billion kilowatthours, 89 percent above the level 1 year earlier.

Sales of electricity to all ultimate consumers in the United States in January 1996 were 270 billion kilowatthours, 6 percent higher than sales during January 1995. Sales to residential consumers during January 1996 were 108 billion kilowatthours, 12 percent higher than the level of sales during the previous year. Sales to industrial consumers totaled 82 billion kilowatthours in January 1996, slightly higher than the level 1 year earlier. Commercial sales were 72 billion kilowatthours, 5 percent higher than the level of

commercial sales during the previous year. In January 1996, other sales totaled 8 billion kilowatthours, 4 percent higher than the January 1995 level

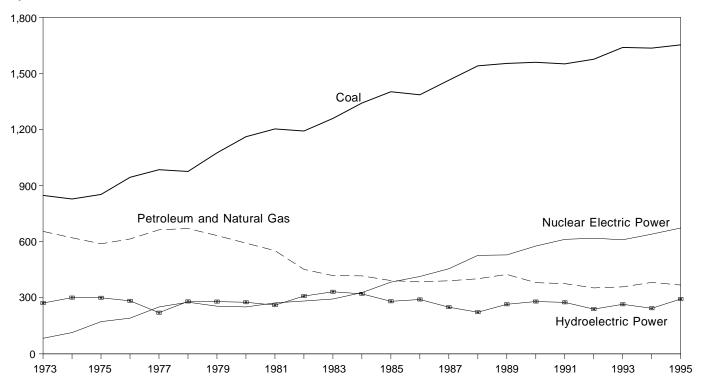
Electric utility consumption of coal during January 1996 was 77 million short tons, 8 percent above consumption in January 1995. Petroleum consumption (excluding petroleum coke) during January 1996 was 13 million barrels, 90 percent above the level of consumption in January 1995. During January 1996, electric utilities consumed 167 billion cubic feet of natural gas, 16 percent below the January 1995 consumption level.

On January 31, 1996, electric utility stocks of all types of coal totaled 118 million short tons, 7 percent lower than the level on January 31, 1995. Stocks of petroleum (excluding petroleum coke) on January 31, 1996, totaled 49 million barrels, 20 percent below the level on January 31, 1995.

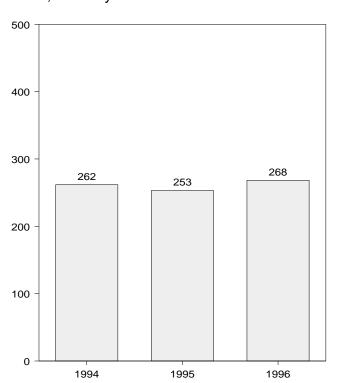
Figure 7.1 Electric Utility Net Generation of Electricity

(Billion Kilowatthours)

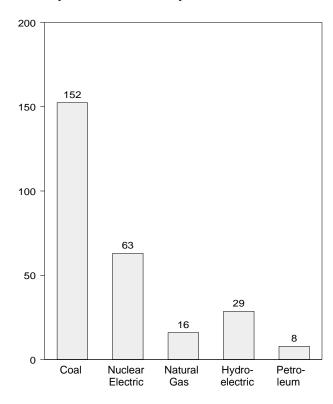
# By Source, 1973-1995



Total, January



Total by Source, January 1996



Note: Because vertical scales differ, graphs should not be compared. Source: Table 7.1.

**Table 7.1 Electric Utility Net Generation of Electricity** 

(Million Kilowatthours)

		Natural		Nuclear Electric	Hydro- Electric	Geothermal		
	Coal	Gasa	Petroleum <sup>b</sup>	Power	Power	Energy	Other <sup>C</sup>	Total
973 Total	847,651	340,858	314,343	83,479	272,083	1,966	328	1,860,710
974 Total	828,433	320,065	300,931	113,976	301,032	2,453	251	1,867,140
975 Total	852,786	299,778	289,095	172,505	300,047	3,246	191	1,917,649
976 Total	944,391	294,624	319,988	191,104	283,707	3,616	266	2,037,696
977 Total	985,219	305,505	358,179	250,883	220,475	3,582	481	2,124,323
978 Total	975,742	305,391	365,060	276,403	280,419	2,978	338	2,206,331
979 Total	1.075.037	329,485	303.525	255,155	279,783	3.889	498	2,247,372
980 Total	1,161,562	346,240	245,994	251,116	276,021	5.073	433	2,286,439
981 Total	1,203,203	345,777	206,421	272,674	260,684	5,686	368	2,294,812
982 Total	1,192,004	305,260	146,797	282,773	309,213	4,843	321	2,241,211
983 Total	1,259,424	274,098	144,499	293,677	332,130	6,075	381	2,310,285
984 Total	1,341,681	297,394	119.808	327,634	321,150	7.741	898	2,416,304
985 Total	1,402,128	291,946	100,202	383,691	281,149	9,325	1,399	2,469,841
986 Total	1,385,831	248,508	136,585	414,038	290,844	10,308	1,195	2,487,310
987 Total	1,463,781	272,621	118,493	455,270	249,695	10,775	1,491	2,572,127
988 Total	1,540,653	252,801	148,900	526,973	222,940	10,773	1,684	2,704,250
989 Total	1.553.661	266,598	158.318	529,355	265,063	9.342	1,968	2,784,304
990 Total	1,559,606	264,089	117,017	576,862	279,926	8,581	2,070	2,808,151
991 Total	1,559,606	264,172	111,463	612,565	275,519	8,087	2,070	2,825,023
991 Total	1,575,895	263,872	88,916	612,363	239,559	8,104	2,050 2,096	
993 Total	1,639,151	258,915	99,539	610,291	265,063	7,571	1,994	2,797,219 2,882,525
004 longons	152.752	16.047	14 600	EC 047	10.042	631	177	264 607
994 January	- , -	16,847	14,600	56,847	19,843	574	154	261,697 225,011
February	131,138	14,523	9,655	49,821	19,146			,
March	133,528	18,177	7,960	48,969	22,161	578	170	231,544
April	119,755	20,235	7,674	43,192	23,219	592	150	214,817
May		20,676	6,991	48,525	24,329	581	147	227,703
June	147,440	30,744	9,887	51,751	23,360	522	154	263,859
July	152,182	34,857	9,317	59,123	21,938	553	179	278,149
August		37,195	6,064	60,104	19,119	610	164	274,645
September	132,059	28,803	5,027	55,628	15,431	564	151	237,663
October	129,637	25,936	4,566	50,703	16,368	578	184	227,972
November	123,604	22,774	4,480	55,280	17,858	572	177	224,746
December	135,556	20,348	4,815	60,497	20,919	584	187	242,906
Total	1,635,493	291,115	91,039	640,440	243,693	6,941	1,992	2,910,712
995 January	142,412	<sup>R</sup> 19,339	4,159	63,342	R 23,291	408	126	R 253,077
February	R 128,447	16,422	7,042	51,858	R 23,956	296	106	R 228,127
March	R 126,970	23,844	3,080	51,880	R 27,458	326	117	R 233,675
April	R 118,786	R 22,062	<sup>R</sup> 3,315	49,321	R 23,464	282	151	R 217,381
May	126,013	R 24,662	4,390	54,387	26,570	255	104	R 236,381
June	R 138,089	R 28,394	4,422	56,381	R 28,387	281	129	R 256,083
July	158,378	R 38,756	<sup>R</sup> 7,252	62,037	25,942	305	157	R 292.827
August	R 166,700	R 44,402	8,257	61,661	22,999	524	165	R 304,709
September	135.241	30,479	4,850	55,690	R 18.798	367	149	R 245.574
October	131,318	23.076	R 3.500	54,293	R 21,440	619	163	R 234.409
November	133.899	R 19,261	3,521	52.708	R 24.019	554	155	R 234.117
December		R 16,609	7,056	52,706 59,844	R 27,329	528	143	R 258,170
Total		R <b>307,306</b>	<sup>R</sup> <b>60,844</b>	673,402	R <b>293,653</b>	4,745	1,664	R 2,994,529
<b>996</b> January	152,362	15,974	7,864	62,942	28,562	354	149	268,207

R=Revised data.

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

a Includes supplemental gaseous fuel.
 b Includes fuel oil nos. 1, 2, 4, 5, and 6, crude oil, kerosene, and petroleum

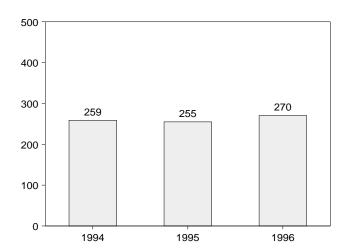
coke.

<sup>c</sup> "Other" is electricity produced from biomass fuels, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution

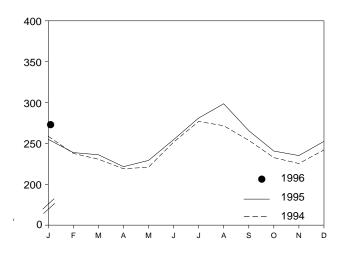
Figure 7.2 Electric Utility Retail Sales of Electricity

(Billion Kilowatthours)

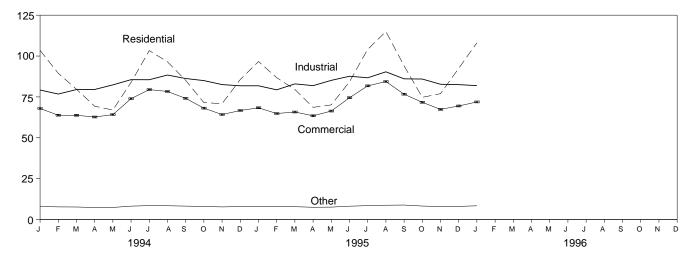
# Total, January



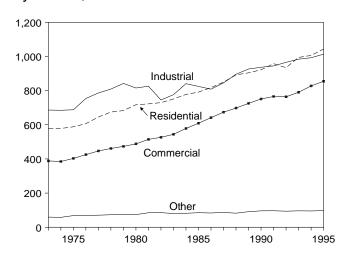
# Total, Monthly



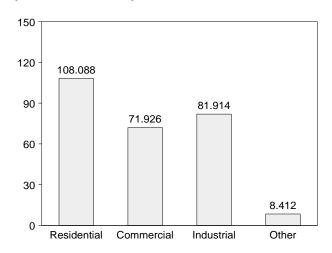
# By Sector, Monthly



By Sector, 1973-1995



By Sector, January 1996



Note: Because vertical scales differ, graphs should not be compared. Source: Table 7.2, Monthly Series.

Table 7.2 Electric Utility Retail Sales of Electricity by End-Use Sector

(Million Kilowatthours)

	Resid	ential	Comn	nercial	Indu	strial	Oth	er <sup>a</sup>	Total	
	Monthly Series <sup>b</sup>	Annual Series	Monthly Series <sup>b</sup>	Annual Series	Monthly Series <sup>b</sup>	Annual Series	Monthly Series <sup>b</sup>	Annual Series	Monthly Series <sup>b</sup>	Annual Series
4072 Tatal	E70 224	NA	200 200	NA	606 00E	NA	E0 226	NIA	4 742 000	NA
1973 Total	579,231	NA	388,266	NA	686,085	NA	59,326	NA	1,712,909	NA NA
1974 Total	578,184 588,140	NA NA	384,826 403,049	NA NA	684,875 687,680	NA NA	58,039 68,222	NA NA	1,705,924	NA NA
1975 Total 1976 Total	606,452	NA NA	403,049 425,094	NA NA	754,069	NA NA	69,631	NA NA	1,747,091 1,855,246	NA NA
1977 Total	645,239	NA NA	425,094 446,514	NA NA	786,037	NA NA	70,571	NA NA		NA NA
1978 Total	674,466	NA NA	461,163	NA NA	809,078	NA NA	73,215	NA NA	1,948,361 2,017,922	NA NA
1979 Total	682,819	NA NA	473,307	NA NA	841,903	NA NA	73,213	NA	2,071,099	NA NA
1980 Total	717,495	NA NA	488,155	NA NA	815,067	NA NA	73,732	NA	2,094,449	NA NA
1981 Total	717,495	NA NA	514,338	NA NA	825,743	NA NA	84,756	NA NA	2,094,449	NA NA
1982 Total	729,520	NA NA	526,397	NA	744,949	NA NA	85,575	NA	2,086,441	NA NA
1983 Total	750,948	NA NA	543,788	NA	775,999	NA NA	80,219	NA	2,150,955	NA
1984 Total	777,654	780,092	578,281	582,621	840,588	837,836	81,849	85,248	2,130,933	2,285,796
1985 Total	790,977	793,934	608,968	605,989	824,523	836,772	85,075	87,279	2,270,372	2,265,796
1986 Total	817,663	793,934 819,088	641,469	630,520	808,292	830,531	83,409	88,615	2,350,835	2,323,974
1987 Total	849,613	850,410	673,707	660,433	845,266	858,233	86,854	88,196	2,455,440	2,457,272
1988 Total	892,125	892,866	697,711	699,100	895,751	896,498	82,362	89,598	2,567,949	2,578,062
1989 Total	903,979	905,525	725,229	725,861	926,376	925,659	91,066	89,765	2,646,651	2,646,809
1990 Total	921,473	924,019	750,835	751,027	936,428	945,522	95,936	91,988	2,704,672	2,712,555
1991 Total	957,801	955,417	765,476	765,664	944,684	946,583	96,513	94,339	2,764,474	2,762,003
1992 Total	934,044	935,939	763,664	761,271	965,356	972,714	94,003	93.442	2,757,067	2,763,365
1993 Total	994,380	994,781	790,225	794,573	984,111	977,164	96,065	94,944	2,864,782	2,861,462
1000 Total	334,000	334,701	750,225	134,313	304,111	377,104	30,003	34,344	2,004,702	2,001,402
1994 January	103,502	_	67,928	_	79,231	_	8,046	_	258,706	_
February	89,432	_	63,815	_	76,758	_	7,746	_	237,750	_
March	79,708	_	63,786	_	79,494	_	7,676	_	230,664	_
April	69,318	_	62,713	_	79,556	_	7,389	_	218,976	_
May	66,991	_	64,174	_	82,362	_	7,403	-	220,931	_
June	83,868	_	73,936	_	85,553	_	8,214	_	251,570	_
July	103,327	_	79,470	_	85,517	_	8,530	_	276,844	_
August	96,486	_	78,336	_	88,378	_	8,441	-	271,641	_
September	85,122	_	74,120	_	86,257	_	8,220	_	253,720	_
October	71,511	_	68,107	_	84,979	_	8,004	_	232,602	_
November	70,901	_	64,226	_	82,534	_	7,728	_	225,388	_
December	85,637	_	66,698	_	81,803	_	7,929	_	242,068	_
Total	1,005,804	1,008,482	827,309	820,269	992,422	1,007,981	95,326	97,830	2,920,860	2,934,563
1005 longor	R 96,647		R 68.346		R 81.819		<sup>R</sup> 8.114		R 254,926	
1995 January	R 86,778	_	R 64,861	_	R 79,337	_	R 7,827	_		_
February	R 79,536	_	R 65,753		R 82.976		R 7.852	_	R 238,802	_
March	R 68,627	_	R 63,474	_	R 81.899	_	<sup>R</sup> 7,515	_	<sup>R</sup> 236,117 <sup>R</sup> 221,515	_
April	R 70,136	_	R 66.351	_	R 85.122	_	R 7,515	_	R 229,223	_
May	R 84,283	_	R 74,492	_	/	_	R 8,179	_		_
June	R 104,101	_	R 81,772	_	<sup>R</sup> 87,639 <sup>R</sup> 86,711	_	R 8,499	_	<sup>R</sup> 254,593 <sup>R</sup> 281,083	_
July August	R 114,101	_	R 84,413	_	R 90,357	_	R 8,766	_	R 298,527	_
September	R 93,972	_	R 76,663	_	R 86,061	_	R 8,875	_	R 265,570	_
October	R 74,762	_	R 71.705	_	<sup>R</sup> 85,936	_	R 8.252	_	R 240,655	_
November	R 76,986	_	R 67,394	_	R 82,735	_	8,002	_	R 235,116	_
December	R 92,485	_	R 69.460	_	82,735	_	8.053	_	R 252,513	_
Total	R 1 0/2 20/	NA	R <b>854,682</b>	NA	R <b>1,013,107</b>	NA	8,053 R <b>97,547</b>	NA	R 3,008,641	NA
10tal	1,043,304	NA	034,002	NA	1,013,107	NA	91,341	NA	3,000,041	NA
1996 January	108,088	_	71,926	_	81,914	_	8,412	_	270,340	_

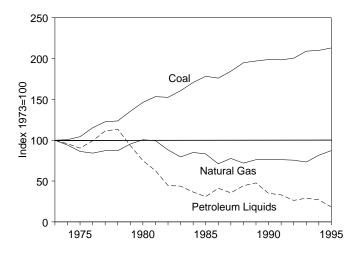
a "Other" is public street and highway lighting, other sales to public authorities, sales to railroads and railways, and interdepartmental sales.
 b Annual totals are the sums of the monthly values.

R=Revised data. NA=Not available.

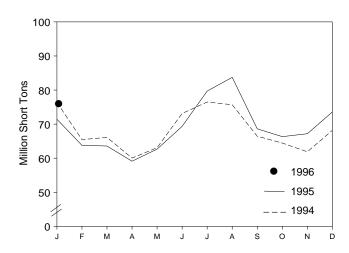
Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Figure 7.3 Electric Utility Consumption and Stocks of Fossil Fuels

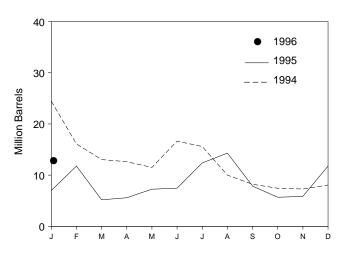
### Fuels Consumed, 1973-1995



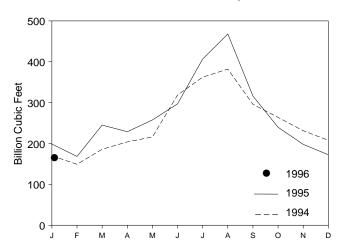
# Coal Consumed, Monthly



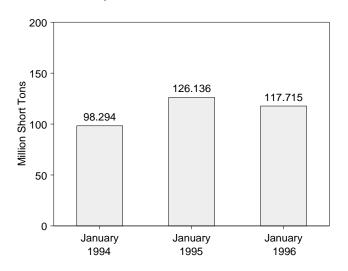
# Petroleum Liquids Consumed, Monthly



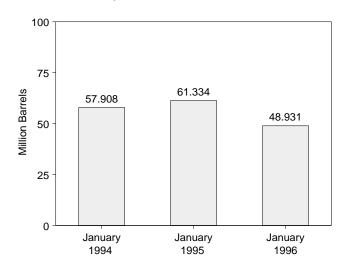
Natural Gas Consumed, Monthly



# Coal Stocks, End of Month



### Petroleum Liquids Stocks, End of Month



Note: Because vertical scales differ, graphs should not be compared. Sources: Tables 7.3 and 7.4.

Table 7.3 Electric Utility Consumption of Fossil Fuels To Generate Electricity

		Co	al								
					By 1 of Petr		By P Mover				
	Anthra- cite	Bituminous Coal	Lignite	Total	Heavy Oil <sup>a</sup>	Light Oil <sup>b</sup>	Steam Plants	GT/IC <sup>c</sup>	Total Liquids	Petroleum Coke	Natural Gas <sup>d</sup>
		Thousand S	Short Tons			Th	ousand Barr	els		Thousand Short Tons	Million Cubic Feet
1973 Total	1,443	376,975	10,794	389,212	NA	NA	513,190	47,058	560,248	507	3,660,172
1974 Total	1,498	378,643	11,670	391,811	NA	NA	483,146	53,128	536,274	625	3,443,428
1975 Total 1976 Total	1,480 1,350	388,523 425,205	15,960 21,817	405,962 448,371	NA NA	NA NA	467,221 514,077	38,907 41,843	506,128 555,920	70 68	3,157,669 3,080,868
1977 Total	1,425	423,203 451,051	24,650	477,126	NA	NA	574,869	48,837	623,705	98	3,191,200
1978 Total	1,064	448,763	31,407	481,235	NA	NA	588,319	47,520	635,839	398	3,188,363
1979 Total	1,046	488,129	37,876	527,051	NA	NA	492,606	30,691	523,297	268	3,490,523
1980 Total	951	526,680	41,642	569,274	391,163	29,051	401,863	18,351	420,214	179	3,681,595
1981 Total	1,221	550,784	44,792	596,797	329,798	21,313	339,680	11,431	351,111	139	3,640,154
1982 Total	1,075	543,346	49,245	593,666	234,434	15,337	243,537	6,234	249,771	149	3,225,518
1983 Total	1,036	570,108	54,067	625,211	228,984	16,512	237,845	7,652	245,497	261	2,910,767
1984 Total	1,070	606,339	56,990	664,399	189,289	15,190	197,050	7,429	204,479	252	3,111,342
1985 Total	1,033	631,885	60,923	693,841	158,779	14,635	166,842	6,572	173,414	231	3,044,083
1986 Total	829	616,134	68,093	685,056	216,156	14,326	222,500	7,983	230,482	313	2,602,370
1987 Total	972	647,824	69,098	717,894	184,011	15,367	190,818	8,560	199,378	348	2,844,051
1988 Total	1,063	681,048	76,260	758,372	229,327	18,769	235,817	12,279	248,096	409 517	2,635,613
1989 Total 1990 Total	1,049	688,504	77,335	766,888 773,549	241,960	25,491	250,315	17,136	267,451 196.054	517 819	2,787,012
1990 Total	1,031 994	694,317 691,275	78,201 79,999	•	181,231 171,157	14,823 13,729	187,531	8,523 7,600	184,886	722	2,787,332 2,789,014
1991 Total	986	698.626	80.248	772,268 779.860	135,779	11,556	177,286 141,163	6,172	147,335	999	2,765,608
1993 Total	951	732,736	79,821	813,508	149,287	13,168	154,905	7,549	162,454	1,220	2,682,440
1994 January	82	69,022	7,257	76,362	20,743	3,709	21,602	2,850	24,452	112	169,983
February	98	58,843	6,514	65,455	14,697	1,397	15,242	851	16,094	88	149,156
March	100	59,696	6,303	66,098	12,026	1,014	12,532	509	13,040	93	185,924
April	88	54,246	5,706	60,040	11,585	1,041	12,043	583	12,626	71	203,934
May	89	56,482	6,513	63,084	10,346	1,164	10,839	670	11,510	59	216,022
June	87	66,162	6,881	73,130	14,775	1,871	15,369	1,278	16,646	71	318,528
July	98	69,428	6,964	76,489	14,062	1,530	14,576	1,016	15,592	76	362,444
August	92	68,713	6,877	75,682	8,992	1,021	9,453	559	10,013	65	382,114
September	93	59,873	6,479	66,445	7,346	870	7,759	456	8,216	62	295,956
October	107	58,011	6,330	64,447	6,634	811	7,057	387	7,444	62	263,958
November	90	55,542	6,245	61,877	6,432	863	6,910	385	7,294	59	231,242
December	100	61,084	6,977	68,161	7,029	1,048	7,523	554	8,077	57	207,886
Total	1,123	737,102	79,045	817,270	134,666	16,338	140,907	10,097	151,004	875	2,987,146
1995 January	75	64,253	7,103	71,431	5,955	1,057	6,380	632	7,012	64	R 198,669
February	82	<sup>R</sup> 57,970	5,729	R 63,782	10,457	1,316	10,883	890	11,773	61	R 168,274
March	83	<sup>R</sup> 57,795	5,692	R 63,569	4,276	907	4,730	452	5,183	52	R 245,111
April	77	53,889	5,144	59,110	4,673	918	5,111	480	5,591	36	R 228,889
May	86	R 57,067	5,502	R 62,655	6,121	1,133	6,648	607	R 7,255	59	R 257,620
June	72	62,422	6,849	69,342	6,262	R 1,195	6,828	R 629	R 7,457	68	R 297,007
July	67	72,082	7,539	79,688	10,507	R 1,879	10,949	R 1,436	R 12,385	57	R 406,758
August	79	76,043	R 7,599	R 83,720	11,446	2,853	11,934	2,365	14,299	80	R 468,021
September	87	61,631	6,906	68,624	6,964	903 R 020	7,355	512 R 407	7,867	66	316,096
October	86	59,747	6,492	66,326	4,747	R 932	5,192	R 487	R 5,680	74	R 239,680
November	93	60,843	6,249	67,185 R 72,574	4,812	1,051	5,290	573	5,863	83	R 197,926
December	93	R 66,206	7,275	R 73,574	10,364	1,421	10,830	956 R <b>40 040</b>	11,785 R 402 450	62 <b>764</b>	R 172,457
Total	978	<sup>R</sup> 749,951	<sup>R</sup> 78,078	R <b>829,007</b>	86,584	R 15,565	92,131	<sup>R</sup> 10,019	<sup>R</sup> 102,150	761	R 3,196,507
1996 January	87	69,427	7,282	76,796	11,409	1,908	12,053	1,263	13,317	62	167,388

a Heavy oil includes fuel oil nos. 4, 5, and 6, and residual fuel oils.
 b Light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.
 c GT/IC = Gas turbine and internal combustion plants.
 d Includes supplemental gaseous fuels.
 R=Revised data. 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.

Table 7.4 Electric Utility Stocks of Coal and Petroleum, End of Period

		Co	al		Petroleum						
						Type troleum		rime r Type	Total Liquids	Petroleum Coke	
	Anthracite	Bituminous Coal	Lignite	e Total	Heavy Oil <sup>a</sup>	Light Oil <sup>b</sup>	Steam Plants	GT/IC <sup>c</sup>			
		Thousand S	Short Tons			Thousand Short Tons					
								40.005			
1973 Total	1,066 930	84,941 81,712	961 867	86,967 83,509	NA NA	NA NA	79,121 97,718	10,095 15,199	89,216 112,917	312 35	
1974 Total 1975 Total	930 982	107,927	1,815	110,724	NA NA	NA NA	108,825	16,432	125,257	35 31	
1976 Total	1,000	114,130	2,306	117,436	NA NA	NA NA	106,993	14,703	123,237	32	
1977 Total	2,321	128,210	2,688	133,219	NA NA	NA NA	124,750	19,281	144,031	44	
1978 Total	2,178	123,020	3,027	128,225	NA NA	NA NA	102,402	16,386	118,788	198	
1979 Total	3,274	152,981	3,459	159,714	NA	NA	111,121	20,301	131,422	183	
1980 Total	4,741	174,154	4,115	183,010	105,351	30,023	117,227	18,147	135,374	52	
1981 Total	5,537	158,258	5,098	168,893	102,042	26,094	112,380	15,756	128,136	42	
1982 Total	6,080	170,480	4,573	181,132	95,515	23,369	105,287	13,597	118,884	41	
1983 Total	6,507	145,250	3,841	155,598	70,573	18,801	78,285	11,090	89,375	55	
1984 Total	6,710	167,118	5,899	179,727	68,503	19,116	76,836	10,784	87,619	50	
1985 Total	7,189	142,144	7,043	156,376	57,304	16,386	64,704	8,985	73,689	49	
1986 Total	7,099	148,665	6,042	161,806	56,841	16,269	64,258	8,853	73,111	40	
1987 Total	6,940	156,670	7,187	170,797	55,069	15,759	61,705	9,123	70,827	51	
1988 Total	6,561	133,434	6,512	146,507	54,187	15,099	60,311	8,974	69,285	86	
1989 Total	6,403	122,967	6,490	135,860	47,446	13,824	53,309	7,962	61,270	105	
1990 Total	6,499	142,650	7,016	156,166	67,030	16,471	73,306	10,195	83,501	94	
1991 Total	6,513	145,367	5,996	157,876	58,636	16,357	65,032	9,961	74,993	70	
1992 Total	6,215	142,156	5,759	154,130	56,135	15,714	62,374	9,475	71,849	67	
1993 Total	5,639	98,560	7,142	111,341	46,769	15,674	53,360	9,083	62,443	89	
1994 January	5,576	86,043	6,676	98,294	42,781	15,127	49,922	7,986	57,908	83	
February	5,496	85,523	6,720	97,739	44,764	15,289	51,209	8,843	60,053	73	
March	5,420	92,333	7,433	105,186	45,750	15,024	51,950	8,824	60,774	89	
April	5,360	100,161	7,803	113,324	44,221	14,937	50,528	8,630	59,158	103	
May	5,309	107,716	7,518	120,543	46,104	15,170	52,623	8,651	61,274	78	
June	5,275	105,668	7,449	118,391	44,719	15,541	51,361	8,898	60,259	63	
July	5,214	96,502	7,704	109,419	44,259	15,323	50,654	8,928	59,582	37	
August	5,173	95,932	7,679	108,783	46,420	15,509	52,643	9,286	61,929	25	
September	5,133	99,793	7,388	112,314	47,111	15,586	53,261	9,437	62,697	35	
October	5,080	104,432	7,161	116,673	45,971	15,930	52,182	9,720	61,902	33	
November	4,903	110,569	7,856	123,328	46,475	16,128	52,730	9,873	62,603	51	
December	4,879	115,325	6,693	126,897	46,342	16,644	52,814	10,172	62,986	69	
1995 January	4,849	R 114,978	6,309	R 126,136	R 45,036	R 16,298	<sup>R</sup> 51,366	R 9,968	<sup>R</sup> 61,334	75	
February	4,791	R 118,668	6,286	R 129,745	39,922	<sup>R</sup> 16,016	<sup>R</sup> 46,112	9,826	<sup>R</sup> 55,937	95	
March	4,748	R 124,915	6,115	R 135,778	41,032	15,608	47,073	9,568	56,641	128	
April	4,711	R 131,439	6,215	R 142,365	38,859	15,447	44,832	9,474	54,306	162	
May	4,656	R 136,845	6,369	R 147,869	38,280	<sup>R</sup> 15,574	44,284	<sup>R</sup> 9,570	<sup>R</sup> 53,854	173	
June	4,634	<sup>R</sup> 132,567	6,184	<sup>R</sup> 143,385	39,810	15,793	45,749	9,854	55,603	144	
July	4,608	119,991	5,712	130,311	37,561	<sup>R</sup> 15,589	R 43,827	R 9,324	<sup>R</sup> 53,151	117	
August	4,591	R 111,183	<sup>R</sup> 5,412	R 121,185	R 35,135	15,454	R 41,454	9,135	R 50,589	98	
September	4,551	113,604	5,073	123,227	37,397	R 15,340	43,538	<sup>R</sup> 9,199	R 52,737	90	
October	4,514	R 117,156	5,145	R 126,814	37,861	R 15,569	<sup>R</sup> 43,955	R 9,475	R 53,429	71	
November	4,396	R 120,042	5,238	R 129,676	38,916	R 15,466	44,850	R 9,532	R 54,383	42	
December	4,325	R 116,749	5,231	R 126,304	35,102	<sup>R</sup> 15,392	<sup>R</sup> 40,992	9,503	<sup>R</sup> 50,495	65	
<b>1996</b> January	4,243	108,139	5,334	117,715	34,380	14,552	40,091	8,841	48,931	61	

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

a Heavy oil includes fuel oil nos. 4, 5, and 6, and residual fuel oils.
 b Light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.
 c GT/IC = Gas turbine and internal combustion plants. NA=Not available.

### Sources for Table 7.1

**1973-September 1977**—Federal Power Commission Form FPC-4, "Monthly Power Plant Report."

October 1977-1979—Federal Energy Regulatory Commission (FERC), Form FPC-4, "Monthly Power Plant Report."

**1980**—Energy Information Administration (EIA), *Electric Power Monthly*, March 1991, Table 4, and (for geothermal energy and other) FERC, Form FPC-4, "Monthly Power Plant Report."

1981—EIA, Electric Power Monthly, March 1992, Table 4, and (for geothermal energy and other) FERC, Form FPC-4, "Monthly Power Plant Report."

1982—EIA, Electric Power Monthly, March 1993, Table 4, and (for geothermal energy and other) EIA, Form EIA-759, "Monthly Power Plant Report."

1983-1992—EIA, Electric Power Monthly, March 1994, Table 4, and (for geothermal energy and other) EIA, Form EIA-759, "Monthly Power Plant Report."

1993 and 1994—EIA, Electric Power Monthly, May 1995, Tables 4 and 5.

**1995 forward**—EIA, Form EIA-759, "Monthly Power Plant Report."

### Sources for Table 7.2

### **Monthly Series**

**1973-September 1977**—Federal Power Commission, Form FPC-5, "Monthly Statement of Electric Operating Revenue and Income."

October 1977-1979—Federal Energy Regulatory Commission, Form FERC-5, "Electric Operating Revenue and Income."

**1980**—Energy Information Administration (EIA), *Electric Power Monthly*, March 1991, Table 51.

1981—EIA, Electric Power Monthly, March 1992, Table 51.

1982—EIA, Electric Power Monthly, March 1993, Table 51.

1983—EIA, Electric Power Monthly, March 1994, Table 51.

**1984 forward (and 1993 monthly data)**—EIA, *Electric Power Monthly*, March 1995, Table 51.

**1985 forward (except 1993 monthly data)**—EIA, *Electric Power Monthly*, April 1996, Table 52.

### **Annual Series**

**1984**—EIA, Electric Power Monthly, March 1995, Table 52.

**1985-1989**—EIA, *Electric Power Monthly*, April 1996, Table 52.

**1990-1994**—EIA, Electric Sales and Revenue 1994 November 1995, Table 3.

### Sources for Table 7.3

### **Prime Mover Type Data**

**1973-September 1977**—Federal Power Commission (FPC), Form FPC-4, "Monthly Power Plant Report."

October 1977-1981—Federal Energy Regulatory Commission (FERC), Form FPC-4, "Monthly Power Plant Report."

**1982 forward**—Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report."

#### **All Other Data**

**1973-September 1977**—FPC, Form FPC-4, "Monthly Power Plant Report."

October 1977-1979—FERC, Form FPC-4, "Monthly Power Plant Report."

**1980**—EIA, Electric Power Monthly, March 1991, Table 17.

1981—EIA, Electric Power Monthly, March 1992, Table 17.

1982—EIA, Electric Power Monthly, March 1993, Table 17.

1983—EIA, Electric Power Monthly, March 1994, Table 18.

1984—EIA, Electric Power Monthly, March 1995, Table 18.

1985-1995—EIA, Electric Power Monthly, April 1996, Table 18.

1996—EIA, Form EIA-759, "Monthly Power Plant Report."

#### Sources for Table 7.4

#### **Prime Mover Type Data**

1973-September 1977—Federal Power Commission (FPC), Form FPC-4, "Monthly Power Plant Report."

October 1977-1981—Federal Energy Regulatory Commission (FERC), Form FPC-4, "Monthly Power Plant Report."

**1982 forward**— Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report."

### **All Other Data**

**1973-September 1977**—FPC, Form FPC-4, "Monthly Power Plant Report."

October 1977-1979—FERC, Form FPC-4 "Monthly Power Plant Report."

1980—EIA, Electric Power Monthly, March 1991, Table 29.

**1981**—EIA, *Electric Power Monthly*, March 1992, Table 29.

1982—EIA, Electric Power Monthly, March 1993, Table 29.

**1983 and 1993 monthly data**—EIA, *Electric Power Monthly*, March 1994, Table 29.

**1984-1995(except 1993 monthly data)**—EIA, *Electric Power Monthly*, April 1996, Table 29.

**1996**—EIA, Form EIA-759, "Monthly Power Plant Report."

# Section 8. Nuclear Energy

In January 1996, U.S. nuclear generating units produced a total of 63 net terawatthours (billion kilowatthours) of electricity, 1 percent lower than in January 1995. Nuclear units generated at an average capacity factor of 85.3 percent, 0.6 percentage points lower than in January 1995. Nuclear power supplied 23.4 percent of the total electric utility-generated electricity in January 1996, compared with 25.0 percent in January 1995.

No low-power or full-power licenses for nuclear power plants were issued by the Nuclear Regulatory Commission during January 1996.

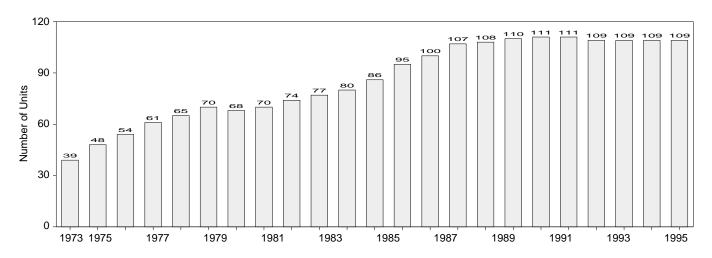
On January 31, 1996, there were 109 operable nuclear generating units in the United States, with a collective net summer capability of 99.1 million kilowatts of electricity. Of the 109 operable units, 11 units generated at less than

25 percent of capacity because of maintenance, refueling, or repair outage, and 7 of the 11 units generated no electricity during the month including one operable unit, Browns Ferry 1, shut down since March 1985. The aggregate net design capacity of the 109 operable units was 101.1 million kilowatts.

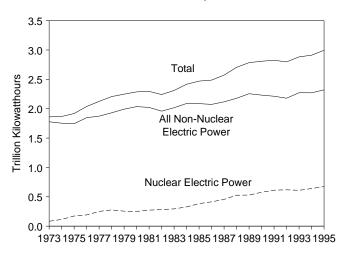
In addition, there were 6 other units with construction permits, although construction for all 6 units was canceled or halted. The design capacity of the 6 units with a construction permit was 7.4 million kilowatts, and the design capacity for the one unit with a low-power license (Watts Bar 2) was 1.2 million kilowatts. The net design capacity of these units, when added to that of the 109 operable nuclear generating units, is 109.6 million kilowatts.

Figure 8.1 Nuclear Power Plant Operations

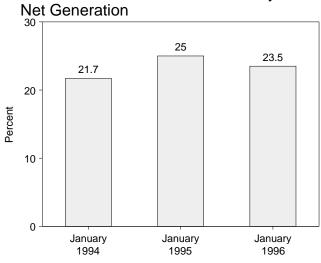
Operable Units, End of Year, 1973-1995



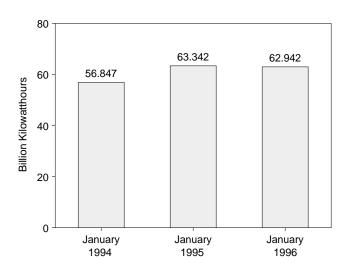
Net Generation of Electricity, 1973-1995



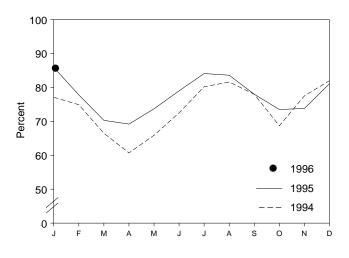
Nuclear Portion of Domestic Electricity



**Nuclear Electricity Net Generation** 



Capacity Factor, Monthly



Note: Because vertical scales differ, graphs should not be compared. Sources: Tables 7.1 and 8.1.

**Table 8.1 Nuclear Power Plant Operations** 

973 Year974 Year	Number	Million Kilowatthours		Units <sup>a,c</sup>	Factor <sup>d</sup>
		1 thorrattriours	Percent	Million Kilowatts	Percent
		1	<u>'</u>		
974 Year	39	83,479	4.5	22.683	53.5
	48	113,976	6.1	31.867	47.8
975 Year	54	172,505	9.0	37.267	55.9
976 Year	61	191,104	9.4	43.822	54.7
977 Year	65	250,883	11.8	46.303	63.3
978 Year	70	276,403	12.5	50.824	64.5
979 Year	68	255,155	11.4	49.747	58.4
980 Year	70	251,116	11.0	51.810	56.3
981 Year	74	272,674	11.9	56.042	58.2
982 Year	77	282,773	12.6	60.035	56.6
983 Year	80	293,677	12.7	63.009	54.4
984 Year	86	327,634	13.6	69.652	56.3
985 Year	95	383,691	15.5	79.397	58.0
	100				
986 Year		414,038	16.6	85.241	56.9
987 Year	107	455,270	17.7	93.583	57.4
988 Year	108	526,973	19.5	94.695	63.5
989 Year	110	529,355	19.0	98.161	62.2
990 Year	111	576,862	20.5	99.624	66.0
991 Year	111	612,565	21.7	99.589	70.2
992 Year	109	618,776	22.1	98.985	70.9
993 Year	109	610,291	21.2	99.041	70.5
994 January	109	56.847	21.7	99.041	77.1
February	109	49.821	22.1	99.041	74.9
,	109	48.969	21.1	99.041	66.5
March		- /			
April	109	43,192	20.1	99.041	60.7
May	109	48,525	21.3	99.041	65.9
June	109	51,751	19.6	99.041	72.5
July	109	59,123	21.3	99.041	80.2
August	109	60,104	21.9	99.041	81.6
September	109	55,628	23.4	99.041	78.0
October	109	50,703	22.2	99.041	68.7
November	109	55,280	24.6	99.041	77.5
December	109	60.497	24.9	99.148	82.0
Year	109	640,440	22.0	99.148	73.8
995 January	109	63,342	25.0	99.148	85.9
February	109	51,858	22.7	99.148	77.8
	109	51,880	22.7	99.148	77.6 70.3
March					
April	109	49,321	22.7	99.148	69.2
May	109	54,387	23.0	99.148	73.7
June	109	56,381	22.0	99.148	79.0
July	109	62,037	21.2	99.148	84.1
August	109	61,661	20.2	99.148	83.6
September	109	55,690	22.7	99.148	78.0
October	109	54,293	23.2	99.148	73.5
November	109	52.708	22.5	99.148	73.8
December	109	59.844	23.2	99.148	81.1
Year	109	673,402	22.5	99.148	77.5
<b>996</b> January	109	62,942	23.5	99.148	85.3

Note 4 at end of section.

Notes: • 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.

Sources: See end of section.

a At end of period.
 b See Note 1 at end of section.
 c For the definition of "Net Summer Capability," see Note 3 at end of section .  $\begin{tabular}{c} \begin{tabular}{c} \$ 

Table 8.2 Nuclear Generating Units, End of Period

	Lice for Op	nsed eration		ruction mits				Total
	Operable <sup>a</sup>	In Startup <sup>b</sup>	Granted	Pending	On Order	Announced	Total	Design Capacity <sup>c</sup>
				Number of Units	3			Million Kilowatts
1973 Year	39	2	57	52	49	9	208	198
1974 Year	48	5	62	75	30	6	226	223
1975 Year	54	2	69	69	14	5	213	212
1976 Year	61	1	71	63	16	2	214	211
	65	2	71 78	49	13	2	209	203
1977 Year		0				0		
1978 Year	70	-	88	32	5	-	195	191
1979 Year	68	0	90	24	3	0	185	180
1980 Year	70	1	82	12	3	0	168	162
1981 Year	74	0	76	11	2	0	163	157
1982 Year	77	2	60	3	2	0	144	134
1983 Year	80	3	53	0	2	0	138	129
1984 Year	86	6	38	0	2	Ô	132	123
1985 Year	95	3	30	Ö	2	Ö	130	121
1986 Year	100	7	19	Ŏ	2	Ŏ	128	119
1987 Year	107	4	14	Ö	2	ŏ	127	119
	107	3	12	0	0	0	127	115
1988 Year				-	-	-		
1989 Year	110	1	10	0	0	0	121	113
1990 Year	111	0	8	0	0	0	119	111
1991 Year	111	0	8	0	0	0	119	111
1992 Year	109	0	8	0	0	0	117	111
1993 Year	109	0	7	0	0	0	116	110
1994 January	109	0	7	0	0	0	116	110
February	109	0	7	0	0	0	116	110
March	109	0	7	0	0	0	116	110
April	109	0	7	0	0	0	116	110
May	109	Ö	7	Ö	Ō	Ö	116	110
June	109	0	7	0	0	Ö	116	110
	109	0	7	0	0	0	116	110
July	109	0	7	0	0	0		
August		-		-	-		116	110
September	109	0	7	0	0	0	116	110
October	109	0	7	0	0	0	116	110
November	109	0	7	0	0	0	116	110
December	109	0	7	0	0	0	116	110
1995 January	109	0	7	0	0	0	116	110
February	109	0	7	0	0	0	116	110
March	109	Ö	7	Ö	Ō	Ö	116	110
April	109	Õ	7	0	Ö	Õ	116	110
May	109	0	7	0	0	0	116	110
	109	0	7	0	0	0	116	110
June								
July	109	0	7	0	0	0	116	110
August	109	0	7	0	0	0	116	110
September	109	0	7	0	0	0	116	110
October	109	0	7	0	0	0	116	110
November	109	1	6	0	0	0	116	110
December	109	1	6	0	0	0	116	110
1996 January	109	1	6	0	0	0	116	110

Note: Geographic coverage is the 50 States and the District of Columbia. Sources: See end of section.

 <sup>&</sup>lt;sup>a</sup> See Note 1 at end of section.
 <sup>b</sup> See Note 2 at end of section.
 <sup>c</sup> Net design electrical rating (DER) is used because many of the units were canceled prior to being assigned a net summer capability. See Note 3

# **Nuclear Energy Notes**

1. Operable Units: Nuclear generating units that have been issued a full-power license by the Nuclear Regulatory Commission (NRC).

**Exceptions:** The Shippingport (60 megawatts (MW)) and the Hanford-N (840 MW) nuclear units were included in the operable units until 1982 and 1988, respectively. The Shippingport unit was excluded from the operable category during March 1974-October 1977 due to a major core modification outage. Hanford-N, an unlicensed unit used for defense materiel production, was included in the operable category because power was produced as by-product and sold commercially. Three Mile Island 2 (880 MW) experienced a major accident in 1979 and, although that unit still retains its operating license and site cleanup continues, there is no plan to restart it. Therefore, it has not been included in the operable category since March 1979. Although Shoreham received a full-power license in April 1989, the unit is not currently scheduled to operate and, therefore, has not been included in the operable category. Rancho Seco (873 MW) was shut down by the Sacramento Municipal Utility District (SMUD) in June 1989 following a referendum on its continued operation. Because there are currently no plans to operate it as a nuclear unit, it is no longer included as an operable unit but is identified as a unit shut down for an extended period. As soon as SMUD and the NRC formalize the plant's official retirement, it will be noted as such in this report. The Department of Energy-operated Experimental Breeder Reactor 2 unit is not a commercial reactor and is therefore not included in the operable category.

In addition, nine units have been retired and therefore removed from the operable category. Those units are: Peach Bottom 1 (40 MW) and Indian Point 1 (265 MW), both retired in 1974; Humboldt Bay (65 MW), officially retired in 1976; Dresden 1 (200 MW), retired in October 1979; LaCrosse (51 MW), retired in May 1987; Fort Saint Vrain (217 MW), retired in October 1989; Yankee Rowe 1 (185 MW), retired in February 1992; San Onofre 1 (436 MW), retired in December 1992; and Trojan (1,104 MW), retired in January 1993.

- 2. In Startup: The period of time between a nuclear generating unit's initial fuel loading date and the issuance of its full-power license. During that period, the unit is undergoing low-power testing and the maximum level of operation is 5 percent of the unit's design thermal rating.
- **3. Capacity:** Nuclear generating units may have more than one type of net capacity rating, including the following:
- (a) Net Summer Capability—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.
- 4. Monthly Capacity Factors: The monthly capacity factors are computed as the actual monthly generation divided by the maximum possible generation for that month. The maximum possible generation is the number of hours in the month multiplied by the net summer capability at the end of the month. That fraction is then multiplied by 100 to obtain a percentage. Annual capacity factors are averages of the monthly values for that year.

## Sources for Table 8.1

### **Operable Units**

**1973-1982:** U.S. Department of Energy (DOE), Office of Nuclear Programs, "U.S. Central Station Nuclear Electric Generating Units: Significant Milestones." **1983 forward:** Nuclear Regulatory Commission (NRC), "Licensed Operating Reactors" (NUREG-0020).

### **Nuclear Electricity Net Generation**

Table 7.1.

# **Nuclear Portion of Domestic Electricity Net Generation**

Calculated from data in Table 7.1.

### **Net Summer Capability of Operable Units**

**1973-1982:** Compiled from various sources, primarily DOE, Office of Nuclear Reactor Programs, "U.S. Central Station Nuclear Electric Generating Units: Significant Milestones."

**1983 forward:** Energy Information Administration (EIA), Form EIA-860, "Annual Electric Generator Report," and monthly updates as appropriate.

### **Capacity Factor**

EIA, Office of Coal, Nuclear, Electric and Alternate Fuels.

#### Sources for Table 8.2

### **Licensed for Operation**

1973-1982: U.S. Department of Energy (DOE), Office of Nuclear Programs, "U.S. Central Station

Nuclear Electric Generating Units: Significant Milestones."

**1983 forward:** Nuclear Regulatory Commission (NRC), "Licensed Operating Reactors" (NUREG-0020).

# Construction Permits, On Order, and Announced

1973-1982: Compiled from various sources, primarily DOE, Office of Nuclear Reactor Programs, "U.S. Central Station Nuclear Electric Generating Units: Significant Milestones"; Energy Information Administration (EIA), Office of Coal, Nuclear, Electric and Alternate Fuels (CNEAF), "Nuclear Steam-Electric Units That Have Been in Operation as of 1957-1989"; EIA, CNEAF, "Nuclear Plant Cancellations: Causes, Costs, and Consequences"; and Utility Data Institute, Inc., "U.S. Nuclear Plant Statistics, 1987.

1983 forward: NRC, "Summary Information Report"

(NUREG-0871); NRC, "Licensed Operating Reactors" (NUREG-0020); and various journals.

### **Total Design Capacity**

1973-1982: Compiled from various sources, primarily DOE, Office of Nuclear Reactor Programs, "U.S. Central Station Nuclear Electric Generating Units: Significant Milestones"; EIA, CNEAF, "Nuclear Steam-Electric Units That Have Been in Operation as of 1957-1987"; EIA, CNEAF, "Monthly Report for Electric Utilities-Power Generation"; EIA, CNEAF, "Nuclear Plant Cancellations: Causes, Costs, and Consequences"; and Utility Data Institute, Inc., "U.S. Nuclear Plant Statistics, 1987."

**1983 forward:** NRC, "Summary Information Report" (NUREG-0871); NRC, "Licensed Operating Reactors" (NUREG-0020); and EIA, Form EIA-860, "Annual Electric Generator Report."

# Section 9. Energy Prices

**Crude Oil.** The average price of domestic crude oil purchased at the wellhead was \$15.43 per barrel in January 1996, 10 percent higher than the level in January 1995. The refiner acquisition cost of imported crude oil in January 1996 was \$17.40 per barrel, 5 percent higher than the January 1995 level. The average cost of domestic crude oil in January 1996 was \$17.96, 9 percent higher than the January 1995 average.

**Motor Gasoline.** The national city average retail price of unleaded regular gasoline at all types of stations was \$1.12 per gallon in February 1996, slightly higher than the price in February 1995. The price of unleaded premium gasoline averaged \$1.31 per gallon in February 1996, slightly lower than the price in February 1995.

**Residual Fuel Oil.** The average price, excluding taxes, of residual fuel oil sold to end users in January 1996 was 47 cents per gallon, 10 percent higher than the previous month's price and 17 percent above the January 1995 average. The average resale price, excluding taxes, of residual fuel oil in January 1996 was 45 cents per gallon, 11 percent higher than the previous month's average and 25 percent higher than the price 1 year earlier.

**Aviation Fuel.** The average price, excluding taxes, of aviation gasoline sold to end users in January 1996 was 98 cents per gallon, 2 percent higher than the previous month's price but 2 percent lower than the January 1995 price. The average price, excluding taxes, of kerosene-type jet fuel sold to end users in January 1996 was 61 cents per gallon, 3 percent higher than the previous month's price and 17 percent higher than the January 1995 average price.

No. 2 Distillate Fuel Oil. The January 1996 national average price, excluding taxes, of heating oil sold to residential customers was 95 cents per gallon, 4 percent higher than the previous month's price and 8 percent higher than the price 1 year earlier. The average price of No. 2 fuel oil sold to all end users was 63 cents per gallon in January 1996, 1 percent higher than the December 1995 price and 12 percent higher than the January 1995 price.

**Electricity**. The average price of electricity sold to all ultimate consumers in the United States in January 1996 was

6.63 cents per kilowatthour, slightly higher than the January 1995 mean price. The price of electricity sold to residential consumers in January 1996 averaged 7.79 cents per kilowatthour, 1 percent lower than the January 1995 price. The price of electricity sold to commercial consumers averaged 7.33 cents per kilowatthour in January 1996, slightly lower than the January 1995 price. The price of electricity sold to industrial users in January 1996 averaged 6.48 cents per kilowatthour, slightly lower than the January 1995 price. The price of electricity sold to other consumers was 6.48 cents per kilowatthour, slightly higher than the price 1 year earlier.

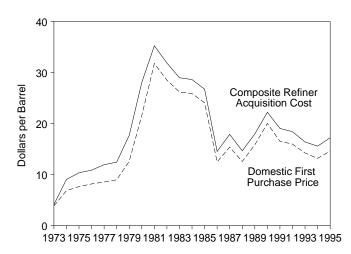
Beginning with January 1986, new series of national average price estimates were based on a statistically derived sample of both publicly and privately owned electric utilities. Previously, average price estimates were derived from selected privately owned electric utilities and were not national averages.

**Natural Gas.** The estimated average wellhead price of natural gas for January 1996 was \$2.20 per thousand cubic feet, 33 percent above the January 1995 price.

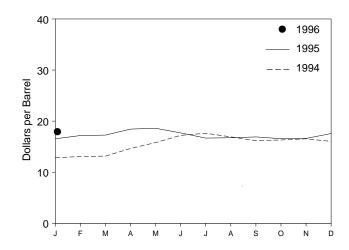
The average price of natural gas delivered to electric utility plants was \$2.58 per thousand cubic feet in December 1995 (latest date for which data are available) 19 percent above the December 1994 price. The average price of natural gas used by residential consumers in January 1996 was \$5.61 per thousand cubic feet, 4 percent lower than the January 1995 price. The average price of natural gas used by commercial consumers in January 1996 was \$5.19 per thousand cubic feet, less than 1 percent lower than the January 1995 price. The average price of natural gas used by industrial consumers in January 1996 was \$3.32 per thousand cubic feet, 13 percent above the January 1995 price.

Figure 9.1 Petroleum Prices

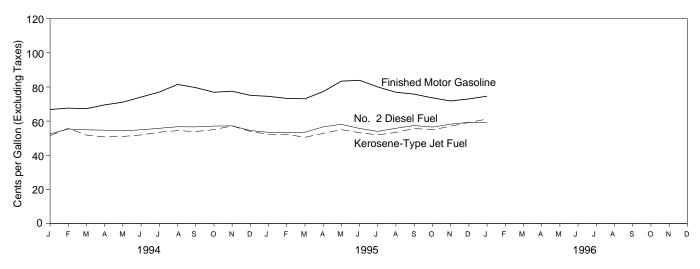
# Crude Oil Prices, 1973-1995



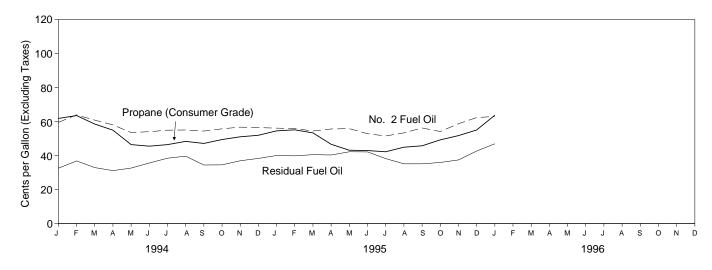
# Composite Refiner Acquisition Cost, Monthly



Refiner Prices to End Users: Motor Gasoline, Diesel Fuel, and Jet Fuel, Monthly



Refiner Prices to End Users: No. 2 Fuel Oil, Propane, and Residual Fuel, Monthly



Sources: Tables 9.1, 9.5, and 9.7.

Table 9.1 Crude Oil Price Summary

(Dollars per Barrel)

				Re	efiner Acquisition Co	st <sup>a</sup>
	Domestic First Purchase Price <sup>b</sup>	F.O.B. Cost of Imports <sup>C</sup>	Landed Cost of Imports <sup>d</sup>	Domestic	Imported	Composite
1973 Average	3.89	e <b>5.21</b>	e <b>6.41</b>	E 4.17	<sup>E</sup> 4.08	E 4.15
974 Average	6.87	10.91	12.32	7.18	12.52	9.07
975 Average	7.67	11.18	12.70	8.39	13.93	10.38
976 Average	8.19	12.15	13.32	8.84	13.48	10.89
977 Average	8.57	13.24	14.36	9.55	14.53	11.96
978 Average	9.00	13.29	14.35	10.61	14.57	12.46
979 Average	12.64	20.07	21.45	14.27	21.67	17.72
980 Average	21.59	32.37	33.67	24.23	33.89	28.07
981 Average	31.77	35.15	36.47	34.33	37.05	35.24
	28.52	32.02	33.18	31.22	33.55	31.87
982 Average	26.19	27.81	28.93	28.87	29.30	28.99
983 Average	25.88	27.60	28.54	28.53	29.30 28.88	28.63
984 Average						
985 Average	24.09	25.84	26.67	26.66	26.99	26.75
986 Average	12.51	12.52	13.49	14.82	14.00	14.55
987 Average	15.40	16.69	17.65	17.76	18.13	17.90
988 Average	12.58	13.25	14.08	14.74	14.56	14.67
989 Average	15.86	16.89	17.68	17.87	18.08	17.97
990 Average	20.03	20.37	21.13	22.59	21.76	22.22
991 Average	16.54	16.89	18.02	19.33	18.70	19.06
992 Average	15.99	16.77	17.75	18.63	18.20	18.43
993 Average	14.25	14.71	15.72	16.67	16.14	16.41
994 January	10.49	12.07	12.74	12.73	12.93	12.83
February	10.71	12.05	12.71	13.24	12.90	13.07
March	10.94	12.38	13.00	13.14	13.18	13.16
April	12.31	13.55	14.30	14.74	14.54	14.64
May	14.02	14.67	15.62	15.86	15.74	15.80
June	14.93	15.44	16.51	17.38	17.04	17.21
July	15.34	16.10	17.15	17.74	17.52	17.62
August	14.50	14.94	16.07	17.22	16.66	16.92
September	13.62	14.32	15.47	16.46	15.91	16.18
October	13.84	14.74	15.66	16.35	16.27	16.31
November	14.14	14.88	15.98	16.63	16.46	16.54
December	13.43	14.46	15.61	16.22	15.78	16.03
Average	13.19	14.18	15.18	15.67	15.51	15.59
995 January	14.00	15.08	16.23	16.52	16.56	16.54
February	14.69	15.63	16.73	17.16	17.21	17.18
March	14.68	15.88	17.04	17.31	17.22	17.27
April	15.84	17.28	18.26	18.20	18.73	18.44
May	15.85	17.30	18.18	18.68	18.51	18.60
June	15.02	15.91	17.07	17.94	17.44	17.69
July	14.01	14.82	15.94	16.85	16.50	16.68
August	14.13	15.05	16.10	16.96	16.54	16.75
September	14.49	15.24	16.38	17.12	16.71	16.75
		14.68	15.87			
October	13.68		R 16.30	16.82	16.30	16.56
November	14.03	R 15.31		16.73	16.50	16.61
December Average	15.02 <b>14.62</b>	<sup>R</sup> 16.13 <sup>R</sup> <b>15.70</b>	<sup>R</sup> 17.10 <sup>R</sup> <b>16.78</b>	17.55 <b>17.33</b>	<sup>R</sup> 17.58 <sup>R</sup> <b>17.14</b>	<sup>R</sup> 17.57 <sup>R</sup> <b>17.24</b>
<b>996</b> January	15.43	15.91	17.10	17.96	17.40	17.68

a See Note 4 at end of section.b See Note 1 at end of section.

R=Revised data. E=Estimate.

Notes: • Values for Domestic First Purchase Price and Refiner Acquisition

Cost for the current month and for F.O.B. and Landed Costs of Imports for the current 2 months are preliminary. • F.O.B. and landed costs through 1980 reflect the period of reporting; prices since then reflect the period of loading. • Annual averages are the averages of the monthly prices, weighted by volume. • Geographic coverage is the 50 States, the District of Columbia, Puerto Rico the Virgin Islands, and all LLS. Territories and Possessions Puerto Rico, the Virgin Islands, and all U.S. Territories and Possessions. Sources: See end of section.

<sup>&</sup>lt;sup>c</sup> See Note 2 at end of section.

d See Note 3 at end of section.

<sup>&</sup>lt;sup>e</sup> Based on October, November, and December data only.

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

(Dollars per Barrel)

	(2011010	por Barro	,								
	Algeria	Indonesia	<b>Iran</b> a	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela	Other Countries	Arab OPEC <sup>b</sup>	Total OPEC <sup>c</sup>
1973 Average <sup>d</sup>	7.23	5.67	4.24	NA	7.81	3.25	NA	5.39	4.84	4.06	5.43
1974 Average	13.23	11.99	10.85	W	12.44	10.17	NA NA	10.71	10.02	10.96	11.33
1975 Average	11.93	12.55	10.81	11.44	11.82	10.17	NA NA	11.04	10.86	11.18	11.34
1976 Average	13.05	12.76	11.61	12.22	13.08	11.62	Ŵ	11.39	11.92	12.06	12.23
1977 Average	14.35	13.57	12.68	13.42	14.44	12.38	14.11	12.63	13.19	13.13	13.29
1978 Average	14.12	13.61	12.65	13.24	14.05	12.70	13.82	12.38	13.35	13.28	13.31
1979 Average	20.53	19.03	22.93	20.27	21.69	17.28	21.70	16.90	21.10	19.27	19.88
1980 Average	36.67	32.17	NA	31.06	35.93	28.17	34.36	24.81	34.34	31.57	32.21
1981 Average	39.08	35.62	( <sup>e</sup> )	33.01	38.31	32.60	36.06	28.95	36.69	34.79	35.17
1982 Average	34.20	35.11	30.97	28.08	35.13	33.73	33.42	23.74	31.96	33.84	33.48
1983 Average	30.09	29.92	28.39	25.20	29.81	27.53	29.91	21.48	27.96	28.28	28.46
1984 Average	28.34	29.13	27.42	26.39	29.51	27.67	28.87	24.23	27.79	27.79	27.79
1985 Average	26.89	27.12	W	25.33	28.04	22.04	27.64	23.64	26.12	24.34	25.67
1986 Average	13.62	13.19	W	11.84	14.35	11.36	13.84	10.92	13.32	11.59	12.21
1987 Average	16.79	17.40	W	16.36	18.47	15.12	18.28	15.08	17.11	15.80	16.43
1988 Average	W	13.81	( <sup>e</sup> )	12.18	15.16	12.16	14.80	12.96	13.45	12.57	13.43
1989 Average	W	17.01	(e)	15.96	18.31	16.29	17.89	16.09	17.12	16.72	17.06
1990 Average	W	21.29	(e)	19.26	22.46	20.36	23.43	19.55	19.88	18.84	20.40
1991 Average	W	18.69	15.58	15.37	20.29	14.62	20.81	14.91	17.79	15.59	16.99
1992 Average	W	17.06	( <sup>e</sup> )	15.26	19.98	15.85	19.61	14.39	17.65	16.50	16.87
1993 Average	W	17.13	( e )	13.74	17.79	13.77	16.64	12.46	15.17	14.25	14.78
1994 January	W	W	( <sup>e</sup> )	11.26	15.02	10.29	W	10.93	12.16	10.73	12.35
February	( <sup>e</sup> )	14.46	(a)	11.44	14.00	12.81	W	10.35	12.16	12.19	11.96
March	W	W	(a)	11.68	14.27	14.19	13.68	11.09	12.36	13.70	12.58
April	W	13.52	(a)	12.88	15.65	14.91	W	11.81	13.73	14.53	13.75
May	( <sup>e</sup> )	15.26	(a)	13.67	16.77	15.59	15.77	12.80	15.23	15.72	14.73
June	W	15.91	(a)	15.02	17.32	14.83	16.53	13.21	16.11	15.21	15.24
July	W	17.56	(a)	15.70	18.02	W	17.29	14.28	16.71	14.76	15.76
August	W	W	(a)	14.57	16.69	14.14	16.70	12.31	15.95	14.09	14.29
September	( e )	W	(a)	13.51	16.35	14.80	15.41	12.09	15.44	14.82	13.91
October	(e)	W	(a) (a)	14.42	17.01	14.22	16.42	12.90	15.29	14.20	14.48
November	( )	W	(a) (a)	15.19	17.13	W	17.01	11.93	15.82	W	14.30
December	W	W		14.74	16.18	W	15.75	12.38	15.14	14.65	13.94
Average	W	15.57	(a)	13.68	16.32	14.12	15.66	12.21	14.68	14.05	14.00
1995 January	( e )	W	(a)	14.98	17.13	W	W	12.61	15.57	W	14.79
February	(e)	W	(a)	15.79	17.43	W	16.84	13.02	16.41	15.88	15.09
March	(e)	W	(a)	15.74	17.19	W	W	14.23	16.62	W	15.47
April	`w´	W	(a)	17.16	18.96	W	W	15.97	17.51	17.33	17.18
May	W	W	(a)	17.20	18.66	W	18.42	15.76	17.96	16.69	16.93
June	( e )	17.71	(a)	16.07	17.66	14.90	W	13.80	16.63	14.84	15.47
July	(e)	W	(a)	14.77	15.97	W	W	13.33	15.54	W	14.43
August	W	W	(a)	14.54	16.48	W	16.23	13.73	15.68	15.13	14.88
September	W	W	(a)	15.24	16.91	W	16.47	13.29	16.06	14.97	14.77
October	( e )	W	(a)	15.02	16.54	W	16.41	12.40	15.14	W	14.26
November	( e )	W	( a )	15.32	17.28	R 16.19	W	13.37	15.63	<sup>R</sup> 16.13	<sup>R</sup> 15.10
December	( e )	W	(a)	R 16.41	R 18.37	R 15.46	W	R 14.70	R 16.36	R 15.40	R 15.89
Average	W	17.13	(a)	<sup>R</sup> 15.65	<sup>R</sup> 17.40	<sup>R</sup> 15.77	R 16.99	R 13.89	R 16.27	<sup>R</sup> 15.74	R 15.38
1996 January	( <sup>e</sup> )	W	(a)	16.32	18.85	15.35	NA	14.33	16.04	15.17	15.69

<sup>&</sup>lt;sup>a</sup> Beginning with February 1994, data for Iran are no longer reported in the

Notes: • The Free on Board (F.O.B.) cost at the country of origin excludes all costs related to insurance and transportation. See Note 2 at end of

section. • Values for the current 2 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 coverage is the 50 States and the District of Columbia.

Sources: • October 1973-September 1977: Federal Energy Administration, Form FEA-F701-M-0, "Transfer Pricing Report." • October 1977-December 1977: Energy Information Administration (EIA), Form FEA-F701-M-0, "Transfer Pricing Report." • 1978 forward: EIA, Petroleum Marketing Monthly, April 1996, Table 24.

Petroleum Marketing Monthly.

b The Arab members of OPEC are Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and the United Arab Emirates.

<sup>&</sup>lt;sup>c</sup> Current members of OPEC are Gabon, Indonesia, Iran, Nigeria, and Venezuela, as well as the Arab members. Prior to 1993, Ecuador was also a member. The cost of imports from the Neutral Zone between Kuwait and Saudi Arabia is included in the cost of imports from "Total OPEC."

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

e No data reported.

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

Table 9.3 Landed Costs of Crude Oil Imports from Selected Countries

(Dollars per Barrel)

	(=	, po. ba										
							Saudi	United		Other	Arab	Total
	Algeria	Canada	Indonesia	Iran <sup>a</sup>	Mexico	Nigeria	Arabia	Kingdom	Venezuela	Countries	OPEC <sup>b</sup>	OPEC <sup>c</sup>
4070 Ad	0.00	<b>5</b> 00	7.00	0.40			5 o 7		<b>5.00</b>	0.00	<b>5</b> 00	0.05
1973 Average <sup>d</sup>	8.39 13.97	5.33 11.48	7.22 13.20	6.48 12.48	NA W	9.08 13.16	5.37 11.63	NA NA	5.99 11.25	6.99 12.93	5.92 12.39	6.85 12.49
1974 Average 1975 Average	12.86	12.84	13.20	12.40	12.61	12.70	12.50	NA NA	12.36	12.93	12.39	12.49
1976 Average	13.90	13.36	13.85	12.86	12.64	13.81	13.06	W	11.89	13.36	13.31	13.32
1977 Average	15.24	14.13	14.65	13.86	13.82	15.29	13.69	14.83	13.11	14.56	14.30	14.35
1978 Average	14.93	14.41	14.65	13.89	13.56	14.88	13.94	14.53	12.84	14.58	14.36	14.34
1979 Average	21.88	20.22	20.63	24.21	20.77	22.97	18.95	22.97	17.65	22.86	20.79	21.29
1980 Average	37.92	30.11	33.92	NA	31.77	37.15	29.80	35.68	25.92	36.15	32.97	33.56
1981 Average	40.46	32.32	37.31	(e)	33.70	39.66	34.20	37.29	29.91	38.54	36.22	36.60
1982 Average	35.35	27.15	36.70	32.46	28.63	36.16	34.99	34.25	24.93	34.03	35.15	34.81
1983 Average	31.26	25.63	31.57	29.81	25.78	30.85	29.27	30.87	22.94	29.68	29.87	29.84
1984 Average	29.06	26.56	30.87	28.70	26.85	30.36	29.20	29.45	25.19	29.21	29.10	29.06
1985 Average	27.51	25.71	28.67	25.79	25.63	28.96	24.72	28.36	24.43	27.33	25.90	26.86
1986 Average	14.82	13.43	14.63	12.38	12.17	15.29	12.84	14.63	11.52	14.25	13.14	13.46
1987 Average	17.87	17.04	18.49	18.28	16.69	19.32	16.81	18.78	15.76	18.30	17.32	17.64
1988 Average	W	13.50	15.15	W	12.58	15.88	13.37	15.82	13.66	14.45	13.60	14.18
1989 Average	19.13	16.81	18.35	(e)	16.35	19.19	17.34	18.74	16.78	18.08	17.41	17.78
1990 Average	W	20.48	22.50	( e )	19.64	23.33	21.82	22.65	20.31	20.52	20.64	21.23
1991 Average	W W	17.16 17.04	20.20 18.76	17.54 ( <sup>e</sup> )	15.89 15.60	21.39 20.78	17.22 17.48	21.37 20.63	15.92 15.13	19.73 19.25	17.45 17.63	18.08 17.81
1992 Average 1993 Average	17.34	15.27	18.55	(e)	14.11	18.73	15.40	20.63 17.92	13.13	16.44	15.28	15.68
1995 Average	17.54	13.27	10.55	( )	17.11	10.73	13.40	17.32	13.33	10.44	13.20	13.00
1994 January	W	12.13	W	( e )	11.61	15.76	11.66	14.98	11.78	13.52	11.86	12.94
February	( e )	12.05	16.17	(a)	11.73	14.68	12.32	15.40	11.12	13.60	12.24	12.59
March	W	11.92	W	(a)	11.97	15.13	13.31	14.67	11.87	13.33	12.85	13.05
April	W	13.43	15.08	(a)	13.23	16.46	14.30	15.31	12.72	15.09	14.21	14.47
May	( e )	15.25	16.42	(a)	14.10	17.36	15.81	16.33	13.53	16.48	15.72	15.62
June	W	16.45 17.53	17.00 18.41	(a) (a)	15.44	18.21 18.74	16.60 16.81	17.40 17.96	14.15 15.02	17.18	16.58 16.86	16.48 16.88
July	W	16.51	19.96	(a)	16.17 14.97	17.78	15.68	17.96	13.24	17.73 16.92	15.72	15.69
August September	W	15.50	W	(a)	14.04	17.78	15.62	16.62	13.24	16.38	15.72	15.25
October	W	15.54	W	( ) (a)	14.82	17.85	15.41	17.06	13.85	16.28	15.34	15.51
November	W	16.06	W	(a)	15.61	18.04	15.85	17.19	13.03	16.97	15.84	15.63
December	W	15.41	16.99	(a)	15.56	17.24	15.56	16.84	13.50	16.45	15.56	15.34
Average	W	14.83	16.91	(a)	14.09	17.21	15.11	16.64	13.12	15.95	15.02	15.08
1995 January	W	16.03	W	(a)	15.52	17.64	16.66	17.35	13.66	16.94	16.65	16.14
February	W	16.74	W	( a )	16.23	18.24	17.11	17.33	14.01	17.57	17.03	16.49
March	W	16.88	18.78	(a)	16.34	18.13	17.41	18.00	15.29	17.78	17.33	16.86
April	W	18.27	W	(a)	17.56	19.82	18.45	18.53	16.95	18.55	18.41	18.34
May	W	18.44	W	ìa΄,	17.69	19.45	17.71	19.16	16.68	18.86	17.70	17.90
June	( e )	17.28	18.98	(a)	16.58	18.74	16.39	18.71	14.85	17.96	16.41	16.62
July	`W	16.33	17.27	(a)	15.28	17.29	15.73	17.44	14.21	16.72	15.74	15.69
August	W	16.35	17.47	(a)	15.12	17.39	16.16	17.28	14.68	16.68	16.12	16.04
September	W	16.37	W	(a)	15.74	17.86	16.35	17.44	14.28	17.12	16.35	16.22
October	W	15.37	W	(a)	15.61	17.49	16.03	17.31	13.33	16.73	15.98	15.61
November	( e )	15.37	W	(a)	15.90	17.98	R 17.00	17.28	14.19	16.96	R 16.87	R 16.35
December	( e )	R 16.07	W	(a)	R 17.08	R 19.09	R 16.92	R 18.74	R 15.48	R 17.88	R 16.83	R 17.01
Average	W	16.64	<sup>R</sup> 18.43	( <sup>a</sup> )	<sup>R</sup> 16.20	<sup>R</sup> 18.25	<sup>R</sup> 16.84	<sup>R</sup> 17.95	14.84	<sup>R</sup> 17.49	<sup>R</sup> 16.79	16.62
1996 January	W	16.07	W	(a)	16.81	19.76	16.88	18.53	15.31	18.13	16.87	17.24

<sup>&</sup>lt;sup>a</sup> Beginning with February 1994, data for Iran are no longer reported in the

Notes: • See Note 3 at end of section. • Values for the current 2 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 coverage is the 50 States and the District of Columbia.

Sources: • October 1973-September 1977: Federal Energy Administration, Form FEA-F701-M-0, "Transfer Pricing Report." • October 1977-December 1977: Energy Information Administration (EIA), Form FEA-F701-M-0, "Transfer Pricing Report." • 1978 forward: EIA, Petroleum Marketing Monthly, April 1996, Table 25.

Petroleum Marketing Monthly.

b The Arab members of OPEC are Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and the United Arab Emirates.

<sup>&</sup>lt;sup>c</sup> Current members of OPEC are Gabon, Indonesia, Iran, Nigeria, and Venezuela, as well as the Arab members. Prior to 1993, Ecuador was also a member. The cost of imports from the Neutral Zone between Kuwait and Saudi Arabia is included in the cost of imports from "Total OPEC."

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

e No data reported.

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

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

973 Average 974 Average 975 Average 976 Average 977 Average 978 Average 979 Average 980 Average 981 Average 982 Average 983 Average 984 Average 985 Average 986 Average 987 Average 987 Average 998 Average 997 Average 998 Average 998 Average 999 Average 999 Average 991 Average 991 Average 993 Average	38.8 53.2 56.7 59.0 62.2 62.6 85.7	NA NA NA 61.4 65.6	NA NA NA	NA NA
974 Average 975 Average 976 Average 977 Average 977 Average 979 Average 980 Average 981 Average 983 Average 984 Average 985 Average 986 Average 987 Average 987 Average 998 Average 998 Average 998 Average 999 Average 999 Average 999 Average 999 Average	53.2 56.7 59.0 62.2 62.6	NA NA 61.4	NA	NA
975 Average 976 Average 977 Average 978 Average 979 Average 980 Average 981 Average 982 Average 985 Average 985 Average 986 Average 987 Average 998 Average 9998 Average 9990 Average 991 Average 992 Average	56.7 59.0 62.2 62.6	NA 61.4		
976 Average 977 Average 978 Average 979 Average 980 Average 981 Average 981 Average 983 Average 985 Average 985 Average 986 Average 987 Average 988 Average 999 Average 990 Average 991 Average 992 Average	59.0 62.2 62.6	61.4		NA
977 Average	62.2 62.6		NA	NA NA
978 Average	62.6		NA NA	NA NA
079 Average         980 Average         981 Average         982 Average         983 Average         984 Average         985 Average         986 Average         987 Average         988 Average         999 Average         991 Average         992 Average         993 Average         993 Average         993 Average		67.0	NA NA	65.2
180 Average 181 Average 182 Average 183 Average 184 Average 185 Average 186 Average 187 Average 188 Average 189 Average 199 Average 191 Average 192 Average 193 Average	65. <i>1</i>	90.3	NA NA	88.2
981 Average b	440.4	****		
082 Average	119.1	124.5	NA <sup>ℂ</sup> 147.0	122.1
183 Average	131.1	137.8		135.3
984 Average	122.2	129.6	141.5	128.1
185 Average	115.7	124.1	138.3	122.5
086 Average	112.9	121.2	136.6	119.8
187 Average 188 Average 189 Average 190 Average 191 Average 192 Average 193 Average	111.5	120.2	134.0	119.6
188 Average 189 Average 190 Average 191 Average 192 Average 193 Average	85.7	92.7	108.5	93.1
989 Average 990 Average 991 Average 992 Average 993 Average	89.7	94.8	109.3	95.7
990 Average 991 Average 992 Average 993 Average	89.9	94.6	110.7	96.3
990 Average 991 Average 992 Average 993 Average	99.8	102.1	119.7	106.0
991 Average 992 Average 993 Average	114.9	116.4	134.9	121.7
992 Average 993 Average	NA	114.0	132.1	119.6
993 Average	NA	112.7	131.6	119.0
204 January	NA	110.8	130.2	117.3
<b>994</b> January	NA	104.3	124.0	110.9
February	NA	105.1	124.5	111.4
March	NA	104.5	124.3	110.9
April	NA	106.4	126.0	112.8
May	NA	108.0	127.4	114.3
June	NA NA	110.6	130.0	116.7
July	NA	113.6	132.7	119.9
August	NA	118.2	136.7	124.3
September	NA	117.7	136.4	123.7
October	NA	115.2	134.5	121.2
November	NA	116.3	135.4	122.2
December	NA	114.3	133.7	120.3
Average	NA	111.2	130.5	117.4
995 January	NA	112.9	132.4	119.0
February	NA	112.0	131.6	118.1
March	NA	111.5	130.6	117.3
April	NA	114.0	132.5	119.7
May	NA	120.0	138.3	125.6
June	NA	122.6	141.1	128.1
July	NA	119.5	138.4	125.2
August	NA	116.4	135.2	122.2
September	NA	114.8	133.2	120.6
October	NA	112.7	131.5	118.5
November	NA NA	110.1	129.2	116.1
December	NA NA	110.1	129.0	116.0
Average				
96 January February	NA	114.7	133.6	120.5

<sup>&</sup>lt;sup>a</sup> Also includes types of motor gasoline not shown separately.

NA=Not available.

Notes: • See Note 5 at end of section. • Geographic coverage for

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

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 Energy Information Administration as the simple averages of monthly data.

b 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 more heavily.

<sup>c</sup> Based on September through December data only.

Table 9.5 Refiner Prices of Residual Fuel Oil

	Sulfur Co	I 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
1978 Average	29.3	31.4	24.5	27.5	26.3	29.8
1979 Average	45.0	46.8	36.6	38.9	39.9	43.6
1980 Average	60.8	67.5	47.9	52.3	52.8	60.7
1981 Average	74.8	82.9	62.2	67.3	66.3	75.6
1982 Average	69.5	74.7	57.2	61.1	61.2	67.6
_	64.3	69.5	57.2 59.1	61.1	60.9	65.1
1983 Average	68.5	72.0	63.9	65.9	65.4	68.7
1984 Average	61.0	72.0 64.4	56.0	58.2	57.7	61.0
1985 Average						
1986 Average	32.8	37.2	28.9	31.7	30.5	34.3
1987 Average	41.2	44.7	36.2	39.6	38.5	42.3
1988 Average	33.3	37.2	27.1	30.0	30.0	33.4
1989 Average	40.7	43.6	33.1	34.4	36.0	38.5
1990 Average	47.2	50.5	37.2	40.0	41.3	44.4
1991 Average	36.4	40.2	29.2	30.6	31.4	34.0
1992 Average	35.1	38.9	28.6	31.2	30.8	33.6
1993 Average	33.7	39.7	25.6	30.3	29.3	33.7
1994 January	33.6	39.1	22.8	27.8	28.3	32.5
February	39.3	44.8	25.7	31.3	33.8	36.8
March	30.0	39.9	24.3	29.5	27.4	32.9
April	29.4	35.2	25.8	29.5	27.5	31.1
May	31.7	35.9	27.5	31.1	29.5	32.6
June	35.8	38.6	31.1	34.2	33.5	35.6
July	37.8	41.2	34.5	37.2	36.2	38.4
August	37.1	43.0	32.7	38.2	35.2	39.6
September	32.6	41.1	27.8	32.2	30.1	34.4
October	32.6	38.7	30.6	33.0	31.6	34.5
November	35.6	40.0	32.9	35.7	34.2	36.9
December	36.9	42.2	32.0	36.9	34.1	38.3
Average	34.5	40.1	28.7	33.0	31.7	35.2
1995 January	38.4	46.0	33.3	37.7	35.9	40.0
February	37.1	43.7	33.3	38.2	35.4	39.8
March	38.3	43.4	35.2	39.6	37.0	40.5
April	36.8	42.6	36.1	39.6	36.5	40.3
May	40.4	43.6	37.3	41.7	38.8	42.2
June	39.9	45.1	36.9	41.3	38.7	42.1
July	36.8	42.9	32.5	36.5	35.3	38.2
August	35.2	39.1	30.0	33.7	33.1	35.1
September	36.4	39.0	30.5	34.0	33.8	35.1
October	35.2	41.7	32.4	34.5	34.0	35.9
November	36.6	43.4	31.8	35.5	34.4	37.4
December	R 44.5	R 48.0	R 36.0	R 40.5	40.4	R 42.6
Average	38.1	R <b>43.4</b>	33.8	37.7	36.2	R <b>39.1</b>
1996 January	49.7	52.9	38.0	44.3	45.0	46.9

R=Revised data.

Notes: • Sales for resale are those made to purchasers other than ultimate consumers. Sales to end users are those made directly to ultimate consumers, including bulk consumers (such as agriculture, industry, and electric utilities) and commercial consumers. • Values for the current month

are preliminary. • Prices prior to 1983 are Energy Information Administration (EIA) estimates. See Note 6 at end of section. • Geographic coverage is the 50 States and the District of Columbia.

Source: EIA, Petroleum Marketing Monthly, April 1996, Table 19.

Table 9.6 Refiner Prices of Petroleum Products for Resale

	Finished Motor Gasoline <sup>a</sup>	Finished Aviation Gasoline	Kerosene- Type Jet Fuel	Kerosene	No. 2 Fuel Oil	No. 2 Diesel Fuel	Propane (Consumer Grade)
1978 Average	43.4	53.7	38.6	40.4	36.9	36.5	23.7
1979 Average	63.7	72.1	66.0	62.4	56.9	57.4	29.1
1980 Average	94.1	112.8	86.8	86.4	80.3	80.1	41.5
1981 Average	106.4	125.0	101.2	106.6	97.6	97.2	46.6
1982 Average	97.3	122.8	95.3	101.8	91.4	91.4	42.7
1983 Average	88.2	117.8	85.4	89.2	81.5	80.8	48.4
1984 Average	83.2	116.5	83.0	91.6	82.1	80.3	45.0
1985 Average	83.5	113.0	79.4	87.4	77.6	77.2	39.8
1986 Average	53.1	91.2	49.5	60.6	48.6	45.2	29.0
1987 Average	58.9	85.9	53.8	59.2	52.7	53.4	25.2
1988 Average	57.7	85.0	49.5	54.9	47.3	47.3	24.0
1989 Average	65.4	95.0	58.3	66.9	56.5	56.7	24.7
1990 Average	78.6	106.3	77.3	83.9	69.7	69.4	38.6
1991 Average	69.9	100.1	65.0	72.2	62.2	61.5	34.9
1992 Average	67.7	99.1	60.5	63.2	57.9	59.1	32.8
1993 Average	62.6	96.5	57.7	60.4	54.4	57.0	35.1
1994 January	52.2	87.1	52.9	65.7	50.7	49.1	32.3
February	54.6	87.8	56.0	73.5	54.2	52.8	34.0
March	54.9	87.4	52.5	59.9	49.7	52.9	31.8
April	57.9	89.5	50.9	55.1	48.9	52.3	30.4
	59.2	91.2	50.6	53.2	49.0	51.7	30.4
June	62.6	93.2	51.5	53.9	49.8	52.3	29.9
July	65.4	96.1	53.8	55.1	50.9	53.7	29.8
August	67.8	98.5	54.4	55.1	51.4	54.1	31.0
September	61.0	97.3	54.0	55.3	50.1	54.2	31.7
October	61.4	95.4	54.4	59.1	50.8	55.2	33.5
November	62.2	95.2	56.3	60.7	51.0	55.1	35.0
December	58.0	94.2	53.1	57.4	49.5	51.0	35.7
Average	59.9	93.3	53.4	61.8	50.6	52.9	32.4
1995 January	60.1	92.9	52.3	56.7	49.4	50.1	35.6
February	60.3	93.2	52.1	55.2	49.1	50.6	34.5
March	60.0	93.1	50.1	52.8	48.1	51.2	34.3
April	66.5	96.6	52.6	56.0	50.4	54.8	33.0
May	71.8	102.2	54.7	57.7	52.4	55.9	33.2
June	68.2	101.6	53.1	53.2	49.3	52.6	32.6
July	62.9	100.1	51.3	52.3	48.1	51.4	32.1
August	62.0	98.9	53.1	54.9	51.0	54.2	33.2
September	62.3	98.7	55.2	58.0	52.0	55.7	33.8
October	58.8	95.8	54.1	57.0	50.5	54.6	34.4
November	58.1	94.2	56.3	60.5	53.4	56.3	34.7
December	R 59.9	95.3	58.6	R 64.0	R 57.3	<sup>R</sup> 57.6	37.9
Average	62.6	97.5	53.9	58.0	51.1	53.8	34.4
1996 January	61.1	95.7	60.4	65.8	56.8	56.2	41.6

<sup>&</sup>lt;sup>a</sup> See Note 5 at end of section.

R=Revised data.

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

Source: EIA, Petroleum Marketing Monthly, April 1996, Table 4.

Table 9.7 Refiner Prices of Petroleum Products to End Users

	Finished Motor Gasoline <sup>a</sup>	Finished Aviation Gasoline	Kerosene- Type Jet Fuel	Kerosene	No. 2 Fuel Oil	No. 2 Diesel Fuel	Propane (Consumer Grade)
1978 Average	48.4	51.6	38.7	42.1	40.0	37.7	33.5
1979 Average	71.3	68.9	54.7	58.5	51.6	58.5	35.7
1980 Average	103.5	108.4	86.8	90.2	78.8	81.8	48.2
1981 Average	114.7	130.3	102.4	112.3	91.4	99.5	56.5
1982 Average	106.0	131.2	96.3	108.9	90.5	94.2	59.2
1983 Average	95.4	125.5	87.8	96.1	91.6	82.6	70.9
1984 Average	90.7	123.4	84.2	103.6	91.6	82.3	73.7
1985 Average	91.2	120.1	79.6	103.0	84.9	78.9	71.7
1986 Average	62.4	101.1	52.9	79.0	56.0	47.8	74.5
1987 Average	66.9	90.7	54.3	77.0	58.1	55.1	70.1
1988 Average	67.3	89.1	51.3	73.8	54.4	50.0	71.4
1989 Average	75.6	99.5	51.3 59.2	73.6 70.9	58.7	58.5	61.5
	88.3	112.0	76.6	92.3	73.4	72.5	74.5
1990 Average						64.8	
1991 Average	79.7	104.7	65.2	83.8	66.5		73.0
1992 Average	78.7	102.7	61.0	78.8	62.7	61.9	64.3
1993 Average	75.9	99.0	58.0	75.4	60.2	60.2	67.3
1994 January	66.8	88.6	51.5	79.5	59.5	52.5	61.8
February	67.6	88.4	55.7	84.1	63.9	55.4	63.5
March	67.3	89.0	51.8	78.2	60.8	54.9	58.5
April	69.5	91.3	50.7	69.7	58.0	54.7	54.9
May	71.1	92.3	51.0	55.2	53.5	54.3	46.4
June	74.1	95.6	51.9	54.5	54.0	54.9	45.5
July	77.0	97.4	53.5	60.4	54.9	55.8	46.4
August	81.5	101.7	54.4	57.8	55.0	56.7	48.3
September	79.6	101.1	53.9	58.3	54.4	56.6	47.1
October	76.9	100.0	55.0	61.5	55.7	57.1	49.4
November	77.5	100.0	57.2	64.0	56.7	57.2	51.0
December	75.1	99.2	53.9	64.7	56.4	54.5	51.9
Average	73.8	95.7	53.4	66.0	57.2	55.4	53.0
1995 January	74.5	99.6	52.3	67.4	56.1	53.4	54.5
February	73.3	99.8	52.2	62.7	55.9	53.3	55.1
March	73.1	99.0	50.5	59.4	54.4	53.5	53.3
April	77.3	101.3	52.8	56.1	55.6	56.6	46.6
May	83.4	105.8	55.0	51.8	55.8	58.1	43.1
June	83.9	106.4	53.2	54.9	52.8	55.7	42.9
	80.0	100.4	53.2 51.9	51.3	52.6 51.5	54.0	42.9
July	76.9	99.2	53.4		53.3		
August	76.9 75.8	99.2 101.3	53.4 55.7	53.3 57.3	53.3 56.2	55.8 57.4	44.9 45.7
September							
October	73.6	96.8	54.9 57.0	56.5	54.1	56.5	49.2
November	71.8	95.4	57.0	62.8	58.7	58.2	51.7
December	73.0	96.0	59.2	70.0	62.3	59.3	55.0
Average	76.5	100.5	54.0	58.9	55.8	56.0	49.2
1996 January	74.6	97.6	61.2	71.8	63.0	59.0	63.7

<sup>&</sup>lt;sup>a</sup> See Note 5 at end of section.

R=Revised data.

Notes: • Sales to end users are those made directly to ultimate consumers, including bulk consumers (such as agriculture, industry, and electric utilities) and residential and commercial consumers. Sales for resale are shown in Table 9.6; they are sales made to purchasers other than

ultimate consumers. • Values for the current month are preliminary. • Prices prior to 1983 are Energy Information Administration (EIA) estimates. See Note 6 at end of section. • Geographic coverage is the 50 States and the District of Columbia.

Source: EIA, Petroleum Marketing Monthly, April 1996, 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	48.6	50.3	50.8	48.8	50.7	50.1	50.1	49.6	48.8
979 Average	68.8	72.5	72.5	70.9	72.8	72.0	71.2	71.0	69.8
980 Average	96.3	100.4	101.5	97.8	101.1	98.3	98.2	97.9	96.4
981 Average	120.4	123.7	125.4	121.3	123.8	121.7	123.2	121.5	118.1
982 Average	115.5	117.4	120.1	117.6	120.1	118.3	120.5	117.4	113.7
983 Average	102.8	104.1	112.9	109.1	110.5	109.1	112.1	107.9	105.8
984 Average	103.9	108.4	111.9	111.6	111.4	112.1	115.5	111.0	107.9
985 Average	99.7	102.4	107.7	107.0	106.7	108.0	111.3	105.9	102.3
986 Average	74.4	75.9	86.6	82.1	82.8	89.0	91.1	90.2	81.4
987 Average	74.7	76.5	81.1	80.6	82.5	83.4	85.2	84.3	76.9
988 Average	77.7	78.2	82.6	82.1	83.6	85.3	86.3	84.8	77.8
989 Average	89.4	89.3	90.5	92.6	93.9	92.9	95.8	91.8	85.1
990 Average	98.9	102.8	107.0	108.4	108.6	109.8	112.5	108.7	102.6
991 Average	96.0	91.6	101.9	103.0	99.9	106.2	111.3	104.0	99.7
992 Average	87.1	85.6	92.1	92.5	91.2	94.7	102.8	93.9	89.0
993 Average	82.6	82.8	90.4	89.7	89.3	91.9	100.1	92.4	86.3
<b>994</b> January	83.8	80.4	88.8	88.4	87.3	90.2	97.2	91.7	87.7
February	90.4	86.6	92.3	91.3	91.4	93.8	101.7	94.8	92.5
March	85.9	83.6	91.0	88.3	89.4	92.1	100.3	93.9	90.4
April	80.8	78.2	88.3	86.0	85.1	89.4	96.4	90.7	86.2
May	76.8	75.4	86.7	85.1	83.3	85.4	96.3	85.4	83.7
June	75.6	73.1	84.6	83.7	82.3	86.1	96.8	83.5	80.1
July	75.6	71.8	83.0	82.1	81.6	84.2	93.9	82.9	75.7
August	78.0	72.8	83.8	78.7	84.0	79.7	89.1	85.9	77.9
September	78.5	72.9	83.3	81.1	84.7	80.5	90.8	85.4	79.1
October	77.5	74.0	83.9	83.0	84.4	83.7	92.9	86.8	80.2
November	77.7	73.7	84.3	83.6	85.8	84.0	93.3	88.6	81.4
December	77.5	77.3	85.3	84.2	87.2	86.1	94.6	89.6	82.0
Average	81.8	79.2	87.6	87.0	88.5	89.0	96.6	89.5	85.7
995 January	77.8	78.4	85.8	84.8	87.3	86.7	95.6	NA	83.1
February	77.4	78.5	85.9	84.9	87.3	87.8	97.0	NA	83.4
March	76.3	77.7	85.6	83.7	87.0	87.0	97.0	NA	82.3
April	76.7	76.6	84.8	83.3	86.5	85.2	94.8	NA	80.9
May	78.7	75.8	84.5	85.4	86.1	86.5	96.0	87.8	81.1
June	78.0	74.5	83.7	84.0	83.2	84.2	95.9	87.4	79.5
July	76.9	72.9	81.6	80.6	81.7	79.4	92.9	85.3	75.8
August	76.6	73.1	81.7	80.9	85.3	77.4	90.3	81.9	75.5
September	76.2	73.8	82.5	81.8	84.5	79.2	91.1	83.7	77.2
October	75.8	73.9	82.5	82.3	85.7	82.9	94.7	85.0	79.5
November	79.1	77.2	84.5	83.8	87.4	85.6	96.3	87.8	81.9
December	87.0	R 83.8	88.0	R 88.9	91.8	R 90.5	R 99.8	94.1	87.2
Average	78.7	77.9	85.3	84.7	87.3	R <b>86.3</b>	R <b>96.3</b>	89.9	82.6
<b>996</b> January	92.4	89.1	92.8	92.1	94.9	94.4	103.5	97.7	92.2

R=Revised data. NA=Not available.

Notes: • States are grouped in Tables 9.8a, 9.8b, and 9.8c by geographic region of the country. • Values for the current month are preliminary.

<sup>•</sup> Prices prior to 1983 are Energy Information Administration (EIA) estimates. See Note 6 at end of section.
Source: EIA, Petroleum Marketing Monthly, April 1996, Table 18.

Table 9.8b No. 2 Distillate Prices to Residences: Selected South Atlantic and Midwestern States

	Delaware	District of Columbia	Maryland	Virginia	West Virginia	Ohio	Michigan	Indiana	Illinois	Wisconsin	Minnesota
978 Average	47.8	50.7	49.2	49.1	46.2	47.4	47.9	48.5	46.5	44.7	47.8
979 Average	68.2	74.2	70.1	70.4	65.1	68.6	70.9	72.7	68.8	67.3	72.4
980 Average	95.4	102.6	97.9	98.5	92.2	91.9	97.8	99.6	95.8	91.5	99.9
981 Average	117.3	127.4	121.4	120.5	115.0	113.2	118.3	118.5	114.9	109.1	118.4
982 Average	111.3	124.5	117.1	117.7	109.3	110.2	113.9	114.3	110.9	107.8	115.1
983 Average	106.0	117.0	110.3	108.7	101.0	101.3	106.4	100.7	100.4	101.2	103.1
984 Average	109.6	118.7	113.5	110.5	102.1	102.1	105.0	103.1	100.1	101.0	104.1
985 Average	104.6	114.3	108.8	106.3	98.0	99.7	102.1	99.1	97.5	98.3	101.9
986 Average	85.0	93.1	91.4	86.6	74.6	77.7	81.0	74.8	NA	75.6	79.2
987 Average	79.3	91.8	86.6	79.5	76.4	74.7	77.5	75.4	79.8	75.1	74.6
988 Average	80.1	91.6	87.0	80.5	74.2	74.7	77.5	75.4	77.6	73.9	73.5
989 Average	88.2	98.6	93.8	87.0	83.0	81.6	85.3	83.2	80.9	81.1	82.4
990 Average	105.8	107.8	111.9	110.6	99.1	98.1	100.9	99.3	96.1	94.2	101.4
991 Average	99.7	112.2	108.4	101.1	93.4	91.0	94.2	91.8	92.7	89.5	91.1
992 Average	92.3	105.7	100.0	92.8	86.4	83.6	87.2	81.2	87.7	81.6	82.6
993 Average	89.9	104.5	98.1	89.3	85.6	84.0	87.2	81.0	84.4	82.3	83.2
<b>994</b> January	92.1	102.5	98.8	88.6	86.3	81.3	85.6	79.1	78.8	79.9	80.5
February	91.5	105.5	99.5	88.6	86.3	84.2	88.0	82.0	82.2	81.8	80.6
March	91.2	102.0	96.3	86.6	85.0	82.5	87.7	81.0	78.7	82.4	80.0
April	89.2	93.7	92.4	83.0	77.8	82.7	87.7	81.2	76.1	81.4	80.3
May	84.4	83.1	86.8	82.2	73.5	83.3	87.3	79.9	73.3	80.8	79.9
June	82.0	W	87.7	79.7	72.4	82.2	86.9	81.5	75.5	79.9	79.7
July	80.5	W	87.8	79.6	72.9	76.8	87.7	80.0	75.3	81.4	79.8
August	82.3	81.9	86.0	80.5	74.8	76.0	84.3	81.6	77.2	79.1	80.8
September	83.1	86.2	87.8	80.4	76.2	79.9	84.2	82.6	76.6	79.8	81.2
October	84.9	95.5	90.0	82.3	79.3	79.8	85.2	81.7	77.6	80.7	81.4
November	86.0	97.7	92.4	84.1	81.4	79.8	85.9	81.2	80.8	80.9	81.2
December	86.1	101.3	94.3	84.8	81.3	81.1	86.1	82.4	80.4	81.2	80.3
Average	89.4	100.0	95.0	85.3	80.9	81.2	86.3	81.2	78.4	81.1	80.6
<b>995</b> January	88.5	102.4	94.2	84.9	82.1	81.2	86.2	81.7	82.0	81.1	80.1
February	88.6	103.4	95.0	84.6	82.3	80.9	85.8	80.1	80.8	80.3	79.1
March	87.6	103.3	94.2	84.0	81.4	80.4	85.7	82.3	76.6	80.4	80.4
April	87.0	100.0	91.3	84.0	80.2	81.9	86.3	82.7	81.5	81.1	80.5
May	85.2	93.3	89.6	83.0	76.2	80.8	86.1	83.9	81.6	81.5	80.5
June	83.2	NA	86.7	82.3	77.3	78.8	83.5	83.7	77.0	81.3	77.3
July	80.0	85.1	83.2	81.2	75.3	76.6	82.0	82.0	76.6	81.0	76.5
August	82.2	W	82.6	80.8	74.3	72.6	82.1	79.3	72.9	78.5	77.3
September	82.4	86.1	85.5	81.6	76.0	77.5	84.5	81.0	75.6	80.7	79.5
October	83.1	NA	89.5	82.5	77.1	79.0	83.9	82.1	74.6	80.4	80.1
November	84.5	100.2	93.1	83.8	81.6	81.7	86.9	79.3	78.9	81.6	80.5
December	<sup>R</sup> 89.5	103.8	<sup>R</sup> 98.5	<sup>R</sup> 88.1	R 89.4	84.0	88.7	83.7	82.9	82.9	81.8
Average	<sup>R</sup> <b>87.0</b>	101.0	93.6	84.4	<sup>R</sup> <b>81.4</b>	80.8	86.1	81.7	78.7	81.2	80.1
996 January	94.1	111.7	104.0	91.3	91.3	85.5	89.1	85.0	84.4	83.1	82.5

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

Source: EIA, *Petroleum Marketing Monthly,* April 1996, Table 18.

Notes: • States are grouped in Tables 9.8a, 9.8b, and 9.8c by geographic region of the country. • Values for the current month are preliminary.

Prices prior to 1983 are Energy Information Administration (EIA) estimates.
 See Note 6 at end of section.

Table 9.8c No. 2 Distillate Prices to Residences: Selected Western States and U.S. Average

	Idaho	Washington	Oregon	Alaska	U.S. Average
	Iddilo	Washington	Oregon	Alaska	Avelage
978 Average	43.6	48.6	45.8	53.2	49.0
979 Average	62.1	69.7	68.0	68.2	70.4
980 Average	91.6	100.8	97.3	97.8	97.4
981 Average	110.4	116.5	111.4	118.0	119.4
_		117.6	111.6	117.4	116.0
982 Average	110.4 101.8	109.0	103.6	108.8	107.8
983 Average					
984 Average	98.5	102.6	99.3	106.9	109.1
985 Average	97.2	101.1	97.1	108.3	105.3
986 Average	73.8	77.5	70.4	94.9	83.6
987 Average	68.8	79.5	72.5	86.5	80.3
988 Average	68.8	78.5	70.9	86.9	81.3
989 Average	77.8	87.4	80.2	96.4	90.0
990 Average	97.4	102.9	97.0	110.1	106.3
991 Average	95.1	101.6	93.3	105.0	101.9
992 Average	85.7	94.0	87.6	94.1	93.4
993 Average	86.2	99.9	91.8	96.1	91.1
<b>194</b> January	73.2	92.8	86.0	88.8	89.6
February	73.7	96.3	88.3	88.6	92.9
March	77.4	97.1	88.4	89.2	91.4
April	76.2	97.5	88.1	88.6	88.2
May	76.9	96.2	87.6	90.0	86.1
June	72.8	93.1	85.1	87.7	85.2
July	74.6	NA	82.5	88.2	82.7
August	80.8	NA NA	NA	80.8	82.1
	83.1	90.2	87.8	83.4	83.2
September		96.2	91.1	85.1	84.7
October	85.8				
November	84.8	99.0	91.6	86.6	85.7
December	84.6	97.3	89.4	84.7	86.8
Average	78.9	95.0	88.7	86.5	88.4
995 January	80.3	95.4	88.5	83.5	87.4
February	79.7	94.8	87.0	84.0	87.9
March	80.0	94.5	88.8	84.2	87.4
April	81.0	NA	90.4	82.8	86.2
May	83.2	NA	91.5	82.3	86.4
June	82.8	NA	89.9	82.7	84.7
July	82.9	94.0	NA	81.7	82.0
August	83.5	91.2	86.3	81.7	80.6
September	86.6	95.5	87.1	83.1	82.3
October	88.8	97.8	90.6	83.5	84.2
November	88.6	99.2	92.3	84.7	86.6
December	R 88.8	R 100.6	R 90.5	R 84.2	<sup>R</sup> 91.2
Average	83.8	96.0	R <b>89.4</b>	83.5	R 87.1
Average	03.0	30.U	03.4	03.3	07.1
96 January	87.6	99.7	90.1	84.1	94.7

R=Revised data. NA=Not available.

Notes: • States are grouped in Tables 9.8a, 9.8b, and 9.8c by geographic region of the country. • Values for the current month are preliminary.

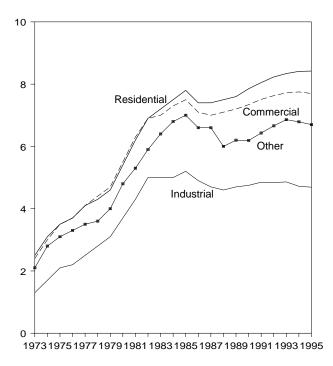
Source: EIA, Petroleum Marketing Monthly, April 1996, Table 18.

Prices prior to 1983 are Energy Information Administration (EIA) estimates.
 See Note 6 at end of section.

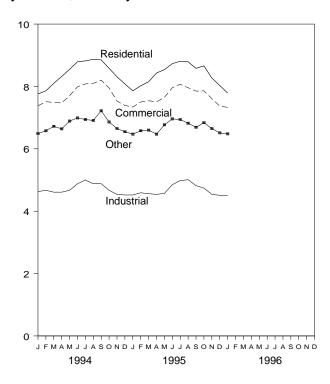
Figure 9.2 Retail Prices of Electricity Sold by Electric Utilities

(Cents per Kilowatthour)

By Sector, 1973-1995



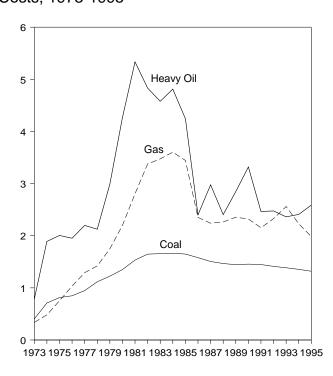
By Sector, Monthly



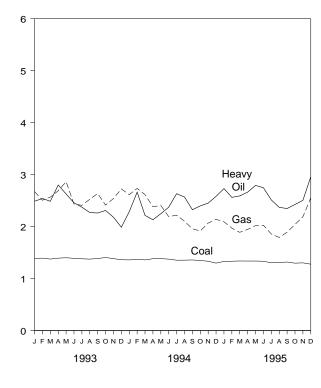
Source: Table 9.9, Monthly Series.

Figure 9.3 Cost of Fossil-Fuel Receipts at Steam-Electric Plants (Dollars per Million Btu)

Costs, 1973-1995



Costs, Monthly



Source: Table 9.10.

Table 9.9 Retail Prices of Electricity Sold by Electric Utilities

(Cents per Kilowatthour)

	Resid	ential	Comm	nercial	Indus	strial	Oth	er <sup>a</sup>	Tot	al <sup>b</sup>
	Monthly Series <sup>c</sup>	Annual Series								
1973 Average	2.5	NA	2.4	NA	1.3	NA	2.1	NA	2.0	NA
1974 Average	3.1	NA	3.0	NA	1.7	NA	2.8	NA	2.5	NA
1975 Average	3.5	NA	3.5	NA	2.1	NA	3.1	NA	2.9	NA
1976 Average	3.7	NA	3.7	NA	2.2	NA	3.3	NA	3.1	NA
1977 Average	4.1	NA	4.1	NA	2.5	NA	3.5	NA	3.4	NA
1978 Average	4.3	NA	4.4	NA	2.8	NA	3.6	NA	3.7	NA
1979 Average	4.6	NA	4.7	NA	3.1	NA	4.0	NA	4.0	NA
1980 Average	5.4	NA	5.5	NA	3.7	NA	4.8	NA	4.7	NA
1981 Average	6.2	NA	6.3	NA	4.3	NA	5.3	NA	5.5	NA
1982 Average	6.9	NA	6.9	NA	5.0	NA	5.9	NA	6.1	NA
1983 Average	7.2	NA	7.0	NA	5.0	NA	6.4	NA	6.3	NA
1984 Average	7.5	7.15	7.3	7.13	5.0	4.83	6.8	5.90	6.5	6.25
1985 Average	7.8	7.39	7.5	7.27	5.2	4.97	7.0	6.09	6.7	6.44
1986 Average	7.4	7.42	7.1	7.20	4.9	4.93	6.6	6.11	6.4	6.44
1987 Average	7.4	7.45	7.0	7.08	4.7	4.77	6.6	6.21	6.3	6.37
1988 Average	7.5	7.48	7.1	7.04	4.6	4.70	6.0	6.20	6.3	6.35
1989 Average	7.6	7.65	7.2	7.20	4.7	4.72	6.2	6.25	6.4	6.45
1990 Average	7.85	7.83	7.34	7.34	4.75	4.74	6.19	6.40	6.57	6.57
1991 Average	8.05	8.04	7.51	7.53	4.85	4.83	6.43	6.51	6.75	6.75
1992 Average	8.23	8.21	7.63	7.66	4.84	4.83	6.66	6.74	6.83	6.82
1993 Average	8.34	8.32	7.72	7.74	4.86	4.85	6.86	6.88	6.92	6.93
1000 Average	0.54	0.02	2		4.00	4.00	0.00	0.00	0.52	0.55
1994 January	7.76	_	7.38	_	4.63	_	6.49	_	6.66	_
February	7.86	_	7.51	_	4.67	_	6.58	_	6.69	_
March	8.10	_	7.49	_	4.61	_	6.72	_	6.68	_
April	8.32	_	7.47	_	4.61	_	6.64	_	6.67	_
May	8.55	_	7.70	_	4.67	_	6.89	_	6.80	_
June	8.79	_	7.99	_	4.88	_	6.99	_	7.17	_
July	8.82	_	8.08	_	5.00	_	6.94	_	7.37	_
August	8.87	_	8.10	_	4.88	_	6.91	_	7.29	_
September	8.85	_	8.20	_	4.88	_	7.22	_	7.25	_
October	8.58	_	7.95	_	4.67	_	6.86	_	6.91	_
November	8.31	_	7.53	_	4.54	_	6.65	_	6.65	_
December	8.08	_	7.39	_	4.52	_	6.55	_	6.64	_
Average	8.41	8.38	7.75	7.73	4.72	4.77	6.79	6.84	6.92	6.91
J										
1995 January	<sup>R</sup> 7.86	_	_ 7.34	_	4.52	_	<sup>R</sup> 6.47	_	_ 6.60	_
February	R 8.02	_	<sup>R</sup> 7.50	_	4.59	_	6.58	_	<sup>R</sup> 6.69	_
March	<sup>R</sup> 8.15	_	<sup>R</sup> 7.54	_	4.56	_	<sup>R</sup> 6.60	_	6.67	_
April	_ 8.43	_	_ 7.51	_	<sup>R</sup> 4.54	_	6.47	_	<sup>R</sup> 6.66	_
May	<sup>R</sup> 8.54	_	<sup>R</sup> 7.65	_	4.57	-	<sup>R</sup> 6.77	-	<sup>R</sup> 6.75	-
June	R 8.73	_	<sup>R</sup> 7.96	_	4.85	_	6.96	_	<sup>R</sup> 7.11	_
July	8.81	_	8.07	_	<sup>R</sup> 4.98	_	6.94	_	7.36	_
August	8.79	_	7.96	_	5.01	-	6.82	-	<sup>R</sup> 7.35	-
September	8.58	_	7.85	_	4.82	_	6.69	_	7.09	_
October	8.66	_	R 7.86	_	4.74	_	R 6.84	_	R 6.96	_
November	8.27	_	7.61	_	4.54	_	6.65	_	6.71	_
December	8.03	_	7.37	_	4.51	_	6.51	_	6.65	_
Average	R 8.42	NA	R 7.70	NA	4.69	NA	R 6.70	NA	6.90	NA
1996 January	7.79	_	7.33	_	4.50	_	6.48	_	6.63	_

<sup>&</sup>lt;sup>a</sup> "Other" is public street and highway lighting, other sales to public authorities, sales to railroads and railways, and interdepartmental sales.

b Average price for total sales to ultimate consumers.

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

Notes: • Prices are calculated by dividing revenue by sales. Revenue may not correspond to sales for a particular month because of electric utility billing and accounting procedures. That lack of correspondence could result in uncharacteristic increases or decreases in the monthly prices. See Note 7 at end of section. • Geographic coverage is the 50 States and the District of Columbia.

Sources: See end of section.

D Average price for total sales to ultimate consurriers.
C Annual values are the sum of the monthly revenue divided by the sum of the monthly sales. Data through 1979 cover privately owned electric utilities in Classes A and B. Data for 1980-1985 cover selected privately owned electric utilities in Class A whose electric operating revenue was \$100 million or more during the previous year. See Note 7 at end of section.

Table 9.10 Quantity and Cost of Fossil-Fuel Receipts at Steam-Electric Utility Plants

					•				
	C	oal		Petro	oleum		Ga	<b>s</b> a	All Fossil Fuels <sup>b</sup>
			Heav	y Oil <sup>b</sup>	Tot	al <sup>b,c</sup>			
	Quantity (thousand short tons)	Cost (cents per million Btu)	Quantity (thousand barrels)	Cost (cents per million Btu)	Quantity (thousand barrels)	Cost (cents per million Btu)	Quantity (million cubic feet)	Cost (cents per million Btu)	Cost (cents per million Btu)
1973 Year	374,842	40.5	512,650	78.5	535,859	80.0	3,382,677	33.8	47.6
1974 Year	384,868	70.9	479,166	189.0	515,217	191.0	3,225,203	48.2	91.4
1975 Year	431,527	81.4	457,582	200.5	510,352	202.3	3,034,808	75.2	104.4
1976 Year	454,858	84.8	495,363	195.2	549,973	199.0	2,962,811	103.4	111.9
1977 Year 1978 Year	490,415 476,169	94.7 111.6	563,685 546,197	219.8 212.5	635,556 616,040	224.9 219.1	3,106,403 3,140,654	129.1 142.2	129.7 141.1
1979 Year	556,558	122.4	479,705	298.8	515,695	307.2	3,368,976	174.9	163.9
1980 Year	593,995	135.1	394,159	426.7	419,140	435.1	3,588,814	219.9	192.8
1981 Year	579,374	153.2	327,477	533.4	345,544	542.5	3,573,558	280.5	225.6
1982 Year	601,427	164.7	228,200	483.2	239,111	492.2	3,161,348	337.6	224.9
1983 Year	592,728	165.6	211,705	457.8	219,652	462.8	2,732,248	347.4	220.6
1984 Year 1985 Year	684,111	166.4 164.8	193,832	481.2 424.4	202,372 164,947	486.3 431.7	2,878,808	360.3 344.4	219.1 209.4
1986 Year	666,743 686,964	157.9	156,410 220,585	424.4 240.1	228,522	243.7	2,808,921 2,387,622	235.1	175.0
1987 Year	721.298	150.6	187,300	297.6	194,578	301.1	2,605,191	224.0	170.6
1988 Year	727,775	146.6	230,234	240.5	236,924	243.9	2,362,721	226.3	164.3
1989 Year	753,217	144.5	237,668	284.6	246,422	289.3	2,472,506	235.5	167.5
1990 Year	786,627	145.5	202,281	331.9	209,350	338.4	2,490,979	232.1	168.9
1991 Year 1992 Year	769,923 775,963	144.7 141.2	163,106 138,537	246.5 247.5	169,625 144,390	254.8 255.1	2,630,818 2,637,678	215.3 232.8	160.3 159.0
1992 Teal	773,303	141.2	130,337	247.5	144,390	233.1	2,037,070	232.0	133.0
1993 January	65,219	138.5	8,437	248.7	9,027	259.1	159,320	267.3	156.2
February	59,225	139.3	7,002	254.1	7,421	263.8	153,537	250.7	155.6
March	63,957	137.5	8,548	248.6	9,022	258.8	185,876	256.7	156.4
April	63,814	139.3	10,074	280.0	10,534	286.5	169,838	268.9	159.9
May June	62,568 63,702	140.0 139.0	10,378 10,638	262.7 245.8	10,803 11,149	269.3 254.2	163,917 244,015	286.3 243.2	161.7 159.9
July	59,853	138.0	15,424	237.3	16,045	243.3	313,392	240.9	164.5
August	65,843	137.4	15,099	227.0	15,624	232.2	340,505	252.6	165.1
September	65,357	138.5	15,324	226.1	15,766	231.0	250,296	263.6	162.8
October	67,123	140.5	13,596	231.0	14,005	236.6	226,238	241.3	159.1
November December	65,938 66,552	138.4 136.2	10,868 16,331	218.0 198.8	11,420 17,085	227.3 205.5	201,903 165,685	254.0 272.4	156.9 154.9
Year	769,152	138.5	141,719	236.2	147,902	203.3 <b>243.3</b>	<b>2,574,523</b>	272.4 <b>256.0</b>	154.9 159.5
<b>1994</b> January	62,611	135.9	16,700	228.6	17,781	238.0	160,361	261.5	156.7
February	64,409	136.8	16,554	266.2	17,543	274.4	142,783	273.5	159.0
March	72,960	135.9	12,796	221.6	13,318	227.7	179,910	261.5	153.1
April	67,380	138.1	9,904	213.1	10,400	220.9	199,349	238.2	153.6
May	71,130	138.3	13,291	224.8	13,892	231.3	211,907	240.6	155.2
June	70,066	137.4	13,461	237.3	14,333	246.1	302,900	219.2	156.4
July August	67,619 75,308	135.3 135.4	14,215 11,135	263.2 256.9	14,771 11,562	267.9 262.1	347,984 360,874	221.9 210.3	158.9 153.8
September	69,922	135.4	8,495	232.5	8,966	240.2	283,747	195.7	148.8
October	69,323	134.8	4,689	239.8	5,187	253.9	252,845	191.6	145.6
November	68,846	133.3	6,313	245.2	6,852	256.9	221,118	206.8	146.3
December	72,354	129.7	7,630	258.1	8,336	268.6	200,126	213.9	143.8
Year	831,929	135.5	135,184	240.9	142,940	248.8	2,863,904	223.0	152.6
1995 January	69,981	132.9	5,565	273.1	6,114	282.7	188,389	209.2	145.2
February	65,789	133.4	6,150	256.2	6,535	263.1	163,598	197.0	143.6
March	69,027	133.8	5,040	259.0	5,451	267.6	233,406	189.0	144.3
April	66,167	133.7	2,849	266.2	3,222	280.4	222,405	194.5	144.1
May	68,501	133.7	5,864	279.2	6,212	286.0	247,211	201.9	147.3
June	64,483 67.734	133.3	8,476 8,367	274.8	9,083	282.4	281,754 376 164	202.6	150.3
July August	67,734 73,242	130.3 130.9	8,367 9,284	251.3 237.0	8,838 10,022	257.7 247.6	376,164 424,323	185.6 179.1	146.0 145.0
September	70,923	131.8	9,036	234.7	9,432	241.3	302,769	189.2	145.1
October	70,140	129.6	5,553	242.5	6,060	253.8	228,603	204.1	142.6
November	70,196	130.2	4,773	250.5	5,421	269.0	189,642	218.9	143.3
December	70,272	127.7	7,259	295.8	7,905	305.7	165,794	255.3	146.0
Year	826,454	131.8	78,216	258.8	84,295	268.1	3,024,056	198.2	145.3

Sources: See end of section.

a Includes supplemental gaseous fuels.

b Heavy oil includes fuel oil nos. 4, 5, and 6, and topped crude oil. The weighted averages for petroleum and all fossil fuels include both heavy and light oil (fuel oil nos. 1 and 2, kerosene, and jet fuel) prices. Data do not include petroleum coke.

<sup>&</sup>lt;sup>c</sup> Data for 1973-1982 do not include small quantities of rerefined motor oil,

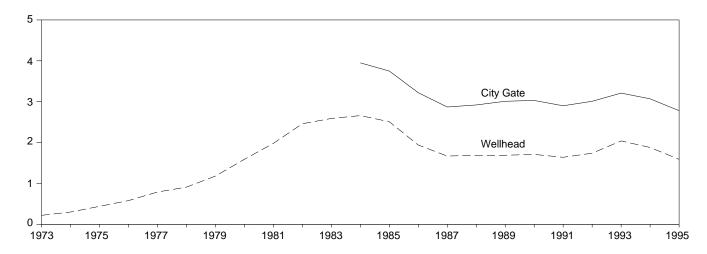
bunker oil, and liquefied petroleum gas.

Notes: • See Note 8 at end of section. • Geographic coverage is the 50 States and the District of Columbia.

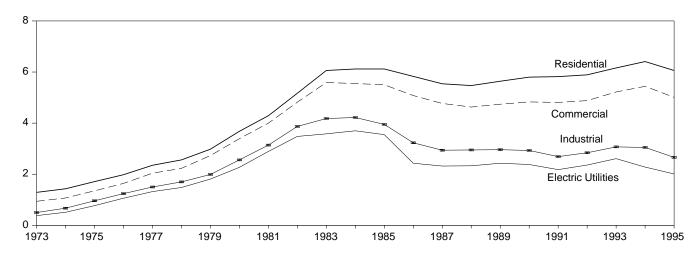
Figure 9.4 Natural Gas Prices

(Dollars per Thousand Cubic Feet)

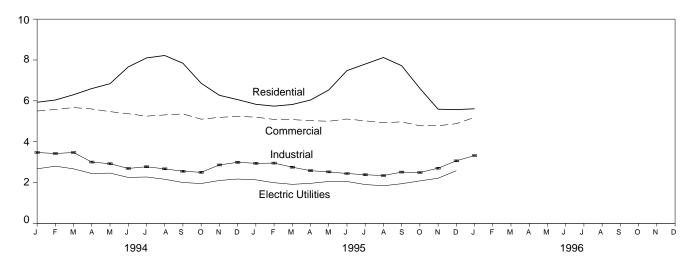
Selected Prices, 1973-1995



Delivered to Consumers, 1973-1995



# Delivered to Consumers, Monthly



Note: Because vertical scales differ, graphs should not be compared. Source: Table 9.11.

**Table 9.11 Natural Gas Prices** 

(Prices: Dollars per Thousand Cubic Feet; Share of Volume Delivered: Percentage)

					Delivered to Co	nsumers <sup>a,b</sup>		
				Com	mercial	Ind	ustrial	
	Wellhead	City Gate	Residential	Price	Share of Total Volume Delivered	Price	Share of Total Volume Delivered	Electric Utilities <sup>c</sup>
1973 Average	0.22	NA	1.29	0.94	NA	0.50	NA	0.38
1974 Average	.30	NA	1.43	1.07	NA	.67	NA	.51
1975 Average	.44	NA	1.71	1.35	NA	.96	NA	.77
1976 Average	.58	NA	1.98	1.64	NA	1.24	NA	1.06
1977 Average	.79	NA	2.35	2.04	NA	1.50	NA	1.32
1978 Average	.91	NA	2.56	2.23	NA	1.70	NA	1.48
1979 Average	1.18	NA	2.98	2.73	NA	1.99	NA	1.81
1980 Average	1.59	NA	3.68	3.39	NA	2.56	NA	2.27
1981 Average	1.98	NA	4.29	4.00	NA	3.14	NA	2.89
1982 Average	2.46	NA NA	5.17	4.82	NA NA	3.87	85.1	3.48
1983 Average	2.59	NA NA	6.06	5.59	NA NA	4.18	80.7	3.58
1984 Average	2.66	3.95	6.12	5.55	NA NA	4.22	74.7	3.70
1985 Average	2.51	3.75	6.12	5.50	NA NA	3.95	68.8	3.55
1986 Average	1.94	3.22	5.83	5.08	NA NA	3.23	59.8	2.43
1987 Average	1.67	2.87	5.54	4.77	93.1	2.94	47.4	2.32
1988 Average	1.69	2.92	5.47	4.63	90.8	2.95	42.6	2.33
1989 Average	1.69	3.01	5.64	4.74	89.1	2.96	36.9	2.43
1990 Average	1.71	3.03	5.80	4.83	86.6	2.93	35.2	2.38
1991 Average	1.64	2.90	5.82	4.81	85.1	2.69	32.7	2.18
<del>-</del>	1.74	3.01	5.89	4.88	83.2	2.84	30.3	2.36
1992 Average 1993 Average	2.04	3.21	6.16	5.22	83.9	3.07	29.7	2.61
1994 January	2.00	3.04	5.93	5.50	83.8	3.47	27.6	2.67
February	1.88	3.26	6.04	5.58	83.9	3.42	29.7	2.80
March	1.86	3.33	6.30	5.67	83.0	3.47	28.3	2.67
April	1.94	3.15	6.60	5.60	78.8	3.00	26.8	2.44
May	1.87	3.17	6.84	5.47	74.1	2.92	25.5	2.46
June	1.84	3.17	7.66	5.37	70.0	2.69	23.3	2.25
July	1.80	3.12	8.10	5.25	68.8	2.77	24.0	2.27
August	2.02	3.15	8.22	5.31	71.8	2.67	23.6	2.16
September	1.90	2.92	7.84	5.36	72.2	2.55	22.2	2.00
October	1.81	2.80	6.86	5.10	74.0	2.50	23.9	1.95
November	1.72	2.84	6.27	5.19	77.9	2.86	24.1	2.10
December	1.84	2.86	6.06	5.24	82.3	2.99	25.7	2.17
Average	1.88	3.07	6.41	5.44	79.3	3.05	25.5	2.28
1995 January	1.65	2.79	5.83	5.20	<sup>R</sup> 75.7	2.94	23.8	2.13
February	1.46	2.71	5.74	5.09	R 76.0	2.95	23.3	1.99
March	1.48	2.74	5.82	5.08	<sup>R</sup> 75.4	2.75	23.0	1.91
April	1.48	2.70	6.04	5.03	<sup>R</sup> 71.8	2.58	22.2	1.96
May	1.63	2.80	6.53	5.00	65.8	2.52	20.7	2.05
June	1.66	2.90	7.48	5.11	R 66.0	2.44	21.5	2.05
July	1.45	2.83	7.80	5.02	60.7	2.38	19.7	1.90
August	1.37	2.81	8.12	4.93	58.1	2.34	19.3	1.84
September	1.56	2.83	7.72	4.97	59.2	2.51	19.3	1.94
October	1.60	2.84	6.61	4.78	64.0	2.49	19.5	2.08
November	1.71	2.67	5.59	4.78	70.7	2.70	21.4	2.21
December	R 1.98	R 2.83	5.57	R 4.88	70.5	3.06	20.6	2.58
Average	E 1.59	R 2.78	6.06	5.01	70.3	2.66	21.3	2.01
1996 January	2.20	3.13	5.61	5.19	71.5	3.32	20.4	NA

a Includes supplemental gaseous fuels.
 b See Note 9 at end of section.
 c See Note 8 at end of section.

Note 9 at end of section. • Wellhead annual and year-to-date prices are simple averages of the monthly prices; all other annual and year-to-date prices are volume-weighted averages of the monthly prices. • Geographic coverage is the 50 States and the District of Columbia.

Sources: See end of section.

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

Notes: • Prices shown on this page are intended to include all taxes. See

## **Energy Prices Notes**

- 1. 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."
- **2.** 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.
- 3. The landed cost of imported crude oil from selected countries does not represent the total cost of all imported crude. Prior to March 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 March 1975, however, coverage was expanded to include U.S. company-owned refineries in the Caribbean. Landed costs do not include supplemental fees.
- 4. Beginning with January 1981, refiner acquisition costs of crude oil are from data collected on 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

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 Pe-

troleum 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.

5. 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 were 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.

**6.** 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 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 reprinted from the December 1983 [3] *Petroleum Marketing Monthly*, published by EIA.

- 7. National average electricity prices are shown in two data series. The "Annual Series" is based on data from publicly and privately owned electric utilities that report on Form EIA-861, "Annual Electric Utility Report." The "Monthly Series" is based on data from over 250 utilities statistically chosen as a sample of the utilities that report on Form EIA-861. The selected utilities report monthly on Form EIA-826, "Monthly Electric Utility Sales and Revenue Report with State Distributions," formerly the "Electric Utility Company Monthly Statement." Annual values shown for the monthly series are the sum of the monthly revenue divided by the sum of the monthly sales. Prior to January 1986, only privately owned utilities were included in the monthly survey and the sample was chosen by using cut-off techniques; from January 1986 through 1992, the sample was chosen using stratification techniques.
- 8. Data for 1973-1982 cover all 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-orgreater total. Data for 1983-1990 cover all electric generating plants at which the generator nameplate capacity of all steam-electric units combined totaled 50 megawatts or greater. Data for 1991 forward cover all electric generating plants at which the generator nameplate capacity of all steam-electric units and combined-cycle units together totaled 50 megawatts or greater.
- 9. Natural gas prices are intended to include all taxes. Instructions on the data collection forms specifically direct that all Federal, State, and local taxes, surcharges, and/or adjustments billed to consumers are to be included. However, sales and other taxes itemized on more than 3,000 consumers' bills are sometimes excluded by the reporting utilities. Delivered-to-consumers prices for 1987 forward represent natural gas delivered and sold to residential, commercial, industrial, and electric utility consumers. They do not include the price of natural gas delivered to industrial and commercial consumers on behalf of third parties. Volumes of natural gas delivered on behalf of third parties are included in the consumption data shown in Table 4.4. Additional information is available in the EIA *Natural Gas Monthly*, Appendix C.

### Sources for Table 9.1

#### **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 (FEA), based on Form FEA-P124, "Domestic Crude Oil Purchaser's Monthly Report."

**1978** forward: Energy Information Administration (EIA), *Petroleum Marketing Monthly*, April 1996, 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 forward:** EIA, *Petroleum Marketing Monthly*, April 1996, 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 forward:** EIA, *Petroleum Marketing Monthly*, April 1996. Table 1.

### Sources for Table 9.9

#### **Monthly Series**

**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 FERC-5, "Electric Operating Revenue and Income."

March 1980-December 1980: FERC, Form FERC-5, "Electric Utility Company Monthly Statement."

1981: Energy Information Administration (EIA) Electric

Power Monthly, March 1992, Table 59. **1982:** EIA, Electric Power Monthly, March 1993 Table 59.

**1983:** EIA, *Electric Power Monthly*, March 1994, Table 59.

**1984** (and **1993** monthly data): EIA, *Electric Power Monthly*, March 1995, Table 60.

**1985 forward (except 1993 monthly data):** EIA, *Electric Power Monthly*, April 1996, Table 60.

#### **Annual Series**

**1984:** EIA, *Electric Power Monthly*, March 1995, Table 60

**1985-1989:** EIA, *Electric Power Monthly*, March 1996, Table 60.

**1990-1994**: EIA, *Electric Sales and Revenue*, November 1995, Table 11.

#### Sources for Table 9.10

**1973-1979:** Annual data for quantity are simple sums of unrounded monthly values and for cost are averages of monthly values, weighted by quantities of Btu, from the following:

**1973-May 1977:** Federal Power Commission, Form FPC-423, "Monthly Report on Cost and Quality of Fuels for Electric Utility Plants."

June 1977-December 1977: Federal Energy Regulatory Commission, Form FERC-423, "Monthly Report on Cost and Quality of Fuels for Electric Utility Plants." 1978 and 1979: Energy Information Administration (EIA), Form FERC-423, "Monthly Report on Cost and Quality of Fuels for Electric Utility Plants."

1980: EIA, Electric Power Monthly, April 1991, Table 33.

**1981:** EIA, *Electric Power Monthly*, April 1992, Table 33.

1982: EIA, Electric Power Monthly, April 1993, Table 33.

1983: EIA, Electric Power Monthly, April 1994, Table 34.

**1984 forward**: EIA, *Electric Power Monthly*, April 1996, Table 34.

### Sources for Table 9.11

### Prices, 1973-1988

Wellhead: Energy Information Administration (EIA), *Natural Gas Annual 1994, Volume 1*, Table 99.

City Gate, 1984-1986: EIA, Natural Gas Monthly, December 1989, Table 4.

City Gate, 1987-1988: EIA, Natural Gas Monthly, December 1994, Table 4.

Delivered to Consumers, 1973-1988: EIA, *Natural Gas Annual 1994*, *Volume 1*, Table 102.

### Prices, 1989 forward

EIA, Natural Gas Monthly, April 1996, Table 4.

#### Share of Total Volume Delivered, Annual

Calculated from EIA, *Natural Gas Annual*, *Volume 1*, report series, Table 1, "Summary Statistics for Natural Gas in the United States," as total amount of natural gas delivered to the sector's consumers minus the amount delivered for the account of others (to derive the amount on system) divided by the total amount delivered to the sector.

### **Share of Total Volume Delivered, Monthly**

EIA, table titled, "Percentage of Total Deliveries Represented by Onsystem Sales, by State," in the *Natural Gas Monthly* issues as follows:

 April 1988-March 1989
 Table C-1

 April 1989-December 1991
 Table 33

 January 1992-February 1993
 Table 32

 March 1993-October 1995
 Table 28

 November 1995-Present
 Table 24

# Section 10. International Energy

**Crude Oil Production.** World crude oil production during January 1996 was 63 million barrels per day, up 0.3 million barrels per day from the level in the previous month.

Organization of Petroleum Exporting Countries (OPEC) production during January 1996 averaged 27 million barrels per day, up 0.2 million barrels per day from the level during the previous month. Production by the Arab members of OPEC in January 1996 averaged 16 million barrels per day, up 0.1 million barrels per day from the December 1995 level. During January 1996, production increased in the United Arab Emirates by 75 thousand barrels per day, Kuwait by 23 thousand barrels per day, Libya by 10 thousand barrels per day, and Saudi Arabia by 8 thousand barrels per day. Production remained unchanged in Algeria, Iraq, and Qatar. Among the non-Arab members of OPEC, production during January 1996 increased in both Iran and Venezuela by 50 thousand barrels per day and Nigeria by 15 thousand barrels per day. Production decreased in Indonesia by 20 thousand barrels per day.

Among the non-OPEC nations, production during January 1996 increased in Mexico by 95 thousand barrels per day and the former U.S.S.R. by 50 thousand barrels per day. Production decreased in the United Kingdom by 30 thousand barrels per day and the United States by 25 thousand barrels per day. Production remained the same in Canada, China, and Ecuador.

Petroleum Consumption. In November 1995, consumption

in all Organization for Economic Cooperation and Development (OECD) countries was 41.5 million barrels per day, 3 percent higher than the November 1994 rate. The consumption rate was higher than it was 1 year ago in France (+9 percent), Italy (+7 percent), the United States (+4 percent), Canada and the United Kingdom (both +2 percent), Japan (+1 percent), and Germany (less than +1), compared with the rate 1 year earlier.

**Petroleum Stocks.** For all OECD countries, petroleum stocks at the end of November 1995 totaled 3.7 billion barrels, 2 percent lower than the ending stock level in November 1994. Stock levels were higher in Japan (+3 percent) and Canada (+2 percent). Stocks were lower in the United States (-5 percent), France and Germany (both -4 percent), Italy and the United Kingdom, (both -2 percent), compared with levels 1 year earlier.

Nuclear Electricity Generation. Based on *Nucleonics Week* information for January 1996, all reporting countries with nuclear capacity generated 219.1 gross terawatthours (one terawatthour equals 1 billion kilowatthours) of nuclear-generated electricity.

As of January 31, 1996, there were 435 operable nuclear generating units in the world.

<sup>&</sup>lt;sup>1</sup> Percentage changes are based on unrounded data.

Table 10.1a World Crude Oil Production: Algeria Through Venezuela

(Thousand Barrels per Day)

	Algeria	Iraq	Kuwait <sup>a</sup>	Libya	Qatar	Saudi Arabia <sup>a</sup>	United Arab Emirates	Arab OPEC <sup>b</sup>	Indonesia	Iran	Nigeria	Venezuela
4070 4	4.007	0.040	0.000	0.475		7.500	4.500	40.000	4.000	5.004	0.054	
1973 Average	1,097	2,018	3,020	2,175	570	7,596	1,533	18,009	1,339	5,861	2,054	3,366
1974 Average	1,009	1,971	2,546	1,521	518	8,480	1,679	17,724	1,375	6,022	2,255	2,976
1975 Average	983	2,262	2,084	1,480	438	7,075	1,664	15,985	1,307	5,350	1,783	2,346
1976 Average	1,075	2,415	2,145	1,933	497	8,577	1,936	18,579	1,504	5,883	2,067	2,294
1977 Average	1,152	2,348	1,969	2,063	445	9,245	1,999	19,221	1,686	5,663	2,085	2,238
1978 Average	1,231	2,563	2,131	1,983	487	8,301	1,831	18,525	1,635	5,242	1,897	2,165
1979 Average	1,224	3,477	2,500	2,092	508	9,532	1,831	21,163	1,591	3,168	2,302	2,356
1980 Average	1,106	2,514	1,656	1,787	472	9,900	1,709	19,144	1,577	1,662	2,055	2,168
1981 Average	1,002	1,000	1,125	1,140	405	9,815	1,474	15,961	1,605	1,380	1,433	2,102
1982 Average	987	1,012	823	1,150	330	6,483	1,250	12,035	1,339	2,214	1,295	1,895
1983 Average	968	1,005	1,064	1,105	295	5,086	1,149	10,672	1,343	2,440	1,241	1,801
1984 Average	1,014	1,209	1,157	1,087	394	4,663	1,146	10,670	1,412	2,174	1,388	1,798
1985 Average	1,037	1,433	1,023	1,059	301	3,388	1,193	9,434	1,325	2,250	1,495	1,677
1986 Average	945	1,690	1,419	1,034	308	4,870	1,330	11,596	1,390	2,035	1,467	1,787
1987 Average	1,048	2,079	1,585	972	293	4,265	1,541	11,783	1,343	2,298	1,341	1,752
1988 Average	1,040	2,685	1,492	1,175	346	5,086	1,565	13,389	1,342	2,240	1,450	1,903
1989 Average	1,095	2,897	1,783	1,150	380	5,064	1,860	14,229	1,409	2,810	1,716	1,907
1990 Average	1,175	2,040	1,175	1,375	406	6,410	2,117	14,698	1,462	3,088	1,810	2,137
1991 Average	1,230	305	190	1,483	395	8,115	2,386	14,104	1,592	3,312	1,892	2,375
1992 Average	1,214	425	1,058	1,433	423	8,332	2,266	15,151	1,504	3,429	1,943	2,371
1993 Average	1,190	512	1,872	1,377	419	8,198	2,191	15,759	1,528	3,650	2,050	2,450
1994 January	1,170	545	1,995	1,370	445	8,095	2,250	15,870	1,510	3,635	2,200	2,490
February	1,170	545	1,998	1,370	430	8,088	2,275	15,875	1,510	3,585	2,200	2,490
March	1,170	545	2,005	1,370	445	8,095	2,250	15,880	1,510	3,685	2,150	2,490
April	1,170	555	2,020	1,370	445	8,110	2,250	15,920	1,510	3,535	2,070	2,480
May	1,170	555	2,050	1,370	445	8,090	2,260	15,940	1,510	3,585	2,100	2,500
June	1,170	555	2,050	1,370	455	8,090	2,280	15,970	1,510	3,685	2,090	2,500
July	1,170	555	2,050	1,380	475	8,100	2,280	16,010	1,510	3,585	1,990	2,520
August	1,170	555	2,050	1,390	435	8,120	2,280	16,000	1,530	3,635	1,630	2,540
September	1,170	555	2,050	1,370	445	8,180	2,280	16,050	1,510	3,685	2,010	2,540
October	1,170	555	2,045	1,390	385	8,245	2,240	16,030	1,520	3,635	2,080	2,540
November	1,170	555	2,045	1,390	455	8,245	2,240	16,100	1,520	3,735	1,980	2,540
December	1,170	555	2,050	1,390	465	8,300	2,270	16,200	1,520	3,635	1,965	2,530
Average	1,170	553	2,034	1,378	444	8,147	2,263	15,988	1,514	3,635	2,037	2,514
<b>1995</b> January	1,180	555	2,070	1,390	455	8,120	2,280	16,050	1,520	3,585	2,000	2,600
February	1,180	555	2,070	1,390	475	8,220	2,280	16,170	1,500	3,685	1,980	2,600
March	1,180	555	2,060	1,390	485	8,110	2,280	16,060	1,510	3,485	1,890	2,600
April	1,180	555	2,070	1,390	485	8,220	2,280	16,180	1,510	3,635	2,050	2,670
May	1,180	555	2,050	1,390	485	8.400	2,280	16,340	1,510	3,835	2.080	2,790
June	1,180	555	2,050	1,390	485	8,100	2,280	16,040	1,510	3,585	1,960	2,790
July	1,210	555	2,060	1,390	485	8,410	2,280	16,390	1,510	3,535	1,980	2,790
August	1,210	555	2,075	1,390	485	8,425	2,280	16,420	1,510	3,685	2,035	2,790
September	1,210	555	2,035	1,390	485	8,315	2,280	16,270	1,510	3,635	2,040	2,790
October	1,210	555	2,065	1,390	485	8,315	2,280	16,300	1,560	3,735	2,040	2,840
November	1,210	555	2,000	1,390	495	8,020	2,280	16,030	1,560	3,635	2,000	2,840
December	1,220	555	R 2,015	1,390	R 495	8,110	R 2,215	R 16.000	1,560	3,685	R 2,145	2,890
Average	1,197	<b>555</b>	R <b>2,013</b>	1,390	R <b>483</b>	8,231	R <b>2,274</b>	R <b>16,188</b>	1,523	3,643	R <b>2,028</b>	2,750
<b>1996</b> January	1,220	555	2,038	1,400	495	8,118	2,290	16,115	1,540	3,735	2,160	2,940

<sup>&</sup>lt;sup>a</sup> Includes about one-half of the production in the Kuwait-Saudi Arabia Neutral Zone from 1973 through July 1990 and in June 1991. Kuwaiti Neutral Zone output was discontinued following Iraq's invasion of Kuwait on August 2, 1990, but was resumed in June 1991. In January 1996, Neutral Zone production by both Kuwait and Saudi Arabia totaled about 455 thousand barrels per day.
<sup>b</sup> The Arab members of the Organization of Petroleum Exporting Countries

Arab Emirates. Production in the Neutral Zone between Kuwait and Saudi Arabia is included in "Arab OPEC."

Notes: • Crude oil includes lease condensate but excludes 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.

Sources: See end of section.

<sup>&</sup>lt;sup>o</sup> The Arab members of the Organization of Petroleum Exporting Countries (OPEC) are Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and the United

R=Revised data.

Table 10.1b World Crude Oil Production: Total OPEC, Ecuador Through Former U.S.S.R., and World

(Thousand Barrels per Day)

	Total OPEC <sup>a</sup>	Ecuadora	Persian Gulf Nations <sup>b</sup>	Canada	China	Mexico	United Kingdom	United States	Former U.S.S.R.	Other <sup>c</sup>	World
	01 20	LCuadoi	Nations	Cariada	Cillia	MEXICO	Killiguolii	Otates	0.0.0.ix.	Other	World
1973 Average	30,779	209	20,668	1,798	1,090	465	2	9,208	8,324	3,804	55,679
1974 Average	30,552	177	21,282	1,551	1,315	571	2	8,774	8,912	3,862	55,716
1975 Average	26,994	161	18,934	1,430	1,490	705	12	8,375	9,523	4,139	52,828
1976 Average	30,549	188	21,514	1,314	1,670	831	245	8,132	10,060	4,355	57,344
1977 Average	31,115	183	21,725	1,321	1,874	981	768	8,245	10,603	4,616	59,707
1978 Average	29,673	202	20,606	1,316	2,082	1,209	1,082	8,707	11,105	4,782	60,158
1979 Average	30,784	214	21,066	1,500	2,122	1,461	1,568	8,552	11,384	5,089	62,674
1980 Average	26,781	204	17,961	1,435	2,114	1,936	1,622	8,597	11,706	5,204	59.599
1981 Average	22,632	211	15,245	1,285	2,012	2,313	1,811	8,572	11,850	5,390	56,076
1982 Average	18,934	211	12,156	1,271	2,045	2,748	2,065	8,649	11,912	5,646	53,481
1983 Average	17,654	237	11,081	1,356	2,120	2,689	2,291	8,688	11,972	6,248	53,255
1984 Average	17,599	258	10,784	1,438	2,296	2,780	2,480	8,879	11,861	6.897	54,488
1985 Average	16,353	281	9,630	1,471	2,505	2,745	2,530	8,971	11,585	7,540	53,981
1986 Average	18,441	293	11,696	1.474	2,620	2,435	2,539	8,680	11,895	7,850	56,227
1987 Average	18,672	174	12,103	1,535	2,690	2,548	2,406	8,349	12,050	8,242	56,666
1988 Average	20,483	302	13,457	1,616	2,730	2,512	2,232	8,140	12,053	8,669	58,737
1989 Average	22,279	279	14.837	1,560	2,757	2,520	1.802	7.613	11.715	9.338	59.863
1990 Average	23,465	285	15,278	1,553	2,774	2,553	1,820	7,355	10,975	9,785	60,566
1991 Average	23,569	299	14,741	1,548	2,835	2,680	1,797	7,417	9,992	10,074	60,210
1992 Average	24,695	318	16,104	1,598	2,838	2,668	1,825	7,171	8,931	10,169	60,213
1993 Average	25,748	346	16,883	1,680	2,911	2,671	1,915	6,847	7,717	10,806	60,640
1994 January	25.995	360	17.000	1.669	2,900	2,745	2,280	6,817	6,985	11,114	60,864
February	25,950	360	16,955	1,722	2,920	2,710	2,280	6,770	6,715	11,270	60,697
March	26,025	360	17,060	1,706	2,920	2,685	2,315	6,746	6,660	11,190	60,608
April	25,845	365	16,950	1,671	2,940	2,700	2,340	6,612	6,485	11,200	60,158
May	25,975	365	17,020	1,706	2,940	2,690	2,345	6,688	6,635	11,250	60,594
June	26,095	375	17,150	1,729	2,950	2,675	2,340	6,611	6,650	11,488	60,912
July	25,955	385	17,080	1,801	2,940	2,675	2,275	6,501	6,540	11,445	60,517
August	25,675	385	17,110	1,790	2,950	2,675	2,315	6,544	6,520	11,535	60,389
September	26,135	400	17,230	1,817	2,910	2,680	2,475	6,609	6,480	11,515	61,021
October	26,145	395	17,140	1,735	2,950	2,685	2,435	6,658	6,560	11,950	61,514
November	26,215	395	17,310	1,778	2,970	2,675	2,485	6,628	6,580	11,960	61,686
December	26,190	395	17,310	1,793	2,980	2,675	2,605	6,760	6,520	12,094	62,011
Average	26,017	378	17,110	1,743	2,939	2,689	2,375	6,662	6,611	11,503	60,916
<b>1995</b> January	26,090	400	17,100	1,792	2,950	2,680	2,520	E 6,596	6,445	R 12,116	R 61,589
February	26,270	400	17,320	1,774	3,000	2,645	2,610	E 6,703	6,655	R 12,041	R 62,099
March	25,880	400	17,010	1,739	3,000	2,670	2,565	E 6,606	6,445	R 12,152	<sup>R</sup> 61,457
April	26,380	400	17,280	1,811	3,000	2,670	2,570	<sup>E</sup> 6,561	6,550	<sup>R</sup> 12,258	R 62,200
May	26,890	400	17,640	1,754	2,980	2,680	2,305	E 6,572	6,655	<sup>R</sup> 11,947	R 62,183
June	26,220	390	17,090	1,847	2,980	2,700	1,855	<sup>E</sup> 6,540	6,650	R 12,154	R 61,336
July	26,540	385	17,360	1,843	2,980	2,705	2,350	E 6,449	6,560	<sup>R</sup> 12,530	R 62,342
August	26,790	375	17,540	1,805	3,015	2,710	2,405	E 6,462	6,610	R 12,303	<sup>R</sup> 62,475
September	26,595	390	17,340	1,890	3,070	2,740	2,655	E 6,380	6,574	R 12,533	R 62,827
October	26,845	390	17,470	1,840	3,070	1,900	2,740	E 6,429	6,585	R 12,737	R 62,536
November	26,525	<sup>R</sup> 385	17,090	R 1,840	3,070	2,555	2,685	<sup>E</sup> 6,554	6,430	R 12,659	R 62,703
December	R 26,630	390	R 17,110	R 1,870	3,070	2,765	2,615	E 6,520	6,455	R 12,798	R 63,113
Average	<sup>R</sup> 26,473	392	<sup>R</sup> 17,280	<sup>R</sup> 1,817	3,015	2,618	2,489	<sup>E</sup> 6,530	6,550	R 12,354	<sup>R</sup> 62,239
1996 January		390	17,265	1,870	3,070	2,860	2,585	6,495	6,505	12,792	63,417

a "Total OPEC" consists of Algeria, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela. Production from the Neutral Zone between Kuwait and Saudi Arabia is included in "Total OPEC." Although Ecuador belonged to OPEC from November 19, 1973, until December 31, 1992, when it formally withdrew, it is not included in "Total OPEC."
b The Persian Gulf Nations are Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and the Lighted Arab Emirates. Production from the Neutral Zone

and the sum of production in "Total OPEC," Ecuador, Canada, China, Mexico, the United Kingdom, the United States, and the former U.S.S.R.

R=Revised data. E=Estimate.

Notes: • Crude oil includes lease condensate but excludes 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.

Sources: See end of section.

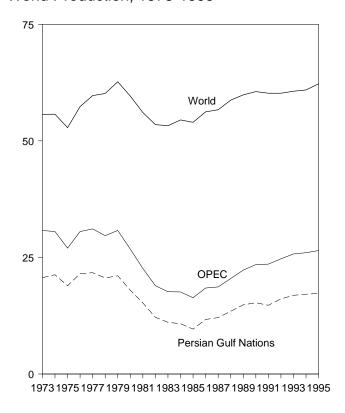
b The Persian Gulf Nations are Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and the United Arab Emirates. Production from the Neutral Zone between Kuwait and Saudi Arabia is included in "Persian Gulf Nations."

<sup>&</sup>lt;sup>c</sup> "Other" is a calculated total derived from the difference between "World"

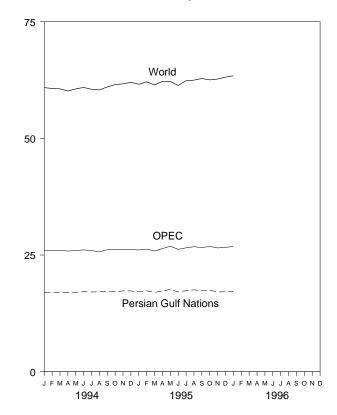
# Figure 10.1 Crude Oil Production

(Million Barrels per Day)

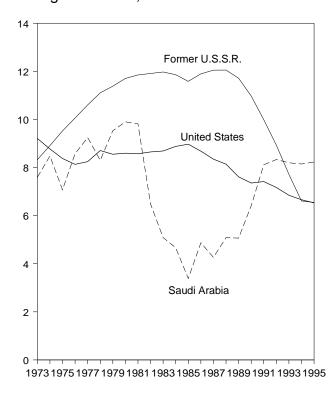
# World Production, 1973-1995



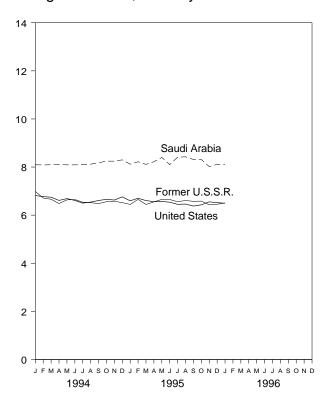
# World Production, Monthly



# Leading Producers, 1973-1995



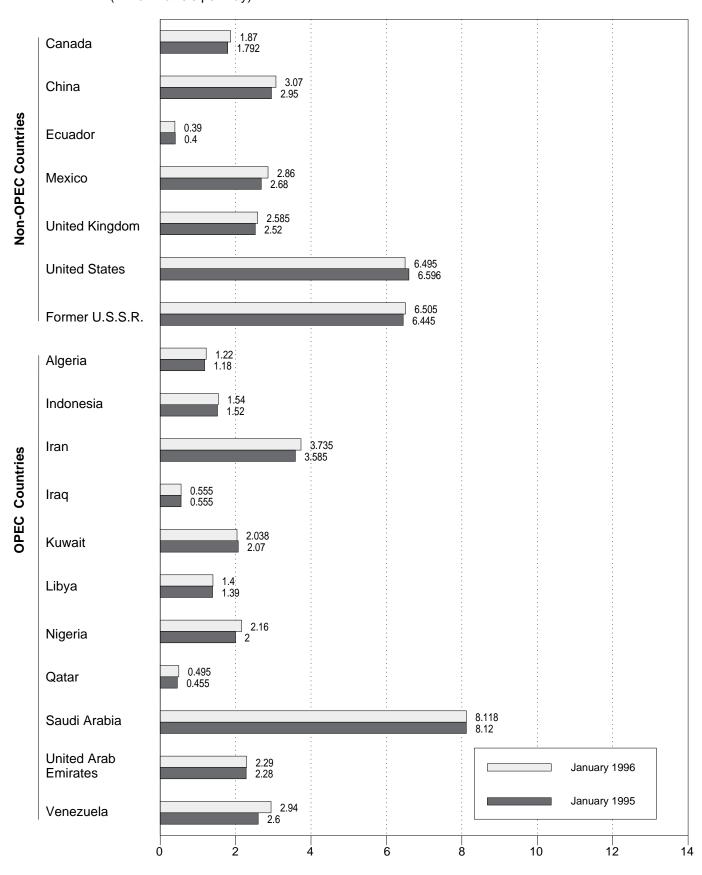
# Leading Producers, Monthly



Note: OPEC is the Organization of Petroleum Exporting Countries. Sources: Tables 10.1a and 10.1b.

Figure 10.2 Crude Oil Production by Selected Country

(Million Barrels per Day)

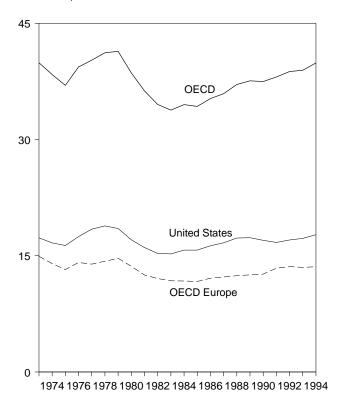


Note: OPEC is the Organization of Petroleum Exporting Countries. Sources: Tables 10.1a and 10.1b.

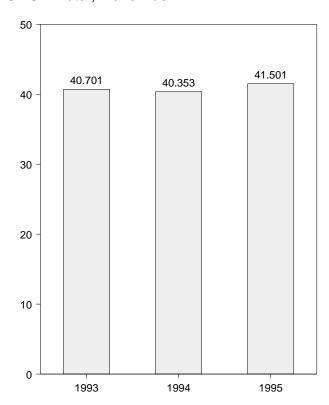
Figure 10.3 Petroleum Consumption in OECD Countries

(Million Barrels per Day)

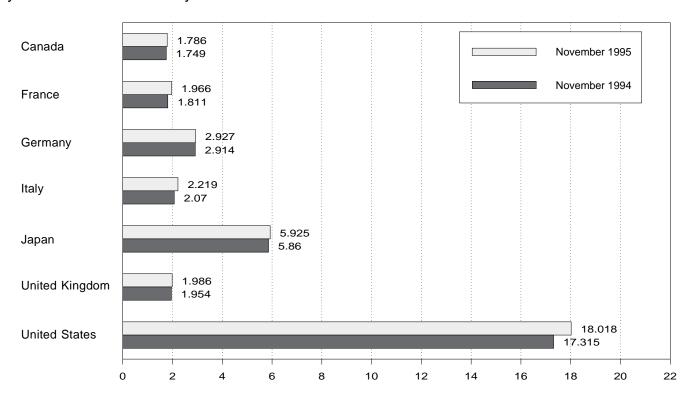
# Overview, 1973-1994



## OECD Total, November



# By Selected OECD Country



Note: OECD is the Organization for Economic Cooperation and Development. Source: Table 10.2.

**Table 10.2 Petroleum Consumption in OECD Countries** 

(Thousand Barrels per Day)

	Canada	France	Germany <sup>a</sup>	Italy	Japan	United Kingdom	United States	OECD Europe <sup>b</sup>	Other OECD <sup>c</sup>	<b>OECD</b> d
	. =									
1973 Average	1,729	2,601	3,055	2,068	4,949	2,341	17,308	14,925	988	39,900
1974 Average	1,779	2,447	2,748	2,004	4,864	2,210	16,653	13,988	1,095	38,379
1975 Average	1,779	2,252	2,650	1,855	4,621	1,911	16,322	13,217	1,041	36,980
1976 Average	1,818	2,420	2,877	1,971	4,837	1,892	17,461	14,124	1,119	39,358
1977 Average	1,850	2,294	2,865	1,897	4,880	1,905	18,431	13,916	1,160	40,237
1978 Average	1,902	2,408	2,927	1,952	4,945	1,938	18,847	14,290	1,204	41,187
1979 Average	1,971	2,463	3,003	2,039	5,050	1,971	18,513	14,667	1,178	41,379
1980 Average	1,873	2,256	2,707	1,934	4,960	1,725	17,056	13,634	1,072	38,595
1981 Average	1,768	2,023	2,449	1,874	4,848	1,590	16,058	12,515	1,080	36,269
1982 Average	1,578	1,880	2,372	1,781	4,582	1,590	15,296	12,053	1,008	34,517
1983 Average	1,448	1,835	2,324	1,750	4,395	1,531	15,231	11,765	954	33,793
1984 Average	1,472	1,754	2,322	1,646	4,576	1,849	15,726	11,736	989	34,500
1985 Average	1,504	1,775	2,338	1,717	4,384	1,634	15,726	11,681	976	34,271
1986 Average	1,506	1,772	2,498	1,738	4,439	1,649	16,281	12,102	951	35,279
1987 Average	1,548	1,789	2,424	1,855	4,484	1,603	16,665	12,255	959	35,911
1988 Average	1,693	1,797	2,422	1,836	4,752	1,697	17,283	12,427	939	37,093
1989 Average	1,733	1,857	2,280	1,930	4,983	1,738	17,325	12,531	998	37,570
1990 Average	1,690	1,818	2,382	1,872	5,140	1,752	16,988	12,629	1,027	37,475
1991 Average	1,622	1,935	2,828	1,863	5,284	1,801	16,714	13,391	1,056	38,067
1992 Average	1,643	1,926	2,843	1,937	5,446	1,803	17,033	13,605	1,041	38,768
1993 January	1,592	1,922	2,530	1,835	5,956	1,729	16,173	12,718	958	37,398
February	1,704	2,103	2,895	1,941	6,306	1,878	17,334	13,904	1,121	40,370
March	1,698	1,981	2,929	1,915	6,252	1,888	17,575	13,915	1,156	40,596
April	1,596	1,901	2,817	1,681	5,459	1,730	16,781	13,019	1,123	37,978
May	1,601	1,668	2,587	1,662	4,770	1,676	16,508	11,999	1,147	36,024
June	1,706	1,930	3,043	1,709	4,963	1,809	17,096	13,526	1,110	38,401
July	1,681	1,824	2,965	1,773	4,864	1,806	17,357	13,502	1,053	38,457
August	1,730	1,626	2,893	1,691	4,796	1,792	17,332	12,945	1,120	37,922
September	1,715	1,761	3,163	1,894	4,775	1,845	17,650	13,923	1,096	39,159
October	1,708	1,789	2,814	1,885	4,998	1,803	17,323	13,368	1,109	38,506
November	1,759	2,045	3,057	2,066	5,502	1,983	17,780	14,535	1,125	40,701
December	1,770	1,983	3,123	2,181	6,234	1,846	17,953	14,619	1,290	41,866
Average	1,688	1,875	2,900	1,852	5,401	1,815	17,237	13,492	1,117	38,935
1994 January	1,701	1,840	2,492	1,774	5,913	1,743	18,072	12,771	1,031	39,488
February	1,795	1,966	2,994	1,907	6,524	1,920	18,337	14,223	1,156	42,036
March	1,701	1,825	3,062	1,891	6,269	1,954	17,313	13,910	1,209	40,402
April	1,590	1,850	2,900	1,816	5,294	1,809	17,489	13,475	1,157	39,005
May	1,658	1,675	2,746	1,674	4,853	1,770	17,181	12,665	1,186	37,543
June	1,690	1,811	3,000	1,683	5,132	1,880	17,815	13,621	1,228	39,487
July	1,717	1,771	2,817	1,702	5,577	1,748	17,485	12,980	1,183	38,943
August	1,786	1,736	2,905	1,699	5,595	1,747	18,117	13,294	1,137	39,928
September	1,790	1,920	3,041	1,945	5,334	1,862	17,490	14,199	1,187	40,001
October	1,731	1,844	2,884	1,873	5,363	1,853	17,719	13,648	1,084	39,545
November	1,749	1,811	2,914	2,070	5,860	1,954	17,315	14,162	1,268	40,353
December	1,819	1,961	2,820	2,070	6,421	1,818	18,319	14,161	1,250	41,970
Average	1,727	1,833	2,879	1,841	5,674	1,837	17,718	13,584	1,173	39,876
1995 January	1,671	1,949	2,730	1,944	6,075	1,754	17,167	R 13,581	1,123	R 39,617
February	1,857	1,895	2,802	2,128	6,787	1,953	18,355	R 13,935	1,175	R 42,110
March	1,704	2,002	3,188	1,993	6,378	1,972	17,403	R 14,597	1,241	R 41,323
April	1,569	1,843	2,854	1,837	5,583	1,788	17,102	<sup>R</sup> 13,594	1,170	<sup>R</sup> 39,018
May	1,732	1,764	2,940	1,829	5,037	1,778	17,241	R 13,371	1,263	R 38,644
June	1,774	1,850	2,874	1,884	5,009	1,809	18,149	R 13,785	1,219	R 39,935
July	R 1,723	1,939	2,827	1,861	5,129	1,736	17,113	R 13,427	1,163	R 38,556
August	R 1,844	1,786	2,932	1,722	5,546	1,795	17,993	R 13,614	1,223	R 40,220
September	R 1,789	1,887	2,938	1,961	5,369	1,818	18,011	R 13,901	1,225	R 40,295
October	R 1,824	1,869	2,749	2,077	R 5,147	R 1,839	17,626	R 13,907	1,157	R 39,660
November	1,786	1,966	2,927	2,219	5,925	1,986	18,018	14,697	1,074	41,501
11-Mo. Average	1,751	1,886	2,888	1,949	5,626	1,838	17,644	13,853	1,185	40,060
1994 11-Mo. Average	1,718	1,821	2,885	1,820	5,605	1,839	17,662	13,531	1,166	39,682
1993 11-Mo. Average	1,681	1,865	2,880	1,822	5,324	1,812	17,170	13,387	1,101	38,663

<sup>&</sup>lt;sup>a</sup> Through December 1990, the data for Germany are for the former West Germany only. Beginning with January 1991, the data for Germany are for the unified Germany, i.e., the former East Germany and West Germany.
<sup>b</sup> "OECD Europe" consists of Austria, Belgium, Denmark, Finland, France,

consists of Canada, Japan, the United States, "OECD Europe" and "Other OECD."  $\begin{tabular}{ll} \end{tabular} \label{table_equation} \end{tabular}$ 

R=Revised data.

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.

Kingdom.

<sup>c</sup> "Other OECD" consists of Australia, New Zealand, and the U.S. Territories.

<sup>&</sup>lt;sup>d</sup> The Organization for Economic Cooperation and Development (OECD)

Notes: • Data through 1992 are final. Subsequent data are preliminary. • Totals may not equal sum of components due to independent rounding.

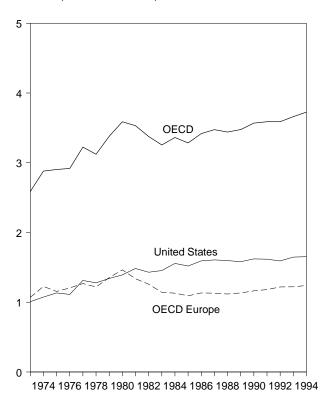
U.S. geographic coverage is the 50 States and the District of Columbia.

Sources: • United States: Table 3.1a. • All Other Data: 1973-1979—International Energy Agency (IEA), Annual Oil and Gas Statistics of OECD Countries. 1980 forward—IEA, quarterly and monthly computer tapes supporting Quarterly Oil Statistics and Energy Balances.

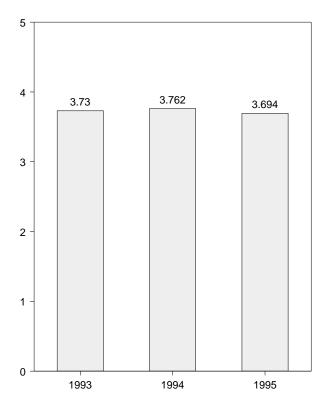
Figure 10.4 Petroleum Stocks in OECD Countries

(Billion Barrels)

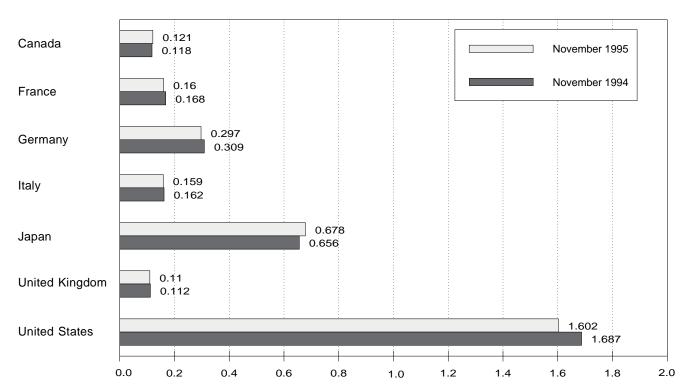
## Overview, End of Year, 1973-1994



# OECD Stocks, End of Month, November



# By Selected Country, End of Month



Note: OECD is the Organization for Economic Cooperation and Development. Source: Table 10.3.

Table 10.3 Petroleum Stocks in OECD Countries, End of Period

(Million Barrels)

			1							
	1					United	United	OECD	Other	
	Canada	France	Germany <sup>a</sup>	Italy	Japan	Kingdom	States	Europeb	<b>OECD</b> <sup>c</sup>	<b>OECD</b> <sup>d</sup>
1973 Year	140	201	181	152	303	156	1,008	1,070	67	2,588
1974 Year		249	213	167	370	191	1,074	1,227	64	2,880
							,			
1975 Year		225	187	143	375	165	1,133	1,154	67	2,903
1976 Year		234	208	143	380	165	1,112	1,205	68	2,918
1977 Year		239	225	161	409	148	1,312	1,268	68	3,224
1978 Year	144	201	238	154	413	157	1,278	1,219	68	3,122
1979 Year		226	272	163	460	169	1,341	1,353	75	3,379
1980 Year	164	243	319	170	495	168	1,392	1,464	72	3,587
1981 Year	161	214	297	167	482	143	1,484	1,337	67	3,531
1982 Year	136	193	272	179	484	125	1,430	1,258	68	3,376
1983 Year		153	249	149	470	118	1,454	1,142	68	3,255
1984 Year		152	239	159	479	112	1,556	1,130	69	3,362
1985 Year		139	233	157	494	123	1,519	1,092	66	3,284
1986 Year		127	252	155	509	124	1,593	1,133	72	3,418
1987 Year		127	259	169	540	121	1,607	1,130	71	3,474
1988 Year		140	266	155	538	112	1,597	1,118	71	3,440
			271	164						-,
1989 Year		138			577	118	1,581	1,133	71 70	3,476
1990 Year		140	265	172	590	112	1,621	1,163	73	3,568
1991 Year		153	288	160	606	119	1,617	1,181	65	3,588
1992 Year	107	146	310	174	603	113	1,592	1,219	67	3,588
1993 January	107	162	318	171	614	119	1,618	1,243	68	3,651
February	102	156	316	166	606	119	1,602	1,229	68	3,607
March	103	154	310	163	593	119	1,590	1,213	66	3,565
April	105	154	310	165	584	115	1,617	1,208	73	3,586
May		161	319	170	592	116	1,650	1,220	68	3,635
June		156	309	166	601	118	1,667	1,201	69	3,645
July		155	311	167	616	114	1,682	1,200	70	3,681
August	114	167	314	169	633	116	1,676	1,240	69	3,733
September		164	311	161	647	115	1,665	1,229	77	3,730
October	110	166	316	160	652	110	1,688	1,225	78	3,752
		156	309	164	643	115			78	
November							1,686	1,212		3,730
December	105	158	309	163	618	118	1,647	1,221	69	3,661
1994 January		165	322	166	616	118	1,622	1,248	70	3,660
February		159	315	157	610	111	1,586	1,206	68	3,567
March	103	152	306	154	602	109	1,584	1,181	72	3,542
April	108	151	309	158	611	108	1,591	1,185	73	3,567
May	109	155	314	160	627	116	1,612	1,213	71	3,632
June	112	161	308	158	630	112	1,624	1,216	70	3,652
July		159	313	157	623	114	1,654	1,227	75	3,700
August	115	164	310	162	632	116	1,659	1,243	74	3,724
September	118	159	305	160	646	114	1,684	1,227	73	3,747
October		163	307	160	655	111	1,673	1.229	74	3,749
November	118	168	309	162	656	112	1,687	1,229	72	3,762
December	119	158	312	164	645	115	1,653	1,240	69	3,726
100E lanuari	101	160	24.4	167	CEO.	442	1 641	<sup>R</sup> 1,247	60	<sup>R</sup> 3,728
1995 January		160	314	167	650 631	113	1,641		69 64	R 3,667
February	121	164	317	163	631	114	1,603	1,248		
March		152	305	159	636	105	1,599	1,194	68	3,621
April	119	156	306	159	642	107	1,600	R 1,195	71	R 3,626
May		153	304	161	652	112	1,611	R 1,203	72	R 3,654
June		166	301	168	656	102	1,609	1,213	73	3,677
July	129	160	304	171	667	110	1,623	<sup>R</sup> 1,242	77	R 3,738
August		160	304	174	671	109	1,613	R 1,240	72	R 3,714
September	126	162	301	163	675	110	1,618	1,236	77	3,732
October	R 123	162	304	165	R 682	R 111	1,605	R 1,236	77	R 3,723
Octobel			50.							

<sup>&</sup>lt;sup>a</sup> Through December 1990, the data for Germany are for the former West Germany only. Beginning with January 1991, the data for Germany are for the unified Germany, i.e., the former East Germany and West Germany.

R=Revised data.

Notes: • Petroleum stocks include crude oil (including strategic reserves), unfinished oils, natural gas plant liquids, and refined products. Petroleum stocks include all nonmilitary petroleum held for storage, regardless of

ownership, within each country in bulk terminals, refinery tanks, pipeline tankage, intercoastal tankers, tankers in port, and inland ship bunkers. Data exclude oil held in pipelines (except for those in the United States), rail and truck cars, sea-going ships' bunkers, service stations, retail stores, and tankers at sea. • 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. • Data through 1992 are final. Subsequent data are preliminary. • Totals may not equal sum of components due to independent rounding. • U.S. geographic coverage is the 50 States and the District of Columbia.

Sources: • United States: Table 3.1a. • All Other Data: International Energy Agency, quarterly and monthly computer tapes supporting *Quarterly Oil Statistics and Energy Balances*.

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.

Kingdom.

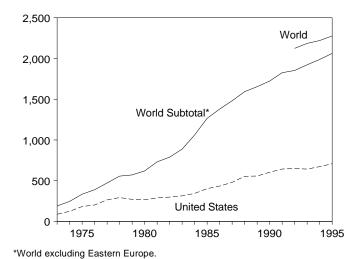
<sup>c</sup> "Other OECD" consists of Australia, New Zealand, and the U.S. Territories.

 $<sup>^{\</sup>rm d}$  The Organization for Economic Cooperation and Development (OECD) consists of Canada, Japan, the United States, "OECD Europe" and "Other OECD."

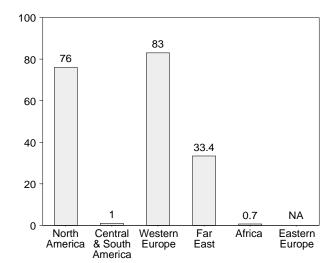
### Figure 10.5 Nuclear Electricity Gross Generation

(Billion Kilowatthours)

#### U.S. and World, 1973-1995

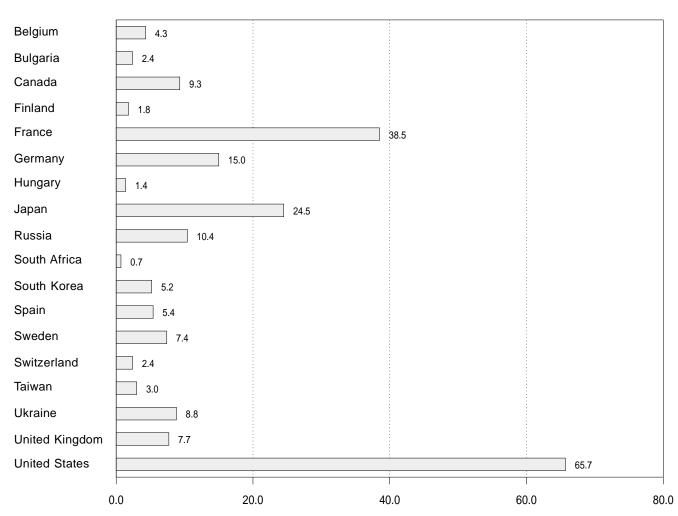


### By Region, January 1996



NA = Not available.

### By Selected Country, January 1996



Note: Because vertical scales differ, graphs should not be compared. Sources: Tables 10.4a-10.4e.

Table 10.4a Nuclear Electricity Gross Generation: Regions and World

	North America	Central and South America	Western Europe	Far East	Africa	Subtotal	Eastern Europe <sup>a</sup>	World
1973 Total	103.1	_	73.9	12.3	_	189.3	NA	NA
1974 Total	139.7	1.0	83.9	21.4	_	246.0	NA	NA
1975 Total	195.5	2.5	111.7	24.4	_	334.1	NA	NA
1976 Total	219.8	2.6	126.2	40.3	_	388.9	NA	NA
1977 Total	290.8	1.6	148.1	31.5	_	472.0	NA	NA
1978 Total	325.4	2.9	166.9	60.6	_	555.9	NA	NA
1979 Total	309.0	2.7	184.3	74.7	_	570.7	NA	NA
1980 Total	305.8	2.3	214.2	97.4	_	619.8	NA	NA
1981 Total	331.8	2.8	293.4	102.9	_	730.9	NA	NA
1982 Total	341.2	1.9	321.8	123.6	_	788.5	NA NA	NA
1983 Total	366.6	3.6	377.2	140.1	_	887.5	NA NA	NA NA
1984 Total	397.6	6.6	485.4	167.7	4.2	1,061.5	NA NA	NA NA
1985 Total	465.6	9.1	582.8	202.0	5.9	1,265.4	NA NA	NA NA
	508.8	5.8	631.5	223.6	9.3	1,378.9	NA NA	NA NA
1986 Total								
1987 Total	560.1	6.2	648.3	259.5	6.6	1,480.7	NA	NA
1988 Total	639.7	5.5	688.1	248.5	11.1	1,592.8	NA	NA
1989 Total	640.2	6.6	732.2	263.4	11.7	1,654.1	NA	NA
1990 Total	681.3	9.4	738.6	284.3	8.9	1,722.5	NA	NA
1991 Total	733.4	9.2	769.7	303.3	9.7	1,825.2	NA .	NA .
1992 Total	735.2	8.8	783.9	315.2	9.9	1,852.9	E 271.5	E 2,124.5
1993 Total	744.6	8.1	817.0	<sup>E</sup> 345.2	7.7	E 1,922.7	<sup>E</sup> 263.0	E 2,185.6
1994 January	69.5	.7	76.3	E 28.6	.9	E 176.0	NA	NA
February	61.3	.7	67.5	E 25.0	.8	E 155.2	NA	NA
March	61.8	.7	70.3	E 27.0	.8	E 160.5	NA	NA
April	55.0	.7	66.8	E 28.3	1.0	E 151.8	NA	NA
May	60.3	.7	60.2	E 28.2	1.3	E 150.7	NA	NA
June	63.6	.7	59.9	E 28.0	1.1	E 153.3	NA	NA
July	72.1	.7	60.2	E 33.6	1.1	E 167.7	NA	NA
August	73.3	.7	62.6	E 36.2	.9	E 173.8	NA	NA
September	67.6	.5	66.9	E 29.6	.4	E 165.0	NA NA	NA
October	62.5	.7	70.0	E 28.6	.5	E 162.3	NA	NA
November	67.4	.7 .7	70.0 72.6	E 28.5	.5 .6	E 169.8	NA NA	NA
December	72.9	. <i>r</i> .7	82.4	E 30.9	.0 .8	E 187.7	NA NA	NA NA
Total	787.3	8.2	815.5	E <b>366.7</b>	10.3	E 1,988.0	E 232.4	E 2,220.4
4005	75.7	4.4	04.4	F 04 0	4.0	F 400 4	NIA	NIA
1995 January	75.7	1.1	81.4	E 31.2 E 29.3	1.0	E 190.4 E 163.9	NA NA	NA NA
February	63.1	1.0	69.8		.7			
March	64.5	1.0	73.9	E 32.1	.7	E 172.1	NA	NA
April	59.8	.9	69.3	E 30.8	.7	E 161.4	NA	NA
May	64.2	.9	62.9	E 31.5	.8	E 160.3	NA	NA
June	67.3	.9	_61.1	E 30.2	1.1	E 160.7	NA	NA
July	_ 75.1	1.0	E 60.6	<sup>E</sup> 36.5	1.1	<sup>E</sup> 174.3	NA	NA
August	<sup>E</sup> 75.6	.6	E 62.0	<sup>E</sup> 39.3	1.2	<sup>E</sup> 178.6	NA	NA
September	E 68.6	.9	<sup>E</sup> 63.5	E 32.4	1.3	<sup>E</sup> 166.7	NA	NA
October	E 66.0	.4	E 71.0	E 32.5	1.2	E 171.1	NA	NA
November	E 64.2	.5	E 74.9	E 32.6	1.1	E 173.2	NA	NA
December	E 72.0	.5	E 80.5	E 35.6	1.0	E 189.6	NA	NA
Total	E 816.1	9.6	E 830.9	E 394.0	11.9	E 2,062.4	E 214.4	E 2,276.8
1996 January	E 76.0	1.0	E 83.0	E 33.4	.7	E 194.0	NA	NA

 $<sup>^{\</sup>mathrm{a}}$  See Table 10.4e for country-specific estimated annual generation and available monthly generation for Eastern Europe.

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

Notes: • Net figures are generally less than gross figures by about 5 percent, the difference being the energy consumed by the generating plants

themselves. Monthly data may not sum to annual totals due to independent rounding and because precommercial generation is included in some annual totals but not in the monthly data. • Data for regions may not sum to totals due to independent rounding.
Source: McGraw-Hill Publishing Company, Nucleonics Week.

Table 10.4b Nuclear Electricity Gross Generation: North, Central, and South America (Billion Kilowatthours)

	- Taiowatti	1					
	Canada	Mexico	United States	North America	Argentina	Brazil	Central and South America
1973 Total	15.3	_	87.8	103.1	_	_	_
1974 Total	15.4	_	124.3	139.7	1.0	_	1.0
1975 Total	13.2	_	182.3	195.5	2.5	_	2.5
1976 Total	18.0	_	201.8	219.8	2.6	_	2.6
1977 Total	26.6	_	264.2	290.8	1.6	_	1.6
1978 Total	33.0	_	292.4	325.4	2.9	_	2.9
1979 Total	38.4	_	270.6	309.0	2.7	_	2.7
1980 Total	40.4	_	265.4	305.8	2.3	_	2.3
1981 Total	43.3	_	288.5	331.8	2.8	_	2.8
1982 Total	42.6	_	298.6	341.2	1.9	0.1	1.9
1983 Total	53.0	_	313.6	366.6	3.4	.2	3.6
1984 Total	53.8	_	343.8	397.6	4.5	2.1	6.6
1985 Total	62.9	_	402.7	465.6	5.8	3.4	9.1
1986 Total	74.6	_	434.1	508.8	5.7	.1	5.8
1987 Total	80.6	_	479.5	560.1	5.2	1.0	6.2
1988 Total	85.6	_	554.1	639.7	5.1	.3	5.5
1989 Total	83.2	_	557.0	640.2	5.0	1.6	6.6
1990 Total	75.8	2.1	603.4	681.3	7.4	2.0	9.4
1991 Total	86.1	4.2	643.0	733.4	7.7	1.4	9.2
1992 Total	81.3	3.9	650.0	735.2	7.1	1.8	8.8
1993 Total	97.6	4.9	642.0	744.6	7.7	.4	8.1
1994 January	9.7	.2	59.6	69.5	.7	.0	.7
February	9.1	.0	52.2	61.3	.7	.0	.7
March	10.5	(s)	51.3	61.8	.7	.0	.7
April	9.1	.4	45.4	55.0	.7	.0	.7
May	8.8	.4	51.1	60.3	.7	.0	.7
June	8.7	.5	54.5	63.6	.7	.0	.7
July	9.5	.5	62.2	72.1	.7	.0	.7
August	9.7	.4	63.1	73.3	.7	.0	.7
September	8.8	.4	58.3	67.6	.5	.0	.5
October	8.8	.5	53.2	62.5	.7	.0	.7
November	9.0	.4	58.0	67.4	.7	.0	.7
December	9.0	.4	63.5	72.9	.7 .7	.0	.7
Total	110.7	4.2	672.4	787.3	8.2	.0	8.2
1995 January	9.0	.3	66.4	75.7	.7	.4	1.1
February	8.4	.4	54.3	63.1	.6	.3	1.0
March	9.5	.4	54.6	64.5	.7	.3	1.0
April	7.6	.6	51.7	59.8	.7	.2	.9
May	6.7	.5	57.1	64.2	.7	.2	.9
June	7.8	.5	59.0	67.3	.7	.2	.9
July	9.1	.9	65.1	75.1	.7	.2	1.0
August	E 9.5	.8	E 65.3	E 75.6	.6	.1	.6
September	E 8.6	.8	E 59.3	E 68.6	.7	.2	.9
October	E 8.1	.9	E 56.9	E 66.0	.3	.1	.4
November	8.0	.8	E 55.4	E 64.2	.2	.2	.5
December	8.4	.9	E 62.7	E 72.0	.3	.2	.5
Total	E 100.4	7.9	E <b>707.7</b>	E 816.1	7.1	2.5	9.6
1996 January	9.3	1.0	<sup>E</sup> 65.7	E 76.0	.7	.3	1.0

 <sup>-=</sup>Not applicable. E=Estimate. (s)=Less than 0.05 billion kilowatthours.
 Notes: • Net figures are generally less than gross figures by about 5 percent, the difference being the energy consumed by the generating plants themselves. • Monthly data may not sum to annual totals due to independent rounding and because precommercial generation is included in

some annual totals but not in the monthly data. • Data for countries may not sum to regional totals due to independent rounding. • U.S. geographic coverage is the 50 States and the District of Columbia.

Source: McGraw-Hill Publishing Company, Nucleonics Week.

Table 10.4c Nuclear Electricity Gross Generation: Western Europe

	Polaium	Finland	France	Gormanya	Italyb	Netherlands	Cnain	Sweden	Switzerland	United Kingdom <sup>c</sup>	Wester
	Belgium	Finiand	France	Germanya	italy	Netneriands	Spain	Sweden	Switzeriand	Kingdom	Europ
973 Total	0.0	_	14.7	11.9	3.1	1.1	6.5	2.1	6.2	28.2	73.9
974 Total	.1	_	14.7	12.0	3.4	3.3	7.2	2.3	7.0	33.8	83.9
975 Total	6.8	_	18.3	21.7	3.8	3.3	7.5	12.0	7.7	30.5	111.7
976 Total	10.0	_	15.8	24.5	3.8	3.9	7.6	16.0	7.9	36.8	126.2
977 Total	11.9	2.7	17.9	36.0	3.4	3.7	6.5	19.9	8.1	38.1	148.1
978 Total	12.5	3.3	30.6	35.7	4.5	4.1	7.6	23.8	8.3	36.6	166.9
979 Total	11.4	6.7	39.9	42.2	2.6	3.5	6.7	21.0	11.8	38.5	184.3
980 Total	12.5	7.0	61.2	43.7	2.2	4.2	5.2	26.7	14.3	37.2	214.2
981 Total	12.8	14.5	105.2	53.4	2.7	3.7	9.4	37.7	15.2	38.9	293.4
982 Total	15.6	16.5	108.9	63.4	6.8	3.9	8.8	38.8	15.0	44.1	321.8
983 Total	24.1	17.4	144.2	65.8	5.8	3.6	10.7	40.4	15.5	49.6	377.2
	27.7					3.8					485.4
984 Total	34.5	18.5	191.2 224.0	92.6	6.9	3.6 3.9	23.1 28.0	51.3	16.3 22.4	54.1 50.7	465.4 582.8
985 Total		18.8		125.8	7.0			58.6		59.7	
986 Total	38.6	18.8	254.3	118.9	8.7	4.2	37.5	69.9	22.5	58.2	631.5
987 Total	41.9	19.4	265.5	130.2	.2	3.6	41.2	67.2	23.0	56.2	648.3
988 Total	43.1	19.3	274.9	145.2	.0	3.7	50.4	69.4	22.7	59.4	688.1
989 Total	41.2	18.8	302.5	149.6	.0	4.0	56.1	65.6	22.8	71.6	732.2
990 Total	42.7	18.9	314.1	147.2	.0	3.4	54.3	68.2	23.6	66.1	738.6
991 Total	42.9	19.2	331.4	147.3	.0	3.3	55.6	76.8	22.9	70.4	769.7
992 Total	43.5	19.0	337.6	158.8	.0	3.8	55.8	63.5	23.4	78.5	783.9
993 Total	41.9	19.6	366.7	153.5	.0	3.9	56.1	61.4	23.3	90.4	817.0
994 January	4.3	1.8	34.1	13.8	.0	.4	5.1	6.9	2.4	7.6	76.3
February	3.5	1.6	30.8	12.1	.0	.1	4.1	6.7	2.1	6.6	67.5
March	3.6	1.8	30.5	12.7	.0	.1	4.1	7.2	2.3	7.9	70.3
April	3.3	1.7	28.6	12.0	.0	.4	4.3	6.9	2.3	7.3	66.8
May	2.8	1.1	25.3	11.2	.0	.4	4.7	5.6	2.0	7.2	60.2
June	2.4	1.6	25.5	11.8	.0	.4	4.1	4.3	1.4	8.5	59.9
July	2.6	1.5	28.0	10.6	.0	.4	4.8	4.4	1.5	6.5	60.2
August	3.3	1.4	28.1	11.5	.0	.4	5.3	4.5	1.2	7.0	62.6
September	3.2	1.4	28.7	12.3	.0	.3	5.1	5.5	2.1	8.3	66.9
October	3.5	1.8	30.8	13.7	.0	.4	4.1	6.7	2.4	6.5	70.0
November	4.0	1.7	31.7	14.1	.0	.4	4.2	7.1	2.3	7.1	70.6
	4.3	1.7	37.1	15.2	.0	.4	5.3	7.1	2.4	8.8	82.4
December  Total	40.6	19.1	359.1	151.1	.0 .0	4.0	55.1	<b>72.8</b>	24.2	89.5	815.5
<b>995</b> January	4.2	1.6	38.7	15.2	.0	.3	5.4	7.2	2.4	6.4	81.4
	3.7	1.5	31.7	13.1	.0		4.6	6.2	2.4	6.8	69.8
February	3.7 3.6					(s)	4.6		2.2	8.0	73.9
March		1.8	34.4	12.4	.0	.1		6.6			
April	4.0	1.7	30.6	12.2	.0	.4	4.3	6.5	2.0	7.5	69.3
May	3.4	1.3	28.3	10.2	.0	.4	5.0	5.6	2.1	6.5	62.9
June	3.1	1.6	27.1	11.3	.0	.4	4.7	3.5	1.6	7.9	61.1
July	2.5	1.7	28.2	11.2	.0	.4	4.3	4.0	1.6	E 6.8	E 60.6
August	2.5	1.4	29.0	12.1	.0	.4	4.3	4.5	1.3	E 6.4	E 62.0
September	2.7	1.6	27.9	12.5	.0	.4	4.0	5.2	2.0	E 7.2	E 63.5
October	3.7	1.6	31.1	13.9	.0	.4	4.1	6.6	2.4	E 7.2	E 71.0
November	3.8	1.4	34.4	14.8	.0	.4	3.8	6.8	2.3	E 7.2	E 74.9
December	4.2	1.7	36.2	15.2	.0	.4	5.4	7.3	2.4	E 7.7	E 80.5
Total	41.4	18.9	377.6	154.3	.0	4.0	54.5	69.9	24.8	E 85.5	E 830.9
1996 January	4.3	1.8	38.5	15.0	.0	.4	5.4	7.4	2.4	E 7.7	E 83.0

<sup>&</sup>lt;sup>a</sup> Through December 1990, the data for Germany are for the former West Germany only. Beginning with January 1991, the data for Germany are for the unified Germany, i.e., the former East Germany and West Germany.

Notes: • Net figures are generally less than gross figures by about 5 percent, the difference being the energy consumed by the generating plants themselves. • Monthly data may not sum to annual totals due to independent rounding and because precommercial generation is included in some annual totals but not in the monthly data. • Data for countries may not sum to regional totals due to independent rounding.

Source: McGraw-Hill Publishing Company, Nucleonics Week.

b In 1987, Italy's citizens voted for a nuclear power moratorium, which shut down their nuclear power plants indefinitely.

<sup>&</sup>lt;sup>c</sup> Monthly data for the United Kingdom are totals for 4- or 5-week reporting periods, not calendar months.

<sup>- =</sup>Not applicable. E=Estimate. (s)=Less than 0.05 billion kilowatthours.

Table 10.4d Nuclear Electricity Gross Generation: Far East and Africa

	Chinaa	India	Japan	Pakistan	South Korea	Taiwan	Far East	South Africa <sup>b</sup>
1973 Total	_	2.5	9.4	0.5	_	_	12.3	_
1974 Total	_	1.9	18.9	.6	_	_	21.4	_
1975 Total	_	2.5	21.3	.5	_	_	24.4	_
1976 Total	_	3.2	36.6	.5	_	_	40.3	_
1977 Total	_	2.8	28.2	.3	0.1	0.1	31.5	_
1978 Total	_	2.3	53.1	.2	2.3	2.7	60.6	_
1979 Total	_	3.2	62.0	(s)	3.2	6.3	74.7	_
1980 Total	_	2.9	82.8	.1	3.5	8.2	97.4	_
1981 Total	_	3.1	86.0	.2	2.9	10.7	102.9	_
1982 Total	_	2.2	104.5	.1	3.8	13.1	123.6	_
1983 Total	_	2.9	109.1	.2	9.0	18.9	140.1	_
1984 Total	_	4.1	127.2	.3	11.8	24.3	167.7	4.2
1985 Total	_	4.5	152.0	.3	16.5	28.7	202.0	5.9
1986 Total	_	5.1	164.8	.5	26.1	26.9	223.6	9.3
1987 Total	_	5.5	182.8	.3	37.8	33.1	259.5	6.6
1988 Total	_	6.1	173.6	.2	38.7	29.9	248.5	11.1
1989 Total	_	4.0	183.7	.1	47.2	28.3	263.4	11.7
1990 Total	_	6.3	191.9	.4	52.8	32.9	284.3	8.9
1991 Total	_	5.4	205.8	.4	56.3	35.3	303.3	9.7
1992 Total	_	6.3	218.0	.6	56.4	33.8	315.2	9.9
1993 Total	E 2.6	6.2	243.5	.4	58.1	34.3	E 345.2	7.7
1994 January	NA	.4	20.5	.1	5.0	2.6	E 28.6	.9
February	NA	.3	17.8	(s)	4.1	2.8	E 25.0	.8
March	NA	.4	19.0	.1	4.6	2.9	E 27.0	.8
April	NA	.4	20.2	(s)	4.9	2.7	E 28.3	1.0
May	NA	.5	19.8	.1	4.9	2.9	E 28.2	1.3
June	NA	.5	19.4	.1	5.0	2.9	E 28.0	1.1
July	NA	.4	24.3	(s)	5.5	3.3	E 33.6	1.1
August	NA	.5	26.9	(s)	5.3	3.5	E 36.2	.9
September	NA	.3	21.7	(s)	4.8	2.9	E 29.6	.4
October	NA	.3	20.5	.1	5.0	2.8	E 28.6	.5
November	NA	.5	20.6	(s)	4.7	2.7	E 28.5	.6
December	NA	.6	23.1	.1	4.3	2.9	E 30.9	.8
Total	E 14.2	5.0	253.8	.6	58.3	34.8	E 366.7	10.3
1995 January	NA	.7	23.1	(s)	4.8	2.5	E 31.2	1.0
February	NA	.5	21.5	(s)	4.9	2.3	E 29.3	.7
March	NA	.6	23.6	(s)	5.1	2.7	E 32.1	.7
April	NA	.6	22.6	(s)	4.9	2.7	E 30.8	.7
May	NA	.7	22.1	(s)	5.4	3.2	E 31.5	.8
June	NA	.7	20.6	.1	5.5	3.4	E 30.2	1.1
July	NA	.8	26.3	.1	6.1	3.3	E 36.5	1.1
August	NA	E.8	29.0	.1	5.9	3.4	E 39.3	1.2
September	NA	E .8	23.9	(s)	4.8	2.8	E 32.4	1.3
October	NA	.5	23.8	.1	5.1	3.0	E 32.5	1.2
November	NA	.5	23.5	(s)	5.5	3.0	E 32.6	1.1
December	NA	.6	26.1	.1	5.9	2.9	E 35.6	1.0
Total	NA	E 8.0	286.1	.5	64.0	35.3	E 394.0	11.9
1996 January	NA	.6	24.5	(s)	5.2	3.0	E 33.4	.7

<sup>&</sup>lt;sup>a</sup> The total gross generation estimate for 1993 and 1994 for China is calculated as 5 percent more than the annual net nuclear generation reported by the International Atomic Energy Agency (IAEA) and is published in the Energy Information Administration annual report, *World Nuclear Outlook 1995*, October 1995, Table 1.

Notes: • The Philippines has a nuclear generating unit under construction.

Its earliest initial commercial operation is projected to be in 1996. • Net figures are generally less than gross figures by about 5 percent, the difference being the energy consumed by the generating plants themselves. • Monthly data may not sum to annual totals due to independent rounding and because precommercial generation is included in some annual totals but not in the monthly data. • Data for countries may not sum to regional totals due to independent rounding

Source: McGraw-Hill Publishing Company, Nucleonics Week.

<sup>&</sup>lt;sup>b</sup> South Africa comprises all of Africa's nuclear electricity generation.

NA=Not available. – =Not applicable. E=Estimate. (s)=Less than 0.05 billion kilowatthours.

Table 10.4e Nuclear Electricity Gross Generation: Eastern Europe

Sulgaria   Republic   Hungary   Kazakhstan   Lithuania   Romania   Russia   Slovakia   Slovakia   Slovakia   Europe   Lithuania   Romania   Russia   Slovakia   Slovakia   Europe   Lithuania   Russia   Russia   Slovakia   Slovakia   Europe   Russia   Rus		`	1	, 		1						
974 Total		Bulgaria		Hungary	Kazakhstan <sup>a</sup>	Lithuania <sup>a</sup>	Romania <sup>b</sup>	Russia	Slovakia <sup>a</sup>	Slovenia	Ukraine	Eastern Europe <sup>0</sup>
974 Total	1973 Total	_	_	_	NΔ	_	_	NΔ	NΔ	_	_	NΔ
975 Total			_	_		_	_			_	_	
976 Total			_			_				_	_	
977 Total			_			_				_		
978 Total			_			_				_	_	
979 Total			_			_				_	NΔ	
980 Total			_									
981 Total			_			_						
982 Total NA			_	_		_				_		
883 Total			_			_				_		
984 Total NA - NA												
985 Total NA												
886 Total NA			_									
887 Total NA												
888 Total NA												
989 Total NA												
990 Total NA												
991 Total NA												
992 Total												
993 Total												
994 January												
February         1.4         1.2         1.2         NA         NA         -         10.0         NA         .4         6.7         NA           March         1.6         1.3         1.2         NA         NA         -         9.5         NA         .4         6.5         NA           May         1.1         1.3         1.0         NA         NA         -         8.0         NA         .5         5.8         NA           Jule         .8         1.3         1.0         NA         NA         -         7.5         NA         .5         6.2         NA           July         .6         1.3         1.1         NA         NA         -         7.0         NA         .5         5.8         NA           August         .9         NA         1.0         NA         NA         -         6.0         NA         .3         2.9         NA           Agetember         .8         NA         1.0         NA         NA         -         6.5         NA         (s)         3.6         NA           October         1.2         NA         1.3         NA         NA         -         7.5	1993 Total	14.0	⁻ 13.2	13.8	⁻.4	⁻ 12.9	-	120.4	⁻ 11.6	4.0	⁻ 72.7	⁻ 263.0
March         1.6         1.3         1.2         NA         NA         -         9.5         NA         4         6.5         NA           April         1.1         1.3         1.0         NA         NA         -         8.0         NA         .5         5.2         NA           May         1.1         1.3         1.0         NA         NA         -         7.5         NA         .5         6.2         NA           June         .8         1.3         1.0         NA         NA         -         7.0         NA         .5         5.8         NA           July         .6         1.3         1.1         NA         NA         -         7.0         NA         .5         5.8         NA           August         .9         NA         1.0         NA         NA         -         6.0         NA         .3         2.9         NA           Aseptember         .8         NA         1.0         NA         NA         -         6.5         NA         (s)         3.6         NA           October         1.2         NA         1.3         NA         NA         -         7.5 <t< td=""><td><b>994</b> January</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	<b>994</b> January											
April         1.1         1.3         1.0         NA         NA         -         8.0         NA         .5         5.8         NA           May         1.1         1.3         1.0         NA         NA         -         7.5         NA         .5         6.2         NA           July         .6         1.3         1.1         NA         NA         -         7.2         NA         .4         3.7         NA           August         .9         NA         1.0         NA         NA         -         6.0         NA         .3         2.9         NA           September         .8         NA         1.0         NA         NA         -         6.5         NA         (s)         3.6         NA           October         1.2         NA         1.3         NA         NA         -         7.5         NA         .4         5.4         NA           December         1.6         NA         1.3         NA         NA         -         9.2         NA         .5         7.4         NA           Total         14.9         E12.7         14.0         E.4         E7.0         -         97.7 <td>•</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>_</td> <td></td> <td></td> <td></td> <td></td> <td></td>	•						_					
May         1.1         1.3         1.0         NA         NA         -         7.5         NA         .5         6.2         NA           June         .8         1.3         1.0         NA         NA         -         7.0         NA         .5         5.8         NA           July         .6         6         1.3         1.1         NA         NA         -         7.2         NA         .4         3.7         NA           August         .9         NA         1.0         NA         NA         -         6.0         NA         .3         2.9         NA           September         .8         NA         1.0         NA         NA         -         6.5         NA         (s)         3.6         NA           October         1.2         NA         1.3         NA         NA         -         7.5         NA         .4         5.4         NA           December         2.0         NA         1.4         NA         NA         -         9.2         NA         .5         7.4         NA           Total         14.9         E12.7         14.0         E.4         E7.0         -												
June         .8         1.3         1.0         NA         NA         -         7.0         NA         .5         5.8         NA           July         .6         1.3         1.1         NA         NA         -         7.2         NA         .4         3.7         NA           August         .9         NA         1.0         NA         NA         -         6.0         NA         .4         3.7         NA           September         .8         NA         1.0         NA         NA         -         6.5         NA         (s)         3.6         NA           October         1.2         NA         1.3         NA         NA         -         7.5         NA         .4         5.4         NA           November         1.6         NA         1.3         NA         NA         -         8.4         NA         .5         6.7         NA           December         2.0         NA         1.4         NA         NA         -         9.2         NA         .5         7.4         NA           Total         14.9         E12.7         14.0         E.4         E7.0         -         97.7 </td <td>•</td> <td></td>	•											
July         .6         1.3         1.1         NA         NA         -         7.2         NA         .4         3.7         NA           August         .9         NA         1.0         NA         NA         -         6.0         NA         .3         2.9         NA           September         .8         NA         1.0         NA         NA         -         6.5         NA         (s)         3.6         NA           October         .1.2         NA         1.3         NA         NA         -         7.5         NA         .4         5.4         NA           November         1.6         NA         1.3         NA         NA         -         8.4         NA         .5         6.7         NA           December         2.0         NA         1.4         NA         NA         -         9.2         NA         .5         7.4         NA           December         2.0         NA         1.4         NA         NA         -         9.2         NA         .5         7.4         NA           Total         14.9         E12.7         14.0         E.4         E7.0         -         9	May						-					
August         .9         NA         1.0         NA         NA         -         6.0         NA         .3         2.9         NA           September         .8         NA         1.0         NA         NA         -         6.5         NA         (s)         3.6         NA           October         1.2         NA         1.3         NA         NA         -         7.5         NA         .4         5.4         NA           November         1.6         NA         1.3         NA         NA         -         8.4         NA         .5         6.7         NA           December         2.0         NA         1.4         NA         NA         -         9.2         NA         .5         7.4         NA           Total         14.9         E12.7         14.0         E.4         E7.0         -         97.7         E12.7         4.6         68.4         E232.4           995         January         2.2         NA         1.4         NA         NA         -         10.7         NA         .5         8.5         NA           February         2.1         NA         1.1         NA         NA <td>June</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td>	June						-					
September         .8         NA         1.0         NA         NA         -         6.5         NA         (s)         3.6         NA           October         1.2         NA         1.3         NA         NA         -         7.5         NA         .4         5.4         NA           November         1.6         NA         1.3         NA         NA         -         8.4         NA         .5         6.7         NA           December         2.0         NA         1.4         NA         NA         -         9.2         NA         .5         7.4         NA           Total         14.9         E12.7         14.0         E.4         E7.0         -         97.7         E12.7         4.6         68.4         E232.4           995 January         2.2         NA         1.4         NA         NA         -         9.2         NA         .5         7.4         NA           February         2.1         NA         1.1         NA         NA         -         8.9         NA         .4         7.5         NA           March         1.9         NA         1.3         NA         1.9         - </td <td>July</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td>	July						-					
October         1.2         NA         1.3         NA         NA         -         7.5         NA         .4         5.4         NA           November         1.6         NA         1.3         NA         NA         -         8.4         NA         .5         6.7         NA           December         2.0         NA         1.4         NA         NA         -         9.2         NA         .5         7.4         NA           Total         14.9         E12.7         14.0         E.4         E7.0         -         97.7         E12.7         4.6         68.4         E232.4           995 January         2.2         NA         1.4         NA         NA         -         10.7         NA         .5         8.5         NA           February         2.1         NA         1.1         NA         NA         -         8.9         NA         .4         7.5         NA           March         1.9         NA         1.3         NA         .9         -         9.0         NA         .5         7.3         NA           May         1.15         NA         1.1         NA         .7         -	August		NA	1.0	NA	NA	-			.3		
November         1.6         NA         1.3         NA         NA         -         8.4         NA         .5         6.7         NA           December         2.0         NA         1.4         NA         NA         -         9.2         NA         .5         7.4         NA           Total         14.9         E12.7         14.0         E.4         E7.0         -         97.7         E12.7         4.6         68.4         E232.4           995 January         2.2         NA         1.4         NA         NA         -         10.7         NA         .5         8.5         NA           February         2.1         NA         1.1         NA         NA         -         8.9         NA         .4         7.5         NA           March         1.9         NA         1.3         NA         .9         -         9.0         NA         .5         7.3         NA           April         1.5         NA         1.1         NA         .7         -         7.8         NA         .3         6.5         NA           May         1.3         NA         1.1         NA         .8         -			NA	1.0			_	6.5		(s)	3.6	
December         2.0         NA         1.4         NA         NA         -         9.2         NA         .5         7.4         NA           Total         14.9         E12.7         14.0         E.4         E7.0         -         97.7         E12.7         4.6         68.4         E232.4           995 January         2.2         NA         1.4         NA         NA         -         10.7         NA         .5         8.5         NA           February         2.1         NA         1.1         NA         NA         -         8.9         NA         .4         7.5         NA           March         1.9         NA         1.3         NA         .9         -         9.0         NA         .5         7.3         NA           April         1.5         NA         1.1         NA         .7         -         7.8         NA         .3         6.5         NA           May         1.3         NA         1.1         NA         .8         -         7.2         NA         .0         4.8         NA           Jule         1.0         NA         1.1         NA         .8         -	October	1.2	NA	1.3	NA	NA	_	7.5	NA	.4	5.4	NA
Total         14.9         E 12.7         14.0         E .4         E 7.0         -         97.7         E 12.7         4.6         68.4         E 232.4           995 January         2.2         NA         1.4         NA         NA         -         10.7         NA         .5         8.5         NA           February         2.1         NA         1.1         NA         NA         -         8.9         NA         .4         7.5         NA           March         1.9         NA         1.3         NA         9         -         9.0         NA         .5         7.3         NA           April         1.5         NA         1.1         NA         .7         -         7.8         NA         .3         6.5         NA           May         1.3         NA         1.1         NA         .8         -         7.2         NA         .0         4.8         NA           Jule         1.0         NA         1.1         NA         .8         -         7.2         NA         .0         4.8         NA           July         1.0         NA         1.1         NA         .8         -	November	1.6	NA	1.3	NA	NA	_	8.4	NA	.5	6.7	NA
995 January 2.2 NA 1.4 NA NA - 10.7 NA .5 8.5 NA February 2.1 NA 1.1 NA NA - 8.9 NA .4 7.5 NA March 1.9 NA 1.3 NA .9 - 9.0 NA .5 7.3 NA April 1.5 NA 1.1 NA .8 - 7.2 NA .0 4.8 NA .3 6.5 NA May 1.3 NA 1.1 NA .8 - 7.2 NA .0 4.8 NA June 9 NA 1.0 NA .7 - 6.6 NA .4 4.4 NA July 1.0 NA 1.1 NA .8 - 7.4 NA .5 4.0 NA July 1.0 NA 1.1 NA .8 - 7.2 NA .5 4.0 NA August 8 NA .8 NA .1.0 NA 1.0 N	December	2.0	NA	1.4	NA		_	9.2	NA	.5	7.4	
February         2.1         NA         1.1         NA         NA         -         8.9         NA         .4         7.5         NA           March         1.9         NA         1.3         NA         .9         -         9.0         NA         .5         7.3         NA           April         1.5         NA         1.1         NA         7         -         7.8         NA         .3         6.5         NA           May         1.3         NA         1.1         NA         .8         -         7.2         NA         .0         4.8         NA           June         .9         NA         1.0         NA         .7         -         6.6         NA         .4         4.4         NA           June         .9         NA         1.0         NA         .7         -         6.6         NA         .4         4.4         NA           June         .9         NA         1.0         NA         .7         -         6.6         NA         .4         4.4         NA           August         .8         NA         1.0         NA         1.0         -         7.2         NA	Total	14.9	E 12.7	14.0	E .4	<sup>E</sup> 7.0	-	97.7	E 12.7	4.6	68.4	E 232.4
February         2.1         NA         1.1         NA         NA         -         8.9         NA         .4         7.5         NA           March         1.9         NA         1.3         NA         9         -         9.0         NA         .5         7.3         NA           April         1.5         NA         1.1         NA         7         -         7.8         NA         .3         6.5         NA           May         1.3         NA         1.1         NA         .8         -         7.2         NA         .0         4.8         NA           June         9         NA         1.0         NA         .7         -         6.6         NA         .4         4.4         NA           July         1.0         NA         1.1         NA         .8         -         7.4         NA         .0         4.8         NA           July         1.0         NA         1.1         NA         .8         -         7.4         NA         .5         4.0         NA           August         .8         NA         1.0         NA         1.0         -         7.2         NA	995 January	2.2	NA	1.4	NA	NA	_	10.7	NA	.5	8.5	NA
March       1.9       NA       1.3       NA       .9       -       9.0       NA       .5       7.3       NA         April       1.5       NA       1.1       NA       7       -       7.8       NA       .3       6.5       NA         May       1.3       NA       1.1       NA       .8       -       7.2       NA       .0       4.8       NA         June       .9       NA       1.0       NA       .7       -       6.6       NA       .4       4.4       NA         July       1.0       NA       1.1       NA       .8       -       7.4       NA       .5       4.0       NA         August       .8       NA       1.0       NA       1.0       -       7.2       NA       .4       4.8       NA         September       1.0       NA       1.1       NA       .9       -       6.5       NA       .4       4.1       NA         October       1.2       NA       1.3       NA       1.0       -       7.8       NA       .5       5.7       NA         November       1.3       NA       1.4       NA <td>February</td> <td>2.1</td> <td>NA</td> <td>1.1</td> <td>NA</td> <td>NA</td> <td>_</td> <td>8.9</td> <td>NA</td> <td>.4</td> <td>7.5</td> <td>NA</td>	February	2.1	NA	1.1	NA	NA	_	8.9	NA	.4	7.5	NA
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May       1.3       NA       1.1       NA       .8       -       7.2       NA       .0       4.8       NA         June       .9       NA       1.0       NA       .7       -       6.6       NA       .4       4.4       NA         July        1.0       NA       1.1       NA       .8       -       7.4       NA       .5       4.0       NA         August        .8       NA       1.0       NA       1.0       -       7.2       NA       .4       4.8       NA         September       1.0       NA       1.1       NA       .9       -       6.5       NA       .4       4.1       NA         October       1.2       NA       1.3       NA       1.0       -       7.8       NA       .5       5.1       NA         November       1.3       NA       1.2       NA       1.3       -       8.9       NA       .5       5.7       NA         December       1.9       NA       1.4       NA       1.7       -       10.5       NA       .5       7.7       NA         Total       17.2	April	1.5	NA	1.1	NA	.7	_	7.8	NA	.3	6.5	NA
June       .9       NA       1.0       NA       .7       -       6.6       NA       .4       4.4       NA         July       1.0       NA       1.1       NA       .8       -       7.4       NA       .5       4.0       NA         August       .8       NA       1.0       NA       1.0       -       7.2       NA       .4       4.8       NA         September       1.0       NA       1.1       NA       .9       -       6.5       NA       .4       4.1       NA         October       1.2       NA       1.3       NA       1.0       -       7.8       NA       .5       5.1       NA         November       1.3       NA       1.2       NA       1.3       -       8.9       NA       .5       5.7       NA         December       1.9       NA       1.4       NA       1.7       -       10.5       NA       .5       7.7       NA         Total       17.2       NA       14.0       NA       F9.7       -       98.3       NA       4.8       70.4       E214.4		1.3	NA	1.1	NA	.8	_	7.2	NA	.0	4.8	NA
July       1.0       NA       1.1       NA       .8       -       7.4       NA       .5       4.0       NA         August       .8       NA       1.0       NA       1.0       -       7.2       NA       .4       4.8       NA         September       1.0       NA       1.1       NA       .9       -       6.5       NA       .4       4.1       NA         October       1.2       NA       1.3       NA       1.0       -       7.8       NA       .5       5.1       NA         November       1.3       NA       1.2       NA       1.3       -       8.9       NA       .5       5.7       NA         December       1.9       NA       1.4       NA       1.7       -       10.5       NA       .5       7.7       NA         Total       17.2       NA       14.0       NA       Eg.7       -       98.3       NA       4.8       70.4       Eg14.4		.9			NA	.7	_	6.6		.4	4.4	NA
August							_	7.4		.5	4.0	
September       1.0       NA       1.1       NA       .9       -       6.5       NA       .4       4.1       NA         October       1.2       NA       1.3       NA       1.0       -       7.8       NA       .5       5.1       NA         November       1.3       NA       1.2       NA       1.3       -       8.9       NA       .5       5.7       NA         December       1.9       NA       1.4       NA       1.7       -       10.5       NA       .5       7.7       NA         Total       17.2       NA       14.0       NA       F9.7       -       98.3       NA       4.8       70.4       F214.4	•						_					
October							_					
November       1.3       NA       1.2       NA       1.3       -       8.9       NA       .5       5.7       NA         December       1.9       NA       1.4       NA       1.7       -       10.5       NA       .5       7.7       NA         Total												
December												
Total 17.2 NA 14.0 NA <sup>E</sup> 9.7 – 98.3 NA 4.8 70.4 <sup>E</sup> 214.4												
996 January												E 214.4
	1996 January	2.4	NA	1.4	NA	1.6	_	10.4	NA	.5	8.8	NA

<sup>&</sup>lt;sup>a</sup> The total gross generation estimate for 1993 and 1994 for Czech Republic, Kazakhstan, Lithuania, and Slovakia is calculated as 5 percent more than the annual net nuclear generation reported by the International Atomic Energy Agency (IAEA) and is published in the Energy Information annual report. *World Nuclear Outlook 1995*. October 1995. Table 1.

NA=Not available. - =Not applicable. E=Estimate. (s)=Less than 0.05 billion kilowatthours.

Notes: • Armenia has two nuclear generating units under construction. The earliest commercial operation for one unit is projected to be in 2000.

Source: McGraw-Hill Publishing Company, Nucleonics Week.

annual report, *World Nuclear Outlook 1995*, October 1995, Table 1.

<sup>b</sup> Romania has one nuclear generating unit, which is undergoing testing. Its commercial operation is projected to begin in early 1996.

Its commercial operation is projected to begin in early 1996.

<sup>c</sup> The total gross generation estimate for 1992 for Eastern European countries are calculated as 5 percent more than the annual net nuclear generation reported by the IAEA and published in the Energy Information Administration annual report, *World Nuclear Capacity and Fuel Cycle Requirements 1993*, November 1993, Table 10.

<sup>•</sup> Net figures are generally less than gross figures by about 5 percent, the difference being the energy consumed by the generating plants themselves.

Monthly data may not sum to annual totals due to independent rounding and because precommercial generation is included in some annual totals but not in the monthly data.
 Data for countries may not sum to regional totals due to independent rounding.

## Sources for Tables 10.1a and 10.1b

#### **United States**

Table 3.1a.

#### Other Countries: Annual Data

**1973-1979:** Energy Information Administration (EIA), *International Energy Annual 1981*, Table 8.

1980: EIA, International Energy Annual 1989, Table 1. 1981: EIA, International Energy Annual 1990, Table 1.

**1982:** EIA, International Energy Annual 1991, Table 1.

**1983-1992:** EIA, International Energy Annual 1992, Table 1.

**1993:** EIA, *International Energy Annual 1993*, Table 2.2.

1995: Average of monthly data.

#### Other Countries: Monthly Data

**1994-1996:** Petroleum Intelligence Weekly, the Oil and Gas Journal, and other industry sources.

#### World: Annual Data

1973-1979: EIA, International Energy Annual 1981, Table 8.

1980: EIA, International Energy Annual 1989, Table 1. 1981: EIA, International Energy Annual 1990, Table 1. 1982: EIA, International Energy Annual 1991, Table 1983-1992: EIA, International Energy Annual 1992, Table 1.

**1993:** EIA, *International Energy Annual 1993*, Table 2.2.

1995: Average of monthly data.

#### World: Monthly Data

**1994-1996:** EIA, *International Petroleum Statistics Report*, sum of all countries' monthly data.

### **Appendix A. Thermal Conversion Factors**

The thermal conversion factors presented in the following eight 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 have a heat content of approximately 66.36 million Btu (10 barrels x 6.636 million Btu/barrel = 66.36 million Btu).

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 more heavily than the thermal conversion factor for propane.

In general, the annual thermal conversion factors presented in Tables A1 through A8 are computed from final annual data. However, if the current year's final data are not available in time for publication, thermal conversion factors for the current year are computed from the best available data and are labeled "preliminary." The source of each factor is described in the section entitled "Thermal Conversion Factor Source Documentation," which follows Table A8 in this appendix.

Table A1. Approximate Heat Content of Petroleum Products
(Million Btu per Barrel)

Petroleum Product	Heat Content	Petroleum Product He	eat Content
Asphalt	6.636	Petrochemical Feedstocks	
Aviation Gasoline		Naphtha Less Than 401° F	5.248
Butane	4.326	Other Oils Equal to or Greater Than 401° F	5.825
Butane-Propane Mixture <sup>a</sup>	4.130	Still Gas	6.000
Distillate Fuel Oil	5.825	Petroleum Coke	6.024
Ethane	3.082	Plant Condensate	5.418
Ethane-Propane Mixture <sup>b</sup>	3.308	Propane	3.836
Isobutane	3.974	Residual Fuel Oil	6.287
Jet Fuel, Kerosene Type	5.670	Road Oil	6.636
Jet Fuel, Naphtha Type	5.355	Special Naphthas	5.248
Kerosene	5.670	Still Gas	6.000
Lubricants	6.065	Unfinished Oils	5.825
Motor Gasoline	5.253	Unfractionated Stream	5.418
Natural Gasoline and Isopentane	4.620	Waxes	5.537
Pentanes Plus	4.620	Miscellaneous	5.796

<sup>&</sup>lt;sup>a</sup> 60 percent butane and 40 percent propane.

 $Source: \ \ See \ ``Thermal\ Conversion\ Factor\ Source\ Documentation,"\ which\ follows\ Table\ A8.$ 

<sup>&</sup>lt;sup>b</sup> 70 percent ethane and 30 percent propane.

Table A2. Approximate Heat Content of Crude Oil, Crude Oil and Products, and Natural Gas Plant Liquids

(Million Btu per Barrel)

		Crude Oil		Crude Oil a	and Products	Natural Gas
	Production	Imports	Exports	Imports	Exports	Plant Liquids Production
1973	5.800	5.817	5.800	5.897	5.752	4.049
1974	5.800	5.827	5.800	5.884	5.774	4.011
1975	5.800	5.821	5.800	5.858	5.748	3.984
1976	5.800	5.808	5.800	5.856	5.745	3.964
1977	5.800	5.810	5.800	5.834	5.797	3.941
1978	5.800	5.802	5.800	5.839	5.808	3.925
1979	5.800	5.810	5.800	5.810	5.832	3.955
1980	5.800	5.812	5.800	5.796	5.820	3.914
1981	5.800	5.818	5.800	5.775	5.821	3.930
1982	5.800	5.826	5.800	5.775	5.820	3.872
1983	5.800	5.825	5.800	5.774	5.800	3.839
1984	5.800	5.823	5.800	5.745	5.850	3.812
1985	5.800	5.832	5.800	5.736	5.814	3.815
1986	5.800	5.903	5.800	5.808	5.832	3.797
1987	5.800	5.901	5.800	5.820	5.858	3.804
1988	5.800	5.900	5.800	5.820	5.840	3.800
1989	5.800	5.906	5.800	5.833	5.857	3.826
1990	5.800	5.934	5.800	5.849	5.833	3.822
991	5.800	5.948	5.800	5.873	5.823	3.807
992	5.800	5.953	5.800	5.877	5.777	3.804
993	5.800	5.954	5.800	5.883	5.779	3.801
994	5.800	5.950	5.800	5.861	5.781	3.794
995 <sup>a</sup>	5.800	5.956	5.800	5.875	5.751	3.797
1996 <sup>a</sup>	5.800	5.956	5.800	5.875	5.751	3.797

a Preliminary.

Note: Crude oil includes lease condensate.

Source: See "Thermal Conversion Factor Source Documentation," which follows Table A8.

Table A3. Approximate Heat Content of Petroleum Products, Weighted Averages (Million Btu per Barrel)

			Consumption					1:
	Residential and Commercial	Industrial	Transportation	Electric Utilities	Total	Imports	Exports	Liquefied Petroleum Gases Consumption
973	5.387	5.568	5.395	6.245	5.515	5.983	5.752	3.746
974	5.377	5.538	5.394	6.238	5.504	5.959	5.773	3.730
975	5.358	5.528	5.392	6.250	5.494	5.935	5.747	3.715
976	5.383	5.538	5.395	6.251	5.504	5.980	5.743	3.711
977	5.389	5.555	5.400	6.249	5.518	5.908	5.796	3.677
978	5.382	5.553	5.404	6.251	5.519	5.955	5.814	3.669
979	5.471	5.418	5.428	6.258	5.494	5.811	5.864	3.680
980	5.468	5.376	5.440	6.254	5.479	5.748	5.841	3.674
981	5.409	5.313	5.432	6.258	5.448	5.659	5.837	3.643
982	5.392	5.263	5.422	6.258	5.415	5.664	5.829	3.615
983	5.286	5.273	5.415	6.255	5.406	5.677	5.800	3.614
984	5.384	5.223	5.422	6.251	5.395	5.613	5.867	3.599
985	5.326	5.221	5.423	6.247	5.387	5.572	5.819	3.603
986	5.357	5.286	5.427	6.257	5.418	5.624	5.839	3.640
987	5.316	5.253	5.430	6.249	5.403	5.599	5.860	3.659
988	5.320	5.248	5.434	6.250	5.410	5.618	5.842	3.652
989	5.257	5.233	5.440	6.241	5.410	5.641	5.869	3.683
990	5.208	5.272	5.445	6.247	5.411	5.614	5.838	3.625
991	5.163	5.192	5.442	6.248	5.384	5.636	5.827	3.614
992	5.169	5.188	5.445	6.243	5.378	5.623	5.774	3.624
993	5.148	5.200	5.438	6.241	5.379	5.620	5.777	3.606
994 <sup>a</sup>	5.154	5.171	5.442	6.231	5.371	5.538	5.779	3.635
995 <sup>a</sup>	5.150	5.150	5.439	6.210	5.358	5.510	5.746	3.624
996 <sup>a</sup>	5.150	5.150	5.439	6.210	5.358	5.510	5.746	3.624

a Preliminary.

Note: Weighted averages of the products included in each category are calculated by using heat content values shown in Table A1. Source: See "Thermal Conversion Factor Source Documentation," which follows Table A8.

Table A4. Approximate Heat Content of Natural Gas

(Btu per Cubic Foot)

	Prod	luction		Consumption	T		
	Dry	Marketed (Wet)	Sectors Other Than Electric Utilities	Electric Utilities	Total	Imports	Exports
973	1,021	1,093	1,020	1,024	1,021	1,026	1,023
974	1,024	1,097	1,024	1,022	1,024	1,027	1,016
975	1,021	1,095	1,020	1,026	1,021	1,026	1,014
976	1,020	1,093	1,019	1,023	1,020	1,025	1,013
977	1,021	1,093	1,019	1,029	1,021	1,026	1,013
978	1,019	1,088	1,016	1,034	1,019	1,030	1,013
979	1,021	1,092	1,018	1,035	1,021	1,037	1,013
980	1,026	1,098	1,024	1,035	1,026	1,022	1,013
981	1,027	1,103	1,025	1,035	1,027	1,014	1,011
982	1,028	1,107	1,026	1,036	1,028	1,018	1,011
983	1,031	1,115	1,031	1,030	1,031	1,024	1,010
984	1,031	1,109	1,030	1,035	1,031	1,005	1,010
985	1,032	1,112	1,031	1,038	1,032	1,002	1,011
986	1,030	1,110	1,029	1,034	1,030	997	1,008
987	1,031	1,112	1,031	1,032	1,031	999	1,011
988	1,029	1,109	1,029	1,028	1,029	1,002	1,018
989	1,031	1,107	1,031	1,030	1,031	1,004	1,019
990	1,031	1,105	1,030	1,034	1,031	1,012	1,018
991	1,030	1,108	1,031	1,024	1,030	1,014	1,022
992	1,030	1,110	1,031	1,022	1,030	1,011	1,018
993	1,027	1,106	1,028	1,022	1,027	1,020	1,016
994 <sup>a</sup>	1,028	1,105	1,029	1,022	1,028	1,022	1,011
995 <sup>a</sup>	1,028	1,105	1,029	1,022	1,028	1,022	1,011
996 <sup>a</sup>	1,028	1,105	1,029	1,022	1,028	1,022	1,011

<sup>a</sup> Preliminary. Source: See "Thermal Conversion Factor Source Documentation," which follows Table A8.

Table A5. Approximate Heat Content of Coal

(Million Btu per Short Ton)

				Consumption				
	Production	Residential and Commercial	Coke Plants	Other Industrial <sup>a</sup>	Electric Utilities <sup>b</sup>	Total	Imports	Exports
1973	23.376	22.831	26.780	22.586	22.246	23.057	25.000	26.596
1974	23.072	22.479	26.778	22.419	21.781	22.677	25.000	26.700
1975	22.897	22.479	26.776	22.419	21.642	22.506	25.000	26.760
1976	22.855	22.774	26.781	22.530	21.679	22.498	25.000	26.601
1977	22.597	22.774	26.787	22.322	21.508	22.265	25.000	26.548
1978	22.248	22.466	26.789	22.207	21.275	22.203	25.000	26.478
1979	22.454	22.242	26.788	22.452	21.364	22.100	25.000	26.548
980	22.415	22.543	26.790	22.690	21.295	21.947	25.000	26.384
981	22.308	22.474	26.794	22.585	21.085	21.713	25.000	26.160
1982	22.239	22.695	26.797	22.712	21.194	21.674	25.000	26.223
1983	22.052	22.775	26.797	22.691	21.194	21.576	25.000	26.223
984	22.032	22.775	26.799	22.543	21.133	21.576	25.000	26.402
985								
	21.870	22.646	26.798	22.020	20.959	21.366	25.000	26.307
1986	21.913	22.947	26.798	22.198	21.084	21.462	25.000	26.292
1987	21.922	23.404	26.799	22.381	21.136	21.517	25.000	26.291
1988	21.823	23.571	26.799	22.360	20.900	21.328	25.000	26.299
1989	21.765	23.650	26.800	22.347	20.848	21.272	25.000	26.160
1990	21.822	23.137	26.799	22.457	20.929	21.331	25.000	26.202
1991	21.681	23.114	26.799	22.460	20.755	21.146	25.000	26.188
1992	21.646	23.105	26.799	22.250	20.787	21.143	25.000	26.161
1993	21.388	22.994	26.800	22.123	20.639	20.983	25.000	26.335
1994	21.352	23.112	26.800	22.068	20.673	21.010	25.000	26.329
1995 <sup>c</sup>	21.278	23.165	26.800	21.909	20.502	20.852	25.000	26.207
1996 <sup>c</sup>	21.278	23.165	26.800	21.909	20.502	29.852	25.000	26.207

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

represent coal consumption.

<sup>c</sup> Preliminary.

Source: See "Thermal Conversion Factor Source Documentation," which follows Table A8.

b Data shown in this column are not the same as those shown in the *Electric Power Monthly* (EPM). The EPM data report coal receipts; the data shown here

Table A6. Approximate Heat Content of Bituminous Coal and Lignite

(Million Btu per Short Ton)

				Consumption				
	Production	Residential and Commercial	Coke Plants	Other Industrial <sup>a</sup>	Electric Utilities	Total	Imports	Exports
1973	23.391	22.887	26.800	22.585	22.262	23.073	25.000	26.612
1974	23.087	22.523	26.800	22.420	21.799	22.694	25.000	26.716
1975	22.910	22.258	26.800	22.439	21.659	22.522	25.000	26.573
1976	22.863	22.819	26.800	22.528	21.692	22.509	25.000	26.613
1977	22.597	22.594	26.800	22.290	21.521	22.266	25.000	26.561
1978	22.242	22.078	26.800	22.175	21.284	22.014	25.000	26.501
1979	22.449	21.884	26.800	22.173	21.372	22.100	25.000	26.570
1980	22.449	22.488	26.800	22.430	21.301	21.950	25.000	26.404
1981	22.301	22.400	26.800	22.572	21.091	21.710	25.000	26.176
1982	22.233	22.226	26.800	22.695	21.200	21.670	25.000	26.231
1983	22.048	22.438	26.800	22.680	21.141	21.576	25.000	26.300
1984	22.046	22.436	26.800	22.525	21.141	21.570	25.000	26.410
1985	21.867	22.568	26.800	22.013	20.965	21.368	25.000	26.320
1986	21.908	22.669	26.800	22.185	21.091	21.462	25.000	26.308
1987	21.918	22.800	26.800	22.360	21.143	21.514	25.000	26.304
1988	21.817	23.135	26.800	22.341	20.905	21.324	25.000	26.308
1989	21.759	22.917	26.800	22.324	20.854	21.268	25.000	26.166
1990	21.819	22.678	26.800	22.444	20.935	21.330	25.000	26.207
1991	21.678	22.635	26.800	22.448	20.761	21.146	25.000	26.192
1992	21.643	22.768	26.800	22.242	20.792	21.142	25.000	26.165
1993	21.383	22.749	26.800	22.111	20.644	20.983	25.000	26.341
1994	21.347	22.683	26.800	22.046	20.681	21.011	25.000	26.335
1995 <sup>b</sup>	21.272	22.785	26.800	21.887	20.509	20.852	25.000	26.212
1996 <sup>b</sup>	21.272	22.785	26.800	21.887	20.509	20.852	25.000	26.212

a Includes transportation.
 b Preliminary.
 Source: See "Thermal Conversion Factor Source Documentation," which follows Table A8.

Table A7. Approximate Heat Content of Anthracite and Coal Coke

(Million Btu per Short Ton)

			Anthracite			
			Consumption			Coal Coke
	Production	Sectors Other Than Electric Utilities	Electric Utilities	Total	Imports and Exports	Imports and Exports
973	22.132	22.674	17.920	21.464	25.400	24.800
974	21.711	22.330	17.200	20.919	25.400	24.800
975	21.582	22.272	17.064	20.762	25.400	24.800
976	22.045	22.618	17.526	21.254	25.400	24.800
977	22.661	24.101	17.244	22.066	25.400	24.800
978	23.079	24.388	17.104	22.398	25.400	24.800
979	23.170	24.272	17.454	22.069	25.400	24.800
980	22.869	22.719	17.652	21.405	25.400	24.800
981	23.291	23.749	18.168	22.080	25.400	24.800
982	23.289	24.578	18.160	22.518	25.400	24.800
983	22.734	24.536	16.516	21.583	25.400	24.800
984	23.107	25.128	17.018	22.322	25.400	24.800
985	22.428	23.031	16.784	20.817	25.400	24.800
986	23.084	24.399	15.578	21.512	25.400	24.800
987	23.108	26.293	15.962	22.435	25.400	24.800
988	23.266	26.021	17.312	22.423	25.400	24.800
989	23.385	27.196	16.310	22.623	25.400	24.800
990	22.574	25.199	16.140	21.668	25.400	24.800
991	22.573	25.268	15.858	21.410	25.400	24.800
992	22.572	24.617	16.944	21.423	25.400	24.800
993	22.573	24.096	16.534	21.262	25.400	24.800
994	22.572	25.037	14.680	20.828	25.400	24.800
995 <sup>a</sup>	22.573	24.872	14.568	20.860	25.400	24.800
996 <sup>a</sup>	22.573	24.872	14.568	20.860	25.400	24.800

<sup>a</sup> Preliminary. Source: See "Thermal Conversion Factor Source Documentation," which follows Table A8.

Table A8. Approximate Heat Rates for Electricity

(Btu per Kilowatthour)

	Fossil-Fueled Steam-Electric Plants <sup>a</sup>	Nuclear Steam-Electric Plants	Geothermal Energy Plants	Electricity Consumption
1973	10,389	10.903	21.674	3,412
1974	10,442	11.161	21,674	3,412
975	10,406	11,013	21,611	3,412
976	10,373	11.047	21.611	3.412
1977	10,435	10.769	21.611	3,412
978	10,361	10.941	21.611	3,412
979	10,353	10.879	21.545	3,412
980	10,388	10,908	21,639	3,412
981	10,453	11,030	21,639	3,412
982	10,454	11,073	21,629	3,412
983	10,520	10,905	21,290	3,412
984	10,440	10,843	21,303	3,412
985	10,447	10,813	21,263	3,412
986	10,446	10,799	21,263	3,412
987	10,419	10,776	21,263	3,412
988	10,324	10,743	21,096	3,412
989	10,317	10,724	21,096	3,412
990	10,335	10,680	21,096	3,412
991	10,352	10,740	20,997	3,412
992	10,302	10,678	20,914	3,412
993	10,280	10,682	20,914	3,412
994	10,272	10,676	20,914	3,412
995 <sup>b</sup>	10,272	10,676	20,914	3,412
996 <sup>b</sup>	10,272	10,676	20,914	3,412

<sup>&</sup>lt;sup>a</sup> This thermal conversion factor is used for hydroelectric power generation and for biomass fuels, wind, photovoltaic, and solar thermal energy consumed at electric utilities.

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

## Thermal Conversion Factor Source Documentation

# Approximate Heat Content of Petroleum and Natural Gas Plant Liquids

**Asphalt.** The 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 Bureau of Mines thermal conversion factor of 5.048 million Btu per barrel for "Gasoline, Aviation" 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.

**Butane.** EIA adopted the Bureau of Mines thermal conversion factor of 4.326 million Btu per barrel 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 and Lease Condensate, Production.

Crude Oil, Imports. Calculated annually by EIA by weighting the thermal conversion factor of each type of crude oil imported by the quantity 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 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 and Lease Condensate, 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."

Crude Oil and Petroleum Products, Exports. Calculated annually by EIA as the average of the thermal conversion factors for each petroleum product

b Preliminary

exported and crude oil exported weighted by the quantity of each petroleum product and crude oil exported. See Crude Oil, Exports and Petroleum Products, Exports.

Crude Oil and Petroleum Products, Imports. Calculated annually by EIA as the average of the thermal conversion factors for each petroleum product and each type of crude oil imported weighted by the quantity of each petroleum product and each type of crude oil imported. See Crude Oil, Imports and Petroleum Products, Imports.

**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 Value of Various Fuels, Adopted January 3, 1950."

**Ethane.** EIA adopted the Bureau of Mines thermal conversion factor of 3.082 million Btu per barrel in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

**Ethane-Propane Mixture**. EIA calculated 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 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 Appendix V of 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 Appendix V of *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 (LPG) Consumption. Calculated annually by EIA as the average of the thermal conversion factors of each liquefied petroleum gas consumed, weighted by the quantity of each liquefied petroleum gas consumed.

**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**. EIA adopted the Bureau of Mines thermal conversion factor of 5.253 million Btu per barrel for "Gasoline, Motor Fuel" 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.

Natural Gas Plant Liquids, Production. Calculated annually by EIA as the average of the thermal conversion factors of each natural gas plant liquid produced weighted by the quantity of each natural gas plant liquid 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 per barrel or equal to that for natural gasoline. See **Natural Gasoline**.

Petrochemical Feedstocks, Naphtha Less Than 401 Degrees Fahrenheit. 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, Oils Equal to or Greater Than 401 Degrees Fahrenheit. 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 Value of Various Fuels, Adopted January 3, 1950." The Bureau of Mines calculated this factor by dividing 30,120,000 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 Products, Total Consumption.** Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products

consumed, weighted by the quantity of each petroleum product consumed.

**Petroleum Products, Consumption by Electric Utilities.** Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed at electric utilities, weighted by the quantity of each petroleum product consumed at electric utilities. The quantity of petroleum consumed is estimated in the State Energy Data System as documented in the State Energy Data Report.

**Petroleum Products, Consumption by Industrial Users**. Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed in the industrial sector, weighted by the estimated quantity of each petroleum product consumed in the industrial sector. The quantity of petroleum products consumed is estimated in the State Energy Data System as documented in the State Energy Data Report.

**Petroleum Products, Consumption by Residential and Commercial Users.** Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed by the residential and commercial sector, weighted by the estimated quantity of each petroleum product consumed in the residential and commercial sector. The quantity of petroleum products consumed is estimated in the State Energy Data System as documented in the State Energy Data Report.

**Petroleum Products, Consumption by Transportation Users.** Calculated annually by EIA as the average of the thermal conversion factor for all petroleum products consumed in the transportation sector, weighted by the estimated quantity of each petroleum product consumed in the transportation sector. The quantity of petroleum products consumed is estimated in the State Energy Data System as documented in the State Energy Data Report.

**Petroleum Products, Exports.** Calculated annually by EIA as the average of the thermal conversion factors for each petroleum product, weighted by the quantity of each petroleum product exported.

**Petroleum Products, Imports.** Calculated annually by EIA as the average of the thermal conversion factors for each petroleum product imported, weighted by the quantity of each petroleum product 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 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 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 and first published in the *Petroleum Statement*, *Annual*, 1970.

**Unfinished Oil.** 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 in the *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 in the *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 Natural Gas

Natural Gas, Total Consumption. 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 of natural gas consumed. The heat content and quantity consumed are from Form EIA-176. Published sources are: 1980-1989: EIA, Natural Gas Annual 1992, Volume 2, Table 15. 1990-1992: EIA, Natural Gas Annual 1992, Volume 2, Table 16. 1993 forward: 1992 value used as an estimate.

**Natural Gas, Consumption by Electric Utilities.** Calculated annually by EIA by dividing the total heat content of natural gas received at electric utilities by the total quantity received at electric utilities. The

heat contents and receipts are from Form FERC-423 and predecessor forms.

Natural Gas, Consumption by Sectors Other Than Electric Utilities. Calculated annually by EIA by dividing the heat content of all natural gas consumed less the heat content of natural gas consumed at electric utilities by the quantity of all natural gas consumed less the quantity of natural gas consumed at electric utilities. Data are from Forms EIA-176, FERC-423, EIA-759, and predecessor forms.

**Natural Gas, Exports.** Calculated annually by EIA by dividing the heat content of exported natural gas by the quantity of natural gas exported, both reported on Form FPC-14.

**Natural Gas, Imports.** Calculated annually by EIA by dividing the heat content of imported natural gas by the quantity of natural gas imported, both reported on Form FPC-14.

Natural Gas Production, Dry. Assumed by EIA to be equal to the thermal conversion factor for the consumption of dry natural gas. See Natural Gas Total Consumption.

Natural Gas Production, Marketed (Wet). Calculated annually by EIA by adding the heat content of dry natural gas production and the total heat content of natural gas plant liquids production and dividing this sum by the total quantity of marketed (wet) natural gas production.

### Approximate Heat Content of Coal and Coal Coke

**Anthracite, Total Consumption**. Calculated annually by EIA by dividing the sum of the heat content of anthracite consumed by electric utilities and all other sectors combined by the total quantity of anthracite consumed.

Anthracite, Consumption by Electric Utilities. Calculated annually by EIA by dividing the heat content of anthracite receipts at electric utilities by the quantity of anthracite received at electric utilities. Heat contents and receipts are from Form FERC-423 and predecessor forms.

Anthracite, Consumption by Sectors Other Than Electric Utilities. Calculated annually by EIA by dividing the heat content of anthracite production less the heat content of the anthracite consumed at electric utilities, net exports, and shipments to U.S. Armed Forces overseas by the quantity of anthracite consumed by sectors other than electric utilities less the quantity of anthracite stock changes, losses, and "unaccounted for."

Anthracite, Imports and Exports. EIA assumed the anthracite imports and exports to be freshly mined

anthracite having an estimated heat content of 25.40 million Btu per short ton.

Anthracite, Production. Calculated annually by EIA by dividing the sum of the heat content of freshly mined anthracite (estimated to have an average heat content of 25.400 million Btu per short ton) and the heat content of anthracite recovered from culm banks and river dredging (estimated to have a heat content of 17.500 million Btu per short ton) by the total quantity of anthracite production.

Bituminous Coal and Lignite, Total Consumption. Calculated annually by EIA by dividing the sum of the heat content of bituminous coal and lignite consumed by electric utilities, coal coke plants, other industrial plants, the residential and commercial sector, and the transportation sector by the sum of their respective tonnages.

Bituminous Coal and Lignite, Consumption by Coke Plants. Estimated by EIA to be 26.800 million Btu per short ton on the basis of an input/output analysis of coal carbonization.

Bituminous Coal and Lignite, Consumption by Electric Utilities. Calculated annually by EIA by dividing the total heat content of bituminous coal and lignite received at electric utilities by the total quantity received at electric utilities. Heat contents and receipts are from Form FERC-423 and predecessor forms.

Bituminous Coal and Lignite, Consumption by Other Industrial and Transportation Users. 1973: Calculated by EIA through regression analysis measuring the difference between the average Btu value of coal consumed by other industrial users and that of coal consumed at electric utilities in the 1974-1982 period. 1974 forward: Calculated annually by EIA by assuming that the bituminous coal and lignite delivered to other industrial users from each coal-producing area (reported on Form EIA-6 and predecessor Bureau of Mines Form 6-1419-Q) contained a heat value equal to that of bituminous coal and lignite received at electric utilities from each of the same coal-producing areas (reported on Form FERC-423). The average Btu value of coal by coal-producing area was applied to the volume of deliveries to other industrial users from each coal-producing area, and the sum total of the heat content was divided by the total volume of deliveries. Coal-producing areas are the Bureau of Mines coal-producing districts for 1974 through 1989 and coal-producing States for 1990 forward.

Bituminous Coal and Lignite, Consumption by Residential and Commercial Users. 1973: Calculated by EIA through regression analysis measuring the difference between the average Btu value of coal consumed by residential and commercial users and that of coal consumed by electric utilities

in the 1974-1982 period. 1974 forward: Calculated annually by EIA by assuming that the bituminous coal and lignite delivered to residential and commercial users from each coal-producing area (reported on Form EIA-6 and predecessor Bureau of Mines Form 6-1419-Q) contained a heat value equal to that of bituminous coal and lignite received at electric utilities from each of the same coal-producing areas (reported on Form FERC-423). The average Btu value of coal by coal-producing area was applied to the volume of deliveries to residential and commercial users from each coal-producing area, and the total of the heat value was divided by the total volume of deliveries. Coal-producing areas are the Bureau of Mines coal-producing districts for 1974 through 1989 and coal-producing States for 1990 forward.

Bituminous Coal and Lignite, Exports. Calculated annually by EIA by dividing the sum of the heat content of exported metallurgical coal (estimated to average 27.000 million Btu per short ton) and the heat content of exported steam coal (estimated to have an average thermal content of 25.000 million Btu per short ton) by the total quantity of bituminous coal and lignite exported.

**Bituminous Coal and Lignite, Imports.** EIA estimated the average thermal conversion factor to be 25.000 million Btu per short ton.

Bituminous Coal and Lignite, Production. Calculated annually by EIA by dividing the sum of the heat content of bituminous coal and lignite consumption, net exports, stock changes, and unaccounted for by the sum of their respective tonnages. Consumers' stock changes by sectors were assumed to have the same conversion factor as that of the consumption sector. Producers' stock changes and unaccounted for were assumed to have the same conversion factor as that for consumption by all users.

**Coal, Consumption.** Calculated annually by EIA by dividing the sum of the heat content of bituminous coal and lignite and anthracite consumption by the sum of their respective tonnages.

Coal, Consumption by Electric Utilities. Calculated annually by EIA by dividing the sum of the heat content of bituminous coal and lignite and anthracite received at electric utilities by the sum of their respective tonnages received.

Coal, Consumption by Sectors Other Than Electric Utilities. Calculated annually by EIA by dividing the sum of the heat content of bituminous coal and lignite and anthracite consumed by sectors other than electric utilities by the sum of their respective tonnages.

**Coal, Exports.** Calculated annually by EIA by dividing the sum of the heat content of bituminous coal and lignite and anthracite exported by the sum of their respective tonnages.

**Coal, Imports.** Calculated annually by EIA by dividing the sum of the heat content of bituminous coal and lignite and anthracite imported by the sum of their respective tonnages.

**Coal, Production.** Calculated annually by EIA by dividing the sum of the total heat content of bituminous coal and lignite and anthracite production by the sum of their respective tonnages.

**Coal Coke, Imports and Exports.** EIA adopted the Bureau of Mines estimate of 24.800 million Btu per short ton.

#### Approximate Heat Rates for Electricity

Fossil-Fueled Steam-Electric Plant Generation. There is no generally accepted practice for measuring the thermal conversion rates for power plants that generate electricity from hydroelectric, wood and waste, wind, photovoltaic, or solar thermal energy sources. Therefore, EIA uses data from Form EIA-767 to calculate a rate factor that is equal to the prevailing annual average heat rate factor for fossil-fueled steam-electric power plants in the United States. By using that factor, it is possible to evaluate fossil fuel requirements for replacing those sources during periods of interruption such as droughts. The heat content of a kilowatthour of electricity produced, regardless of the generation process, is 3,412 Btu per kilowatthour. 1973-1991: The weighted annual average heat rate for fossil-fueled steam-electric power plants in the United States, as published by EIA in Electric Plant Cost and Power Production Expenses 1991, Table 9. 1992 forward: Unpublished factors calculated on the basis of data from Form EIA-767.

Geothermal Energy Plant Generation. 1973-1981: Calculated annually by EIA by weighting the annual average heat rates of operating geothermal units by the installed nameplate capacities as reported on Form FPC-12. 1982 forward: Estimated annually by EIA on the basis of an informal survey of relevant plants.

Nuclear Steam-Electric Plant Generation. 1973-1991: Calculated annually by EIA 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 are reported on Form FERC-1, Form EIA-412, and predecessor forms. The factors, beginning with 1982 data, are published in the following EIA reports—1982: Historical Plant Cost and Annual Production Expenses for Selected Electric Plants 1982, page 215. 1983-1991: Electric Plant Cost and Power Production Expenses 1991, Table 13. 1992 forward: Calculated annually by EIA by dividing the total heat content of the steam leaving the nuclear generating units to generate electricity by the total (net) electricity generated by nuclear generating units. The heat content and electricity generation data are reported in Nuclear Regulatory Commission, Licensed Operating Reactors—Status Summary Report.

# Appendix B. Metric and Other Physical Conversion Factors

Data presented in the *Monthly Energy Review* and in other 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	multiplied by	Conversion Factor	equals	Metric Unit
Mass	short tons (2,000 lb)	х	0.907 184 7	=	metric tons (t)
	long tons	Χ	1.016 047	=	metric tons (t)
	pounds (lb)	Х	0.453 592 37 <sup>a</sup>	=	kilograms (kg)
	pounds uranium oxide (lb U <sub>3</sub> O <sub>8</sub> )	Х	0.384 647 <sup>b</sup>	=	kilograms uranium (kgU)
	ounces, avoirdupois (avdp oz)	X	28.349 52	=	grams (g)
Volume	barrels of oil (bbl)	x	0.158 987 3	=	cubic meters (m <sup>3</sup> )
	cubic yards (yd <sup>3</sup> )	X	0.764 555	=	cubic meters (m <sup>3</sup> )
	cubic feet (ft <sup>3</sup> )	Х	0.028 316 85	=	cubic meters (m <sup>3</sup> )
	U.S. gallons (gal)	Х	3.785 412	=	liters (L)
	ounces, fluid (fl oz)	Х	29.573 53	=	milliliters (mL)
	cubic inches (in <sup>3</sup> )	Х	16.387 06	=	milliliters (mL)
Length	miles (mi)	х	1.609 344 <sup>a</sup>	=	kilometers (km)
	yards (yd)	x	0.914 4 <sup>a</sup>	=	meters (m)
	feet (ft)	Х	0.304 8 <sup>a</sup>	=	meters (m)
	inches (in)	X	2.54 <sup>b</sup>	=	centimeters (cm)
Area	acres	х	0.404 69	=	hectares (ha)
	square miles (mi <sup>2</sup> )	Х	2.589 988	=	square kilometers (km <sup>2</sup> )
	square yards (yd <sup>2</sup> )	x	0.836 127 4	=	square meters (m <sup>2</sup> )
	square feet (ft <sup>2</sup> )	Х	0.092 903 04 <sup>a</sup>	=	square meters (m <sup>2</sup> )
	square inches (in <sup>2</sup> )	x	6.451 6 <sup>b</sup>	=	square centimeters (cm <sup>2</sup> )
Temperature	degrees Fahrenheit (°F)	х	5/9 (after subtracting 32) <sup>a,c</sup>	=	degrees Celsius (°C)
Energy	British thermal units (Btu)	х	1, 055.055 852 62 <sup>a,d</sup>	=	joules (J)
	calories (cal)	Х	4.186 8 <sup>a</sup>	=	joules (J)
	kilowatthours (kWh)	Х	3.6 <sup>a</sup>	=	megajoules (MJ)

<sup>&</sup>lt;sup>a</sup>Exact conversion.

<sup>&</sup>lt;sup>b</sup>Calculated by the Energy Information Administration.

<sup>&</sup>lt;sup>c</sup>To convert degrees Celsius (<sup>o</sup>C) to degrees Fahrenheit (<sup>o</sup>F) exactly, multiply by 9/5, then add 32.

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

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, contact Dr. Barry Taylor at Building 221, Room B610, National Institute of Standards and Technology, Gaithersburg, MD 20899, or on telephone number 301–975–4220.

Sources: • General Services Administration, Federal Standard 376B, *Preferred Metric Units for General Use by the Federal Government* (Washington, DC, January 27, 1993), pp. 9–11, 13, and 16. • National Institute of Standards and Technology, Special Publications 330, 811, and 814. • American National Standards Institute/Institute of Electrical and Electronic Engineers, ANSI/IEEE Std 268–1992, pp. 28 and 29.

**Table B2. Metric Prefixes** 

Unit Multiple	Prefix	Symbol	Unit Subdivision	Prefix	Symbol
101	deka	da	10-1	deci	d
10 <sup>2</sup>	hecto	h	10 <sup>-2</sup>	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
109	giga	G	10 <sup>-9</sup>	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 <sub>18</sub>	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

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	multiplied by	Conversion Factor	equals	Final Unit
Petroleum	barrels (bbl)	х	42 <sup>a</sup>	=	U.S. gallons (gal)
Coal	short tons long tons	X X	2,000 <sup>a</sup> 2,240 <sup>a</sup>	= =	pounds (lb) pounds (lb)
Wood	metric tons (t)  cords (cd)  cords (cd)	x x x	1,000 <sup>a</sup> 1.25 <sup>b</sup> 128 <sup>a</sup>	= =	short tons cubic feet (ft <sup>3</sup> )

<sup>a</sup>Exact conversion.

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

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.

### Appendix C. Carbon Dioxide Emission Factors for Coal

The need for accurate estimates of carbon dioxide emissions produced during the combustion of coal has led the Energy Information Administration (EIA) to develop basic emission factors. Basic emission factors reflect the carbon-to-heat-content ratio of coal, a ratio which measures carbon dioxide emissions per unit of energy (pounds per million Btu), assuming complete combustion. These basic factors are derived from 5,426 sample analyses maintained in EIA's Coal Analysis File. Variations in the carbon-to-heat-content of different coals were observed to follow coal rank and geographic origin, leading EIA to develop basic emission factors specific to the rank and the State of origin of the coal.

On the basis of these rank- and State-specific basic emission factors for coal, EIA has also developed emission factors by sector. These sectoral emission factors weight the coal consumed in a given sector by its rank and State of origin. Table C1 presents the U.S. average carbon dioxide emission factors for coal by sector. Emission factors differ among sectors and within a given sector over time for a number of reasons:

- A higher average emission factor in the residential and commercial sector can be attributed to the steady consumption of bituminous coal and anthracite (presumably for home heating).
- Virtually all of the coal consumed by coke plants comes from only a few States in the Appalachian Coal Basin (West Virginia, Virginia, and eastern Kentucky). Hence, the emission factors for this sector have remained fairly constant.
- Other industrial users of coal (not coke plants) increased consumption of low-rank, high-emission western coals, which has contributed to a rise in their average emission factor.
- Electric utilities, which account for most U.S. coal consumption, have shifted over time away from highrank, low-emission bituminous coal to low-rank, highemission subbituminous coal and lignite as reflected in a gradually rising weighted-average carbon dioxide emission factor.

Table C1. Average Carbon Dioxide Emission Factors for Coal by Coal-Consuming Sector (Pounds of Carbon Dioxide per Million Btu)

		Indus	trial		
Year	Residential and Commercial	Coke Plants <sup>a</sup>	Other Coal	Electric Utilities	U.S. Average <sup>b</sup>
1980	210.6	205.8	205.9	206.7	206.5
1981	212.0	205.8	205.9	206.9	206.7
1982	210.4	205.7	206.0	207.0	206.9
1983	209.2	205.5	205.9	207.1	207.0
1984	209.5	205.6	206.2	207.1	207.0
1985	209.3	205.6	206.4	207.3	207.1
1986	209.2	205.4	206.5	207.3	207.1
1987	209.4	205.2	206.4	207.3	207.2
1988	209.1	205.3	206.4	207.6	207.3
1989	209.7	205.3	206.6	207.5	207.3
1990	209.5	206.2	206.8	207.6	207.4
1991	210.2	206.2	206.9	207.7	207.5
1992	211.2	206.2	207.1	207.7	207.6
1993	209.9	206.2	207.0	207.8	207.7
1994	209.8	206.3	207.2	207.9	207.8

<sup>&</sup>lt;sup>a</sup>No allowances have been made for carbon retained in non-energy coal chemical byproducts from the coal carbonization process.

<sup>&</sup>lt;sup>b</sup>Weighted average. The weights used are consumption values by sector.

Source: Energy Information Administration, Office of Coal, Nuclear, Electric and Alternate Fuels.

### **Appendix D. List of Features**

The following is a complete list of features that have appeared in the *Monthly Energy Review* since the first issue was published in October 1974. There are several categories of features on the list: "Articles" cover a wide range of energy-related subjects in depth; "Highlights" summarize the most important information presented in the subject Energy Information Administration (EIA) report; "Energy Previews" provide brief overviews of EIA preliminary energy data on a given topic; "EIA Data News" items present information on recent changes

in the scope, design, methodology, and findings of EIA's energy surveys and databases; "Energy Snapshots" use graphics to set off key data from EIA survey reports; and "Energy Plugs" are 1-page descriptions of recently released EIA products. Questions and comments about features may be directed to Barbara T. Fichman by telephone at 202-586-5737, by fax at 202-586-0018, or by Internet E-Mail at bfichman@eia.doe.gov.

Feature	<b>Cover Date</b>
1996 Energy Snapshot: Describing Current and Potential Markets for Alternative-Fuel Vehicles Energy Plug: Renewable Energy Annual 1995 Energy Plug: State Energy Price and Expenditure Report 1993 Energy Plug: Annual Energy Outlook 1996 Energy Plug: Alternatives to Traditional Transportation Fuels 1994, Volume 1	March 1996 January 1996 January 1996 February 1996 February 1996
Highlights: Manufacturing Consumption of Energy 1991.  Article: U.S. Wind Energy Potential: The Effect of the Proximity of Wind Resources to Transmission Lines.  EIA Data News: The Response Analysis Survey: Evaluating Manufacturing Energy Consumption Survey Methodology.  Energy Preview: Electric Utility Fleet Survey 1993, Preliminary Estimates: Assessing the Market for Alternative-Fuel Vehicles.  Highlights: Commercial Buildings Energy Consumption and Expenditures 1992  Article: Measuring Dependence on Imported Oil.  Energy Preview: Household Energy Consumption and Expenditures 1993, Preliminary Estimates.  Energy Snapshot: Housing Characteristics 1993.  Highlights: State Energy Data Report 1993, Consumption Estimates  Special Communication: Results of the Monthly Energy Review Features Readership Survey Highlights: Annual Energy Review 1994.  Energy Preview: Alternative Fuel Providers Fleet Surveys, Preliminary Data.  Article: Environmental Externalities in Electric Power Markets: Acid Rain, Urban Ozone, and Climate Change	January 1995 February 1995 March 1995 April 1995 April 1995 August 1995 August 1995 September 1995 October 1995 November 1995 November 1995 November 1995
1994 Energy Preview: Commercial Buildings Energy Consumption Survey, Preliminary Estimates, 1992 Highlights: Household Vehicles Energy Consumption 1991 Highlights: Energy Use and Carbon Emissions: Some International Comparisons Highlights: Commercial Buildings Characteristics 1992 Article: Demand, Supply, and Price Outlook for Reformulated Motor Gasoline 1995 Article: Commercial Nuclear Electric Power in the United States: Problems and Prospects Highlights: Reducing Home Heating and Cooling Costs Energy Preview: Commercial Buildings Energy Consumption and Expenditures 1992, Preliminary Estimates Article: Carbon Dioxide Emission Factors for Coal: A Summary. Article: The Impact of Flow Control and Tax Reform on Ownership and Growth in the U.S. Waste-to-Energy Industry EIA Data News: Data Collection on Alternative-Fuel Vehicles Highlights: Energy End-Use Intensities in Commercial Buildings Article: Change in Method for Estimating Fuel Economy for the Residential Transportation Energy Consumption Survey Article: Comparability of Supply- and Consumption-Derived Estimates of Manufacturing	January 1994 February 1994 April 1994 June 1994 July 1994 August 1994 August 1994 September 1994 September 1994 October 1994 October 1994 October 1994
Energy Consumption	October 1994

Feature	Cover Date
1994 (Continued)  Energy Preview: Housing Characteristics 1993, Selected Preliminary Estimates  Energy Preview: Propane-Provider Fleet Survey 1993, Preliminary Estimates  Energy Preview: Atlanta Private Fleet Survey 1994, Preliminary Estimates	November 1994 November 1994 December 1994
1993 Energy Preview: Residential Transportation Energy Consumption Survey, Preliminary Estimates, 1991 EIA Data News: Natural Gas Transported for the Account of Others Highlights: Federal Energy Subsidies: Direct and Indirect Interventions in Energy Markets Highlights: Household Energy Consumption and Expenditures 1990 Article: Demand, Supply, and Price Outlook for Low-Sulfur Diesel Fuel Energy Preview: Manufacturing Energy Consumption Survey, Preliminary Estimates, 1991 Highlights: Natural Gas 1992: Issues and Trends Highlights: International Energy Outlook 1993 Highlights: The Changing Structure of the U.S. Coal Industry: An Update Highlights: Emissions of Greenhouse Gases in the United States 1985-1990 Highlights: Assessment of Energy Use in Multibuilding Facilities	January 1993 February 1993 July 1993 August 1993 August 1993 September 1993 October 1993 November 1993 December 1993 December 1993
Energy Preview: Residential Energy Consumption and Expenditures Preliminary Estimates, 1990  EIA Data News: Oxygenate Data Collection Begins Highlights: Lighting in Commercial Buildings Article: Demand, Supply, and Price Outlook for Oxygenated Gasoline, Winter 1992-1993  EIA Data News: EIA Statistics on Electric Utility Demand-Side Management EIA Data News: EIA Statistics on Nonutility Power Producers Highlights: Derived Annual Estimates of Manufacturing Energy Consumption, 1974-1988 Article: Energy Efficiency in the Manufacturing Sector	April 1992 May 1992 June 1992 August 1992 September 1992 October 1992 November 1992 December 1992
1991 Highlights: U.S. Energy Industry Financial Developments, 1990 Fourth Quarter	March 1991 April 1991
1990 Article: Refining Results Highlight Energy Companies' First-Half Profit Performance	June 1990 August 1990
Article: A Review of Valdez Oil Spill Market Impacts	March 1989 March 1989 May 1989 May 1989 June 1989 July 1989 September 1989 October 1989
Highlights: Household Energy Consumption and Expenditures 1987, Part 1: National Data Article: Improved Energy Profits Offset by Refining Results in 1989	November 1989 December 1989
Article: Measures of Energy Consumption, Expenditures, and Prices Highlights: Characteristics of Commercial Buildings 1986 Article: The U.S. Energy Industry's Financial Recovery Continued in the First Half of 1988 Article: A U.S. Perspective on Condensate Article: State Energy Severance Taxes, 1972-1987 Highlights: Manufacturing Energy Consumption Survey: Consumption of Energy, 1985 Highlights: Profiles of Foreign Direct Investment in U.S. Energy 1987 Highlights: Manufacturing Energy Consumption Survey: Fuel Switching, 1985 Article: Increased Refining Income Led U.S. Energy Industry Financial Recovery in 1988	May 1988 June 1988 June 1988 July 1988 September 1988 October 1988 November 1988 December 1988

Feature	Cover Date
Article: Manufacturing Sector Energy Consumption, 1985 Provisional Estimates Highlights: Consumption and Expenditures, April 1984 Through March 1985, Part 1: National Data Highlights: Consumption and Expenditures, April 1984 Through March 1985, Part 2: Regional Data Article: U.S. Energy Industry Financial Developments, 1987 Second Quarter Article: End-Use Consumption of Residential Energy Highlights: Uranium Industry Annual 1986 Highlights: Potential Oil Production from ANWR Highlights: Profiles of Foreign Direct Investment in U.S. Energy 1986 Article: The U.S. Energy Industry in 1987: A Slow Recovery	January 1987  April 1987  May 1987  June 1987  July 1987  September 1987  October 1987  November 1987  December 1987
1986 Article: State Motor Gasoline Taxes, 1960-1985 Article: The Impact of Low Oil Prices on Electric Utility Fuel Choice Article: U.S. Energy Industry Financial Developments, 1986 Second Quarter Highlights: International Energy Annual 1985 Article: U.S. Energy Industry Financial Developments, 1986	March 1986 June 1986 June 1986 September 1986 December 1986
Highlights: Annual Energy Review 1984 Highlights: Performance Profiles of Major Energy Producers 1983 Article: Estimating Well Completions Highlights: State Energy Price and Expenditure Report 1970-1982 Highlights: State Energy Data Report, Consumption Estimates, 1960-1983 Highlights: Annual Outlook for U.S. Electric Power 1985 Highlights: Short-Term Energy Outlook, Volume 1, October 1985 Highlights: Analysis of Growth in Electricity Demand, 1980-1984 Highlights: Profiles of Foreign Direct Investment in U.S. Energy 1984 Highlights: Performance Profiles of Major Energy Producers 1984	January 1985 February 1985 March 1985 March 1985 April 1985 June 1985 August 1985 August 1985 November 1985 December 1985
Highlights: Annual Energy Review 1983 Highlights: Annual Energy Outlook 1983 Highlights: State Energy Data Report, Consumption Estimates, 1960-1982 Highlights: State Energy Price and Expenditure Report, 1970-1981 Highlights: Solar Collector Manufacturing Activity 1983 Highlights: International Energy Annual 1983 Highlights: Estimates of U.S. Wood Energy Consumption, 1980-1983 Highlights: Energy Conservation Indicators 1983 Annual Report Highlights: Annual Energy Outlook 1984	February 1984 March 1984 March 1984 May 1984 June 1984 September 1984 September 1984 November 1984 December 1984
Highlights: Residential Energy Consumption Survey: Consumption and Expenditures Highlights: Residential Energy Consumption Survey: Housing Characteristics Article: The Effect of Weather on Energy Use Article: Trends in U.S. Energy Since 1973 Article: Data Series on Petroleum Use at Electric Utilities Highlights: Energy Price and Expenditure Data Report, 1970-1980 Highlights: Railroad Deregulation: Impact on Coal Highlights: Port Deepening and User Fees: Impact on U.S. Coal Exports Highlights: U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, 1982 Annual Report Article: Residential Energy Consumption, 1978 Through 1981 Article: Exploring for Oil and Gas Article: The Influence of Federal Actions on Petroleum Exploration Article: Aggregate Statistics: Accurate or Misleading?	January 1983 February 1983 April 1983 May 1983 July 1983 July 1983 August 1983 August 1983 September 1983 September 1983 December 1983[2] December 1983[3]

Feature	Cover Date
Article: The Interstate and Intrastate Natural Gas Markets  Article: Natural Gas Drilling and Production Under the Natural Gas Policy Act  Highlights: U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, 1981 Annual Report  Article: Impacts of Financial Constraints on the Electric Utility Industry  Highlights: Energy Company Development Patterns in the Postembargo Era	January 1982 February 1982 September 1982 October 1982 November 1982
1981         Article: Changes in 1981 Petroleum Data Series         Article: Information Services of the Energy Information Administration         Article: An Overview of Natural Gas Markets	May 1981 September 1981 December 1981
Article: The Solar Collector Industry and Solar Energy Article: Trends in the Installation of Energy Using Equipment in New Residential Buildings Article: The Energy Information Administration's Oil and Gas Reserves Program—The First Year's Report Article: Energy From Urban Waste Article: Natural Gas Liquids: Revisions to 1979 Data Article: EIA Weekly Petroleum Data: Data Collection and Methods of Estimation Article: The Department of Energy Disclosure Policy for Individually Identifiable Information Maintained by the Energy Information Administration	February 1980 March 1980 June 1980 August 1980 October 1980 November 1980 December 1980
1979 Article: The Energy Requirements of U.S. Agriculture	July 1979 October 1979 December 1979
1978 Article: Short-Term Petroleum Supply and Demand	May 1978
1977 Article: Crude Oil Entitlements Program	January 1977 July 1977
1976 Article: Curtailments of Natural Gas Service Article: Home Heating Conservation Alternatives and the Solar Collector Industry Article: Trends in United States Petroleum Imports	January 1976 March 1976 September 1976
Article: Energy Consumption Article: Nuclear Power Article: The Price of Crude Oil Article: U.S. Coal Resources and Reserves Article: Propane—A National Energy Resource Article: Short-Term Energy Supply and Demand Forecasting at FEA	March 1975 April 1975 June 1975 July 1975 September 1975 October 1975

### **Glossary**

**Anthracite:** A hard, black, lustrous coal containing a high percentage of fixed carbon and a low percentage of volatile matter. Often referred to as hard coal. It conforms to ASTM Specification D388-84 for anthracite, meta-anthracite, and semianthracite.

**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 are used for blending or compounding into finished aviation gasoline (e.g., straight-run gasoline, alkylate, and reformate). Excludes oxygenates (alcohols and ethers), butane, and pentanes plus.

Aviation Gasoline, Finished: All special grades of gasoline for use in aviation reciprocating engines, as given in ASTM Specification D910 and Military Specification MIL-G-5572. Excludes blending components that will be used in blending or compounding into finished aviation gasoline.

**Barrel** (**petroleum**): A unit of volume equal to 42 U.S. gallons.

**Base (Cushion) 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.

**Bituminous Coal:** A dense black coal, often with well-defined bands of bright and dull material, with a moisture content usually less than 20 percent. Often referred to as soft coal. It is the most common coal and is used primarily for generating electricity, making coke, and space heating. It conforms to ASTM Specification D388-84 for bituminous coal. In this report, bituminous coal includes subbituminous coal.

British Thermal Unit (Btu): The quantity of heat needed to raise the temperature of 1 pound of water by 1° F at or near 39.2° F. See Heat Content of a Quantity of Fuel, Gross and Heat Content of a Quantity of Fuel, Net.

**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.

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.

Coal: A black or brownish-black solid, combustible substance formed by the partial decomposition of vegetable matter without access to air. The rank of coal, which includes anthracite, bituminous coal, subbituminous coal, and lignite, is based on fixed carbon, volatile matter, and heating value. Coal rank indicates the progressive alteration, or coalification, from lignite to anthracite. Lignite contains approximately 9 to 17 million Btu per ton. The heat contents of subbituminous and bituminous coal range from 16 to 24 million Btu per ton, and from 19 to 30 million Btu per ton, respectively. Anthracite contains approximately 22 to 28 million Btu per ton.

**Coal Coke:** A hard, porous product made from baking bituminous coal in ovens at temperatures as high as 2,000° F. It is used both as a fuel and as a reducing agent in smelting iron ore in a blast furnace.

Commercial Sector: The commercial sector, as defined economically, consists of business establishments that are not engaged in transportation or in manufacturing or other types of industrial activity (agriculture, mining, or construction). Commercial establishments include hotels, motels, restaurants,

wholesale businesses, retail stores, laundries, and other service enterprises; religious and nonprofit organizations; health, social, and educational institutions; and Federal, State, and local governments. Street lights, pumps, bridges, and public services are also included if the establishment operating them is considered commercial.

**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.

**Conversion Factor:** A number that translates units of one system into corresponding values of another system. Conversion factors can be used to translate physical units of measure for various fuels into Btu equivalents.

Cost, Insurance, Freight (CIF): A type of sale in which the buyer of the product agrees to pay a unit price that includes the f.o.b. value of the product at the point of origin plus all costs of insurance and transportation. This type of transaction differs from a "delivered" purchase in that the buyer accepts the quantity as determined at the loading port (as certified by the Bill of Loading and Quality Report) rather than pay on the basis of the quantity and quality ascertained at the unloading port. It is similar to the terms of an f.o.b. sale, except that the seller, as a service for which he is compensated, arranges for transportation and insurance.

**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.

**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  $60^{\circ}$  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):** The number of degrees per day that the daily average temperature is above 65° F. The daily average temperature is the mean of the maximum and minimum temperatures for a 24-hour period.

**Degree-Days, Heating (HDD):** The number of degrees per day that the daily average temperature is below 65° F. The daily average temperature is the mean of the maximum and minimum temperatures for a 24-hour period.

Degree-Days, Population-Weighted: Heating or cooling degree-days weighted by the population of the area in which the degree-days are recorded. To compute State population-weighted degree-days, each State is divided into from one to nine climatically homogeneous divisions, which are assigned weights based on the ratio of the population of the division to the total population of the State. Degree-day readings for each division are multiplied by the corresponding population weight for each division and those products are then summed to arrive at the State population-weighted degree-day figure. To compute national population-weighted degree-days, the Nation is divided into nine Census regions, each comprising from three to eight States, which are assigned weights based on the ratio of the population of the region to the total population of the Nation. Degree-day readings for each region are multiplied by the corresponding population weight for each region and those products are then summed to arrive at the national population-weighted degree-day figure.

**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.

**Distillate Fuel Oil:** A general classification for one of the petroleum fractions produced in conventional distillation operations. Included are products known as No. 1, No. 2, and No. 4 fuel oils and No. 1, No. 2, and No. 4 diesel fuels. It is used primarily for space heating, on- and off-highway diesel engine fuel (including railroad engine fuel and fuel for agricultural machinery), and electric power 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 (as a decrement from gas reserves): The volume of natural gas withdrawn from reservoirs during the report year less (1) the volume returned to such reservoirs in cycling, repressuring of oil reservoirs, and conservation operations; (2) shrinkage resulting from the removal of lease condensate and plant liquids; and (3) nonhydrocarbon gases, where they occur in sufficient quantity to render the gas unmarketable. Volumes of gas withdrawn from gas storage reservoirs and native gas that has been transferred to the storage category are not considered production. This is not the same as marketed production, since the latter also excludes vented and flared gas but contains liquids.

Dry Natural Gas Production (as an increment to gas supply): Gross withdrawals from production reservoirs less gas used in reservoir repressuring, amounts vented and flared, nonhydrocarbons removed, and various natural gas constituents, such as ethane, propane, and butane, removed at natural gas processing plants. The parameters for measurement are 60° F and 14.73 pounds standard per square inch absolute.

**Electrical System Energy Losses:** The amount of energy lost during generation, transmission, and distribution of electricity, including plant and unaccounted-for uses.

**Electricity Generation:** The process of producing electric energy or transforming other forms of energy into electric energy. Also the amount of electric energy produced or expressed in watthours (Wh).

**Electricity Generation, Gross:** The total amount of electric energy produced by the generating station or stations, measured at the generator terminals.

Electricity Generation, Net: Gross generation less electricity consumed at the generating plant for station use. Electricity required for pumping at pumped-storage plants is regarded as plant use and is deducted from gross generation.

Electricity Production: Net electricity (gross electricity output measured at generator terminals minus power plant use) generated by publicly and

privately owned electric utilities. Excludes industrial electricity generation (except autogeneration of hydroelectric power).

**Electricity Sales:** The amount of kilowatthours sold in a given period of time; usually grouped by classes of service, such as residential, commercial, industrial, and other. "Other" sales include sales for public street and highway lighting and other sales to public authorities, sales to railroads and railways, and interdepartmental sales.

**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 Utility: A corporation, person, agency, authority, or other legal entity or instrumentality that owns and/or operates facilities for the generation, transmission, distribution, or sale of electric energy, primarily for use by the public, and that files forms listed in the *Code of Federal Regulations*, Title 18, Part 141. Facilities that qualify as cogenerators or small power producers under the Public Utility Regulatory Policies Act are not considered electric utilities.

Electric Utility Sector: The electric utility sector consists of privately and publicly owned establishments that generate, transmit, distribute, or sell electricity primarily for use by the public and that meet the definition of an electric utility. Nonutility power producers are not included in the electric utility sector.

**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 Consumption, End-Use: Primary end-use energy consumption is the sum of fossil fuel consumption by the four end-use sectors (residential, commercial, industrial, and transportation) and generation of hydroelectric power by nonelectric utilities. Net end-use energy consumption includes

electric utility sales to those sectors but excludes electrical system energy losses. *Total end-use energy consumption* includes both electric utility sales to the four end-use sectors *and* electrical system energy losses.

Energy Consumption, Total: The sum of fossil fuel consumption by the five sectors (residential, commercial, industrial, transportation, and electric utility) plus hydroelectric power, nuclear electric power, net imports of coal coke, and electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy.

**Energy Source:** A substance, such as petroleum, natural gas, or coal, that supplies heat or power. In Energy Information Administration reports, electricity and renewable forms of energy, such as biomass, geothermal, wind, and solar, are considered to be energy sources.

**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.

**Ethylene:** An olefinic hydrocarbon (C<sub>2</sub>H<sub>4</sub>) recovered from refinery processes or petrochemical processes.

**Exploratory Well:** A well drilled to find and produce oil or gas in an unproved area, to find a new reservoir in a field previously found to be productive of oil or gas in another reservoir, or to extend the limit of a known oil or gas reservoir.

**Exports:** Shipments of goods from the 50 States and the District of Columbia to foreign countries and to Puerto Rico, the Virgin Islands, and other U.S. possessions and territories.

#### f.a.s.: See Free Alongside Ship.

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 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 Department of Energy was created. Its functions were divided between the Department of

Energy and the Federal Energy Regulatory Commission, an independent regulatory agency.

**First Purchase Price:** The marketed first sales price of domestic crude oil, consistent with the removal price defined by the provisions of the Windfall Profits Tax on Domestic Crude Oil (Public Law 96-223, Sec. 4998 (c)).

**Flared Natural Gas:** Natural gas burned in flares on the base site or at gas processing plants.

f.o.b.: See Free on Board.

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 U.S.S.R.

**Fossil Fuel:** Any naturally occurring organic fuel, such as petroleum, coal, and natural gas.

**Fossil Fuel 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.

Free Alongside Ship (f.a.s.): The value of a commodity at the port of exportation, generally including the purchase price, plus all charges incurred in placing the commodity alongside the carrier at the port of exportation.

Free on Board (f.o.b.): A transaction whereby the seller makes the product available within an agreed-on period at a given port at a given price. It is the responsibility of the buyer to arrange for the transportation and insurance.

**Fuel Ethanol:** An anhydrous, denatured aliphatic alcohol ( $C_2H_5OH$ ) intended for motor gasoline blending. See **Oxygenates.** 

**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 (leaded or unleaded) and alcohol (generally ethanol but sometimes methanol) limited to 10 percent by volume

of alcohol. Gasohol is included in finished leaded and unleaded motor gasoline.

Gas-Turbine Electric Power Plant: A plant in which the prime mover is a gas turbine. A gas turbine typically consists of an axial-flow air compressor, one or more combustion chambers where liquid or gaseous fuel is burned and the hot gases expand to drive the generator and then are used to run the compressor.

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:** Energy from the internal heat of the Earth, which may be residual heat, friction heat, or a result of radioactive decay. The heat is found in rocks and fluids at various depths and can be extracted by drilling and/or pumping.

Geothermal Energy (as used at electric utilities): Hot water or steam extracted from geothermal reservoirs in the Earth's crust and supplied to steam turbines at electric utilities that drive generators to produce electricity.

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.

Heat Content of a Quantity of Fuel, Gross: The total amount of heat released when a fuel is burned. Coal, crude oil, and natural gas all include chemical compounds of carbon and hydrogen. When those fuels are burned, the carbon and hydrogen combine with oxygen in the air to produce carbon dioxide and water. Some of the energy released in burning goes into transforming the water into steam and is usually lost. The amount of heat spent in transforming the water into steam is counted as part of gross heat content but is not counted as part of net heat content. Also referred to as the higher heating value. Btu conversion factors typically used in EIA represent gross heat content.

Heat Content of a Quantity of Fuel, Net: The amount of usable heat energy released when a fuel is burned under conditions similar to those in which it is normally used. Also referred to as the lower heating value. Btu conversion factors typically used in EIA represent gross heat content.

**Heavy Oil:** The fuel oils remaining after the lighter oils have been distilled off during the refining process. Except for start-up and flame stabilization, virtually all petroleum used in steam-electric power plants is heavy oil.

**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.

**Imports:** Receipts of goods into the 50 States and the District of Columbia from foreign countries and from Puerto Rico, the Virgin Islands, and other U.S. possessions and territories.

**Industrial Sector:** The industrial sector comprises manufacturing industries, which make up the largest part of the sector, along with mining, construction, agriculture, fisheries, and forestry. Establishments in this sector range from steel mills, to small farms, to companies assembling electronic components.

**Internal Combustion Electric Power Plant:** A power plant in which the prime mover is an internal combustion engine. Diesel or gas-fired engines are the principal types used in electric power plants. The plant is usually operated during periods of high demand for electricity.

Jet Fuel: The term includes kerosene-type jet fuel and naphtha-type jet fuel. Kerosene-type jet fuel is a kerosene-quality product used primarily for commercial turbojet and turboprop aircraft engines. Naphtha-type jet fuel is a fuel in the heavy naphthas range used primarily for military turbojet and turboprop aircraft engines.

**Kerosene:** A petroleum distillate that has 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.

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 as fuel in natural gas processing plants.

**Lease Condensate:** A natural gas liquid recovered from gas well gas (associated and non-associated) in lease separators or natural gas field facilities. Lease condensate consists primarily of pentanes and heavier hydrocarbons.

**Light Oil:** Lighter fuel oils distilled off during the refining process. Virtually all petroleum used in internal combustion and gas-turbine engines is light oil.

**Lignite:** A brownish-black coal of low rank with a high content of moisture and volatile matter. Often referred to as brown coal. It is used almost exclusively for electric power generation. It conforms to ASTM Specification D388-84 for lignite.

**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: 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.

**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 Components: Naphthas that will be used for blending or compounding into finished motor gasoline (e.g., straight-run gasoline, alkylate, reformate, benzene, toluene, and zylene).

Excluded are oxygenates (alcohols and ethers), butane, and pentanes plus.

Motor Gasoline, Finished: A complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives, that has been blended to form a fuel suitable for use in spark-ignition engines. Motor gasoline, as given in ASTM Specification D439 or Federal Specification VV-G-1690B, includes a range in distillation temperatures from 122 to 158° F at the 10-percent recovery point and from 365 to 374° F at the 90-percent recovery point. Motor gasoline includes reformulated motor gasoline, oxygenated motor gasoline, and other finished motor gasoline. Blendstock is excluded until blending has been completed.

- Reformulated Motor Gasoline: Motor gasoline, formulated for use in motor vehicles, the composition and properties of which are certified as "reformulated motor gasoline" by the Environmental Protection Agency.
- Oxygenated Motor Gasoline: Motor gasoline, formulated for use in motor vehicles, that has an oxygen content of 1.8 percent or higher by weight.
- Other Finished Motor Gasoline: Motor gasoline that is not included in the reformulated or oxygenated categories.

Motor Gasoline, Finished Gasohol: A blend of finished motor gasoline (leaded or unleaded) and alcohol (generally ethanol, but sometimes methanol) in which 10 percent or more of the product is alcohol.

Motor Gasoline, Finished Leaded: Motor gasoline that contains more than 0.05 gram of lead per gallon or more than 0.005 gram of phosphorus per gallon. Premium and regular grades are included, depending on the octane rating. Includes leaded gasohol. Blendstock is excluded until blending has been completed. Alcohol that is to be used in the blending of gasohol is also excluded.

**Motor Gasoline, Finished Leaded Premium:** Motor gasoline having an antiknock index, calculated as (R+M)/2, greater than 90 and containing more than 0.05 gram of lead per gallon or more than 0.005 gram of phosphorus per gallon.

Motor Gasoline, Finished Leaded Regular: Motor gasoline having an antiknock index, calculated as (R+M)/2, greater than or equal to 87 and less than or equal to 90 and containing more than 0.05 gram of lead or 0.005 gram of phosphorus per gallon.

Motor Gasoline, Finished Unleaded: Motor gasoline containing not more than 0.05 gram of lead per gallon and not more than 0.005 gram of phosphorus per gallon. Premium and regular grades are included, depending on the octane rating. Includes unleaded gasohol. Blendstock is excluded until blending has

been completed. Alcohol that is to be used in the blending of gasohol is also excluded.

Motor Gasoline, Finished Unleaded Midgrade: Motor gasoline having an antiknock index, calculated as (R+M)/2, greater than or equal to 88 and less than or equal to 90 and containing not more than 0.05 gram of phosphorus per gallon.

Motor Gasoline, Finished Unleaded Premium: Motor gasoline having an antiknock index, calculated as (R+M)/2, greater than 90 and containing not more than 0.05 gram of lead or 0.005 gram of phosphorus per gallon.

Motor Gasoline, Finished Unleaded Regular: Motor gasoline having an antiknock index, calculated as (R+M)/2, of 87 containing not more than 0.05 gram of lead per gallon and not more than 0.005 gram of phosphorus per gallon.

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: Includes finished leaded motor gasoline (premium and regular), finished unleaded motor gasoline (premium, midgrade, and regular), motor gasoline blending components, and gasohol.

MTBE (Methyl Tertiary Butyl Ether): An ether,  $(CH_3)_3COCH_3$ , intended for motor gasoline blending. See Oxygenates.

**Naphtha:** A genetic term applied to a petroleum fraction with an approximate boiling range between 122 and  $400^{\circ}$  F.

Natural Gas: A mixture of hydrocarbons (principally methane) and small quantities of various nonhydrocarbons existing in the gaseous phase or in solution with crude oil in underground reservoirs.

Natural Gas, Dry: The marketable portion of natural gas production, which is obtained by subtracting extraction losses, including natural gas liquids removed at natural gas processing plants, from total production.

Natural Gas Marketed Production: Gross withdrawals of natural gas from production reservoirs, less gas used for reservoir repressuring;

nonhydrocarbon gases removed in treating and processing operations; and quantities 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 Materials 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 Gas, Wet:** Natural gas prior to the extraction of liquids and other miscellaneous products.

Net Consumption: See Energy Consumption, End-Use.

**Nonhydrocarbon Gases:** Typical nonhydrocarbon gases that may be present in reservoir natural gas are carbon dioxide, helium, hydrogen sulfide, and nitrogen.

**Nuclear Electric Power:** Electricity generated by an electric power plant whose turbines are driven by steam generated in a reactor by heat from the fissioning of nuclear fuel.

**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 the nuclear fission chain can be initiated, maintained, and controlled so that energy is released at a specific rate. The reactor includes fissionable material (fuel), such as uranium or plutonium; fertile material; moderating material (unless it is a fast reactor); a heavy-walled pressure vessel; shielding to protect personnel; provision for heat removal; and control elements and instrumentation.

**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 (Including Lease Condensate).

**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.

**Operable (nuclear):** A U.S. nuclear generating unit is considered operable after it completes low-power testing and is issued a full-power operating license by the Nuclear Regulatory Commission. A foreign nuclear generating unit is considered operable once it has generated electricity to the grid.

Organization for Economic Cooperation and Development (OECD): Current members are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, the United States and its territories (Guam, Puerto Rico, and the Virgin Islands), and Germany.

Organization of Petroleum Exporting Countries (OPEC): Countries that have organized for the purpose of negotiating with oil companies on matters of oil production, prices, and future concession rights. Current members are Algeria, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.

### Oxygenated Motor Gasoline: See Motor Gasoline, Finished.

Oxygenates: Any substance which, when added to motor gasoline, increases the amount of oxygen in that motor gasoline blend. Through a series of waivers and interpretive rules, the Environmental Protection Agency (EPA) has determined the allowable limits for oxygenates in unleaded gasoline. The "Substantially Similar" Interpretive Rules (56 FR [February 11, 1991]) allows blends of aliphatic alcohols other than methanol and aliphatic ethers, provided the oxygen content does not exceed 2.7 percent by weight. The "Substantially Similar" Interpretive Rules also provide for blends of methanol up to 0.3 percent by volume exclusive of other oxygenates, and butanol or alcohols of a higher molecular weight up to 2.75 percent by weight. Individual waivers pertaining to the use of oxygenates in unleaded motor gasoline have been issued by the EPA. They include:

- Fuel Ethanol. Blends of up to 10 percent by volume anhydrous ethanol (200 proof).
- Methanol. Blends of methanol and gasoline-grade tertiary butyl alcohol (GTBA)

such that the total oxygen content does not exceed 3.5 percent by weight and the ratio of methanol to GTBA is less than or equal to 1. It is also specified that this blended fuel must meet ASTM volatility specifications.

Blends of up to 5.0 percent by volume methanol with a minimum of 2.5 percent by volume cosolvent alcohols having carbon number of 4 or less (i.e., ethanol, propanol, butanol, and/or GTBA). The total oxygen must not exceed 3.7 percent by weight, and the blend must meet ASTM volatility specifications as well as phase separation and alcohol purity specifications.

• MTBE (Methyl tertiary butyl ether). Blends up to 15.0 percent by volume MTBE that must meet the ASTM D4814 specifications. Blenders must take precautions that the blends are not used as base gasolines for other oxygenated blends.

**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 generic term applied to oil and oil products in all forms, such as crude oil, lease condensate, unfinished oils, petroleum products, natural gas plant liquids, and nonhydrocarbon compounds blended into finished petroleum products.

**Petroleum Coke:** A residue that is the final product of the condensation process in cracking. The product is either marketable petroleum coke or catalyst petroleum coke.

**Petroleum Coke, Catalyst:** The carbonaceous residue that is deposited on and deactivates the catalyst used in many catalytic operations (e.g., catalytic cracking). Carbon is deposited on the catalyst, thus deactivating the catalyst. The catalyst is reactivated by burning off the carbon, which is used as a fuel in the refining process. That carbon or coke is not recoverable in a concentrated form.

**Petroleum Coke, Marketable:** Those grades of coke produced in delayed or fluid cokers that may be recovered as relatively pure carbon. Marketable petroleum coke may be sold as is or further purified by calcining.

**Petroleum Consumption:** The sum of all refined petroleum products supplied. For each refined petroleum product, the amount supplied is calculated by adding production and imports, then subtracting changes in primary stocks (net withdrawals are a plus

quantity and net additions are a minus quantity) and exports.

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 Products Supplied:** See **Petroleum Consumption**.

**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 and Solar Thermal Energy (as used at electric utilities): Energy radiated by the sun as electromagnetic waves (electromagnetic radiation) that is converted at electric utilities into electricity by means of solar (photovoltaic) cells or concentrating (focusing) collectors.

**Pipeline Fuel:** Gas consumed in the operation of pipelines, primarily in compressors.

### **Primary Consumption:** See **Energy Consumption, End-Use.**

**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.

**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 (petroleum):** An installation that manufactures finished petroleum products from crude oil, unfinished oils, natural gas liquids, other hydrocarbons, and alcohol.

**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 wood, waste, photovoltaic, and solar thermal energy.

**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: The residential sector is considered to consist of all private residences, whether occupied or vacant, owned or rented, including single-family homes, multifamily housing units, and mobile homes. Secondary homes, such as summer homes, are also included. Institutional housing, such as school dormitories, hospitals, and military barracks, generally are not included in the residential sector; they are included in the commercial sector.

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, 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: See Standard Industrial Classification.

**Solar Energy:** The radiant energy of the sun, which can be converted into other forms of energy, such as heat or electricity.

**Standard Industrial Classification (SIC):** A set of codes developed by the Office of Management and Budget which categorizes industries into groups with similar economic activities.

Startup Test Phase of Nuclear Power Plant: A nuclear power plant that has been licensed by the Nuclear Regulatory Commission to operate but is still in the initial testing phase, during which the production of electricity may not be continuous. In general, when the electric utility is satisfied with the plant's performance, it formally accepts the plant from the manufacturer and places it in commercial operation status. A request is then submitted to the appropriate utility rate commission to include the power plant in the rate base calculation.

**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.

Strategic Petroleum Reserve (SPR): Petroleum stocks maintained by the Federal Government for use during periods of major supply interruption.

**Supplemental Gaseous Fuels:** Any gaseous substance that, introduced into or commingled with natural gas, increases 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, or air or inert gases added for Btu stabilization.

**Synthetic Natural Gas (SNG):** A manufactured product chemically similar in most respects to natural gas, resulting from the conversion or reforming of petroleum hydrocarbons. It may easily be substituted for, or interchanged with, pipeline quality natural gas. Also referred to as substitute natural gas.

Total Consumption: See Energy Consumption, End-Use.

**Transportation Sector:** The transportation sector consists of private and public vehicles that move people and commodities. Included are automobiles, trucks, buses, motorcycles, railroads and railways (including streetcars), aircraft, ships, barges, and natural gas pipelines.

Unaccounted-for Crude Oil: Arithmetic difference between the calculated supply and the calculated disposition of crude oil. The calculated supply is the sum of crude oil production and imports, less changes in crude oil stocks. The calculated disposition of crude oil is the sum of crude oil input to refineries, crude oil exports, crude oil burned as fuel, and crude oil losses.

**Underground Storage:** The storage of natural gas in underground reservoirs at a different location from which it was produced.

**United States:** Unless otherwise noted, "United States" in this publication means the 50 States and the District of Columbia. U.S. exports include shipments to U.S. territories, and imports include receipts from U.S. territories.

U.S.S.R.: The Union of Soviet Socialist Republics consisted of 15 constituent republics: Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan. As a political entity, the U.S.S.R. ceased to exist as of December 31, 1991.

**Vented Natural Gas:** Gas released into the air on the base site or at processing plants.

Wellhead Price: The value of crude oil or natural gas at the mouth of the well.

Well Servicing Unit: Truck-mounted equipment generally used for downhole services after a well is drilled. Services include well completions and recompletions, maintenance, repairs, workovers, and well plugging and abandonments. Jobs range from minor operations, such as pulling the rods and rod pumps out of an oil well, replacing the pump and rerunning the assemblage into the well, to major workovers, such as milling out and repairing collapsed casing. Well depth and characteristics determine the type of equipment used.

Wind Energy (as used at electric utilities): The kinetic energy of wind converted at electric utilities into mechanical energy by wind turbines (i.e., blades rotating from a hub) that drive generators to produce electricity for distribution.

Wood and Waste (as used at electric utilities): Wood energy, garbage, bagasse, sewerage gas, and other industrial, agricultural, and urban refuse used to generate electricity for distribution.

**Wood Energy:** Wood and wood products used as fuel, including round wood (cord wood), limb wood, wood chips, bark, sawdust, forest residues, charcoal, pulp waste, and spent pulping liquor.

Working Gas: The gas in a reservoir that is in addition to the base (cushion) 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 given season.