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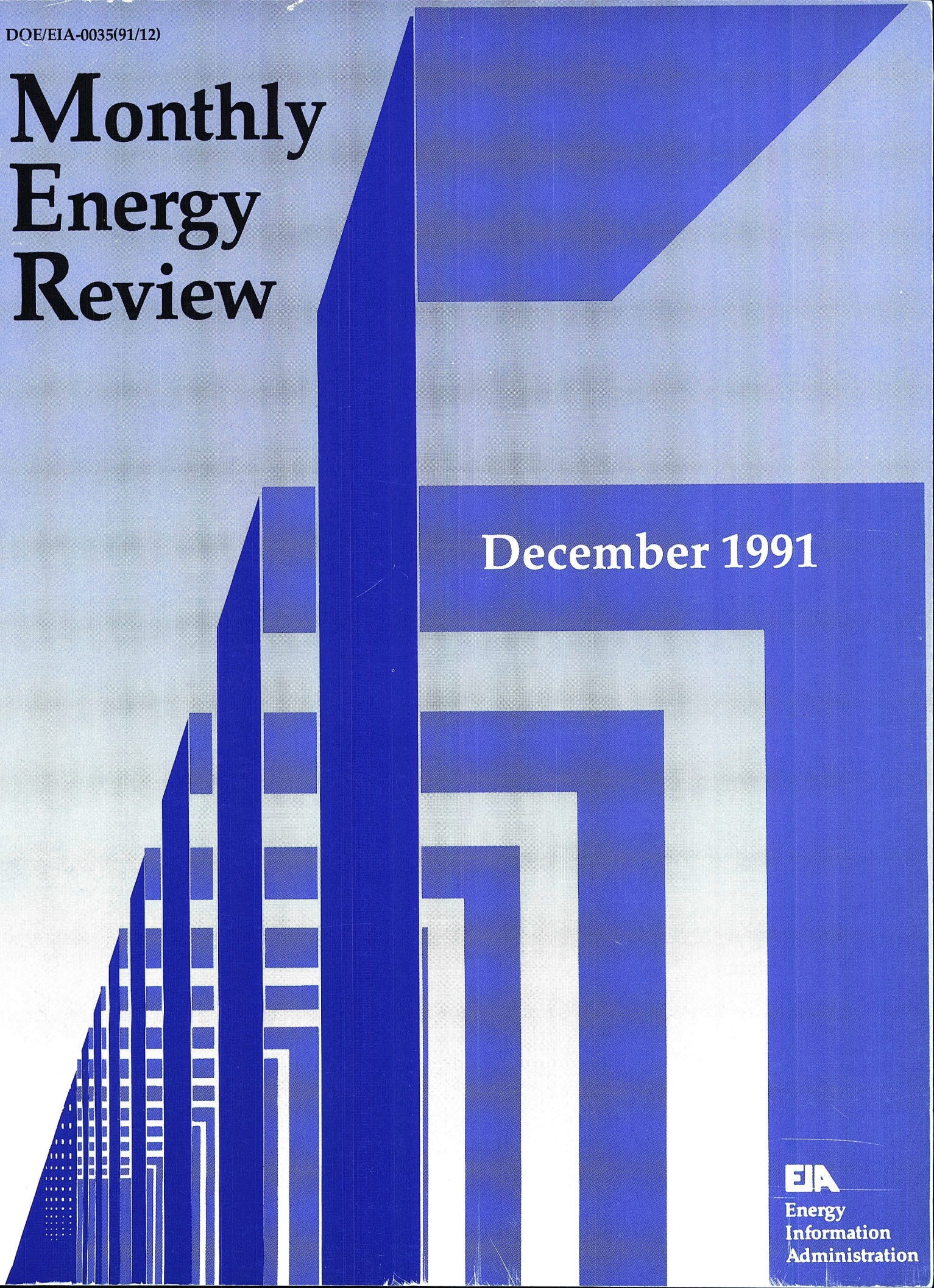
Monthly Energy Review

December 1991



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Monthly Energy Review

December 1991

Energy Information Administration
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U.S. Department of Energy
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List of Feature Articles

Feature articles on energy-related subjects are occasionally included in this publication. The following is a complete list of all the feature articles that have been published to date.

List of Highlights

"Highlights"—special features that summarize the most important information presented in selected Energy Information Administration reports—are occasionally included in this publication. The following is a complete list of all the reports that have been summarized to date.

Section 1. Energy Overview

The rate of energy production in the United States was unchanged during the first 9 months of 1991 compared to the same period in 1990. U.S. energy consumption was up 0.1 percent compared to the same period in 1990, and net imports of all energy fell 11.7 percent.

Energy production during September 1991 totaled 5.5 quadrillion Btu, a 1.5-percent increase compared with the level of production during September 1990. Petroleum production increased 1.4 percent, coal production rose 0.8 percent, and natural gas production was down 0.1 percent. All other forms of energy production combined were up 7.0 percent from the level of production during September 1990.

Energy consumption during September 1991 totaled 6.4 quadrillion Btu, 0.8 percent above the level of consumption during September 1990. Petroleum consumption increased 1.2 percent, natural gas consumption was up 0.4 percent, and coal consumption was down 3.7 percent. Consumption of all other forms of energy combined increased 9.9 percent compared with the level 1 year earlier.

Net imports of energy during September 1991 totaled 1.1 quadrillion Btu, 10.1 percent above the level of net imports 1 year earlier. Net imports of petroleum increased 6.7 percent, and net imports of natural gas were up 6.2 percent. Net exports of coal increased 1.3 percent compared with the level in September 1990.

Table 1.1 Energy Summary for September 1991

(Quadrillion Btu)

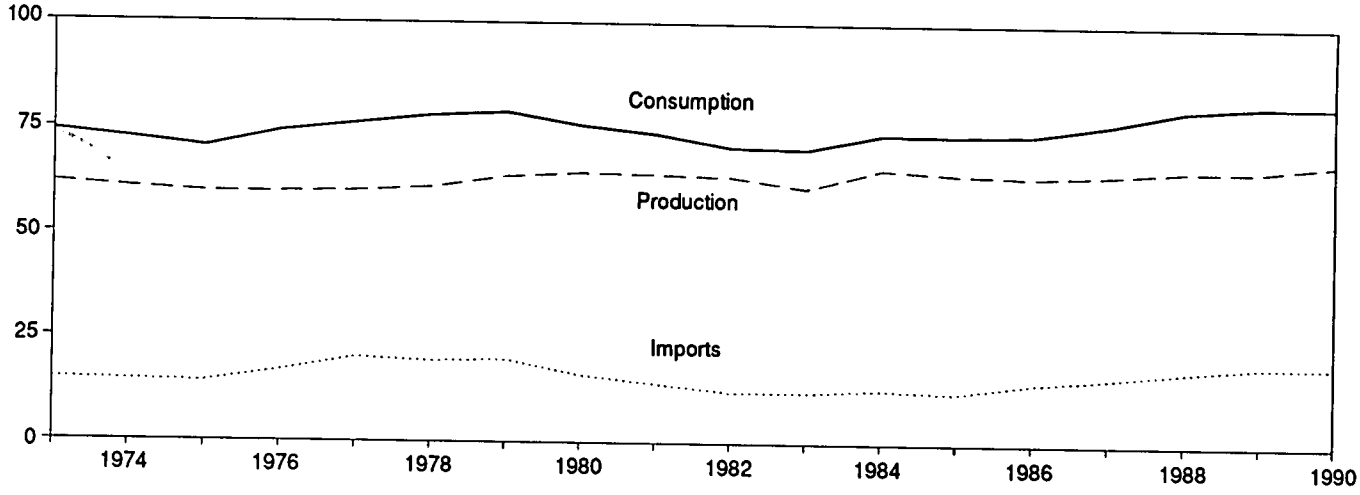
	September			Cumulative January Through September				
	1991	1990	Percent Change[a]	1991	1991 Daily Rate	1990	1990 Daily Rate	Percent Change[a]
Production[b]	**5.491**	**5.408**	**1.5**	**50.836**	**0.186**	**50.831**	**0.186**	**0.0**
Coal	1.829	1.814	.8	16.428	.060	16.873	.062	-2.6
Natural Gas (Dry)	1.438	1.440	-.1	13.598	.050	13.647	.050	-.4
Petroleum[c]	1.460	1.440	1.4	13.405	.049	13.204	.048	1.5
Other[d]	.764	.714	7.0	7.405	.027	7.107	.026	4.2
Consumption[b]	**6.384**	**6.336**	**.8**	**60.942**	**.223**	**60.867**	**.223**	**.1**
Coal	1.572	1.631	-3.7	14.170	.052	14.262	.052	-.6
Natural Gas[e]	1.305	1.300	.4	14.767	.054	14.276	.052	3.4
Petroleum	2.712	2.680	1.2	24.457	.090	25.235	.092	-3.1
Other[f]	.796	.724	9.9	7.548	.028	7.094	.026	6.4
Net Imports	**1.110**	**1.007**	**10.1**	**9.929**	**.036**	**11.250**	**.041**	**-11.7**
Coal[g]	-.267	-.263	1.3	-2.023	-.007	-2.038	-.007	-.7
Natural Gas	.121	.114	6.2	1.185	.004	1.039	.004	14.0
Petroleum[h]	1.223	1.147	6.7	10.624	.039	12.262	.045	-13.4
Other[i]	.032	.010	218.2	.143	.001	-.013	.000	-1199.2

[a] Based on daily rates prior to rounding.
[b] Production and consumption totals exclude wood, waste, geothermal, wind, photovoltaic, and solar thermal energy, except for small amounts used by electric utilities to generate electricity for distribution.
[c] Includes crude oil, lease condensate, and natural gas plant liquids.
[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] 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.
[g] Minus sign indicates exports are greater than imports.
[h] Includes crude oil, lease condensate, petroleum products, pentanes plus, unfinished oils, gasoline blending components, and imports of crude oil for the Strategic Petroleum Reserve.
[i] Other is net imports of electricity and coal coke.
Note: Totals may not equal sum of components due to independent rounding.
Sources: Tables 1.3, 1.4, and 1.5.

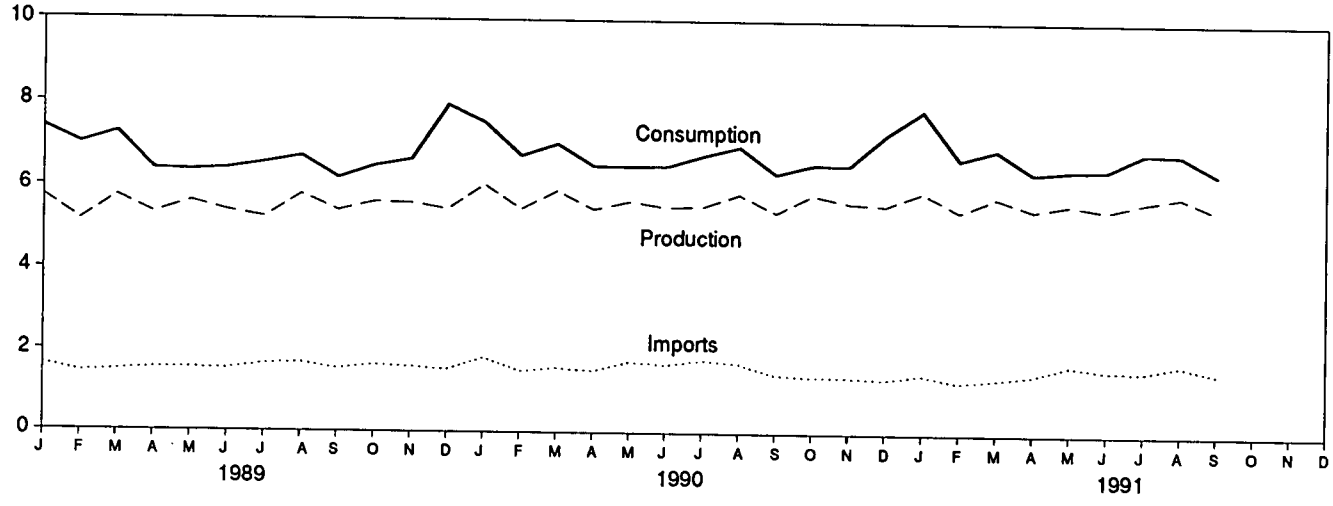
Figure 1.1 Energy Overview

(Quadrillion Btu)

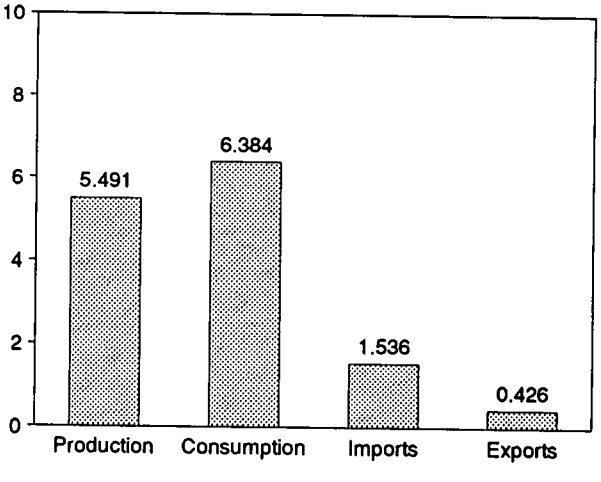
Consumption, Production, and Imports, 1973-1990



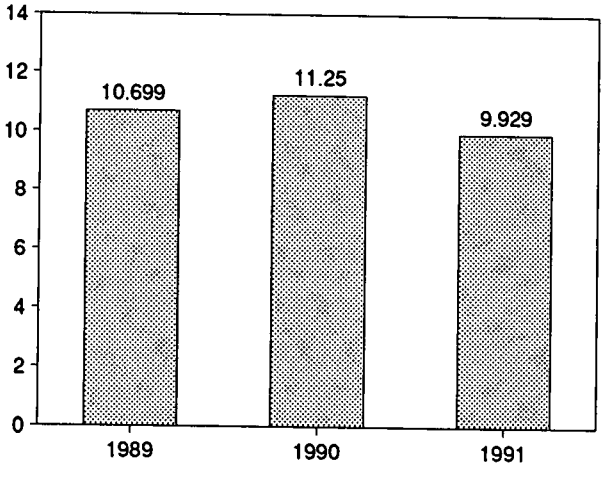
Consumption, Production, and Imports, Monthly



Overview, September 1991



Net Imports, January-September



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

Table 1.2 Energy Overview

(Quadrillion Btu)

	Production[a]	Consumption[a,b]	Imports	Exports	Net Imports
1973 Total	62.060	74.282	14.731	2.051	12.680
1974 Total	60.835	72.543	14.413	2.223	12.190
1975 Total	59.860	70.546	14.111	2.359	11.752
1976 Total	59.892	74.362	16.837	2.188	14.648
1977 Total	60.219	76.288	20.090	2.071	18.019
1978 Total	61.103	78.089	19.254	1.931	17.323
1979 Total	63.801	78.898	19.616	2.870	16.746
1980 Total	64.761	75.955	15.971	3.723	12.247
1981 Total	64.421	73.990	13.975	4.329	9.646
1982 Total	R63.962	70.848	12.092	4.633	7.460
1983 Total	R61.278	70.524	12.027	3.717	8.310
1984 Total	R65.923	74.101	12.763	3.804	8.959
1985 Total	R64.840	73.945	12.098	4.231	7.868
1986 Total	R64.295	74.237	14.430	4.055	10.376
1987 Total	R64.911	76.844	15.755	3.852	11.903
1988 Total	R66.084	80.195	17.561	4.415	13.146
1989 January	R5.736	7.391	1.642	.319	1.323
February	R5.170	6.995	1.452	.337	1.116
March	R5.737	7.265	1.494	.404	1.090
April	R5.337	6.386	1.558	.405	1.152
May	R5.620	6.363	1.556	.420	1.136
June	R5.401	R6.410	1.535	.440	1.095
July	R5.252	R6.555	1.665	.327	1.338
August	R5.795	6.710	1.697	.408	1.288
September	R5.415	6.191	1.550	.389	1.161
October	R5.618	6.488	1.649	.419	1.230
November	R5.597	6.644	1.605	.460	1.145
December	R5.455	7.946	1.543	.435	1.108
Total	R66.133	81.345	18.947	4.766	14.181
1990 January	R6.040	R7.534	1.829	.361	1.468
February	R5.465	R6.741	1.513	.330	1.183
March	R5.897	7.024	1.588	.428	1.160
April	R5.464	R6.499	1.524	.387	1.137
May	R5.655	R6.492	1.748	.412	1.336
June	R5.522	R6.504	1.680	.412	1.268
July	R5.543	R6.762	1.799	.386	1.413
August	R5.837	R6.976	1.716	.438	1.278
September	R5.408	R6.336	1.449	.441	1.007
October	R5.834	R6.559	1.398	.418	.980
November	R5.642	R6.548	1.397	.460	.937
December	R5.589	R7.291	1.356	.437	.919
Total	R67.896	R81.269	18.995	4.910	14.085
1991 January	R5.913	R7.869	1.465	.396	1.069
February	R5.451	R6.702	1.283	.463	.820
March	R5.789	R6.937	R1.367	.395	R.972
April	R5.497	R6.380	1.469	.324	1.145
May	R5.640	R6.457	R1.711	.485	R1.226
June	R5.504	R6.477	R1.595	.425	R1.170
July	R5.703	R6.881	1.574	.454	1.120
August	R5.849	6.856	1.742	.444	1.298
September	5.491	6.384	1.536	.426	1.110
9-Month Total	50.836	60.942	13.741	3.812	9.929
1990 9-Month Total	50.831	60.867	14.846	3.596	11.250
1989 9-Month Total	49.462	60.266	14.149	3.450	10.699

[a] Excludes wood, waste, geothermal, wind, photovoltaic, and solar thermal energy, except for small amounts used by electric utilities to generate electricity for distribution.

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

R=Revised data.

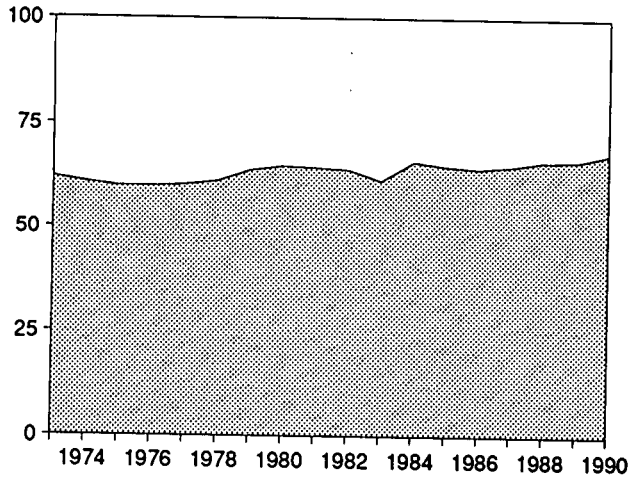
Notes: • For definitions, see Notes 1 through 4 at end of section. • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Sources: • **Production:** Table 1.3. • **Consumption:** Table 1.4. • **Imports and Exports:** Tables 3.1b, 4.2, 6.1, A3-A9, and Section 2, "Energy Consumption Notes and Sources," Notes 8 and 9. • **Net Imports:** Table 1.5.

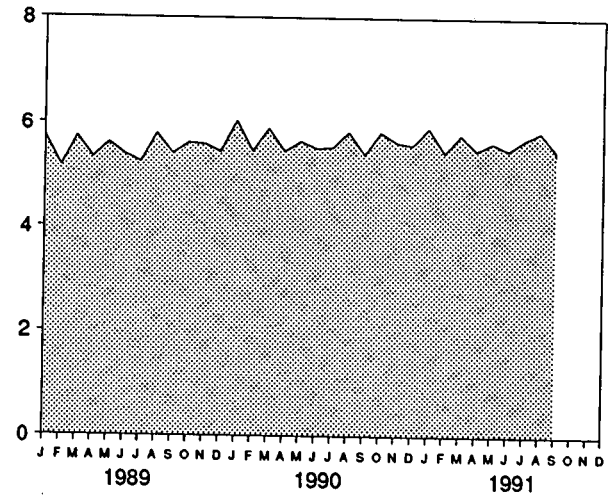
Figure 1.2 Energy Production

(Quadrillion Btu)

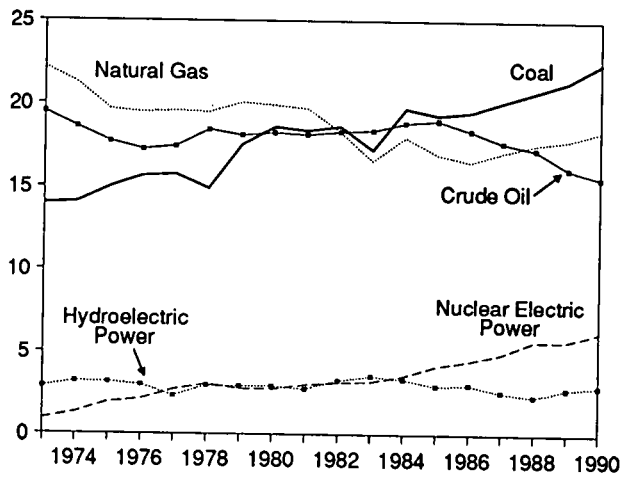
Total Production, 1973-1990



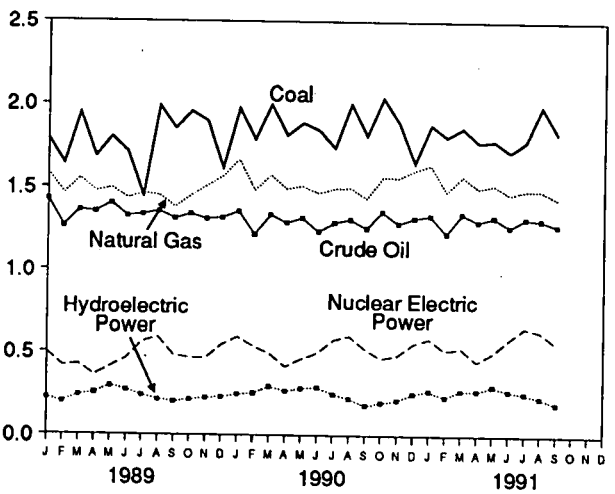
Total Production, Monthly



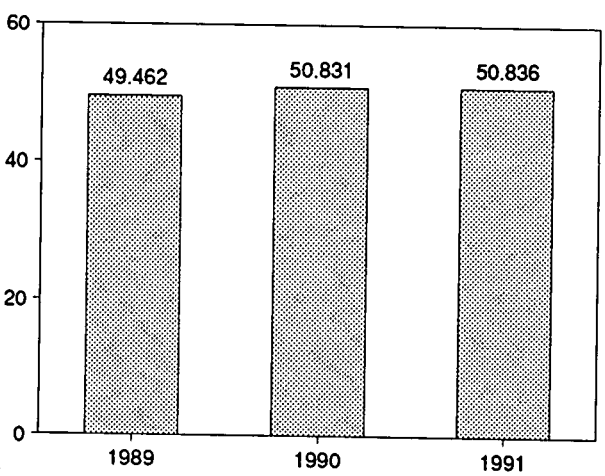
Production by Major Sources, 1973-1990



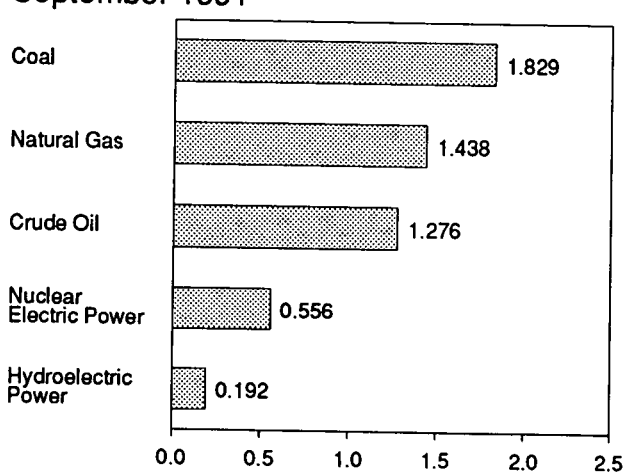
Production by Major Sources, Monthly



Total Production, January-September



Production by Major Sources, September 1991



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

Table 1.3 Energy Production by Source

(Quadrillion Btu)

	Coal	Natural Gas (Dry)	Crude Oil[a]	Natural Gas Plant Liquids	Nuclear Electric Power	Hydro-electric Power[b]	Other[c]	Total[d]
1973 Total	**13.993**	**22.187**	**19.493**	**2.569**	**0.910**	**2.861**	**0.046**	**62.060**
1974 Total	**14.074**	**21.210**	**18.575**	**2.471**	**1.272**	**3.177**	**.056**	**60.835**
1975 Total	**14.990**	**19.640**	**17.729**	**2.374**	**1.900**	**3.155**	**.072**	**59.860**
1976 Total	**15.654**	**19.480**	**17.262**	**2.327**	**2.111**	**2.976**	**.081**	**59.892**
1977 Total	**15.755**	**19.565**	**17.454**	**2.327**	**2.702**	**2.333**	**.082**	**60.219**
1978 Total	**14.910**	**19.485**	**18.434**	**2.245**	**3.024**	**2.937**	**.068**	**61.103**
1979 Total	**17.539**	**20.076**	**18.104**	**2.286**	**2.776**	**2.931**	**.089**	**63.801**
1980 Total	**18.597**	**19.908**	**18.249**	**2.254**	**2.739**	**2.900**	**.114**	**64.761**
1981 Total	**18.376**	**19.699**	**18.146**	**2.307**	**3.008**	**2.758**	**.127**	**64.421**
1982 Total	**18.639**	**R18.319**	**18.309**	**2.191**	**3.131**	**3.266**	**.108**	**R63.962**
1983 Total	**17.246**	**R16.593**	**18.392**	**2.184**	**3.203**	**3.527**	**.133**	**R61.278**
1984 Total	**19.719**	**R18.007**	**18.848**	**2.274**	**3.553**	**3.348**	**.174**	**R65.923**
1985 Total	**19.325**	**R16.981**	**18.992**	**2.241**	**4.149**	**2.939**	**.213**	**R64.840**
1986 Total	**19.510**	**R16.541**	**18.376**	**2.149**	**4.471**	**3.017**	**.231**	**R64.295**
1987 Total	**20.142**	**R17.136**	**17.675**	**2.215**	**4.906**	**2.593**	**.244**	**R64.911**
1988 Total	**20.737**	**R17.598**	**17.279**	**2.260**	**5.661**	**2.314**	**.235**	**R66.084**
1989 January	1.792	R1.585	1.427	.197	.497	.219	.019	R5.736
February	1.641	R1.464	1.265	.172	.415	.195	.017	R5.170
March	1.946	R1.552	1.362	.196	.425	.237	.020	R5.737
April	1.686	R1.478	1.352	.192	.359	.252	.017	R5.337
May	1.802	R1.498	1.405	.192	.411	.293	.018	R5.620
June	1.715	R1.436	1.327	.173	.461	.271	.018	R5.401
July	1.449	R1.464	1.338	.183	.561	.237	.019	R5.252
August	1.988	R1.454	1.356	.178	.589	.211	.018	R5.795
September	1.853	R1.384	1.313	.170	.481	.198	.017	R5.415
October	1.956	R1.452	1.340	.175	.467	.210	.018	R5.618
November	1.899	R1.512	1.311	.170	.465	.221	.017	R5.597
December	1.618	R1.567	1.319	.159	.545	.228	.018	R5.455
Total	**21.345**	**R17.848**	**16.117**	**2.158**	**5.677**	**2.771**	**.217**	**R66.133**
1990 January	1.976	R1.670	1.357	.183	.591	.245	.018	R6.040
February	1.790	R1.486	1.218	.168	.536	.252	.016	R5.465
March	1.999	R1.576	1.337	.181	.494	.293	.018	R5.897
April	1.815	R1.496	1.289	.171	.413	.265	.014	R5.464
May	1.888	R1.511	1.318	.178	.461	.282	.017	R5.655
June	1.846	R1.470	1.236	.167	.497	.289	.017	R5.522
July	1.741	R1.496	1.290	.176	.575	.247	.017	R5.543
August	2.004	R1.501	1.310	.187	.598	.220	.017	R5.837
September	1.814	R1.440	1.257	.183	.520	.178	.016	R5.408
October	2.039	R1.565	1.356	.198	.465	.194	.017	R5.834
November	1.893	R1.562	1.285	.194	.483	.209	.016	R5.642
December	1.651	R1.608	1.319	.190	.553	.250	.017	R5.589
Total	**22.456**	**R18.383**	**15.571**	**2.174**	**6.186**	**2.924**	**.202**	**R67.896**
1991 January	1.878	R1.639	1.334	.194	.583	.268	.017	R5.913
February	1.808	R1.481	1.226	.181	.513	.229	.014	R5.451
March	1.861	R1.572	1.345	.198	.527	.270	.016	R5.789
April	1.774	R1.503	1.299	.190	.447	.268	.015	R5.497
May	1.785	R1.521	1.325	.195	.501	.297	.015	R5.640
June	1.719	R1.465	1.267	.185	.581	.270	.016	R5.504
July	1.784	R1.490	1.317	.190	.651	.253	.016	R5.703
August	1.991	R1.489	1.308	.192	.627	.227	.016	R5.849
September	1.829	R1.438	1.276	.184	.556	.192	.015	5.491
9-Month Total	**16.428**	**13.598**	**11.697**	**1.709**	**4.987**	**2.276**	**.142**	**50.836**
1990 9-Month Total	**16.873**	**13.647**	**11.611**	**1.593**	**4.685**	**2.271**	**.152**	**50.831**
1989 9-Month Total	**15.872**	**13.314**	**12.146**	**1.654**	**4.200**	**2.112**	**.164**	**49.462**

[a] Includes lease condensate.
[b] Electric utility and industrial production of hydroelectric power.
[c] Other production is electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy.
[d] 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.

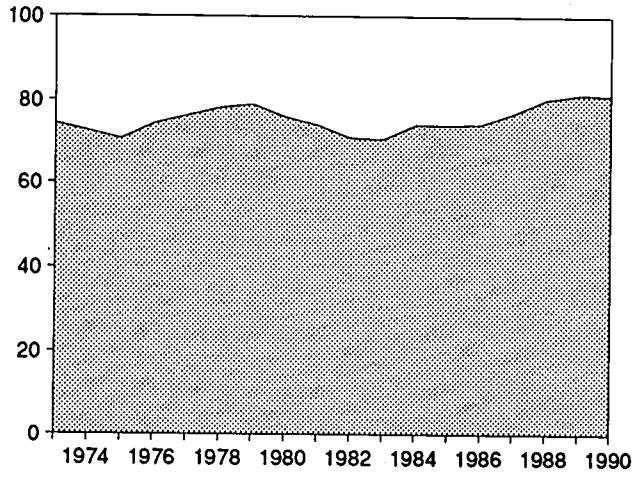
Notes: • See Note 1 at end of section. • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Sources: • **Coal**—Tables 6.1 and A6-A8. • **Natural Gas (Dry)**—Tables 4.1 and A5. • **Crude Oil and Natural Gas Plant Liquids**—Tables 3.1a and A3. • **Nuclear Electric Power**—Tables 7.1 and A9. • **Hydroelectric Power**—Table 7.1; Section 2, "Energy Consumption Notes and Sources," Note 7; and Table A9. • **Other**—Section 2, "Energy Consumption Notes and Sources," Note 8, and Table A9.

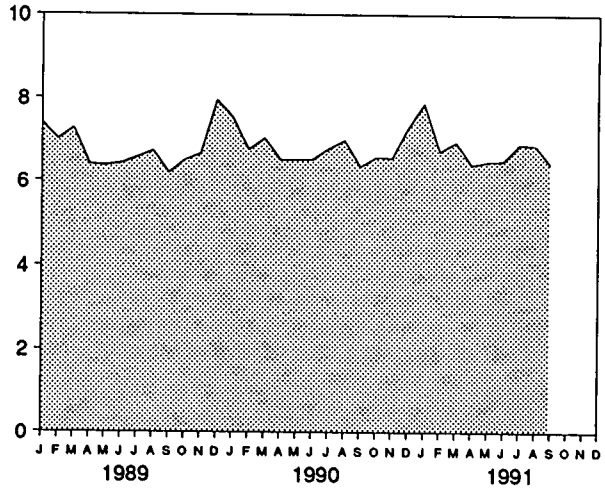
Figure 1.3 Energy Consumption

(Quadrillion Btu)

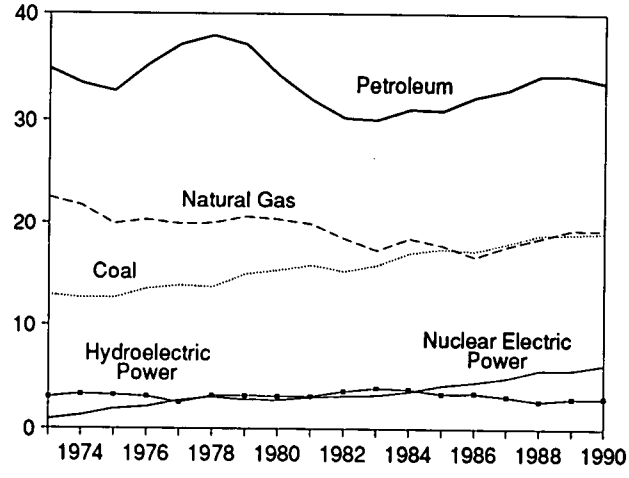
Total Consumption, 1973-1990



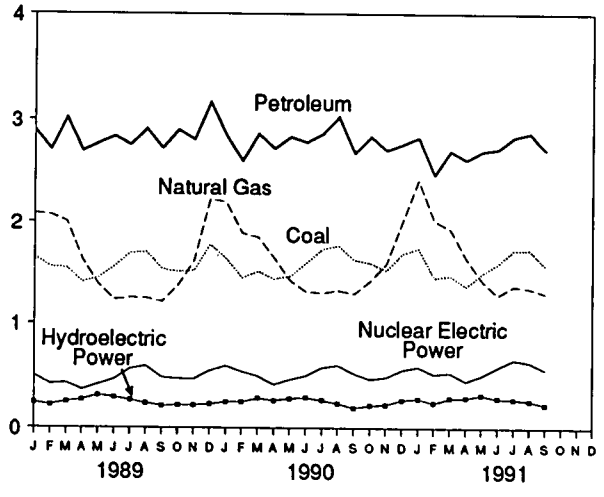
Total Consumption, Monthly



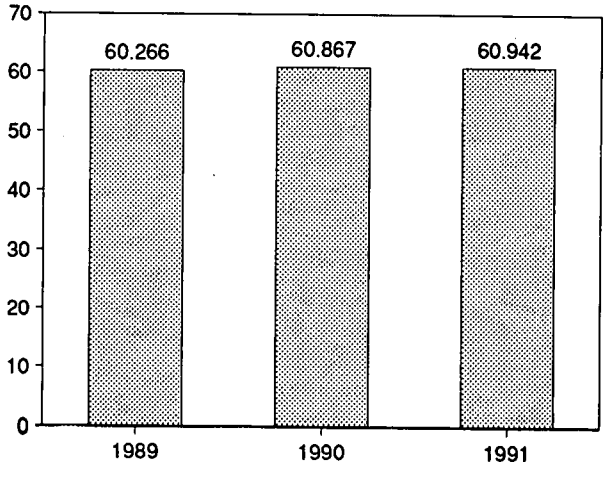
Consumption by Major Sources, 1973-1990



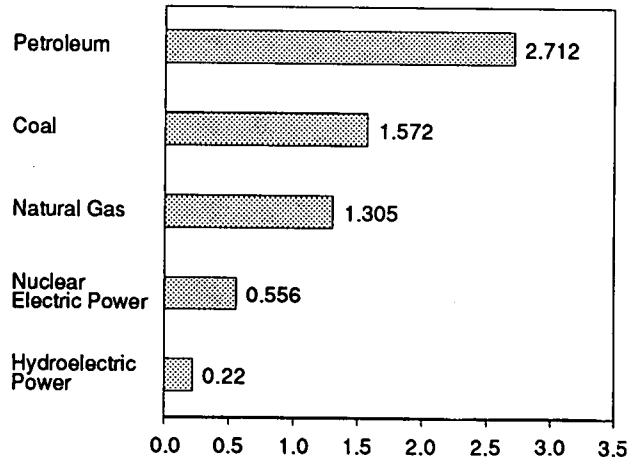
Consumption by Major Sources, Monthly



Total Consumption, January-September



Consumption by Major Sources, September 1991



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

Table 1.4 Energy Consumption by Source

(Quadrillion Btu)

	Coal	Natural Gas[a]	Petroleum	Nuclear Electric Power	Hydro-electric Power[b]	Other[c]	Total[d]
1973 Total	12.971	22.512	34.840	0.910	3.010	0.039	74.282
1974 Total	12.663	21.732	33.455	1.272	3.309	.112	72.543
1975 Total	12.663	19.948	32.731	1.900	3.219	.086	70.546
1976 Total	13.584	20.345	35.175	2.111	3.066	.081	74.362
1977 Total	13.922	19.931	37.122	2.702	2.515	.097	76.288
1978 Total	13.765	20.000	37.965	3.024	3.141	.193	78.089
1979 Total	15.039	20.666	37.123	2.776	3.141	.152	78.898
1980 Total	15.423	20.394	34.202	2.739	3.118	.079	75.955
1981 Total	15.907	19.928	31.931	3.008	3.105	.111	73.990
1982 Total	15.322	18.505	30.231	3.131	3.572	.086	70.848
1983 Total	15.894	17.357	30.054	3.203	3.899	.118	70.524
1984 Total	17.070	18.507	31.051	3.553	3.757	.163	74.101
1985 Total	17.478	17.834	30.922	4.149	3.363	.199	73.945
1986 Total	17.262	16.708	32.196	4.471	3.385	.215	74.237
1987 Total	18.008	17.744	32.865	4.906	3.068	.253	76.844
1988 Total	18.846	18.552	34.222	5.661	2.639	.274	80.195
1989 January	1.652	2.087	2.896	.497	.234	.026	7.391
February	1.561	2.071	2.714	.415	.214	.019	6.995
March	1.549	2.007	3.017	.425	.243	.023	7.265
April	1.412	1.631	2.698	.359	.262	.024	6.386
May	1.456	1.392	2.775	.411	.306	.024	6.363
June	1.561	R1.239	2.840	.461	.287	.022	R6.410
July	1.694	R1.259	2.759	.561	.259	.022	R6.555
August	1.705	1.255	2.912	.589	.229	.021	6.710
September	1.540	1.219	2.726	.481	.207	.019	6.191
October	1.514	1.381	2.902	.467	.210	.014	6.488
November	1.524	1.617	2.810	.465	.212	.016	6.644
December	1.776	2.224	3.163	.545	.223	.016	7.946
Total	18.944	R19.381	34.211	5.677	2.884	.248	81.345
1990 January	1.640	R2.198	2.846	.591	.241	.018	R7.534
February	1.456	R1.890	2.602	.536	.241	.016	R6.741
March	1.518	1.849	2.866	.494	.278	.019	7.024
April	1.444	R1.647	2.724	.413	.258	.014	R6.499
May	1.472	R1.429	2.837	.461	.276	.017	R6.492
June	1.598	R1.322	2.786	.497	.284	.018	R6.504
July	1.733	R1.308	2.866	.575	.259	.021	R6.762
August	1.769	R1.334	3.028	.598	.230	.017	R6.976
September	1.631	R1.300	2.680	.520	.187	.017	R6.336
October	1.599	R1.427	2.841	.465	.210	.018	R6.559
November	1.530	R1.591	2.710	.483	.219	.015	R6.548
December	1.690	R2.000	2.767	.553	.263	.018	R7.291
Total	19.082	R19.297	33.553	6.186	2.944	.207	R81.269
1991 January	1.743	R2.417	2.832	.583	.276	.018	R7.869
February	1.457	R2.015	2.467	.513	.235	.015	R6.702
March	1.479	R1.932	2.701	.527	.280	.018	R6.937
April	R1.374	R1.647	2.614	.447	.284	.016	R6.380
May	R1.498	R1.430	2.700	.501	.311	.016	R6.457
June	R1.594	R1.288	2.721	.581	.278	.015	R6.477
July	1.725	R1.378	2.837	.651	.271	.019	R6.881
August	1.729	1.356	2.874	.627	.256	.014	6.856
September	1.572	1.305	2.712	.556	.220	.019	6.384
9-Month Total	14.170	14.767	24.457	4.987	2.411	.150	60.942
1990 9-Month Total	14.262	14.276	25.235	4.685	2.253	.156	60.867
1989 9-Month Total	14.129	14.160	25.337	4.200	2.240	.201	60.266

[a] Includes supplemental gaseous fuels.

[b] Electric utility and industrial production and net imports of electricity.

[c] Other consumption is net imports of coal coke and electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy.

[d] 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.

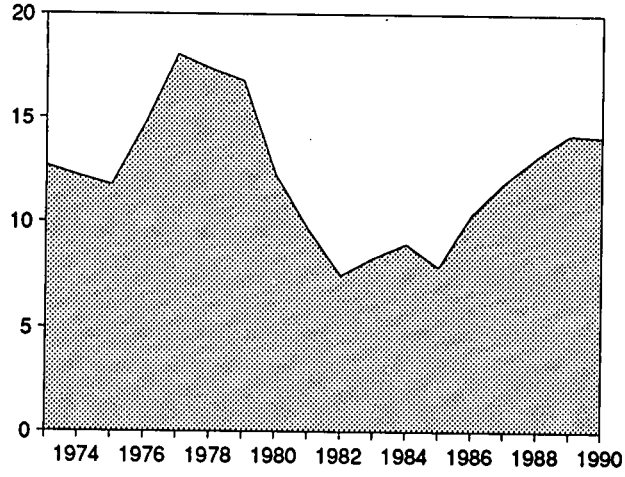
Notes: • See Note 2 at end of section. • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Sources: • **Coal**—Tables 6.1 and A6-A8. • **Natural Gas**—Tables 4.2 and A5. • **Petroleum**—Tables 3.1a and A4. • **Nuclear Electric Power**—Tables 7.1 and A9. • **Hydroelectric Power**—Table 7.1; Section 2, "Energy Consumption Notes and Sources," Note 8; and Table A9. • **Other**—Section 2, "Energy Consumption Notes and Sources," Note 7, and Table A9.

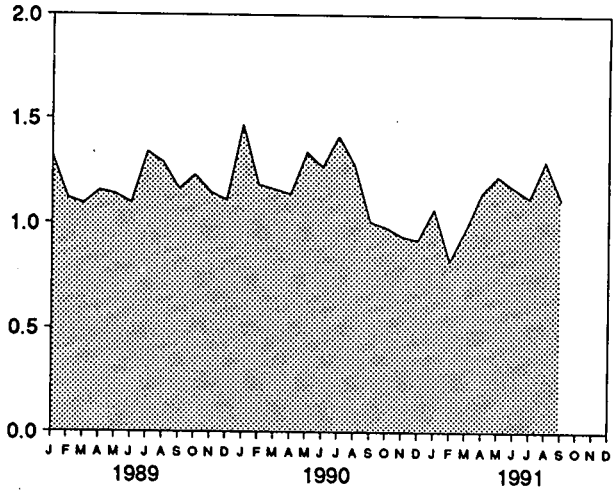
Figure 1.4 Energy Net Imports

(Quadrillion Btu, Except as Noted)

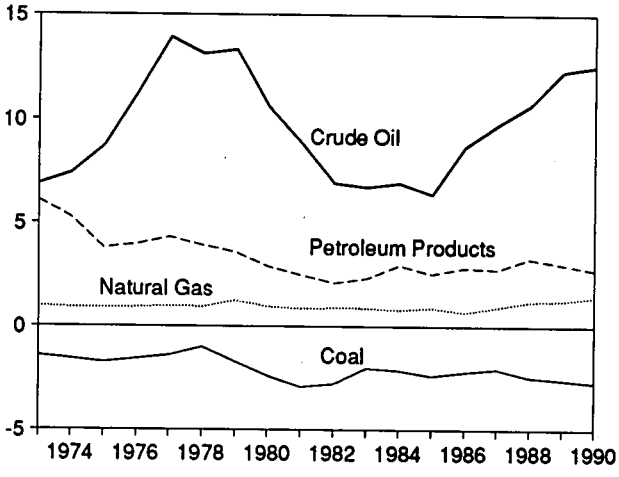
Total Net Imports, 1973-1990



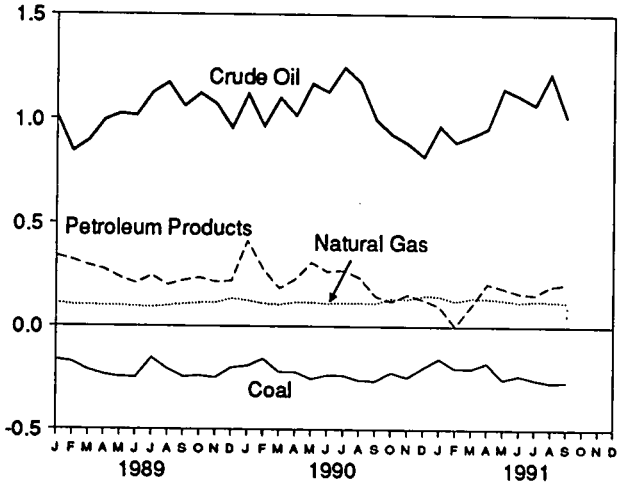
Net Imports, Monthly



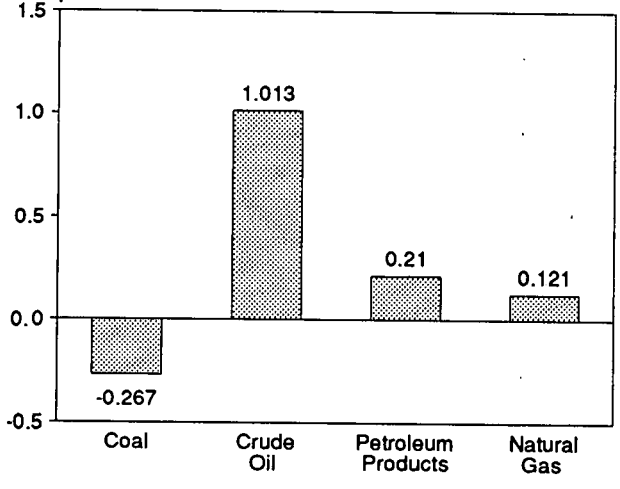
Net Imports by Major Sources, 1973-1990



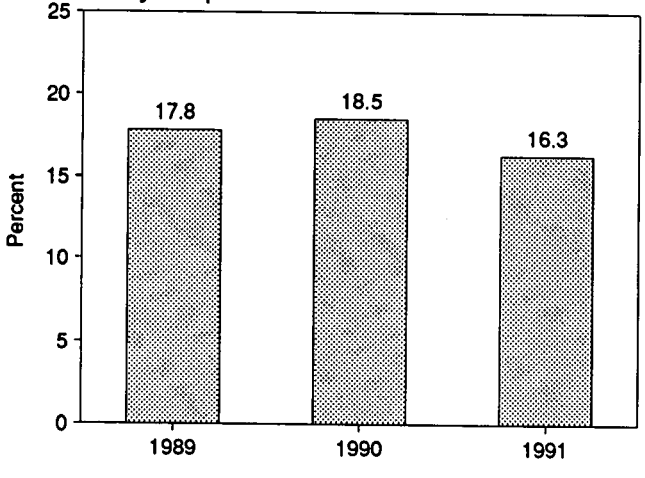
Net Imports by Major Sources, Monthly



Net Imports by Major Sources, September 1991



Net Imports as Share of Consumption, January-September



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

Table 1.5 Energy Net Imports by Source

(Quadrillion Btu)

	Coal	Natural Gas	Crude Oil[a]	Petroleum Products[b]	Electricity[c]	Coal Coke	Total
1973 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**
1975 Total	**-1.738**	**.904**	**8.708**	**3.800**	**.064**	**.014**	**11.752**
1976 Total	**-1.567**	**.922**	**11.221**	**3.982**	**.089**	**(s)**	**14.648**
1977 Total	**-1.401**	**.981**	**13.921**	**4.321**	**.182**	**.015**	**18.019**
1978 Total	**-1.004**	**.941**	**13.125**	**3.932**	**.204**	**.125**	**17.323**
1979 Total	**-1.702**	**1.243**	**13.328**	**3.603**	**.211**	**.063**	**16.746**
1980 Total	**-2.391**	**.957**	**10.586**	**2.912**	**.217**	**-.035**	**12.247**
1981 Total	**-2.918**	**.857**	**8.854**	**2.522**	**.347**	**-.016**	**9.646**
1982 Total	**-2.768**	**.898**	**6.917**	**2.128**	**.306**	**-.022**	**7.460**
1983 Total	**-2.013**	**.885**	**6.731**	**2.351**	**.372**	**-.016**	**8.310**
1984 Total	**-2.119**	**.792**	**6.918**	**2.970**	**.409**	**-.011**	**8.959**
1985 Total	**-2.389**	**.896**	**6.381**	**2.570**	**.423**	**-.013**	**7.868**
1986 Total	**-2.193**	**.686**	**8.676**	**2.855**	**.368**	**-.017**	**10.376**
1987 Total	**-2.049**	**.937**	**9.748**	**2.784**	**.475**	**.009**	**11.903**
1988 Total	**-2.446**	**1.221**	**10.698**	**3.308**	**.325**	**.040**	**13.146**
1989 January	-.163	.112	1.012	.340	.014	.007	1.323
February	-.173	.103	.843	.321	.019	.002	1.116
March	-.211	.102	.894	.295	.006	.003	1.090
April	-.234	.099	.994	.276	.010	.007	1.152
May	-.246	.100	1.025	.238	.012	.006	1.136
June	-.247	.095	1.016	.210	.016	.004	1.095
July	-.153	.092	1.125	.248	.022	.004	1.338
August	-.206	.099	1.173	.202	.018	.003	1.288
September	-.245	.108	1.062	.224	.009	.002	1.161
October	-.239	.113	1.122	.237	(s)	-.004	1.230
November	-.249	.115	1.073	.217	-.009	-.001	1.145
December	-.199	.137	.956	.221	-.005	-.002	1.108
Total	**-2.566**	**1.278**	**12.296**	**3.029**	**.113**	**.030**	**14.181**
1990 January	-.191	.127	1.120	.415	-.003	(s)	1.468
February	-.157	.111	.964	.276	-.011	(s)	1.183
March	-.220	.106	1.102	.186	-.015	.001	1.160
April	-.220	.118	1.016	.231	-.007	-.001	1.137
May	-.254	.118	1.168	.310	-.006	(s)	1.336
June	-.235	.112	1.129	.266	-.005	.001	1.268
July	-.236	.116	1.246	.272	.011	.003	1.413
August	-.261	.114	1.176	.239	.010	-.001	1.278
September	-.263	.114	.997	.150	.009	.001	1.007
October	-.222	.138	.926	.123	.015	.001	.980
November	-.246	.136	.882	.157	.010	-.001	.937
December	-.198	.151	.820	.133	.013	.001	.919
Total	**-2.705**	**1.463**	**12.545**	**2.757**	**.020**	**.005**	**14.085**
1991 January	-.156	.150	.967	.099	E .008	.001	1.069
February	-.202	.125	.889	.001	E .006	.001	.820
March	-.203	R .142	.920	.101	E .011	.002	R .972
April	-.176	.139	.956	.211	E .015	.001	1.145
May	-.256	R .133	1.146	.189	E .014	.001	R 1.226
June	-.236	R .122	1.112	.166	E .008	-.001	R 1.170
July	-.256	.127	1.070	.158	E .017	.003	1.120
August	-.270	.125	1.217	.199	E .029	-.002	1.298
September	-.267	.121	1.013	.210	E .028	.004	1.110
9-Month Total	**-2.023**	**1.185**	**9.290**	**1.334**	E **.135**	**.008**	**9.929**
1990 9-Month Total	**-2.038**	**1.039**	**9.918**	**2.344**	**-.017**	**.004**	**11.250**
1989 9-Month Total	**-1.879**	**.912**	**9.146**	**2.355**	**.128**	**.037**	**10.699**

[a] Crude oil, lease condensate, and imports of crude oil for the Strategic Petroleum Reserve.

[b] Petroleum products, unfinished oils, pentanes plus, and gasoline blending components.

[c] 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 A9.

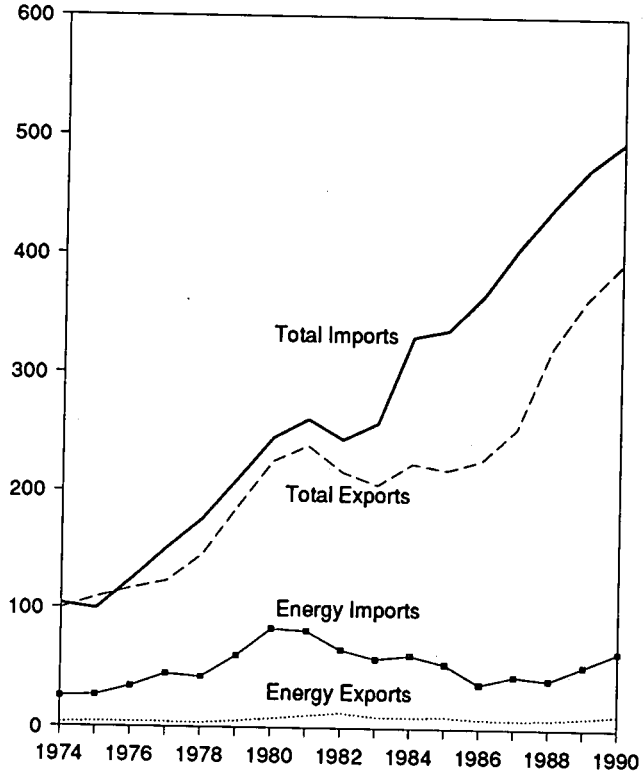
R=Revised data. E=Estimate. (s)=Less than +0.5 trillion Btu and greater than -0.5 trillion Btu.

Notes: • See Notes 3 and 4 at end of section. • Net imports equals imports minus exports. Minus sign indicates exports are greater than imports. • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

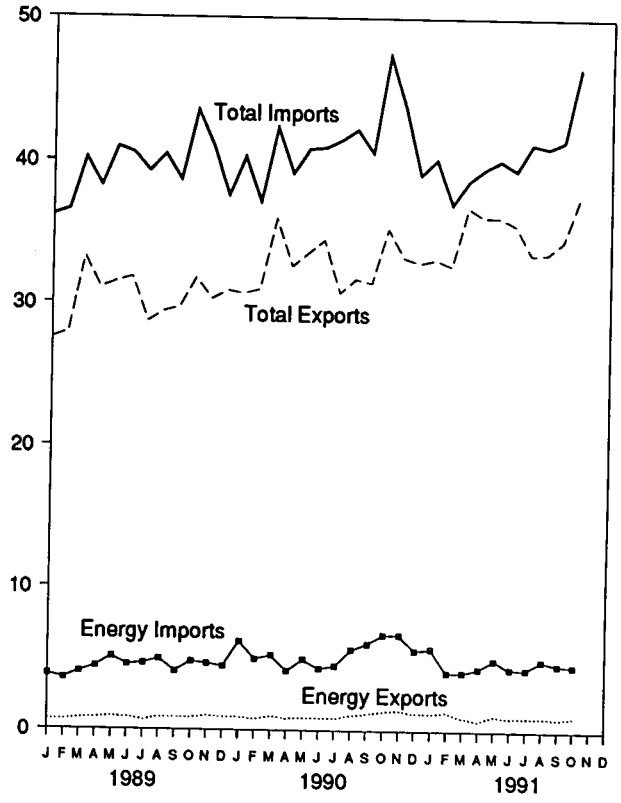
Sources: • **Coal**—Tables 6.1 and A6-A8. • **Natural Gas**—Tables 4.2 and A5. • **Crude Oil and Petroleum Products**—Tables 3.1b and A3. • **Electricity**—Section 2, "Energy Consumption Notes and Sources," Note 8, and Table A9. • **Coal Coke**—Section 2, "Energy Consumption Notes and Sources," Note 9, and Table A8.

Figure 1.5 Merchandise Trade Value
(Billion Dollars)

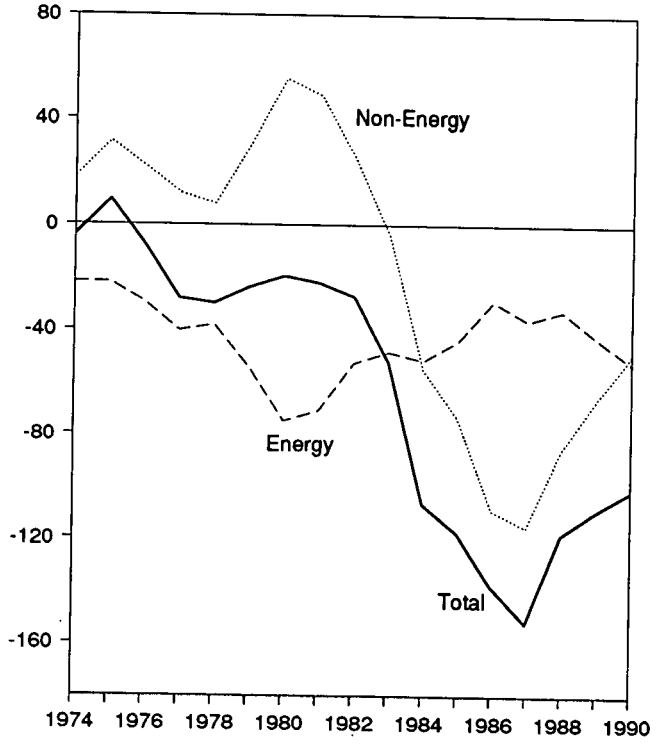
Imports and Exports, 1974-1990



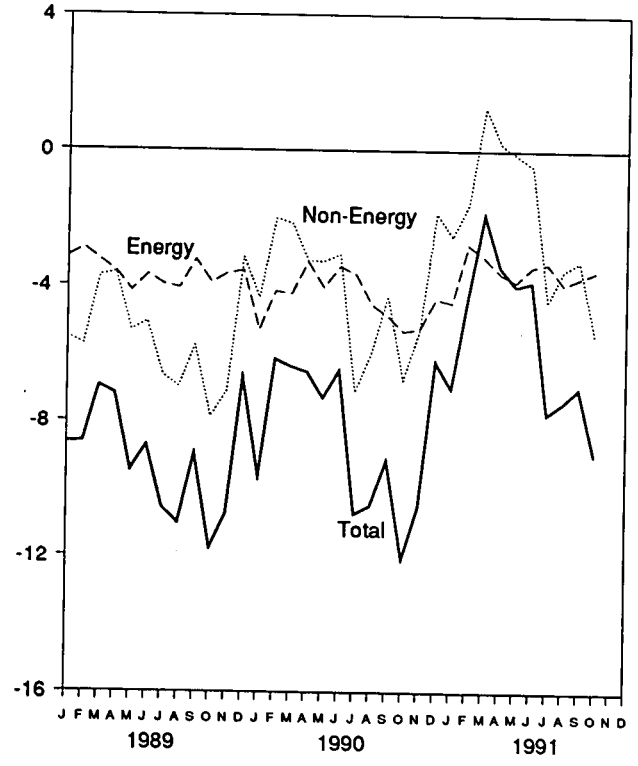
Imports and Exports, Monthly



Trade Balance, 1974-1990



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)

	Petroleum			Energy			Non-Energy Balance	Total Merchandise		
	Exports	Imports	Balance	Exports	Imports	Balance		Exports	Imports	Balance
1974 Total	792	24,668	-23,876	3,444	25,454	-22,010	18,126	99,437	103,321	-3,884
1975 Total	907	25,197	-24,289	4,470	26,476	-22,006	31,557	108,856	99,305	9,551
1976 Total	998	32,226	-31,228	4,226	33,996	-29,770	21,950	116,794	124,614	-7,820
1977 Total	1,276	42,368	-41,093	4,184	44,537	-40,354	12,001	123,182	151,534	-28,353
1978 Total	1,561	39,526	-37,965	3,881	42,096	-38,215	8,010	145,847	176,052	-30,205
1979 Total	1,914	56,715	-54,801	5,621	59,998	-54,377	30,455	186,363	210,285	-23,922
1980 Total	2,833	78,637	-75,803	7,982	82,924	-74,942	55,246	225,566	245,262	-19,696
1981 Total	3,696	76,659	-72,963	10,279	81,360	-71,081	48,814	238,715	260,982	-22,267
1982 Total	5,947	60,458	-54,511	12,729	65,409	-52,680	25,170	216,442	243,952	-27,510
1983 Total	4,557	53,217	-48,659	9,500	57,952	-48,452	-3,957	205,639	258,048	-52,409
1984 Total	4,470	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	3,640	35,142	-31,503	8,115	37,310	-29,195	-109,084	227,159	365,438	-138,279
1987 Total	3,922	42,285	-38,363	7,713	44,220	-36,506	-115,613	254,122	406,241	-152,119
1988 Total	3,693	38,787	-35,094	8,235	41,042	-32,807	-85,720	322,426	440,952	-118,526
1989 January	403	3,505	-3,102	678	3,816	-3,138	-5,501	27,541	36,179	-8,639
February	337	3,276	-2,938	673	3,567	-2,894	-5,728	27,927	36,549	-8,622
March	372	3,751	-3,379	783	4,024	-3,241	-3,712	33,243	40,197	-6,954
April	384	4,170	-3,786	814	4,392	-3,578	-3,613	31,052	38,243	-7,191
May	435	4,789	-4,354	905	5,057	-4,152	-5,311	31,496	40,959	-9,463
June	413	4,275	-3,862	854	4,523	-3,670	-5,054	31,820	40,544	-8,724
July	384	4,397	-4,013	676	4,629	-3,953	-6,629	28,708	39,290	-10,582
August	487	4,665	-4,178	865	4,925	-4,060	-6,975	29,406	40,440	-11,034
September	407	3,846	-3,439	852	4,074	-3,222	-5,749	29,710	38,680	-8,971
October	411	4,519	-4,108	853	4,757	-3,904	-7,876	31,756	43,536	-11,780
November	523	4,387	-3,864	990	4,616	-3,626	-7,128	30,279	41,033	-10,754
December	466	4,125	-3,660	885	4,430	-3,545	-3,142	30,874	37,561	-6,687
Total	**5,021**	**49,704**	**-44,683**	*** 9,869**	*** 52,779**	*** -42,910**	*** -66,490**	**363,812**	**473,211**	**-109,399**
1990 January	486	5,923	-5,437	881	6,171	-5,290	-4,349	30,664	40,304	-9,640
February	436	4,704	-4,269	781	4,938	-4,157	-1,993	30,962	37,112	-6,150
March	514	4,867	-4,352	976	5,205	-4,229	-2,140	35,971	42,339	-6,369
April	392	3,970	-3,578	828	4,101	-3,274	-3,253	32,617	39,144	-6,527
May	390	4,650	-4,259	872	4,913	-4,041	-3,267	33,539	40,846	-7,308
June	388	4,062	-3,674	866	4,286	-3,420	-3,056	34,470	40,946	-6,476
July	385	4,238	-3,853	837	4,482	-3,645	-7,114	30,736	41,495	-10,759
August	568	5,380	-4,812	1,055	5,601	-4,546	-5,963	31,723	42,232	-10,509
September	682	5,797	-5,115	1,175	6,050	-4,875	-4,282	31,444	40,602	-9,157
October	893	6,331	-5,438	1,332	6,659	-5,327	-6,758	35,310	47,395	-12,085
November	961	6,371	-5,410	1,426	6,673	-5,247	-5,282	33,267	43,796	-10,529
December	807	5,292	-4,485	1,204	5,581	-4,377	-1,834	32,889	39,100	-6,211
Total	**6,901**	**61,583**	**-54,682**	**12,233**	**64,661**	**-52,428**	**-49,290**	**393,592**	**495,311**	**-101,718**
1991 January	896	5,394	-4,497	1,206	5,696	-4,490	-2,527	33,150	40,167	-7,017
February	907	3,754	-2,847	1,305	4,072	-2,767	-1,565	32,683	37,016	-4,333
March	556	3,814	-3,257	938	4,057	-3,119	1,246	36,797	38,670	-1,873
April	389	4,055	-3,666	732	4,340	-3,608	189	36,110	39,529	-3,419
May	604	4,656	-4,052	1,067	4,927	-3,860	-126	36,136	40,121	-3,986
June	503	4,111	-3,608	925	4,337	-3,413	-449	35,573	39,435	-3,861
July	505	4,041	-3,536	971	4,290	-3,319	-4,457	33,507	41,283	-7,776
August	465	4,637	-4,173	956	4,890	-3,934	-3,506	33,584	41,024	-7,440
September	427	4,367	-3,941	893	4,632	-3,739	R -3,259	R 34,508	R 41,506	R -6,997
October	559	4,247	-3,688	979	4,524	-3,545	-5,461	37,539	46,545	-9,006
10-Month Total	**5,811**	**43,075**	**-37,264**	**9,971**	**45,765**	**-35,794**	**-19,914**	**349,586**	**405,294**	**-55,708**
1990 10-Month Total	**5,133**	**49,920**	**-44,787**	**9,603**	**52,408**	**-42,805**	**-42,174**	**327,436**	**412,415**	**-84,978**
1989 10-Month Total	**4,033**	**41,192**	**-37,159**	**7,953**	**43,765**	**-35,812**	**-56,147**	**302,659**	**394,617**	**-91,959**

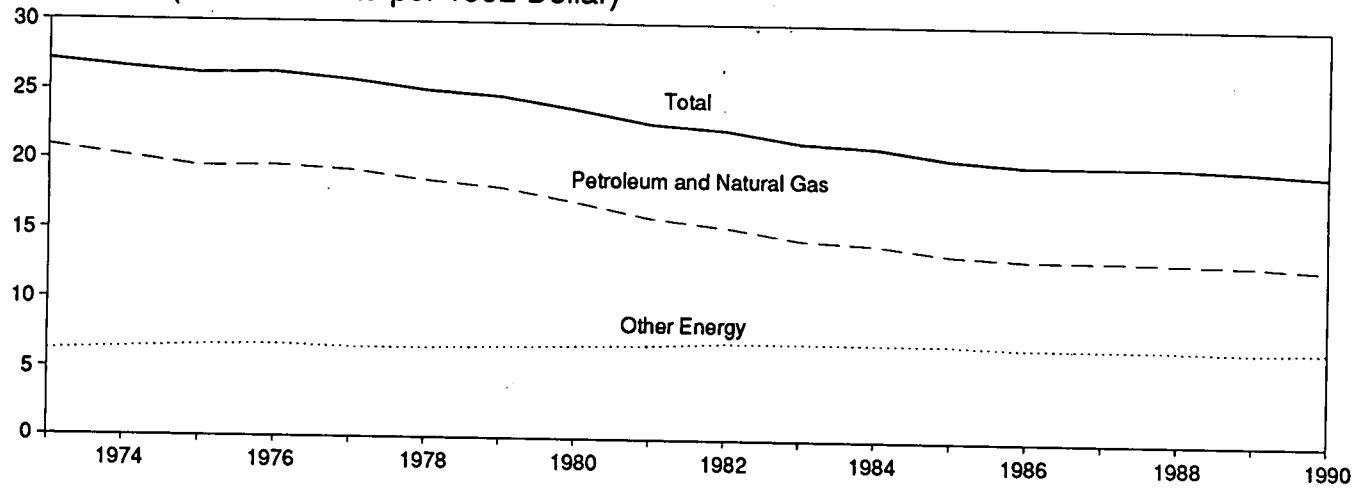
* Annual value is not equal to the sum of the months because some monthly revisions are not available for publication.

R=Revised data.

Notes: • Monthly data are not adjusted for seasonal variations. • 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, and Puerto Rico) and the Virgin Islands. • See Note 5 at end of section. • Totals may not equal sum of components due to independent rounding.

Sources: 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," 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," 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: Monthly FT900 issues. **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. 1991: Monthly FT900 issues. **Petroleum Balance, Energy Balance, and Non-Energy Balance:** Calculated by the Energy Information Administration.

Figure 1.6 Energy Consumption per Dollar of Gross National Product
(Thousand Btu per 1982 Dollar)



Source: Table 1.7.

Table 1.7 Energy Consumption per Dollar of Gross National Product
(Seasonally Adjusted at Annual Rates)

	Energy Consumption			Gross National Product (GNP)	Energy Consumption per Dollar of GNP		
	Petroleum and Natural Gas	Other Energy	Total[a]		Petroleum and Natural Gas	Other Energy	Total
	Quadrillion Btu			Trillion 1982 Dollars	Thousand Btu per 1982 Dollar		
1973 Year	**57.352**	**16.930**	**74.282**	**2.744**	**20.9**	**6.2**	**27.1**
1974 Year	**55.187**	**17.356**	**72.543**	**2.729**	**20.2**	**6.4**	**26.6**
1975 Year	**52.678**	**17.868**	**70.546**	**2.695**	**19.5**	**6.6**	**26.2**
1976 Year	**55.520**	**18.842**	**74.362**	**2.827**	**19.6**	**6.7**	**26.3**
1977 Year	**57.053**	**19.235**	**76.288**	**2.959**	**19.3**	**6.5**	**25.8**
1978 Year	**57.966**	**20.123**	**78.089**	**3.115**	**18.6**	**6.5**	**25.1**
1979 Year	**57.789**	**21.109**	**78.898**	**3.192**	**18.1**	**6.6**	**24.7**
1980 Year	**54.596**	**21.359**	**75.955**	**3.187**	**17.1**	**6.7**	**23.8**
1981 Year	**51.859**	**22.131**	**73.990**	**3.249**	**16.0**	**6.8**	**22.8**
1982 Year	**48.736**	**22.112**	**70.848**	**3.166**	**15.4**	**7.0**	**22.4**
1983 Year	**47.411**	**23.113**	**70.524**	**3.279**	**14.5**	**7.0**	**21.5**
1984 Year	**49.558**	**24.543**	**74.101**	**3.501**	**14.2**	**7.0**	**21.2**
1985 Year	**48.756**	**25.189**	**73.945**	**3.619**	**13.5**	**7.0**	**20.4**
1986 Year	**48.904**	**25.333**	**74.237**	**3.718**	**13.2**	**6.8**	**20.0**
1987 Year	**50.609**	**26.235**	**76.844**	**3.845**	**13.2**	**6.8**	**20.0**
1988 Year	**52.775**	**27.420**	**80.195**	**4.017**	**13.1**	**6.8**	**20.0**
1989 1st Quarter	R54.000	R27.432	R81.432	4.096	13.2	6.7	19.9
2nd Quarter	R53.567	R27.692	R81.259	4.112	13.0	6.7	R19.8
3rd Quarter	R52.151	R27.574	R79.725	4.130	R12.6	6.7	19.3
4th Quarter	R54.655	R28.315	R82.970	4.133	13.2	6.9	20.1
Year	**R53.592**	**R27.753**	**81.345**	**4.118**	**13.0**	**6.7**	**19.8**
1990 1st Quarter	R51.927	R28.077	R80.004	4.151	12.5	6.8	19.3
2nd Quarter	R54.104	R28.478	R82.582	4.155	13.0	R6.9	19.9
3rd Quarter	R53.599	R28.443	R82.042	4.170	12.9	6.8	R19.7
4th Quarter	R51.747	R28.676	R80.423	4.153	12.5	6.9	19.4
Year	**R52.850**	**28.419**	**R81.269**	**4.157**	**12.7**	**6.8**	**R19.5**
1991 1st Quarter	R52.402	R28.393	R80.795	4.124	R12.7	6.9	R19.6
2nd Quarter	R52.692	R29.192	R81.884	4.119	R12.8	7.1	R19.9
3rd Quarter	53.480	28.439	81.919	4.143	12.9	6.9	19.8

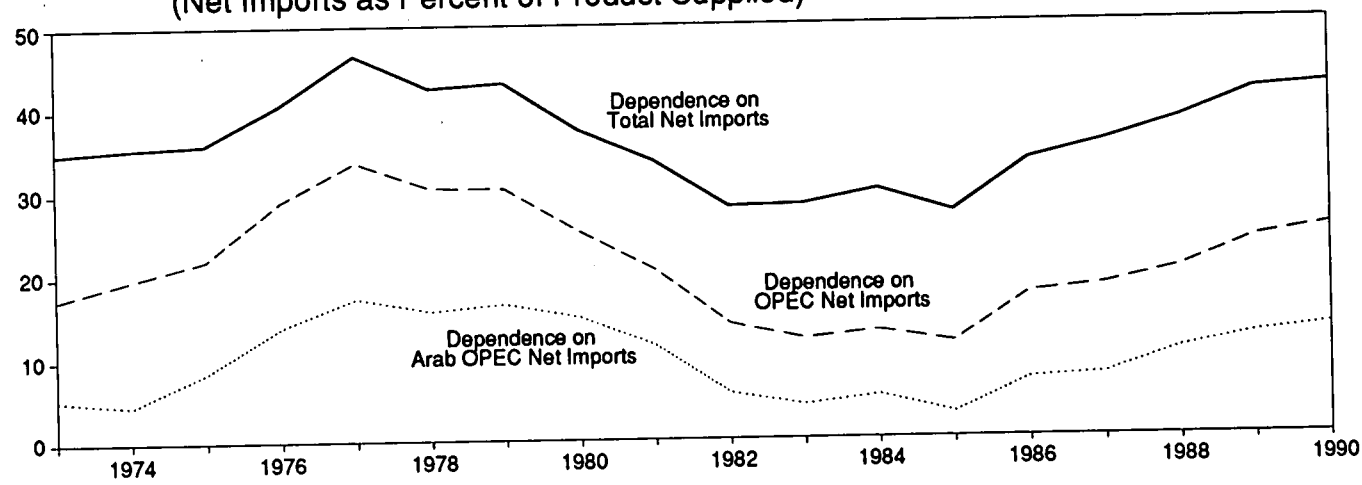
[a] Excludes wood, waste, geothermal, wind, photovoltaic, and solar thermal energy, except for small amounts used by electric utilities to generate electricity for distribution.

R=Revised data.

Notes: • Quarterly data are seasonally adjusted and shown at annual rates. • Geographic coverage is the 50 States and the District of Columbia. • Yearly data may not equal average of quarters due to seasonality adjustments and independent rounding.

Sources: • **Energy Consumption:** Table 1.4. • **Gross National Product:** 1973-1989: *Economic Report of the President*, February 1991, Table B-7. 1990 forward: U.S. Department of Commerce, Bureau of Economic Analysis, *United States Department of Commerce News*, October 29, 1991, Table 2.

Figure 1.7 U.S. Dependence on Petroleum Net Imports
(Net Imports as Percent of Product Supplied)



Source: Table 1.8.

Table 1.8 U.S. Dependence on Petroleum Net Imports

Annual Rate	Net Imports[a]			Petroleum Products Supplied	Net Imports as Percent of U.S. Petroleum Products Supplied		
	From Arab OPEC[b]	From OPEC[c]	From All Countries		From Arab OPEC[b]	From OPEC[c]	From All Countries
	Thousand Barrels per Day				Percent		
1973 Average	914	2,991	6,025	17,308	5.3	17.3	34.8
1974 Average	752	3,277	5,892	16,653	4.5	19.7	35.4
1975 Average	1,382	3,599	5,846	16,322	8.5	22.0	35.8
1976 Average	2,423	5,063	7,090	17,461	13.9	29.0	40.6
1977 Average	3,184	6,190	8,565	18,431	17.3	33.6	46.5
1978 Average	2,962	5,747	8,002	18,847	15.7	30.5	42.5
1979 Average	3,054	5,633	7,985	18,513	16.5	30.4	43.1
1980 Average	2,549	4,293	6,365	17,056	14.9	25.2	37.3
1981 Average	1,844	3,315	5,401	16,058	11.5	20.6	33.6
1982 Average	852	2,136	4,298	15,296	5.6	14.0	28.1
1983 Average	630	1,843	4,312	15,231	4.1	12.1	28.3
1984 Average	817	2,037	4,715	15,726	5.2	13.0	30.0
1985 Average	470	1,821	4,286	15,726	3.0	11.6	27.3
1986 Average	1,160	2,828	5,439	16,281	7.1	17.4	33.4
1987 Average	1,272	3,053	5,914	16,665	7.6	18.3	35.5
1988 Average	1,837	3,513	6,587	17,283	10.6	20.3	38.1
1989 1st Quarter	2,046	3,911	7,080	17,719	11.5	22.1	40.0
2nd Quarter	2,055	4,015	7,084	16,885	12.2	23.8	42.0
3rd Quarter	2,318	4,383	7,512	16,870	13.7	26.0	44.5
4th Quarter	2,091	4,180	7,127	17,830	11.7	23.4	40.0
Average	2,128	4,124	7,202	17,325	12.3	23.8	41.6
1990 1st Quarter	2,420	4,617	7,721	17,072	14.2	27.0	45.2
2nd Quarter	2,245	4,397	7,733	16,952	13.2	25.9	45.6
3rd Quarter	2,514	4,621	7,565	17,223	14.6	26.8	43.9
4th Quarter	1,795	3,513	5,643	16,708	10.7	21.0	33.8
Average	2,243	4,285	7,161	16,988	13.2	25.2	42.2
1991 1st Quarter	1,957	3,699	5,633	16,427	11.9	22.5	34.3
2nd Quarter	2,253	4,256	7,083	16,319	13.8	26.1	43.4
3rd Quarter	2,026	4,217	7,168	16,918	12.0	24.9	42.4

[a] Net imports is imports minus exports. Imports from members of the Organization of Petroleum Exporting Countries (OPEC) exclude indirect imports, which are petroleum products primarily from Caribbean and West European areas and refined from crude oil produced by OPEC.

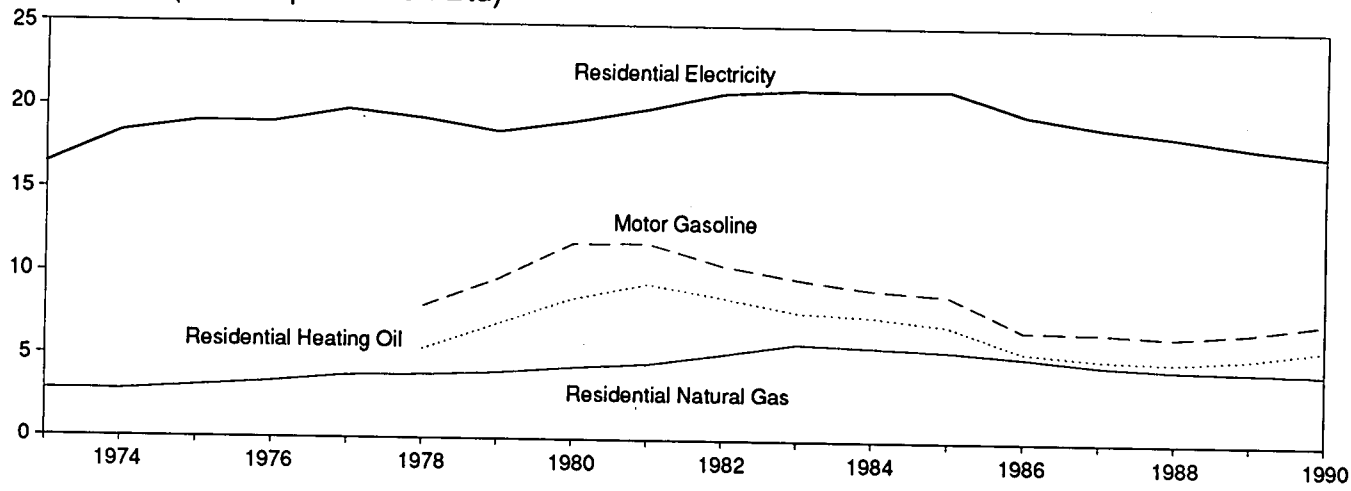
[b] The Arab members of OPEC are Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and the United Arab Emirates. Net imports from the Neutral Zone between Kuwait and Saudi Arabia are included in net imports from "Arab OPEC."

[c] OPEC consists of Ecuador, Gabon, Indonesia, Iran, Nigeria, and Venezuela, as well as the Arab members.

Notes: • Beginning in October 1977, Strategic Petroleum Reserves are included. • Geographic coverage is the 50 States and the District of Columbia. • Annual averages may not equal average of quarters due to independent rounding.

Sources: • **Imports:** Tables 3.3a-3.3h. • **Exports:** 1973-1976: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*. 1977-1980: Energy Information Administration (EIA), *Energy Data Reports*, "Petroleum Statement, Annual." 1981-1989: EIA, *Petroleum Supply Annual*. 1990 forward: EIA, *Petroleum Supply Monthly*. • **Petroleum Products Supplied:** Table 3.1a.

Figure 1.8 Cost of Fuels to End Users in Constant (1982-84) Dollars
(Dollars per Million Btu)



Source: Table 1.9.

Table 1.9 Cost of Fuels to End Users in Constant (1982-84) Dollars

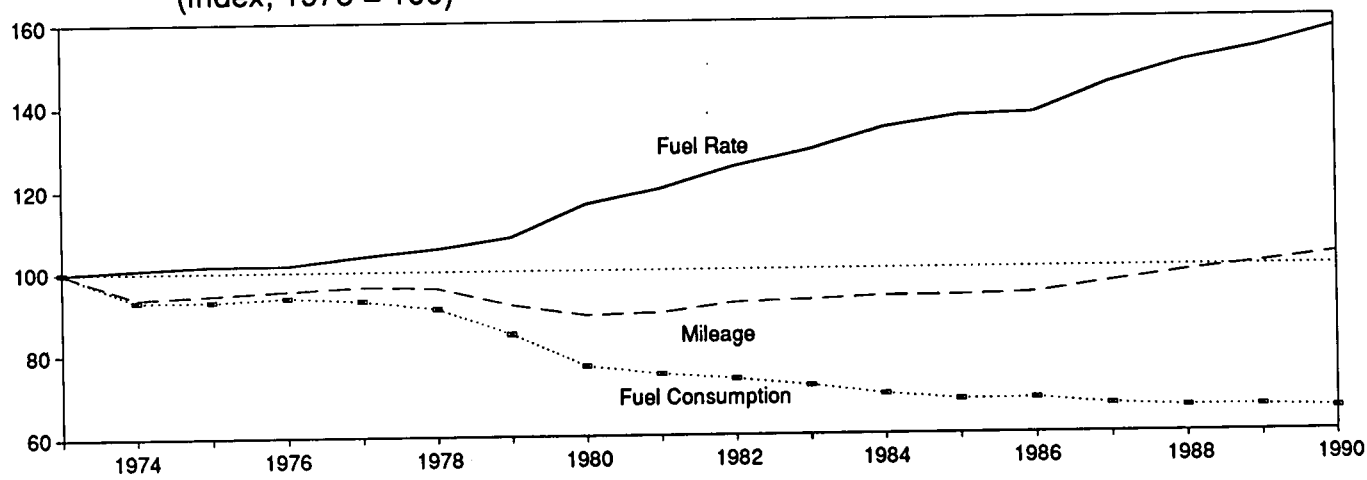
	Motor Gasoline		Residential Heating Oil		Residential Natural Gas		Residential Electricity	
	Cents per Gallon	Dollars per Million Btu	Cents per Gallon	Dollars per Million Btu	Cents per Million Cubic Feet	Dollars per Million Btu	Cents per Kilowatthour	Dollars per Million Btu
1973 Average	**NA**	**NA**	**NA**	**NA**	**290.5**	**2.85**	**5.6**	**16.50**
1974 Average	**NA**	**NA**	**NA**	**NA**	**290.1**	**2.83**	**6.3**	**18.43**
1975 Average	**NA**	**NA**	**NA**	**NA**	**317.8**	**3.12**	**6.5**	**19.07**
1976 Average	**NA**	**NA**	**NA**	**NA**	**348.0**	**3.41**	**6.5**	**19.06**
1977 Average	**NA**	**NA**	**NA**	**NA**	**387.8**	**3.81**	**6.8**	**19.83**
1978 Average	**100.0**	**8.00**	**75.2**	**5.42**	**392.6**	**3.86**	**6.6**	**19.33**
1979 Average	**121.5**	**9.71**	**97.0**	**6.99**	**410.5**	**4.03**	**6.3**	**18.57**
1980 Average	**148.2**	**11.85**	**118.2**	**8.52**	**446.6**	**4.36**	**6.6**	**19.21**
1981 Average	**148.8**	**11.90**	**131.4**	**9.47**	**471.9**	**4.60**	**6.8**	**19.99**
1982 Average	**132.7**	**10.61**	**120.2**	**8.67**	**535.8**	**5.22**	**7.2**	**20.96**
1983 Average	**123.0**	**9.83**	**108.2**	**7.80**	**608.4**	**5.90**	**7.2**	**21.19**
1984 Average	**115.3**	**9.22**	**105.0**	**7.57**	**589.0**	**5.72**	**7.2**	**21.16**
1985 Average	**111.2**	**8.89**	**97.9**	**7.06**	**568.8**	**5.52**	**7.2**	**21.25**
1986 Average	**84.9**	**6.79**	**76.3**	**5.50**	**531.9**	**5.17**	**6.8**	**19.79**
1987 Average	**84.2**	**6.74**	**70.7**	**5.10**	**487.7**	**4.73**	**6.5**	**19.09**
1988 Average	**81.4**	**6.51**	**68.7**	**4.96**	**462.4**	**4.49**	**6.3**	**18.58**
1989 1st Quarter	78.7	6.29	70.5	5.08	444.5	4.31	5.9	17.34
2nd Quarter	91.6	7.32	69.7	5.02	486.7	4.72	6.3	18.32
3rd Quarter	88.2	7.05	65.5	4.72	555.7	5.39	6.5	18.96
4th Quarter	83.3	6.66	74.5	5.37	448.0	4.35	6.0	17.61
Average	**85.5**	**6.83**	**72.6**	**5.23**	**454.8**	**4.41**	**6.1**	**17.96**
1990 1st Quarter	84.7	6.77	79.5	5.73	R434.4	R4.22	5.8	17.02
2nd Quarter	86.4	6.91	69.7	5.02	R469.5	R4.56	6.1	17.98
3rd Quarter	94.5	7.56	75.1	5.41	R531.9	R5.16	6.3	18.34
4th Quarter	106.5	8.52	91.8	6.62	R435.3	R4.23	5.9	17.17
Average	**93.1**	**7.44**	**81.3**	**5.86**	**R443.8**	**R4.31**	**6.0**	**17.49**
1991 1st Quarter	90.0	7.19	81.5	5.88	412.5	4.00	5.6	16.52
2nd Quarter	88.1	7.04	68.5	4.94	470.5	4.57	6.0	17.72
3rd Quarter	87.3	6.98	64.2	4.63	524.5	5.09	6.1	18.01

R=Revised data. NA=Not available.

Notes: • Fuel costs are calculated using the Urban Consumer Price Index (CPI) developed by the Bureau of Labor Statistics. See Note 6 at end of section. • Geographic coverage is the 50 States and the District of Columbia. • Annual averages may not equal average of quarters due to independent rounding.

Sources: • **Annual Data:** Annual prices in Tables 9.4 (All Types), 9.8c, 9.11, and 9.9 (Monthly Series), adjusted by the CPI. • **Quarterly Data:** Simple averages of monthly prices in Tables 9.4 (All Types), 9.8c, 9.11, and 9.9 (Monthly Series), adjusted by the CPI. • **CPI:** 1973-1989: *Economic Report of the President*, February 1991, Table B-60. 1990 forward: Council of Economic Advisers, *Economic Indicators*, October 1991, "Consumer Prices - All Urban Consumers." • **Conversion Factors:** Tables A2, A5, and A9.

Figure 1.9 Passenger Car Efficiency
(Index, 1973 = 100)



Source: Table 1.10.

Table 1.10 Passenger Car Efficiency

	Mileage		Fuel Consumption		Fuel Rate	
	Miles per Car	Index 1973=100.0	Gallons per Car	Index 1973=100.0	Miles per Gallon	Index 1973=100.0
1973	10,256	100.0	771	100.0	13.30	100.0
1974	9,606	93.7	716	92.9	13.42	100.9
1975	9,690	94.5	716	92.9	13.52	101.7
1976	9,785	95.4	723	93.8	13.53	101.7
1977	9,879	96.3	716	92.9	13.80	103.8
1978	9,835	95.9	701	90.9	14.04	105.6
1979	9,403	91.7	653	84.7	14.41	108.3
1980	9,141	89.1	591	76.7	15.46	116.2
1981	9,186	89.6	576	74.7	15.94	119.8
1982	9,428	91.9	566	73.4	16.65	125.2
1983	9,475	92.4	553	71.7	17.14	128.9
1984	9,558	93.2	536	69.5	17.83	134.1
1985	9,560	93.2	525	68.1	18.20	136.8
1986	9,608	93.7	526	68.2	18.27	137.4
1987	9,878	96.3	514	66.7	19.20	144.4
1988	10,121	98.7	509	66.0	19.87	149.4
1989	10,332	100.7	509	66.0	20.31	152.7
1990[a]	10,556	102.9	505	65.5	20.92	157.3

[a] 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*, Table VM-1.

Table 1.11 Population-Weighted Heating Degree-Days

Census Divisions	November 1 through November 30					Cumulative July 1 through November 30				
				Percent Change					Percent Change	
	Normal[a]	1990	1991	Normal to 1991	1990 to 1991	Normal[a]	1990	1991	Normal to 1991	1990 to 1991
New England										
Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	705	632	676	-4.1	7.0	1,320	1,143	1,252	-5.2	9.5
Middle Atlantic										
New Jersey, New York, Pennsylvania	654	565	632	-3.4	11.9	1,124	952	1,049	-6.7	10.2
East North Central										
Illinois, Indiana, Michigan, Ohio, Wisconsin	744	609	827	11.2	35.8	1,235	1,167	1,356	9.8	16.2
West North Central										
Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota	805	658	975	21.1	48.2	1,334	1,237	1,607	20.5	29.9
South Atlantic										
Delaware, Florida, Georgia, Maryland and the District of Columbia, North Carolina, South Carolina, Virginia, West Virginia	366	283	382	4.4	35.0	552	446	550	-.4	23.3
East South Central										
Alabama, Kentucky, Mississippi, Tennessee	453	332	514	13.5	54.8	684	543	694	1.5	27.8
West South Central										
Arkansas, Louisiana, Oklahoma, Texas	296	200	386	30.4	93.0	387	313	476	23.0	52.1
Mountain										
Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming	700	616	733	4.7	19.0	1,250	1,112	1,279	2.3	15.0
Pacific										
California, Oregon, Washington	387	348	327	-15.5	-6.0	632	528	536	-15.2	1.5
U.S. Average[b]	**553**	**457**	**586**	**6.0**	**28.2**	**911**	**798**	**936**	**2.7**	**17.3**

[a] Normal is based on calculations of data from 1951 through 1980.
[b] Excludes Alaska and Hawaii
Source: See Note 7 at end of section.

Table 1.12 Population-Weighted Cooling Degree-Days

Census Divisions	November 1 through November 30					Cumulative January 1 through November 30				
				Percent Change					Percent Change	
	Normal[a]	1990	1991	Normal to 1991	1990 to 1991	Normal[a]	1990	1991	Normal to 1991	1990 to 1991
New England										
Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	0	0	0	([c])	([c])	424	503	600	41.5	19.3
Middle Atlantic										
New Jersey, New York, Pennsylvania	0	0	0	([c])	([c])	712	755	1,001	40.6	32.6
East North Central										
Illinois, Indiana, Michigan, Ohio, Wisconsin	0	0	0	([c])	([c])	762	737	1,083	42.1	46.9
West North Central										
Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota	0	1	0	([c])	([c])	1,007	1,012	1,197	18.9	18.3
South Atlantic										
Delaware, Florida, Georgia, Maryland and the District of Columbia, North Carolina, South Carolina, Virginia, West Virginia	38	50	43	([c])	([c])	1,835	2,086	2,171	18.3	4.1
East South Central										
Alabama, Kentucky, Mississippi, Tennessee	1	7	5	([c])	([c])	1,587	1,720	1,841	16.0	7.0
West South Central										
Arkansas, Louisiana, Oklahoma, Texas	14	41	21	([c])	([c])	2,452	2,630	2,555	4.2	-2.9
Mountain										
Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming	2	8	5	([c])	([c])	1,056	1,212	1,118	5.9	-7.8
Pacific										
California, Oregon, Washington	0	3	0	([c])	([c])	597	668	581	-2.7	-13.0
U.S. Average[b]	**8**	**14**	**10**	([c])	([c])	**1,155**	**1,248**	**1,369**	**18.5**	**9.7**

[a] Normal is based on calculations of data from 1951 through 1980.
[b] Excludes Alaska and Hawaii
[c] Percent change not meaningful: normal less than 100 or ratio incalculable.
Source: See Note 7 at end of section.

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 the Appendix.

2. Energy Consumption: Consumption of energy includesconsumption 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 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 the Appendix.

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 factorsprovided in the Appendix. For further information on electricity, see "Note for imports and exports of electricity" under Note 8 of the Notes and Sources for the Energy Consumption Section.

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 the Appendix. For more information on electricity, see "Note for imports and exports of electricity" under Note 8 of the Notes and Sources for the Energy Consumption Section.

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 alongside ship (f.a.s.) basis.

"Balance" is exports minus imports; a positive balance indicates a surplus trade value and a negative balance indicates a deficit trade value. "Energy" includes mineral fuels, lubricants, and related material. "Non-Energy Balance" and "Total Merchandise" include foreign exports (i.e., reexports) 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.

6. The Consumer Price Index: The values for the Consumer Price Index, All Urban Consumers, All Items, 1982-84=100, are as follows:

1973	44.4	1989:	1st Quarter	121.7
1974	49.3		2nd Quarter	123.7
1975	53.8		3rd Quarter	124.7
1976	56.9		4th Quarter	125.9
1977	60.6		Year	124.0
1978	65.2	1990:	1st Quarter	128.0
1979	72.6		2nd Quarter	129.3
1980	82.4		3rd Quarter	131.6
1981	90.9		4th Quarter	133.7
1982	96.5		Year	130.7
1983	99.6	1991:	1st Quarter	134.8
1984	103.9		2nd Quarter	135.6
1985	107.6		3rd Quarter	136.7
1986	109.6			
1987	113.6			
1988	118.3			

7. Degree-Days: Degree-days are relative measurements of outdoor air temperature. Cooling degree-days are defined as deviations of the mean daily temperature at a sampling station above a base temperature equal to 65 °F by convention. Heating degree-days are deviations of the mean daily temperature below 65 °F. For example, if a weather station recorded a mean daily temperature of 78 °F, cooling degree-days for that station would be 13 (and heating degree-days, 0). A weather station recording a mean daily temperature of 40 °F would report 25 heating degree-days (and 0 cooling degree-days).

There are several degree-day databases maintained by the National Oceanic and Atmospheric Administration. The information published in the *Monthly Energy Review (MER)* 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 1980 by the U.S. Department of Commerce, Bureau of the Census. The data shown in the *MER* are available sooner than the Historical Climatology Series 5-1 and 5-2 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 September 1991 was 6.4 quadrillion Btu. Petroleum products accounted for 42 percent[1] of the energy consumed in September 1991, while coal accounted for 25 percent and natural gas accounted for 20 percent.

Residential and commercial sector consumption was 2.1 quadrillion Btu in September 1991, down slightly from the September 1990 level. The sector accounted for 33 percent of September 1991 total consumption, down 1 percentage point from its 34 percent share in September 1990.

Industrial sector consumption was 2.4 quadrillion Btu in September 1991, up 1 percent from the September 1990 level. The industrial sector accounted for 38 percent of September 1991 total consumption, about the same share as in September 1990.

Transportation sector consumption of energy was 1.8 quadrillion Btu in September 1991, up 1 percent from the September 1990 level. The sector accounted for 29 percent of September 1991 total consumption, up 1 percentage point from its 28 percent share in September 1990.

Electric utility consumption of energy totaled 2.5 quadrillion Btu in September 1991, down slightly from the September 1990 level. Coal contributed 54 percent of the energy consumed by electric utilities in September 1991, while nuclear electric power contributed 22 percent; natural gas, 11 percent; hydroelectric, 9 percent; petroleum, 4 percent; and wood, waste, geothermal, wind, photovoltaic, and solar thermal energy, about 1 percent.

Table 2.1 Energy Consumption Summary for September 1991

(Quadrillion Btu)

Energy Source	End-Use Sectors				Electric Utilities	Total
	Residential and Commercial	Industrial	Transportation	Total[a]		
Coal	0.012	0.203	([b])	0.218	1.353	1.572
Natural Gas[c]	.271	.712	.052	1.034	.271	1.305
Petroleum	.192	.663	1.765	2.620	.091	2.712
Nuclear Electric Power	–	–	–	–	.556	.556
Hydroelectric Power	–	.002	–	.002	.218	.220
Net Imports of Coal Coke	–	.004	–	.004	–	.004
Other[d]	–	–	–	–	.015	.015
Primary Consumption	**.474**	**1.583**	**1.817**	**3.879**	**2.505**	**6.384**
Electricity	.553	.279	.001	.834	–	–
Net Consumption	**1.028**	**1.862**	**1.818**	**4.712**	–	–
Electrical System Energy Losses	1.110	.559	.003	1.672	–	–
Total Consumption[e]	**2.138**	**2.422**	**1.821**	**6.384**	–	–

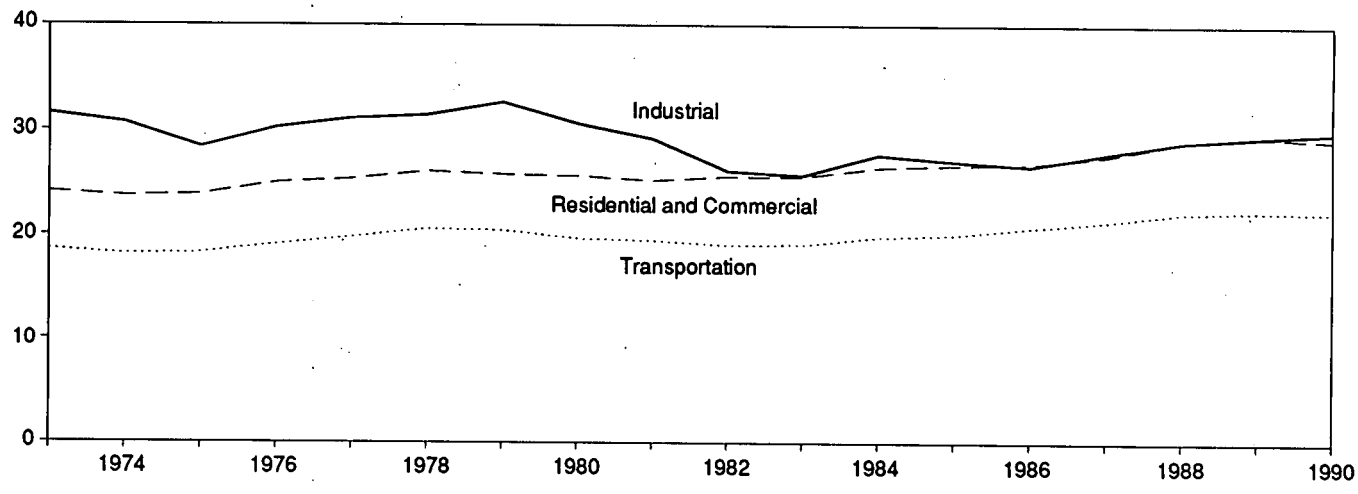
[a] Totals for coal and natural gas may not equal sum of sectors due to the use of sector-specific conversion factors.
[b] Small amounts of coal consumed for transportation are reported as industrial sector consumption.
[c] Includes supplemental gaseous fuels. Transportation sector is pipeline fuel only.
[d] Other is electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy.
[e] Excludes wood, waste, geothermal, wind, photovoltaic, and solar thermal energy, except for small amounts used by electric utilities to generate electricity for distribution.
– =Not applicable.
Note: Totals may not equal sum of components due to independent rounding.
Additional Notes and Sources: See Tables 2.2-2.6 and end of section.

[1]Percentage changes are based on numbers in the following tables.

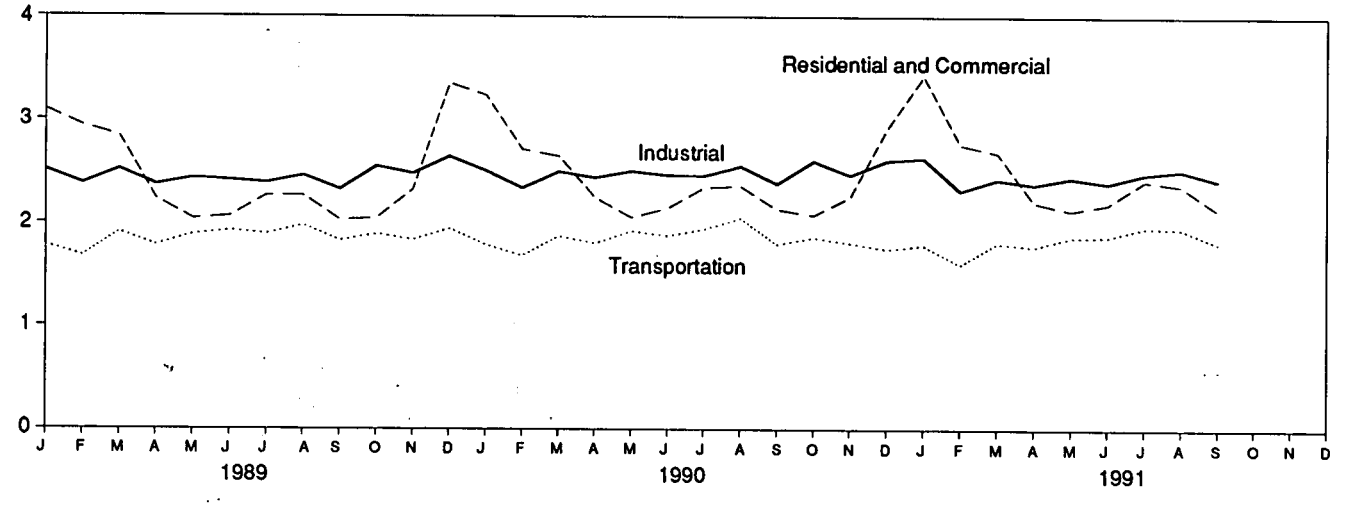
Figure 2.1 Energy Consumption by End-Use Sector

(Quadrillion Btu)

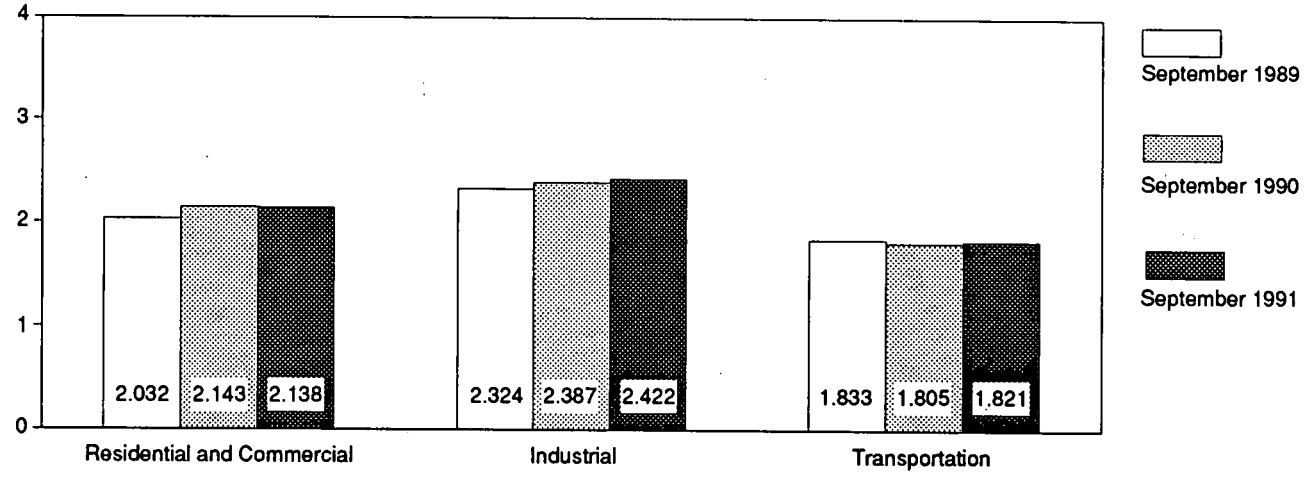
Consumption by End-Use Sector, 1973-1990



Consumption by End-Use Sector, Monthly



Consumption by End-Use Sector, September



Note: Because vertical scales differ, graphs should not be compared.
Source: Table 2.2.

Table 2.2 Energy Consumption by End-Use Sector

(Quadrillion Btu)

	Residential and Commercial		Industrial		Transportation			
	Net	Total	Net	Total	Net	Total	Net	Total
1973 Total	**15.766**	**24.143**	**25.917**	**31.528**	**18.584**	**18.605**	**60.274**	**74.282**
1974 Total	**15.246**	**23.724**	**24.994**	**30.696**	**18.095**	**18.117**	**58.341**	**72.543**
1975 Total	**15.200**	**23.900**	**22.737**	**28.401**	**18.219**	**18.244**	**56.157**	**70.546**
1976 Total	**15.997**	**25.020**	**24.038**	**30.234**	**19.076**	**19.101**	**59.119**	**74.362**
1977 Total	**15.828**	**25.387**	**24.593**	**31.075**	**19.794**	**19.819**	**60.223**	**76.288**
1978 Total	**16.023**	**26.088**	**24.637**	**31.388**	**20.589**	**20.611**	**61.251**	**78.089**
1979 Total	**15.709**	**25.809**	**25.679**	**32.615**	**20.447**	**20.472**	**61.836**	**78.898**
1980 Total	**15.075**	**25.653**	**23.854**	**30.609**	**19.669**	**19.695**	**58.597**	**75.955**
1981 Total	**14.541**	**25.243**	**22.533**	**29.238**	**19.480**	**19.507**	**56.556**	**73.990**
1982 Total	**14.629**	**25.630**	**20.020**	**26.144**	**19.043**	**19.069**	**53.697**	**70.848**
1983 Total	**14.395**	**25.630**	**19.401**	**25.756**	**19.109**	**19.135**	**52.907**	**70.524**
1984 Total	**15.014**	**26.501**	**21.064**	**27.727**	**19.843**	**19.871**	**55.923**	**74.101**
1985 Total	**14.889**	**26.732**	**20.439**	**27.120**	**20.066**	**20.097**	**55.391**	**73.945**
1986 Total	**14.812**	**26.834**	**20.135**	**26.642**	**20.728**	**20.758**	**55.678**	**74.237**
1987 Total	**15.177**	**27.621**	**21.175**	**27.870**	**21.328**	**21.357**	**57.678**	**76.844**
1988 Total	**16.097**	**29.000**	**22.111**	**29.007**	**22.155**	**22.186**	**60.366**	**80.195**
1989 January	1.972	3.095	1.955	2.510	1.784	1.786	5.710	7.391
February	1.896	R2.938	R1.839	R2.377	1.678	1.681	5.413	6.995
March	1.769	R2.838	R1.957	R2.517	1.910	1.912	5.634	7.265
April	1.305	R2.234	1.819	2.368	1.786	1.788	4.906	6.386
May	R1.038	R2.042	1.812	R2.433	1.887	1.890	4.735	6.363
June	.956	2.067	R1.793	R2.413	1.925	1.928	R4.675	R6.410
July	.973	2.267	R1.754	R2.388	1.894	1.897	R4.624	R6.555
August	.997	2.267	1.822	2.458	1.978	1.980	4.801	6.710
September	.980	2.032	1.772	2.324	1.831	1.833	4.584	6.191
October	1.062	2.049	1.952	2.546	1.893	1.895	4.904	6.488
November	R1.337	2.324	1.890	2.479	1.840	1.842	5.066	6.644
December	2.075	R3.353	R2.008	R2.641	1.946	1.949	6.033	7.946
Total	**R16.360**	**R29.504**	**R22.373**	**R29.458**	**R22.349**	**R22.380**	**R61.086**	**81.345**
1990 January	R2.073	R3.236	R1.982	R2.505	R1.790	R1.793	R5.845	R7.534
February	R1.726	R2.711	R1.813	R2.339	R1.689	R1.691	R5.227	R6.741
March	R1.602	R2.647	R1.917	R2.498	R1.877	R1.879	5.395	7.024
April	R1.302	R2.250	R1.885	R2.442	R1.807	R1.810	R4.991	R6.499
May	R1.046	R2.061	R1.890	R2.504	R1.926	R1.929	R4.860	R6.492
June	R.966	R2.152	R1.819	R2.466	R1.883	R1.885	R4.669	R6.504
July	R1.020	R2.348	R1.832	R2.461	R1.947	R1.950	R4.801	R6.762
August	R1.041	R2.362	R1.897	R2.554	R2.054	R2.057	R4.994	R6.976
September	R1.020	R2.143	R1.828	R2.387	R1.802	R1.805	R4.652	R6.336
October	R1.062	R2.085	R2.010	R2.604	R1.869	R1.872	R4.940	R6.559
November	R1.297	R2.262	R1.906	R2.470	R1.815	R1.817	R5.016	R6.548
December	R1.759	R2.919	R2.003	R2.609	R1.759	R1.762	R5.523	R7.291
Total	**R15.913**	**R29.180**	**R22.782**	**R29.837**	**R22.218**	**R22.250**	**R60.915**	**R81.269**
1991 January	R2.189	R3.433	R2.062	R2.633	R1.796	R1.798	R6.051	R7.869
February	R1.786	R2.766	R1.825	R2.320	R1.611	R1.613	R5.224	R6.702
March	R1.632	R2.686	R1.868	R2.431	R1.817	R1.819	R5.317	R6.937
April	R1.260	R2.213	R1.831	R2.381	R1.782	R1.785	R4.874	R6.380
May	R1.034	R2.132	R1.804	R2.445	R1.874	R1.877	R4.715	R6.457
June	R.990	R2.195	R1.780	R2.395	R1.879	R1.882	R4.654	R6.477
July	R1.039	R2.418	R1.843	R2.483	R1.971	R1.974	R4.859	R6.881
August	R1.032	R2.371	R1.877	R2.518	R1.957	R1.960	4.873	6.856
September	1.028	2.138	1.862	2.422	1.818	1.821	4.712	6.384
9-Month Total	**11.990**	**22.352**	**16.752**	**22.029**	**16.504**	**16.528**	**45.279**	**60.942**
1990 9-Month Total	**11.795**	**21.910**	**16.862**	**22.156**	**16.774**	**16.798**	**45.434**	**60.867**
1989 9-Month Total	**11.886**	**21.780**	**16.522**	**21.789**	**16.672**	**16.695**	**45.083**	**60.266**

R=Revised data.

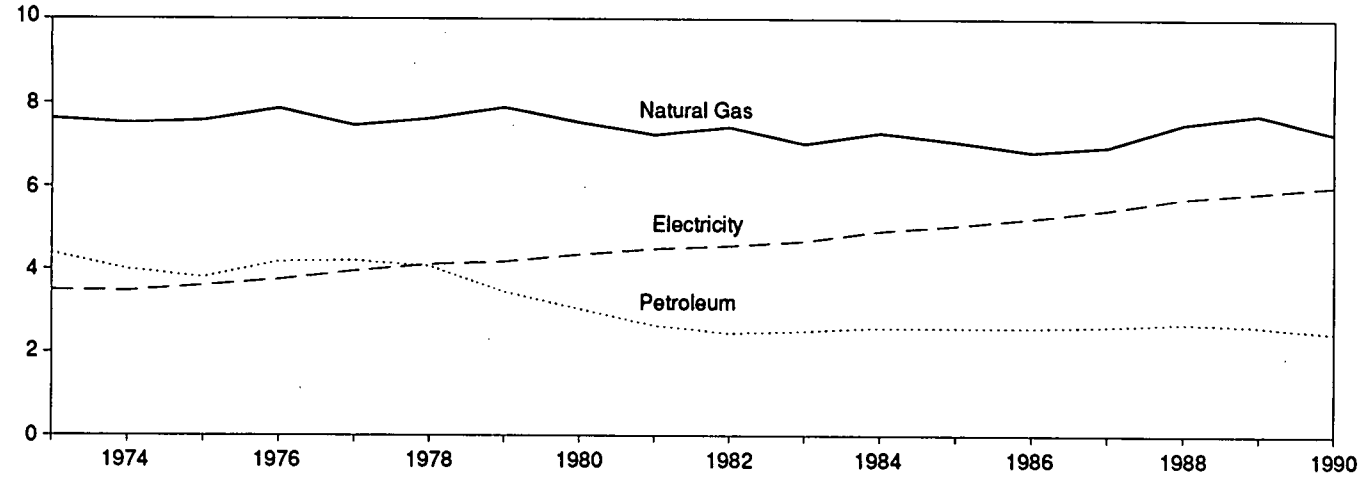
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding and the use of sector-specific conversion factors for natural gas and coal.

Additional Notes and Sources: See end of section.

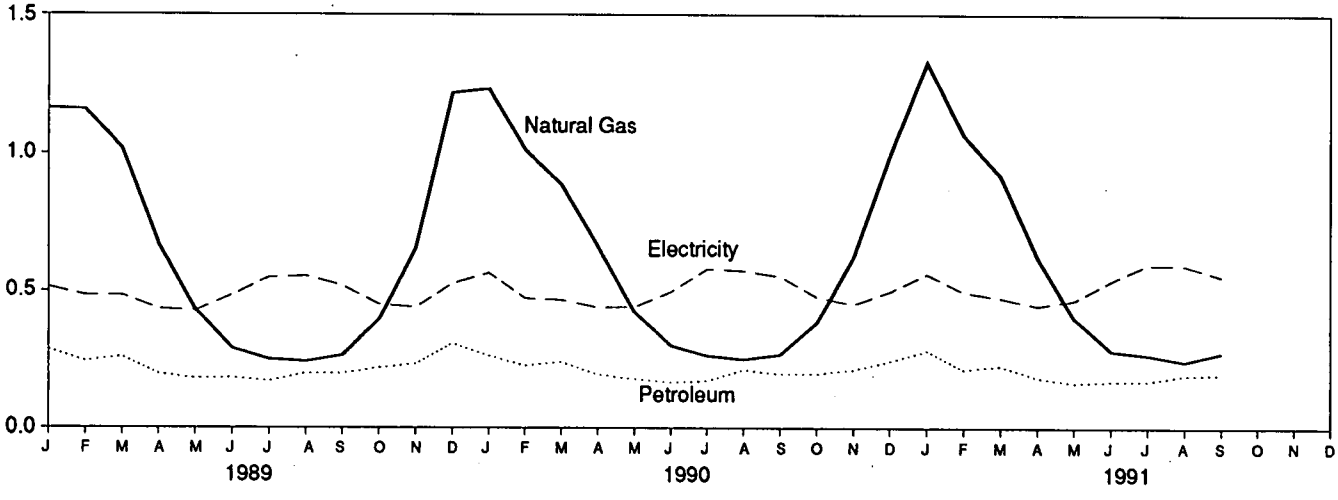
Figure 2.2 Residential and Commercial Energy Consumption

(Quadrillion Btu)

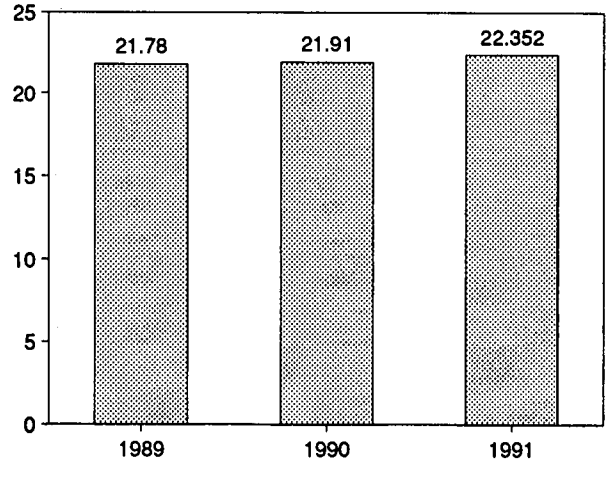
Consumption by Major Sources, 1973-1990



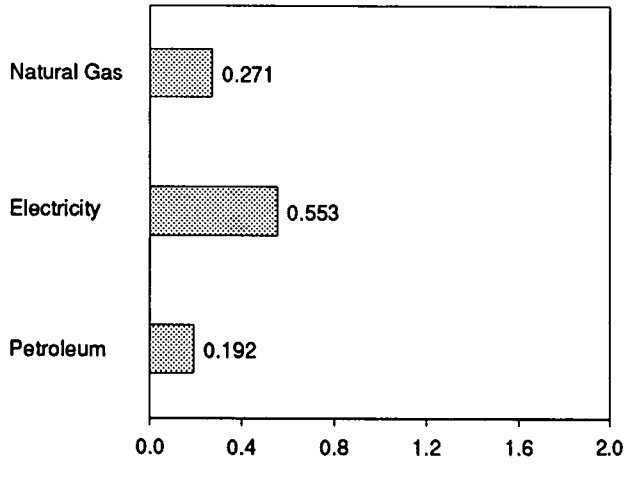
Consumption by Major Sources, Monthly



Total Consumption, January-September



Consumption by Major Sources, September 1991



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

Table 2.3 Residential and Commercial Energy Consumption

(Quadrillion Btu)

	Coal	Natural Gas[a]	Petroleum	Primary Consumption	Electricity	Net Consumption	Electrical System Energy Losses	Total Consumption[b]
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	8.478	23.724
1975 Total	.209	7.581	3.805	11.595	3.604	15.200	8.700	23.900
1976 Total	.203	7.866	4.181	12.250	3.747	15.997	9.023	25.020
1977 Total	.205	7.461	4.206	11.873	3.955	15.828	9.559	25.387
1978 Total	.214	7.624	4.070	11.908	4.116	16.023	10.065	26.088
1979 Total	.187	7.891	3.448	11.525	4.184	15.709	10.101	25.809
1980 Total	.145	7.540	3.035	10.721	4.355	15.075	10.578	25.653
1981 Total	.167	7.243	2.634	10.043	4.497	14.541	10.703	25.243
1982 Total	.187	7.427	2.449	10.063	4.566	14.629	11.001	25.630
1983 Total	.192	7.024	2.498	9.715	4.680	14.395	11.235	25.630
1984 Total	.209	7.292	2.585	10.086	4.928	15.014	11.487	26.501
1985 Total	.176	7.079	2.573	9.827	5.061	14.889	11.843	26.732
1986 Total	.176	6.825	2.576	9.577	5.235	14.812	12.022	26.834
1987 Total	.162	6.954	2.618	9.734	5.443	15.177	12.443	27.621
1988 Total	.168	7.513	2.693	10.373	5.724	16.097	12.903	29.000
1989 January	.015	1.162	.281	R1.458	.514	1.972	1.123	3.095
February	.016	R1.158	.239	1.413	.483	1.896	1.041	R2.938
March	.012	1.018	.255	1.285	.484	1.769	1.068	R2.838
April	.012	.668	.192	.872	.432	1.305	.929	R2.234
May	.008	.428	.176	R.613	.425	R1.038	1.004	R2.042
June	.007	.285	.179	.471	.485	.956	1.112	2.067
July	.012	.246	.166	.424	.549	.973	1.294	2.267
August	.011	.238	.195	.444	.553	.997	1.270	2.267
September	.007	.260	.194	.462	.518	.980	1.052	2.032
October	.005	.392	.215	.612	.450	1.062	.987	2.049
November	.013	.656	.229	R.898	.439	R1.337	.987	2.324
December	.028	1.218	.303	R1.550	.526	2.075	1.277	R3.353
Total	.146	R7.731	2.625	R10.501	5.859	R16.360	13.143	R29.504
1990 January	.016	R1.232	.259	R1.508	.565	R2.073	1.163	R3.236
February	.015	R1.014	.223	R1.252	.473	R1.726	.986	R2.711
March	.013	R.886	.236	R1.135	.467	R1.602	1.045	R2.647
April	.012	R.661	.190	R.863	.439	R1.302	.948	R2.250
May	.008	R.422	.175	R.605	.441	R1.046	1.015	R2.061
June	.009	R.297	.163	R.469	.497	R.966	1.186	R2.152
July	.012	R.260	.168	R.440	.580	R1.020	1.328	R2.348
August	.012	R.247	.209	R.467	.573	R1.041	1.322	R2.362
September	.009	R.264	.193	R.467	.553	R1.020	1.123	R2.143
October	.010	R.380	.194	R.584	.479	R1.062	1.023	R2.085
November	.014	R.622	.209	R.846	.451	R1.297	.966	R2.262
December	.024	R.997	.240	R1.261	.498	R1.759	1.160	R2.919
Total	.156	R7.283	2.459	R9.897	6.015	R15.913	13.267	R29.180
1991 January	.020	R1.329	.278	R1.627	.562	R2.189	1.244	R3.433
February	.014	R1.067	.209	R1.290	.496	R1.786	.980	R2.766
March	.013	R.921	.223	R1.156	.475	R1.632	1.054	R2.686
April	R.010	R.624	.180	R.814	.446	R1.260	.954	R2.213
May	R.008	R.399	.161	R.568	.466	R1.034	1.098	R2.132
June	R.008	R.278	.168	R.454	.537	R.990	1.205	R2.195
July	.011	R.263	.168	R.442	.597	R1.039	1.379	R2.418
August	.010	R.239	.189	R.439	.594	R1.032	1.339	R2.371
September	.012	.271	.192	.474	.553	1.028	1.110	2.138
9-Month Total	.106	5.391	1.767	7.265	4.725	11.990	10.362	22.352
1990 9-Month Total	.107	5.283	1.817	7.207	4.588	11.795	10.115	21.910
1989 9-Month Total	.100	5.464	1.878	7.442	4.444	11.886	9.894	21.780

[a] Includes supplemental gaseous fuels.

[b] 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.

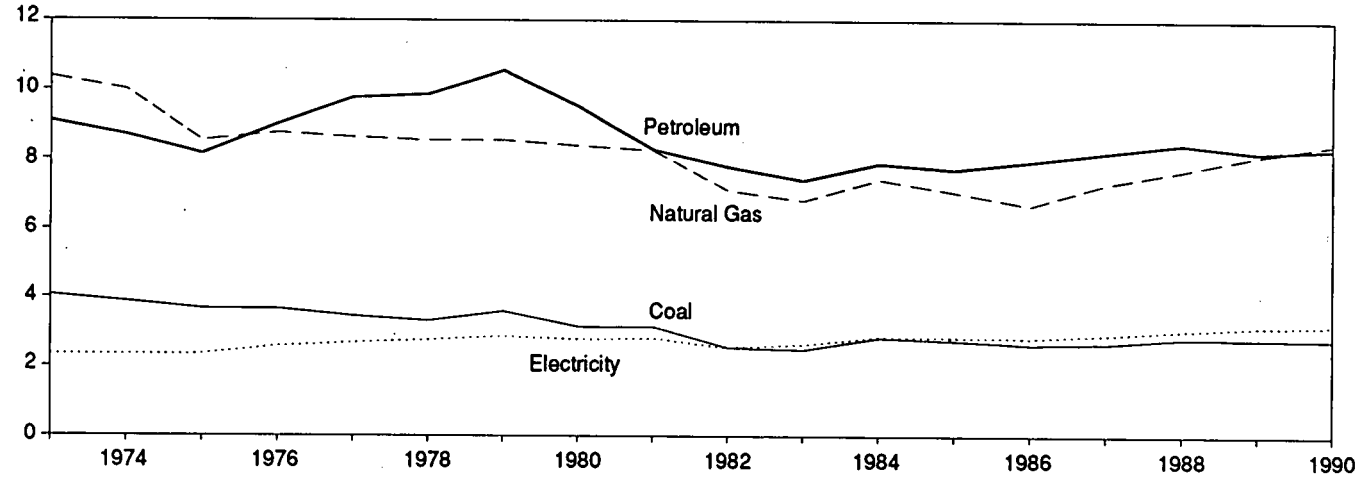
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Additional Notes and Sources: See end of section.

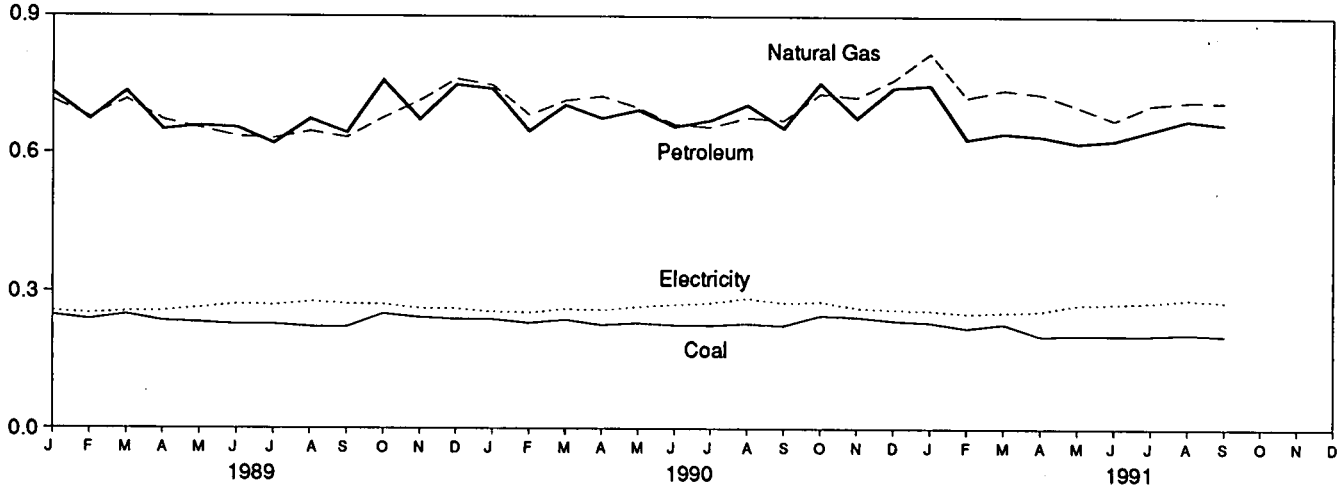
Figure 2.3 Industrial Energy Consumption

(Quadrillion Btu)

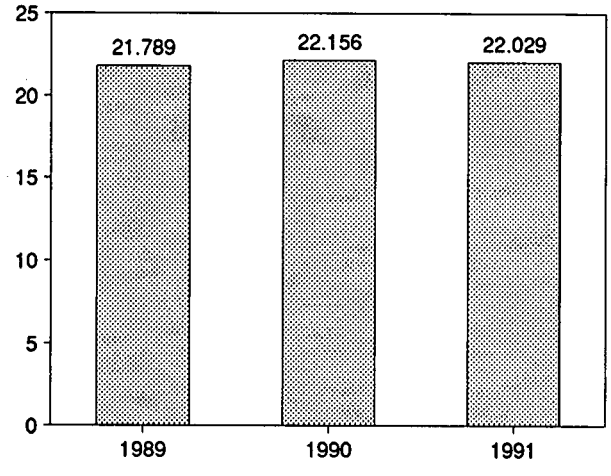
Consumption by Major Sources, 1973-1990



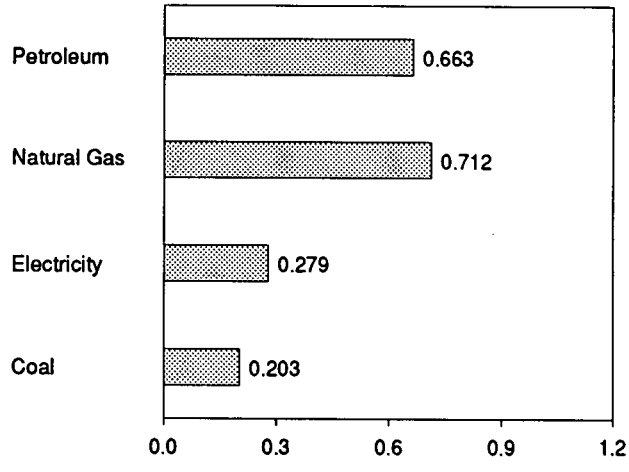
Consumption by Major Sources, Monthly



Total Consumption, January-September



Consumption by Major Sources, September 1991



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

Table 2.4 Industrial Energy Consumption

(Quadrillion Btu)

	Coal	Natural Gas[a]	Petroleum	Hydro-electric Power	Net Imports of Coal Coke	Primary Consumption	Electricity	Net Consumption	Electrical System Energy Losses	Total Consumption[b]
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	10.004	8.694	.033	.056	22.657	2.337	24.994	5.701	30.696
1975 Total	3.667	8.532	8.146	.032	.014	20.391	2.346	22.737	5.664	28.401
1976 Total	3.661	8.762	9.010	.033	(s)	21.465	2.573	24.038	6.196	30.234
1977 Total	3.454	8.635	9.774	.033	.015	21.911	2.682	24.593	6.481	31.075
1978 Total	3.314	8.539	9.867	.032	.125	21.876	2.761	24.637	6.751	31.388
1979 Total	3.593	8.549	10.568	.034	.063	22.807	2.873	25.679	6.935	32.615
1980 Total	3.155	8.395	9.525	.033	-.035	21.073	2.781	23.854	6.755	30.609
1981 Total	3.157	8.257	8.285	.033	-.016	19.715	2.817	22.533	6.705	29.238
1982 Total	2.552	7.121	7.794	.033	-.022	17.479	2.542	20.020	6.124	26.144
1983 Total	2.490	6.826	7.420	.033	-.016	16.753	2.648	19.401	6.356	25.756
1984 Total	2.842	7.448	7.894	.033	-.011	18.205	2.859	21.064	6.663	27.727
1985 Total	2.760	7.080	7.725	.033	-.013	17.584	2.855	20.439	6.681	27.120
1986 Total	2.643	6.690	7.953	.032	-.017	17.301	2.834	20.135	6.507	26.642
1987 Total	2.673	7.323	8.210	.032	.009	18.247	2.928	21.175	6.694	27.870
1988 Total	2.828	7.696	8.456	.032	.040	19.053	3.059	22.111	6.895	29.007
1989 January	.245	R.714	.731	.003	.007	R1.700	.254	1.955	.555	2.510
February	.236	R.677	.672	.003	.002	1.590	.249	R1.839	.538	R2.377
March	.247	R.716	.734	.003	.003	1.704	.254	R1.957	.560	R2.517
April	.233	.671	.650	.003	.007	1.564	.255	1.819	.549	2.368
May	.230	.653	.658	.003	.006	1.549	.263	1.812	.621	R2.433
June	.226	R.635	.654	.003	.004	R1.522	.271	R1.793	.620	R2.413
July	.226	R.631	.620	.003	.004	R1.484	.269	R1.754	.634	R2.388
August	.221	.646	.673	.002	.003	1.545	.277	1.822	.636	2.458
September	.220	.633	.643	.002	.002	1.499	.272	1.772	.553	2.324
October	.249	.676	.758	.002	-.004	1.681	.271	1.952	.594	2.546
November	.241	.714	.672	.002	-.001	R1.628	.262	1.890	.589	2.479
December	.237	R.762	.749	.002	-.002	1.748	.261	R2.008	.633	R2.641
Total	2.810	R8.128	8.214	.033	.030	R19.215	3.158	R22.373	7.085	R29.458
1990 January	.237	R.748	.740	.003	(s)	R1.728	.254	R1.982	.523	R2.505
February	.229	R.682	.647	.003	(s)	R1.561	.252	R1.813	.526	R2.339
March	.236	R.714	.704	.003	.001	R1.657	.260	R1.917	.581	R2.498
April	.225	R.724	.675	.003	-.001	R1.627	.258	R1.885	.557	R2.442
May	.229	R.698	.693	.003	(s)	R1.623	.266	R1.890	.614	R2.504
June	.225	R.662	.657	.003	.001	R1.548	.271	R1.819	.647	R2.466
July	.224	R.656	.671	.003	.003	R1.557	.275	R1.832	.630	R2.461
August	.228	R.677	.705	.002	-.001	R1.612	.285	R1.897	.657	R2.554
September	.224	R.671	.654	.002	.001	R1.552	.275	R1.828	.559	R2.387
October	.246	R.730	.753	.002	.001	R1.732	.278	R2.010	.594	R2.604
November	.243	R.722	.676	.002	-.001	R1.642	.264	R1.906	.565	R2.470
December	.235	R.761	.743	.002	.001	R1.743	.260	R2.003	.606	R2.609
Total	2.781	R8.446	8.318	.033	.005	R19.583	3.199	R22.782	7.055	R29.837
1991 January	.231	R.820	.749	.003	.001	R1.804	.258	R2.062	.571	R2.633
February	.219	R.722	.630	.003	.001	R1.574	.251	R1.825	.496	R2.320
March	.228	R.739	.643	.003	.002	R1.615	.254	R1.868	.563	R2.431
April	R.202	R.730	.637	.003	.001	R1.573	.257	R1.831	.551	R2.381
May	R.204	R.702	.622	.003	.001	R1.533	.272	R1.804	.641	R2.445
June	R.204	R.672	.628	.003	-.001	R1.506	.274	R1.780	.615	R2.395
July	.204	R.706	.650	.003	.003	R1.566	.277	R1.843	.641	R2.483
August	.207	R.713	.672	.002	-.002	R1.593	.284	R1.877	.641	R2.518
September	.203	.712	.663	.002	.004	1.583	.279	1.862	.559	2.422
9-Month Total	1.902	6.515	5.895	.026	.008	14.346	2.406	16.752	5.277	22.029
1990 9-Month Total	2.057	6.232	6.146	.026	.004	14.465	2.397	16.862	5.294	22.156
1989 9-Month Total	2.083	5.976	6.035	.026	.037	14.157	2.365	16.522	5.267	21.789

[a] Includes supplemental gaseous fuels.

[b] 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. (s)=Less than +0.5 trillion Btu and greater than -0.5 trillion Btu.

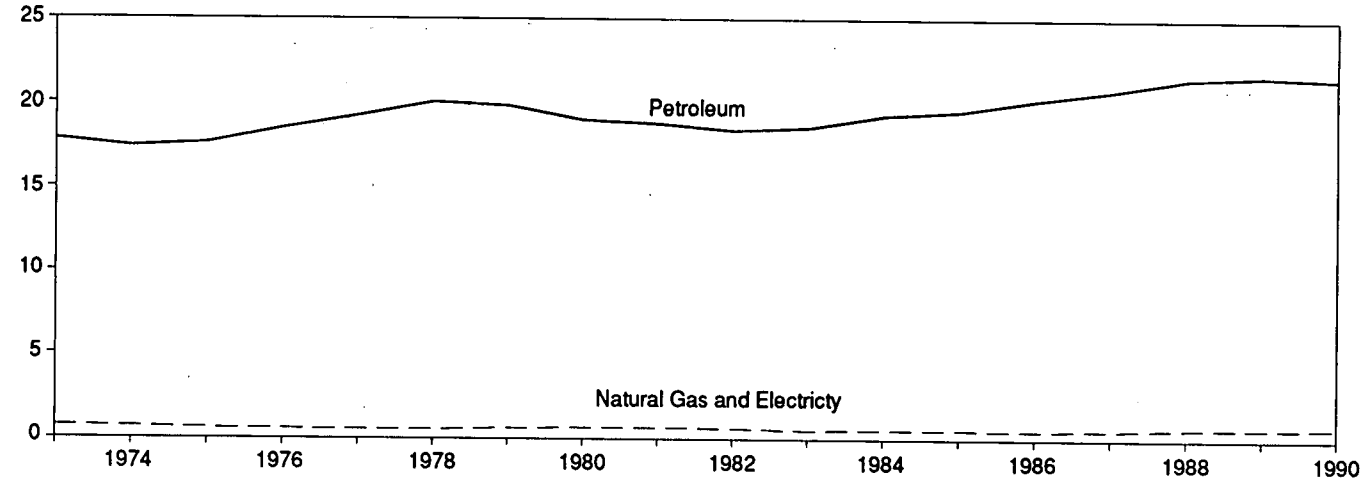
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Additional Notes and Sources: See end of section.

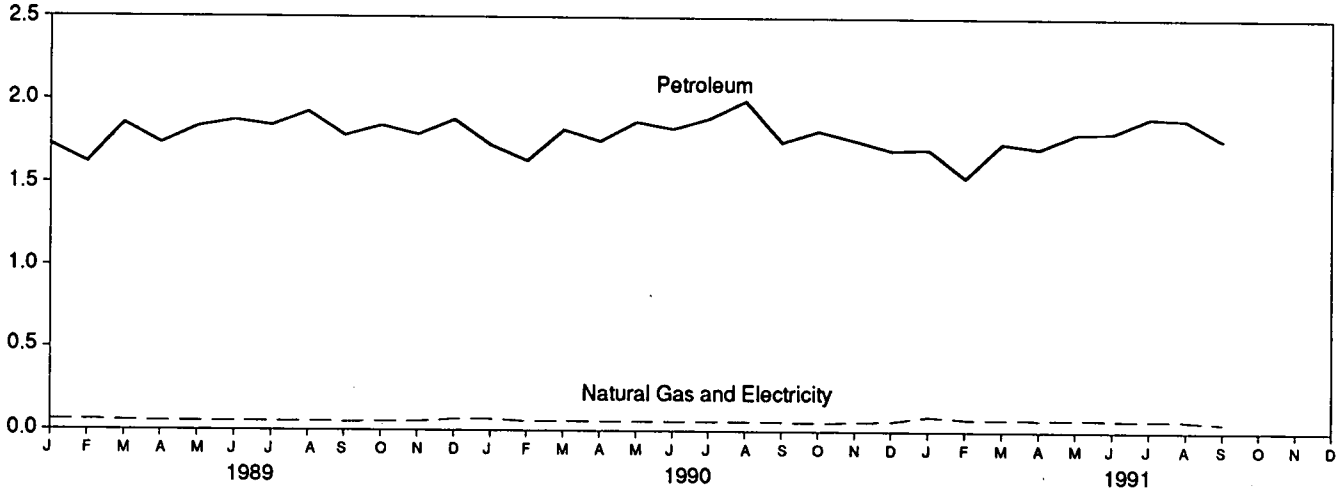
Figure 2.4 Transportation Energy Consumption

(Quadrillion Btu)

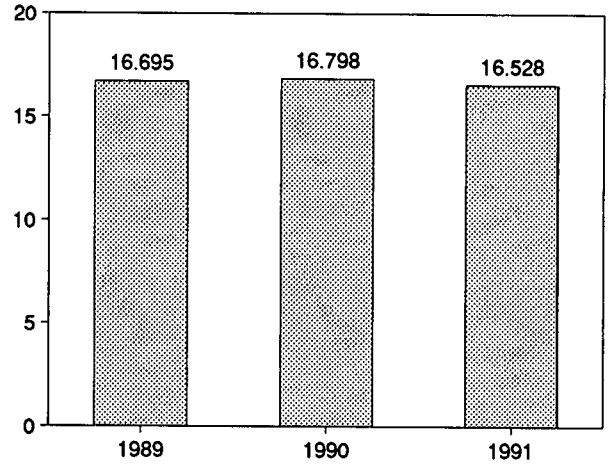
Consumption by Major Sources, 1973-1990



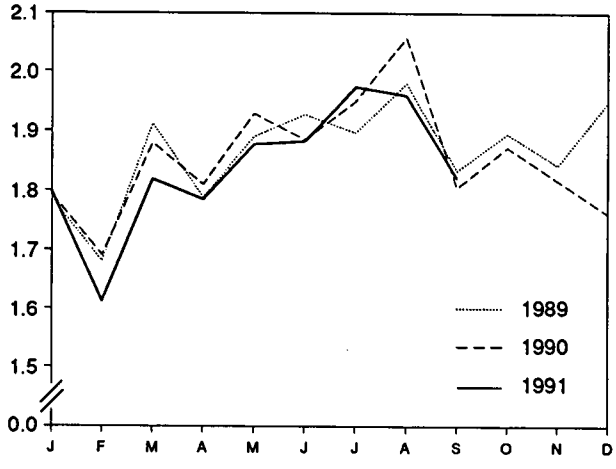
Consumption by Major Sources, Monthly



Total Consumption, January-September



Total Consumption, Monthly



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

Table 2.5 Transportation Energy Consumption

(Quadrillion Btu)

	Coal	Natural Gas[a]	Petroleum	Primary Consumption	Electricity	Net Consumption	Electrical System Energy Losses	Total Consumption[b]
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	(c)	.539	20.041	20.580	.009	20.589	.022	20.611
1979 Total	(c)	.612	19.825	20.436	.010	20.447	.025	20.472
1980 Total	(c)	.650	19.008	19.658	.011	19.669	.026	19.695
1981 Total	(c)	.658	18.811	19.469	.011	19.480	.026	19.507
1982 Total	(c)	.612	18.420	19.032	.011	19.043	.026	19.069
1983 Total	(c)	.505	18.593	19.098	.011	19.109	.026	19.135
1984 Total	(c)	.545	19.286	19.831	.012	19.843	.028	19.871
1985 Total	(c)	.519	19.534	20.053	.013	20.066	.030	20.097
1986 Total	(c)	.499	20.215	20.714	.013	20.728	.030	20.758
1987 Total	(c)	.535	20.780	21.315	.013	21.328	.029	21.357
1988 Total	(c)	.632	21.510	22.141	.014	22.155	.031	22.186
1989 January	(c)	.059	1.724	1.782	.001	1.784	.002	1.786
February	(c)	.059	1.618	1.677	.001	1.678	.002	1.681
March	(c)	.056	1.853	1.909	.001	1.910	.002	1.912
April	(c)	.051	1.734	1.785	.001	1.786	.002	1.788
May	(c)	.053	1.834	1.886	.001	1.887	.003	1.890
June	(c)	.052	1.873	1.924	.001	1.925	.003	1.928
July	(c)	.052	1.841	1.893	.001	1.894	.003	1.897
August	(c)	.052	1.925	1.976	.001	1.978	.003	1.980
September	(c)	.049	1.780	1.829	.001	1.831	.002	1.833
October	(c)	.051	1.841	1.892	.001	1.893	.002	1.895
November	(c)	.052	1.787	1.839	.001	1.840	.002	1.842
December	(c)	.067	1.878	1.945	.001	1.946	.003	1.949
Total	(c)	R.648	21.687	R22.336	.014	R22.349	.031	R22.380
1990 January	(c)	R.066	1.723	R1.789	.001	R1.790	.003	R1.793
February	(c)	R.056	1.632	R1.687	.001	R1.689	.002	R1.691
March	(c)	R.058	1.818	R1.876	.001	R1.877	.003	R1.879
April	(c)	R.056	1.750	R1.806	.001	R1.807	.002	R1.810
May	(c)	R.057	1.868	R1.925	.001	R1.926	.003	R1.929
June	(c)	R.056	1.826	R1.881	.001	R1.883	.003	R1.885
July	(c)	R.056	1.890	R1.945	.001	R1.947	.003	R1.950
August	(c)	R.057	1.996	R2.053	.001	R2.054	.003	R2.057
September	(c)	R.054	1.747	R1.801	.001	R1.802	.002	R1.805
October	(c)	R.052	1.816	R1.868	.001	R1.869	.003	R1.872
November	(c)	R.055	1.759	R1.814	.001	R1.815	.002	R1.817
December	(c)	R.060	1.699	R1.758	.001	R1.759	.003	R1.762
Total	(c)	R.680	21.524	R22.204	.014	R22.218	.031	R22.250
1991 January	(c)	R.089	1.706	R1.795	.001	R1.796	.003	R1.798
February	(c)	R.073	1.537	R1.610	.001	R1.611	.002	R1.613
March	(c)	R.073	1.743	R1.816	.001	R1.817	.003	R1.819
April	(c)	R.069	1.712	R1.781	.001	R1.782	.002	R1.785
May	(c)	R.071	1.802	R1.873	.001	R1.874	.003	R1.877
June	(c)	R.069	1.808	R1.877	.001	R1.879	.003	R1.882
July	(c)	R.069	1.900	R1.969	.001	R1.971	.003	R1.974
August	(c)	R.066	1.890	R1.956	.001	R1.957	.003	R1.960
September	(c)	.052	1.765	1.817	.001	1.818	.003	1.821
9-Month Total	(c)	.630	15.862	16.493	.011	16.504	.025	16.528
1990 9-Month Total	(c)	.513	16.250	16.763	.011	16.774	.024	16.798
1989 9-Month Total	(c)	.480	16.182	16.662	.010	16.672	.023	16.695

[a] Pipeline fuel only, including supplemental gaseous fuels.

[b] Excludes wood, waste, geothermal, wind, photovoltaic, and solar thermal energy, except for small amounts used by electric utilities to generate electricity for distribution.

[c] Since 1978, the small amounts of coal consumed for transportation are reported as industrial sector consumption.

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

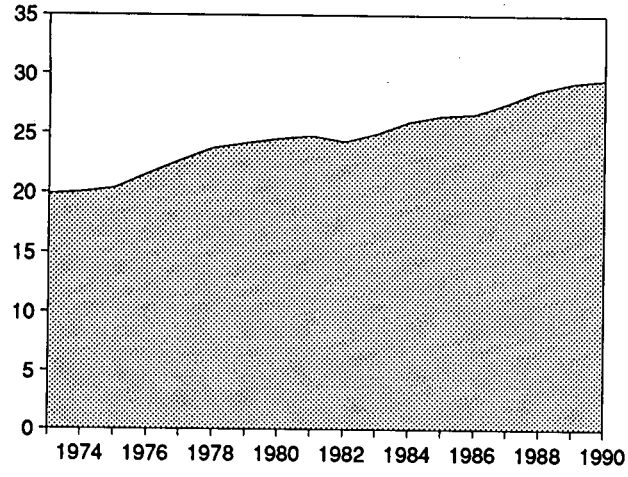
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Additional Notes and Sources: See end of section.

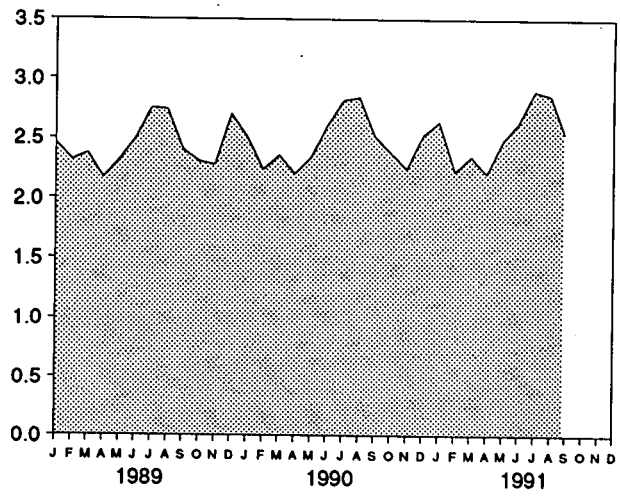
Figure 2.5 Energy Input at Electric Utilities

(Quadrillion Btu)

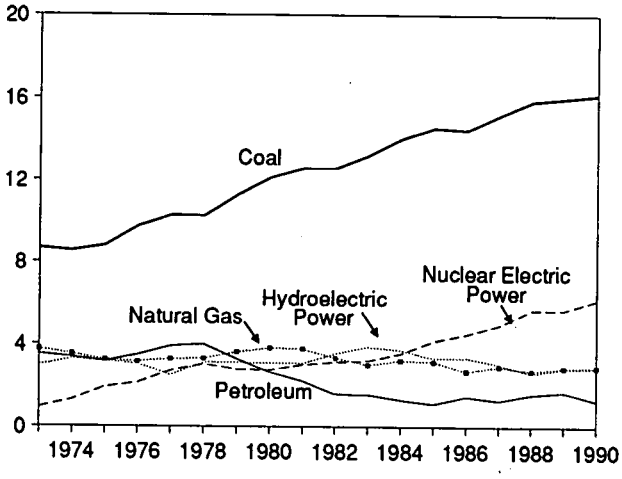
Total Input, 1973-1990



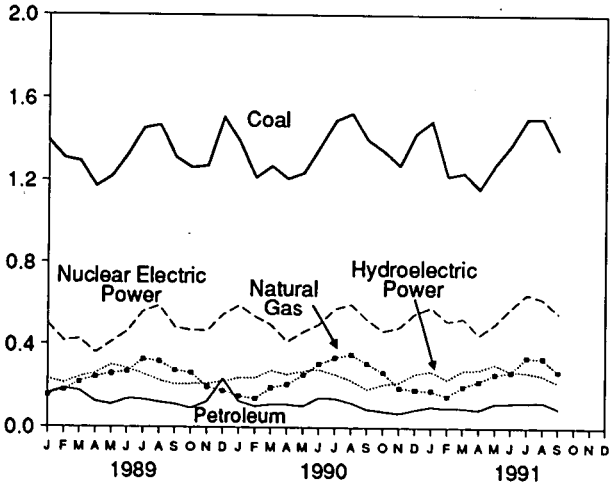
Total Input, Monthly



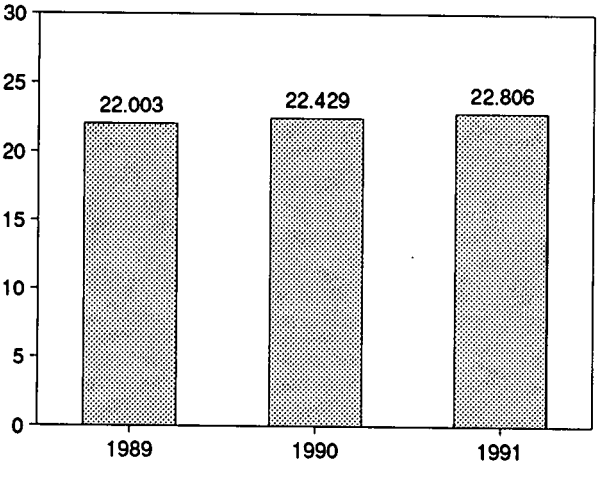
Input by Major Sources, 1973-1990



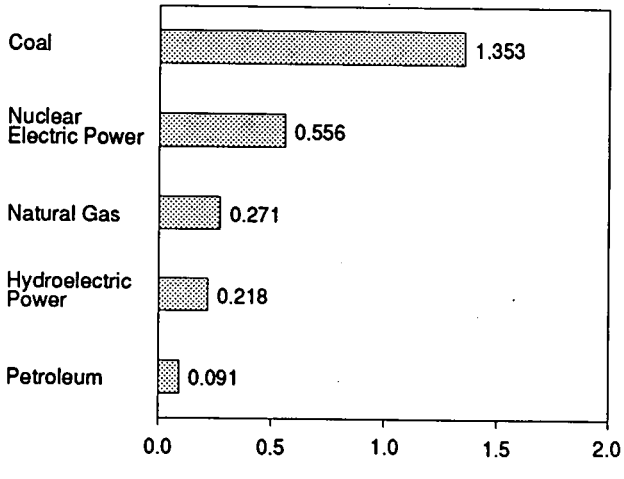
Input by Major Sources, Monthly



Total Input, January-September



Input by Major Sources, September 1991



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

Table 2.6 Energy Input at Electric Utilities

(Quadrillion Btu)

	Coal	Natural Gas[a]	Petroleum[b]	Nuclear Electric Power	Hydro-electric Power[c]	Other[d]	Total
1973 Total	**8.658**	**3.748**	**3.515**	**0.910**	**2.975**	**0.046**	**19.852**
1974 Total	**8.534**	**3.519**	**3.365**	**1.272**	**3.276**	**.056**	**20.022**
1975 Total	**8.786**	**3.240**	**3.166**	**1.900**	**3.187**	**.072**	**20.350**
1976 Total	**9.720**	**3.152**	**3.477**	**2.111**	**3.032**	**.081**	**21.574**
1977 Total	**10.262**	**3.284**	**3.901**	**2.702**	**2.482**	**.082**	**22.713**
1978 Total	**10.238**	**3.297**	**3.987**	**3.024**	**3.110**	**.068**	**23.724**
1979 Total	**11.260**	**3.613**	**3.283**	**2.776**	**3.107**	**.089**	**24.128**
1980 Total	**12.123**	**3.810**	**2.634**	**2.739**	**3.085**	**.114**	**24.505**
1981 Total	**12.583**	**3.768**	**2.202**	**3.008**	**3.072**	**.127**	**24.760**
1982 Total	**12.582**	**3.342**	**1.568**	**3.131**	**3.539**	**.108**	**24.270**
1983 Total	**13.213**	**2.998**	**1.544**	**3.203**	**3.866**	**.133**	**24.956**
1984 Total	**14.020**	**3.220**	**1.286**	**3.553**	**3.725**	**.174**	**25.977**
1985 Total	**14.542**	**3.160**	**1.090**	**4.149**	**3.330**	**.213**	**26.484**
1986 Total	**14.444**	**2.691**	**1.452**	**4.471**	**3.353**	**.231**	**26.642**
1987 Total	**15.173**	**2.935**	**1.257**	**4.906**	**3.035**	**.244**	**27.551**
1988 Total	**15.850**	**2.709**	**1.563**	**5.661**	**2.607**	**.235**	**28.626**
1989 January	1.392	.152	.161	.497	.231	.019	2.450
February	1.309	.178	.185	.415	.211	.017	2.315
March	1.293	.217	.175	.425	.240	.020	2.370
April	1.170	.242	.121	.359	.259	.017	2.169
May	1.220	.258	.107	.411	.302	.018	2.317
June	1.327	.268	.134	.461	.284	.018	2.492
July	1.454	.329	.132	.561	.256	.019	2.751
August	1.470	.319	.118	.589	.226	.018	2.741
September	1.312	.276	.109	.481	.205	.017	2.399
October	1.263	.262	.089	.467	.208	.018	2.306
November	1.272	.195	.121	.465	.210	.017	2.280
December	1.508	.176	.233	.545	.220	.018	2.701
Total	**15.988**	**2.871**	**1.685**	**5.677**	**2.852**	**.217**	**29.290**
1990 January	1.387	.151	.123	.591	.238	.018	2.509
February	1.214	.136	.100	.536	.238	.016	2.241
March	1.271	.190	.108	.494	.275	.018	2.357
April	1.209	.206	.108	.413	.255	.014	2.205
May	1.238	.252	.101	.461	.273	.017	2.340
June	1.364	.307	.141	.497	.280	.017	2.606
July	1.494	.337	.138	.575	.256	.017	2.817
August	1.527	.354	.117	.598	.227	.017	2.841
September	1.397	.311	.086	.520	.184	.016	2.514
October	1.345	.265	.077	.465	.207	.017	2.377
November	1.275	.191	.067	.483	.217	.016	2.249
December	1.430	.181	.085	.553	.260	.017	2.527
Total	**16.150**	**2.881**	**1.251**	**6.186**	**2.911**	**.202**	**29.582**
1991 January	1.490	.177	.099	.583	.273	.017	2.639
February	1.223	.151	.092	.513	.232	.014	2.226
March	1.239	.198	.092	.527	.277	.016	2.350
April	1.161	.223	.085	.447	.281	.015	2.211
May	1.283	.258	.115	.501	.308	.015	2.480
June	1.377	.269	.117	.581	.275	.016	2.634
July	1.504	.341	.118	.651	.268	.016	2.898
August	1.505	.337	.123	.627	.253	.016	2.862
September	1.353	.271	.091	.556	.218	.015	2.505
9-Month Total	**12.135**	**2.224**	**.933**	**4.987**	**2.385**	**.142**	**22.806**
1990 9-Month Total	**12.100**	**2.244**	**1.022**	**4.685**	**2.227**	**.152**	**22.429**
1989 9-Month Total	**11.945**	**2.238**	**1.242**	**4.200**	**2.214**	**.164**	**22.003**

[a] Includes supplemental gaseous fuels.

[b] Petroleum products reported as "oil consumed in steam plants" through 1979 and "heavy oil" from 1980 forward, which are assumed to be residual fuel oil; petroleum products reported as "oil consumed in gas turbine and internal combustion engine plants" through 1979 and "light oil" from 1980 forward, which are assumed to be distillate fuel oil and kerosene; and petroleum coke.

[c] Includes net imports of electricity.

[d] Other is electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy.

R=Revised data.

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

Additional Notes and Sources: See end of section.

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 wood, waste, geothermal, 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. The SIC code used to classify an establishment as residential is 88 (Household).
- 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. SIC codes used to classify an establishment as commercial are 50 through 87, 89, and 91 through 97.
- Industrial—Manufacturing industries, which make up the largest part of the sector, along with mining, construction, agriculture, fisheries, and forestry. Establishments in the sector range from steel mills to small farms to companies assembling electronic components. The SIC codes used to classify establishments as industrial are 1 through 39.
- 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. The SIC codes used to classify establishments as belonging to the transportation sector are 40 through 49.
- Electric Utility—Privately and publicly owned establishments that generate electricity primarily for use by the public.

Although the end-use allocations are made according to these aggregations as closely as possible, some data are collected using different classifications. For example, data on agricultural use of natural gas are collected and reported in the commercial sector, rather than 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 the Appendix.

4. Coal: Coal is anthracite, bituminous coal (including sub-bituminous coal), and lignite. Sources:

- 1973-September 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 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 forward: EIA, Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants" and Form EIA-6, "Coal Distribution Report."
- 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."

5. Natural Gas: Natural gas consumption by end use is based on data presented in Table 4.3 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 the Appendix. 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*.
- 1980-1989: EIA, *Natural Gas Annual*.
- 1990 forward: EIA, Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers," and EIA computations.
- 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."
- 1981-1990: EIA, *Petroleum Supply Annual*.
- 1991 forward: 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**

Electric Utilities, All Periods.

Monthly and annual consumption for 1973-1979 is assumed to be the amount of oil (minus small amounts of kerosene and kerosene-type jet fuel deliveries) reported as consumed in internal combustion and gas turbine engine plants. From January 1980, electric utility consumption of distillate fuel is assumed to be the petroleum products reported as "light oil" (minus small amounts of kerosene deliveries through 1982) consumed at electric utilities.

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."

Non-Electric Utilities, Annual Estimates Through 1989.

The aggregate non-electric utility use of distillate fuel is total distillate 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 distillate fuel delivered to end users, grouped into sectors from EIA's "Deliveries of Fuel Oil and Kerosene" ("Deliveries") reports (based primarily on data collected by Form EIA-821, previously Form EIA-172) as follows:

- Residential deliveries are directly from the "Deliveries" reports for 1979-1989. Prior to 1979, each year's deliveries subtotal of the heating plus industrial category is split into residential, commercial, and industrial (including farm) in proportion to the 1979 shares.

- Commercial deliveries are directly from the Deliveries reports for 1979-1989. Prior to 1979,

each year's deliveries subtotal of the heating plus industrial category is split into residential, commercial, and industrial (including farm) in proportion to the 1979 shares.

- Industrial deliveries for 1979-1989 are the sum of deliveries for industrial, farm, oil company, off-highway, diesel, and all other uses. Prior to 1979, each year's deliveries 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.

- Transportation deliveries are the sum of deliveries for railroad, vessel bunkering, and on-highway diesel, and military uses for all years.

Non-Electric Utilities, Monthly Estimates Through 1989.

- Residential and commercial monthly consumption is estimated by allocating the annual estimates described above into months in proportion to each month's share of the year's sales of No. 2 heating oil as reported in the "Monthly Report of Heating Oil Sales" by the Ethyl Corporation from 1973-1980 and the American Petroleum Institute for 1981 and 1982, and the EIA, Form EIA-782A, "Refiners/Gas Plant Operators' Monthly Petroleum Product Sales Report," No. 2 Fuel Oil Sales to End Users and for Resale, for 1983-1989.

- 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." 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.

Non-Electric Utilities, 1990 Forward.

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 1989.

- **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 deliveries grouped into end-use sectors from EIA's "Deliveries of Fuel Oil and Kerosene" ("Deliveries") reports (based primarily on data collected by Form EIA-821, previously Form EIA-172), as follows:

  - Residential deliveries are directly from the "Deliveries" reports for 1979-1989. Deliveries for 1989 are used as estimates for succeeding periods. Prior to 1979, each year's deliveries category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares.

  - Commercial deliveries are directly from the "Deliveries" reports for 1979-1989. Deliveries for 1989 are used as estimates for succeeding periods. Prior to 1979, each year's deliveries category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares.

  - Industrial deliveries are directly from the "Deliveries" reports for 1979-1989. Deliveries for 1989 are used as estimates for succeeding periods. Prior to 1979, each year's deliveries 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 based on 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 high of 67 percent in 1981 to a low of 33 percent in 1987.

  - LPG consumed annually by the industrial sector is estimated as the difference between LPG's total supplied and the estimated consumption 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 for use in the production of synthetic rubber; refinery fuel use; use as syn-

thetic 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.

- 1984-1989: 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.

- 1990 forward: The 1989 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 formed from 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**

  Electric Utilities, All Periods.

  Monthly and annual consumption for 1973-1979 is assumed to be the amount of oil reported as consumed in steam-electric power plants. From January 1980 forward, electric utility consumption of residual fuel is assumed to be the petroleum products reported as heavy oil consumed at electric utilities.

  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."

  Non-Electric Utilities, Annual Estimates Through 1989.

  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 delivered to end users, grouped into sectors from EIA's "Deliveries of Fuel Oil and Kerosene" ("Deliveries") reports (based primarily on data collected by Form EIA-821, previously Form EIA-172), as follows:

  - Commercial deliveries are directly from the "Deliveries" reports for 1979-1989. Prior to 1979, each year's deliveries subtotal of the heating plus industrial category is split into commercial and industrial in proportion to the 1979 shares.

  - Industrial deliveries for 1979-1989 are the sum of deliveries for industrial, oil company, and all other uses. Prior to 1979, each year's deliveries 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 deliveries are the sum of deliveries for railroad, vessel bunkering, and military uses for all years.

  Non-Electric Utilities, Monthly Estimates Through 1989.

  - Commercial sector monthly consumption is estimated by allocating the annual commercial sector estimates described above into months in proportion to each month's share of the year's sales of No. 2 fuel oil as reported in the "Monthly Report of Heating Oil Sales" by the Ethyl Corporation for 1973-1980 and the American Petroleum Institute for 1981 and 1982, and the EIA, Form EIA-782A, "Refiners/Gas Plant Operators' Monthly Petroleum Product Sales Report," No. 2 Fuel Oil Sales to End Users and for Resale, 1983-1989.

- Transportation monthly estimates are made by evenly distributing the annual sector estimate over the months, adjusted 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.

Non-Electric Utilities, 1990 Forward.

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 1989.

- **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 and Wood, Waste, Geothermal, 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: DOE, Assistant Secretary for Fossil Energy, Form FE-781-R, "Annual Report of International Electrical Export/Import Data."
- 1990 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 1989 forward, "Monthly Series" data are used directly. For 1984-1988, 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 total 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 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 non-electric utilities and from Canada and Mexico, although they are included in electricity sales.

Section 3. Petroleum

Total petroleum imports[2] averaged 7.6 million barrels per day in November 1991, 2 percent[3] higher than the October 1991 rate and 8 percent higher than the November 1990 rate.

In November 1991, 16.5 million barrels per day of petroleum products were supplied for domestic use, 3 percent lower than the previous month and 1 percent lower than the November 1990 rate. Motor gasoline accounted for 43 percent of the total; distillate fuel oil, 19 percent; and residual fuel oil, 7 percent.

Motor gasoline supplied during November 1991 averaged 7.0 million barrels per day, 3 percent lower than both the previous month and the November 1990 rate. Stocks of total motor gasoline totaled 209 million barrels at the end of November 1991, 5 million barrels above the stock level in the previous month but 8 million barrels below the level 1 year earlier.

In November 1991, 3.1 million barrels of distillate fuel oil were supplied per day, 2 percent above the October 1991 rate but slightly below the November 1990 rate. Distillate fuel oil ending stocks for November 1991 were 143 million barrels, 5 million barrels above the stock level in the previous month and 11 million barrels above the stock level 1 year earlier.

Residual fuel oil supplied in November 1991 averaged 1.1 million barrels per day, 4 percent higher than the previous month and 11 percent higher than the November 1990 rate. Residual fuel oil stocks measured 51 million barrels at the end of November 1991, 3 million barrels higher than the stock level in the previous month and 1 million barrels above the level 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 August 1991.

[2]Total import data include imports into the Strategic Petroleum Reserve.
[3]Percentage changes are based on numbers shown in the following tables.

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

	Field Production			Stock Change[a]			Ending Stocks[b]
	Total Domestic[c]	Crude Oil	Natural Gas Plant Production	Crude Oil[d]	Petroleum Products	Petroleum Products Supplied	Crude Oil[d] and Petroleum Products
	Thousand Barrels per Day						Million Barrels
1973 Average	10,975	9,208	1,738	-11	146	17,308	1,008
1974 Average	10,498	8,774	1,688	62	117	16,653	[9] 1,074
1975 Average	10,045	8,375	1,633	[9] 17	[9] 15	16,322	1,133
1976 Average	9,774	8,132	* 1,604	39	-96	17,461	1,112
1977 Average	9,913	8,245	1,618	170	378	18,431	1,312
1978 Average	10,328	8,707	1,567	78	-172	18,847	1,278
1979 Average	10,179	8,552	1,584	148	25	18,513	1,341
1980 Average	10,214	8,597	1,573	98	42	17,056	[9] 1,392
1981 Average	10,230	8,572	1,609	[9] 290	[9] -130	16,058	1,484
1982 Average	10,252	8,649	1,550	136	-283	15,296	[9] 1,430
1983 Average	10,299	8,688	1,559	[9] 214	[9] -234	15,231	1,454
1984 Average	10,554	8,879	1,630	199	81	15,726	1,556
1985 Average	10,636	8,971	1,609	50	-153	15,726	1,519
1986 Average	10,289	8,680	1,551	78	124	16,281	1,593
1987 Average	10,008	8,349	1,595	128	-87	16,665	1,607
1988 Average	9,818	8,140	1,625	1	-29	17,283	1,597
1989 January	9,678	7,937	1,664	179	563	17,269	1,620
February	9,441	7,788	1,607	47	-733	17,920	1,601
March	9,284	7,575	1,650	-127	-924	17,989	1,568
April	9,501	7,772	1,674	494	413	16,624	1,596
May	9,498	7,816	1,620	271	598	16,546	1,623
June	9,188	7,624	1,507	-434	-64	17,497	1,608
July	9,055	7,444	1,541	148	1,182	16,453	1,649
August	9,106	7,544	1,504	283	-104	17,360	1,654
September	9,096	7,548	1,480	-144	577	16,795	1,667
October	8,983	7,453	1,478	73	-378	17,304	1,658
November	9,084	7,536	1,483	541	-367	17,311	1,663
December	8,734	7,337	1,343	-302	-2,335	18,858	1,581
Average	**9,219**	**7,613**	**1,546**	**86**	**-129**	**17,325**	**1,581**
1990 January	9,178	7,546	1,541	273	1,284	16,964	1,630
February	9,147	7,497	1,570	-330	507	17,175	1,635
March	9,034	7,433	1,526	1,057	-823	17,087	1,642
April	8,979	7,407	1,493	26	-83	16,778	1,640
May	8,923	7,328	1,502	479	532	16,915	1,672
June	8,645	7,106	1,458	72	378	17,165	1,685
July	8,735	7,173	1,484	-154	929	17,084	1,709
August	8,931	7,287	1,575	-227	-113	18,050	1,699
September	8,891	7,224	1,597	-896	887	16,512	1,698
October	9,301	7,542	1,667	111	-879	16,934	1,674
November	9,155	7,387	1,690	-364	-322	16,695	1,654
December	9,019	7,338	1,604	-528	-544	16,494	1,621
Average	**8,994**	**7,355**	**1,559**	**-35**	**142**	**16,988**	**1,621**
1991 January	[E] 9,135	[E] 7,418	1,635	-94	-1,094	16,882	1,587
February	[E] 9,334	[E] 7,548	1,690	250	-688	16,284	1,574
March	[E] 9,225	[E] 7,481	1,670	-242	-261	16,100	1,559
April	[E] 9,206	[E] 7,467	1,656	65	560	16,103	1,578
May	[E] 9,116	[E] 7,368	1,647	638	986	16,098	1,628
June	[E] 8,976	[E] 7,282	1,616	-364	551	16,764	1,634
July	[E] 9,019	[E] 7,326	1,608	-163	174	16,910	1,634
August	[E] 8,972	[E] 7,272	1,617	91	265	17,133	1,645
September	[E] 9,027	[E] 7,332	1,609	-143	701	16,704	1,662
October	[RE] 9,162	[RE] 7,409	[R] 1,673	[R] 54	[R] -656	[R] 16,894	[R] 1,643
November	[PE] 8,998	[PE] 7,302	[E] 1,615	[E] -31	[E] -3	[E] 16,458	[E] 1,644
11-Month Average	[PE] **9,105**	[PE] **7,381**	[E] **1,639**	[E] **5**	[E] **50**	[E] **16,579**	[E] **1,644**
1990 11-Month Average	**8,992**	**7,357**	**1,555**	**11**	**206**	**17,034**	**1,654**
1989 11-Month Average	**9,264**	**7,639**	**1,564**	**122**	**76**	**17,183**	**1,663**

* Due to differences internal to Energy Information Administration data processing systems, some small discrepancies exist between the data in this table and the data in the *Petroleum Supply Annual* and *Petroleum Supply Monthly*. See Note 6 at end of section.

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

[b] Stocks are totals as of end of period.

[c] Includes crude oil, natural gas plant liquids, other hydrocarbons, and alcohol.

[d] Includes stocks located in the Strategic Petroleum Reserve.

Footnotes continued on following page.

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

	Imports			Exports			Net Imports[f]
	Total	Crude Oil[e]	Petroleum Products	Total	Crude Oil	Petroleum Products	
	Thousand Barrels per Day						
1973 Average	6,256	3,244	3,012	231	2	229	6,025
1974 Average	6,112	3,477	2,635	221	3	218	5,892
1975 Average	6,056	4,105	1,951	209	6	204	5,846
1976 Average	7,313	5,287	2,026	223	8	215	7,090
1977 Average	8,807	6,615	2,193	243	50	193	8,565
1978 Average	8,363	6,356	2,008	362	158	204	8,002
1979 Average	8,456	6,519	1,937	*471	235	*236	*7,985
1980 Average	6,909	5,263	1,646	544	287	258	6,365
1981 Average	5,996	4,396	1,599	595	228	367	5,401
1982 Average	5,113	3,488	1,625	815	236	579	4,298
1983 Average	5,051	3,329	1,722	739	164	575	4,312
1984 Average	5,437	3,426	2,011	722	181	541	4,715
1985 Average	5,067	3,201	1,866	781	204	577	4,286
1986 Average	6,224	4,178	2,045	785	154	631	5,439
1987 Average	6,678	4,674	2,004	764	151	613	5,914
1988 Average	7,402	5,107	2,295	815	155	661	6,587
1989 January	8,255	5,661	2,594	761	137	624	7,494
February	8,032	5,305	2,727	875	208	666	7,157
March	7,456	5,035	2,421	860	156	704	6,596
April	8,078	5,750	2,328	810	139	670	7,268
May	7,778	5,729	2,049	791	131	661	6,986
June	7,977	5,976	2,002	975	243	732	7,002
July	8,369	6,214	2,155	780	69	711	7,589
August	8,560	6,565	1,995	967	162	805	7,593
September	8,002	6,028	1,975	655	32	623	7,347
October	8,301	6,187	2,115	791	61	730	7,511
November	8,341	6,171	2,170	975	120	855	7,366
December	7,579	5,463	2,116	1,067	247	821	6,512
Average	**8,061**	**5,843**	**2,217**	**859**	**142**	**717**	**7,202**
1990 January	9,197	6,212	2,985	709	132	578	8,488
February	8,399	5,895	2,505	822	102	720	7,577
March	7,965	6,117	1,848	880	132	748	7,084
April	7,858	5,813	2,045	761	111	649	7,097
May	8,834	6,454	2,380	690	112	578	8,144
June	8,747	6,423	2,323	803	88	715	7,944
July	9,048	6,855	2,193	696	89	606	8,353
August	8,644	6,452	2,192	850	64	785	7,794
September	7,361	5,664	1,698	847	68	779	6,514
October	6,717	5,132	1,585	949	104	844	5,768
November	7,003	5,085	1,918	1,085	137	948	5,918
December	6,439	4,611	1,828	1,187	162	1,026	5,252
Average	**8,018**	**5,894**	**2,123**	**857**	**109**	**748**	**7,161**
1991 January	7,066	5,303	1,763	1,199	50	1,149	5,867
February	6,844	5,498	1,346	1,441	153	1,288	5,403
March	6,550	5,129	1,421	944	136	807	5,607
April	7,374	5,523	1,851	737	162	575	6,636
May	8,496	6,387	2,109	1,149	165	984	7,347
June	8,177	6,317	1,860	921	78	843	7,256
July	7,714	5,949	1,765	963	139	824	6,752
August	8,622	6,667	1,955	837	55	783	7,785
September	7,745	5,795	1,950	785	109	676	6,960
October	R7,396	R5,683	R1,712	R918	R91	R826	R6,478
November	E7,564	E5,627	E1,937	E877	E138	E739	E6,687
11-Month Average	E7,601	E5,810	E1,791	E977	E116	E861	E6,624
1990 11-Month Average	**8,164**	**6,013**	**2,151**	**826**	**104**	**722**	**7,338**
1989 11-Month Average	**8,105**	**5,878**	**2,227**	**839**	**132**	**708**	**7,266**

Footnotes continued.

[e] Includes crude oil for storage in the Strategic Petroleum Reserve.

[f] Net imports equals imports minus exports.

[9] In January 1975, 1981, and 1983, numerous respondents were added to surveys affecting stocks reported and stock change calculations. See Note 4 at end of section.

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

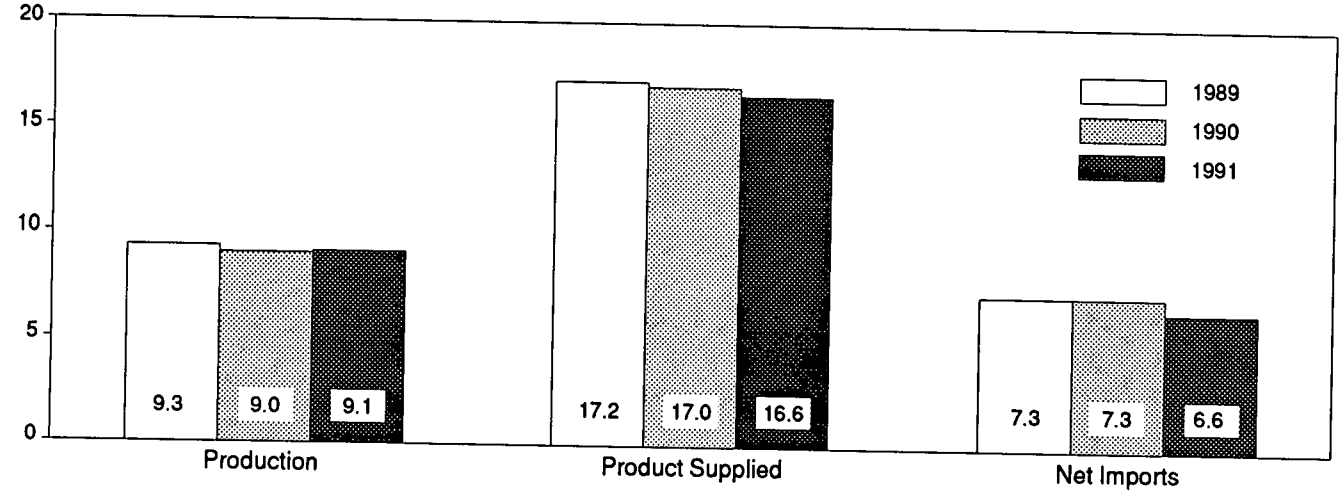
Notes: • Crude oil includes lease condensate. • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration, *Petroleum Supply Monthly*, December 1991, Table S1.

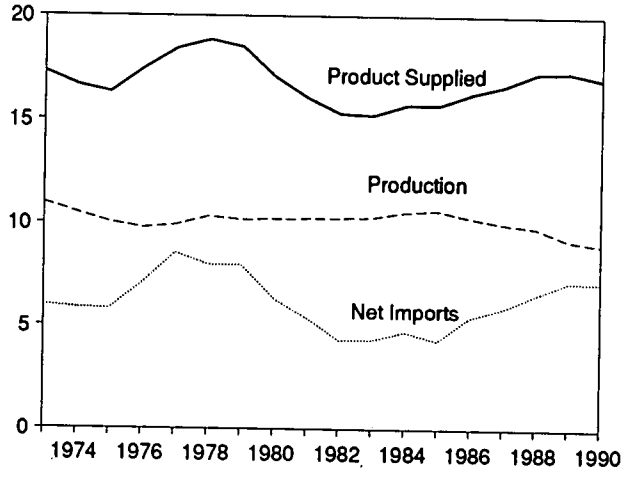
Figure 3.1 Petroleum Overview

(Million Barrels per Day)

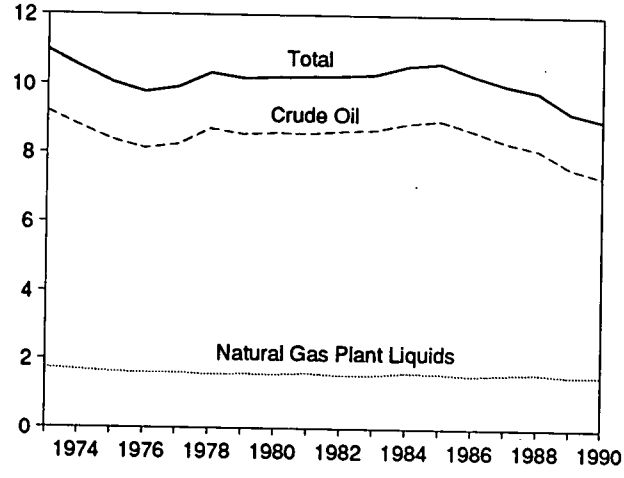
Overview, January-November



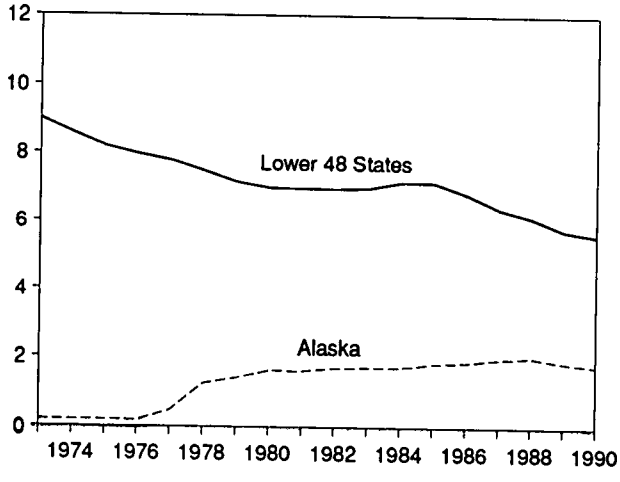
Overview, 1973-1990



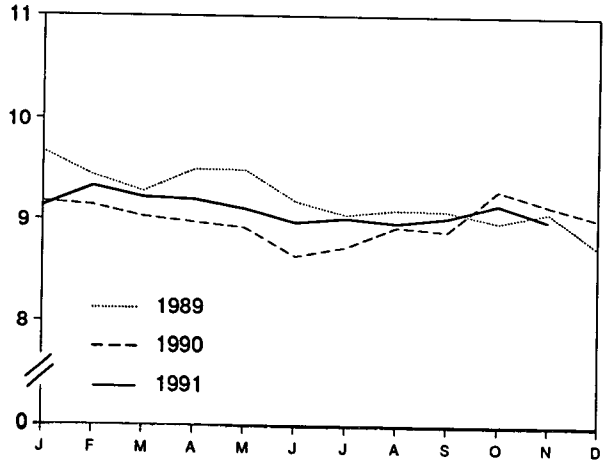
Production, 1973-1990



Crude Oil Production, 1973-1990



Total Production, Monthly

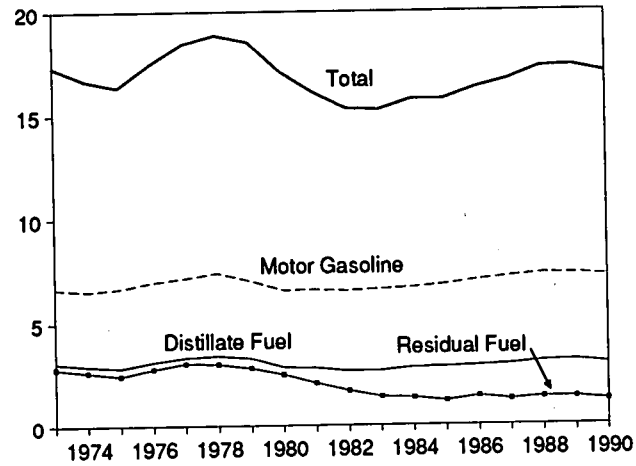


Note: Because vertical scales differ, graphs should not be compared.
Sources: Tables 3.1a, 3.1b, and 3.2a.

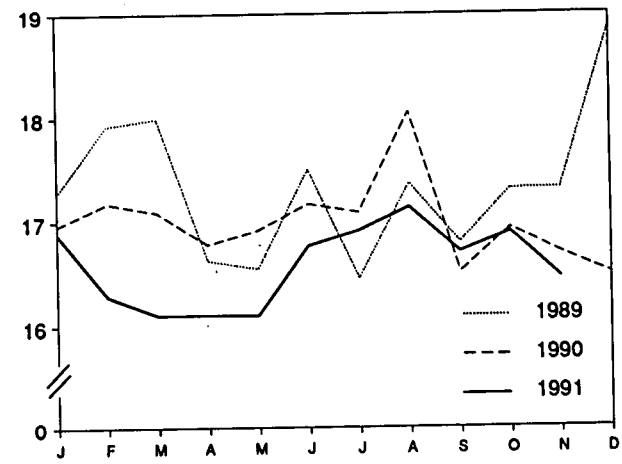
Figure 3.1 Petroleum Overview (Continued)

(Million Barrels per Day, Except as Noted)

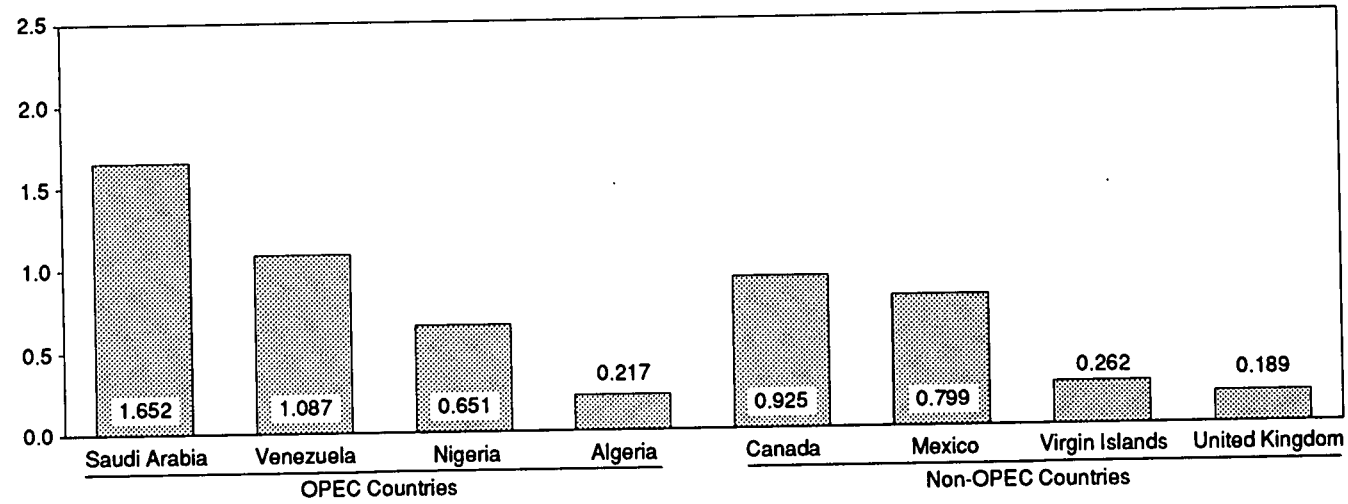
Product Supplied, 1973-1990



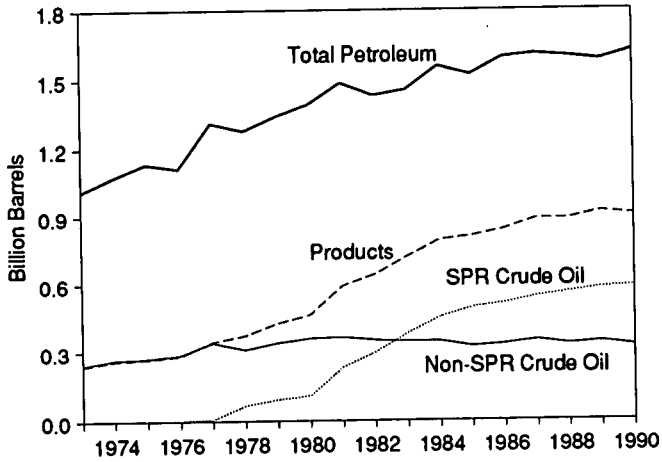
Total Product Supplied, Monthly



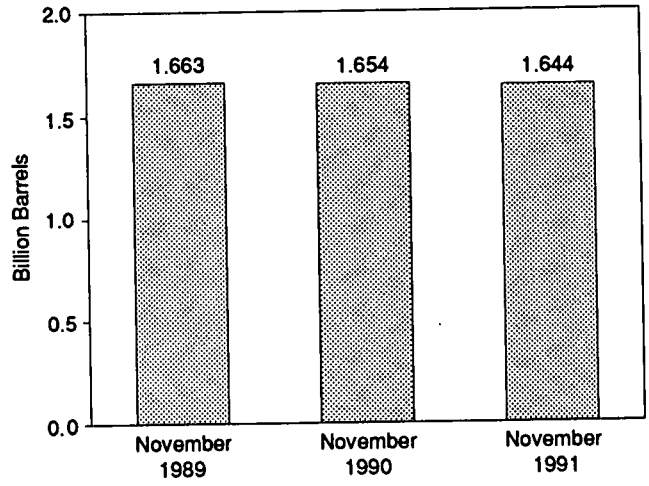
Imports from Selected Countries, October 1991



Stocks, End of Year, 1973-1990



Total Petroleum Stocks, End of Month



Note: OPEC = Organization of Petroleum Exporting Countries.
Note: SPR = Strategic Petroleum Reserve.
Note: Because vertical scales differ, graphs should not be compared.
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 Production		Imports			Unaccounted-for Crude Oil[d]	Crude Oil Used Directly[e]
	Total Domestic	Alaskan	Total	SPR[c]	Other		
	Thousand Barrels per Day						
1973 Average	**9,208**	**198**	**3,244**	**–**	**3,244**	**3**	**-19**
1974 Average	**8,774**	**193**	**3,477**	**–**	**3,477**	**-25**	**-15**
1975 Average	**8,375**	**191**	**4,105**	**–**	**4,105**	**17**	**-17**
1976 Average	**8,132**	**173**	**5,287**	**–**	**5,287**	**77**	***-19**
1977 Average	**8,245**	**464**	**6,615**	**21**	**6,594**	**-6**	**-14**
1978 Average	**8,707**	**1,229**	**6,356**	***161**	**6,195**	**-57**	***-15**
1979 Average	**8,552**	**1,401**	**6,519**	**67**	**6,452**	**-11**	***-14**
1980 Average	**8,597**	**1,617**	**5,263**	**44**	**5,219**	**34**	***-14**
1981 Average	**8,572**	**1,609**	**4,396**	**256**	**4,141**	**83**	**-58**
1982 Average	**8,649**	**1,696**	**3,488**	**165**	**3,323**	**71**	**-59**
1983 Average	**8,688**	**1,714**	**3,329**	**234**	**3,096**	**114**	**–**
1984 Average	**8,879**	**1,722**	**3,426**	**197**	**3,229**	**185**	**–**
1985 Average	**8,971**	**1,825**	**3,201**	**118**	**3,083**	**145**	**–**
1986 Average	**8,680**	**1,867**	**4,178**	**48**	**4,130**	**139**	**–**
1987 Average	**8,349**	**1,962**	**4,674**	**73**	**4,601**	**145**	**–**
1988 Average	**8,140**	**2,017**	**5,107**	**51**	**5,055**	**196**	**–**
1989 January	7,937	1,958	5,661	65	5,596	94	–
February	7,788	1,962	5,305	84	5,221	-26	–
March	7,575	1,686	5,035	75	4,960	426	–
April	7,772	1,890	5,750	59	5,690	91	–
May	7,816	1,973	5,729	77	5,652	280	–
June	7,624	1,861	5,976	55	5,920	135	–
July	7,444	1,725	6,214	75	6,139	426	–
August	7,544	1,870	6,565	32	6,533	213	–
September	7,548	1,875	6,028	59	5,969	121	–
October	7,453	1,877	6,187	37	6,149	-125	–
November	7,536	1,915	6,171	41	6,131	397	–
December	7,337	1,904	5,463	12	5,452	343	–
Average	**7,613**	**1,874**	**5,843**	**56**	**5,787**	**200**	**–**
1990 January	7,546	1,864	6,212	24	6,188	178	–
February	7,497	1,834	5,895	12	5,883	-98	–
March	7,433	1,819	6,117	44	6,073	540	–
April	7,407	1,802	5,813	38	5,775	-9	–
May	7,328	1,765	6,454	89	6,365	225	–
June	7,106	1,612	6,423	17	6,407	349	–
July	7,173	1,687	6,855	0	6,855	150	–
August	7,287	1,727	6,452	95	6,357	259	–
September	7,224	1,702	5,664	0	5,664	402	–
October	7,542	1,884	5,132	0	5,132	382	–
November	7,387	1,746	5,085	0	5,085	269	–
December	7,338	1,838	4,611	0	4,611	409	–
Average	**7,355**	**1,773**	**5,894**	**27**	**5,867**	**258**	**–**
1991 January	E 7,418	E 1,848	5,303	0	5,303	-14	–
February	E 7,548	E 1,908	5,498	0	5,498	424	–
March	E 7,481	E 1,887	5,129	0	5,129	134	–
April	E 7,467	E 1,798	5,523	0	5,523	294	–
May	E 7,368	E 1,771	6,387	0	6,387	596	–
June	E 7,282	E 1,757	6,317	0	6,317	47	–
July	E 7,326	E 1,775	5,949	0	5,949	418	–
August	E 7,272	E 1,731	6,667	0	6,667	8	–
September	E 7,332	E 1,787	5,795	0	5,795	546	–
October	RE 7,409	RE 1,843	R 5,683	0	R 5,683	R -30	–
November	PE 7,302	PE 1,767	E 5,627	E 0	E 5,627	E 107	–
11-Month Average	PE **7,381**	PE **1,806**	E **5,810**	E **0**	E **5,810**	E **228**	**–**
1990 11-Month Average	**7,357**	**1,767**	**6,013**	**29**	**5,984**	**243**	**–**
1989 11-Month Average	**7,639**	**1,871**	**5,878**	**60**	**5,819**	**187**	**–**

* Due to differences internal to Energy Information Administration data processing systems, some small discrepancies exist between the data in this table and the data in the *Petroleum Supply Annual* and *Petroleum Supply Monthly*. See Note 6 at end of section.

[a] Stocks are totals as of end of period.

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

[c] Strategic Petroleum Reserve.

[d] A balancing item.

[e] Beginning in January 1983, crude oil used directly as fuel is shown as product supplied.

[f] Stocks of Alaskan crude oil in transit are included beginning in January 1981. See Note 5 at end of section.

[g] Stock change is calculated by using new basis stock levels. See Note 4 at end of section.

Footnotes continued on following page.

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

	Disposition						Ending Stocks[a]		
	Crude Losses	Stock Change[b] SPR[c]	Stock Change[b] Other	Refinery Input	Exports	Product Supplied[e]	Total	SPR[c]	Other Primary
	Thousand Barrels per Day						Million Barrels		
1973 Average	13	–	-11	12,431	2	–	242	–	242
1974 Average	13	–	62	12,133	3	–	265	–	265
1975 Average	13	–	17	12,442	6	–	271	–	271
1976 Average	*14	–	39	13,416	8	–	285	–	285
1977 Average	16	20	150	14,602	50	–	348	7	340
1978 Average	16	163	-84	14,739	158	–	376	67	309
1979 Average	16	67	81	14,648	235	–	430	91	339
1980 Average	*14	45	52	13,481	287	–	[f]466	108	[f]358
1981 Average	5	336	[f]-46	12,470	228	–	594	230	363
1982 Average	3	174	-38	11,774	236	–	[g]644	294	[g]350
1983 Average	2	234	[g]-20	11,685	164	66	723	379	344
1984 Average	2	195	4	12,044	181	64	796	451	345
1985 Average	1	117	-67	12,002	204	60	814	493	321
1986 Average	(s)	50	28	12,716	154	49	843	512	331
1987 Average	(s)	80	49	12,854	151	34	890	541	349
1988 Average	(s)	52	-51	13,246	155	40	890	560	330
1989 January	(s)	65	115	13,330	137	47	895	562	334
February	(s)	85	-38	12,765	208	48	897	564	333
March	(s)	75	-202	12,963	156	45	893	566	327
April	(s)	60	434	12,956	139	23	908	568	340
May	(s)	77	194	13,405	131	19	916	570	346
June	(s)	44	-478	13,905	243	20	903	572	331
July	(s)	86	62	13,848	69	19	908	574	333
August	(s)	32	251	13,861	162	17	916	575	341
September	1	59	-203	13,791	32	18	912	577	335
October	0	37	36	13,360	61	21	914	578	336
November	(s)	41	500	13,420	120	25	930	579	351
December	(s)	12	-313	13,165	247	33	921	580	341
Average	(s)	56	30	13,401	142	28	921	580	341
1990 January	(s)	24	249	13,491	132	40	930	581	349
February	0	12	-342	13,487	102	36	920	581	339
March	0	44	1,013	12,876	132	24	953	582	371
April	(s)	38	-12	13,051	111	24	954	583	370
May	0	89	389	13,386	112	30	969	586	383
June	(s)	16	56	13,689	88	29	971	587	384
July	0	0	-154	14,212	89	31	966	587	379
August	(s)	94	-321	14,142	64	18	959	590	370
September	(s)	(s)	-897	14,104	68	14	932	590	343
October	(s)	-8	120	12,825	104	15	936	589	346
November	(s)	-111	-253	12,953	137	13	925	586	339
December	(s)	-10	-517	12,708	162	15	908	586	323
Average	(s)	16	-51	13,409	109	24	908	586	323
1991 January	0	0	-94	12,727	50	23	906	586	320
February	0	-147	397	13,052	153	17	913	582	331
March	(s)	-422	180	12,832	136	18	905	568	337
April	(s)	0	65	13,037	162	21	907	568	339
May	(s)	0	638	13,533	165	15	927	568	359
June	(s)	(s)	-364	13,915	78	16	916	568	348
July	0	(s)	-163	13,701	139	15	911	569	343
August	0	(s)	91	13,789	55	13	914	569	345
September	(s)	0	-143	13,691	109	16	910	569	341
October	(s)	[R] (s)	[R]54	[R]12,894	[R]91	[R]22	[R]911	569	[R]343
November	[E] (s)	[E] (s)	[E]-31	[E]12,913	[E]138	[E]14	[E]913	[E]569	[E]345
11-Month Average	[E] (s)	[E]-51	[E]56	[E]13,281	[E]116	[E]17	[E]913	[E]569	[E]345
1990 11-Month Average	(s)	18	-8	13,474	104	25	925	586	339
1989 11-Month Average	(s)	60	62	13,423	132	27	930	579	351

Footnotes continued.

PE=Preliminary estimate. R=Revised data. – =Not applicable. E=Estimate. (s)=Less than 500 barrels per day.

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

Source: Energy Information Administration, *Petroleum Supply Monthly*, December 1991, Table S2.

Table 3.3a Petroleum Imports: Algeria, Iraq, Kuwait, and Libya

(Thousand Barrels per Day)

	Arab OPEC[a]							
	Algeria		Iraq		Kuwait[c]		Libya	
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average	136	120	4	4	47	42	164	133
1974 Average	190	180	0	0	5	5	4	4
1975 Average	282	264	2	2	16	4	232	223
1976 Average	432	408	26	26	5	1	453	444
1977 Average	559	544	74	74	48	42	723	704
1978 Average	649	634	62	62	6	5	654	638
1979 Average	636	608	88	88	8	5	658	642
1980 Average	488	456	28	28	27	27	554	548
1981 Average	311	261	(s)	0	0	0	319	317
1982 Average	170	90	3	3	5	2	26	23
1983 Average	240	176	10	10	14	7	0	0
1984 Average	323	194	12	12	36	24	1	0
1985 Average	187	84	46	46	21	4	4	0
1986 Average	271	78	81	81	68	28	0	0
1987 Average	295	115	83	82	84	70	0	0
1988 Average	300	58	345	343	92	80	0	0
1989 January	335	93	345	345	32	32	0	0
February	310	62	430	430	79	79	0	0
March	272	40	361	361	0	0	0	0
April	235	75	555	526	0	0	0	0
May	272	34	424	402	64	64	0	0
June	205	30	384	384	309	303	0	0
July	263	43	530	530	334	314	0	0
August	216	77	528	517	348	348	0	0
September	256	58	513	498	271	271	0	0
October	250	74	509	495	191	191	0	0
November	323	71	443	442	148	148	0	0
December	288	60	372	367	105	105	0	0
Average	**269**	**60**	**449**	**441**	**157**	**155**	**0**	**0**
1990 January	413	97	690	657	250	250	0	0
February	282	47	500	488	150	140	0	0
March	301	67	585	580	100	82	0	0
April	234	62	588	588	50	50	0	0
May	259	38	727	724	64	64	0	0
June	333	72	708	708	105	94	0	0
July	308	70	1,120	1,120	43	33	0	0
August	360	80	966	966	243	207	0	0
September	279	69	318	318	33	33	0	0
October	173	15	0	0	0	0	0	0
November	177	46	0	0	0	0	0	0
December	242	92	0	0	0	0	0	0
Average	**280**	**63**	**518**	**514**	**86**	**79**	**0**	**0**
1991 January	327	63	0	0	0	0	0	0
February	246	38	0	0	0	0	0	0
March	222	76	0	0	0	0	0	0
April	282	90	0	0	0	0	0	0
May	308	87	0	0	0	0	0	0
June	304	70	0	0	0	0	0	0
July	202	44	0	0	0	0	0	0
August	182	16	0	0	0	0	0	0
September	205	19	0	0	34	34	0	0
October	217	53	0	0	33	33	0	0
10-Month Average	**249**	**56**	**0**	**0**	**7**	**7**	**0**	**0**
1990 10-Month Average	**294**	**62**	**622**	**617**	**104**	**95**	**0**	**0**
1989 10-Month Average	**261**	**59**	**458**	**449**	**163**	**161**	**0**	**0**

See footnotes at end of Table 3.3h.

Table 3.3b Petroleum Imports: Qatar, Saudi Arabia, U.A.E., and Total Arab OPEC

(Thousand Barrels per Day)

	Arab OPEC[a]						Total Arab OPEC[a]	
	Qatar		Saudi Arabia[c]		United Arab Emirates			
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average	7	7	486	462	71	71	915	838
1974 Average	17	17	461	438	74	69	752	713
1975 Average	18	18	715	701	117	117	1,383	1,330
1976 Average	24	24	1,230	1,222	254	254	2,424	2,378
1977 Average	67	67	1,380	1,373	335	333	3,185	3,136
1978 Average	64	64	1,144	1,142	385	385	2,963	2,930
1979 Average	31	31	1,356	1,347	281	281	3,058	3,002
1980 Average	22	22	1,261	1,250	172	172	2,551	2,503
1981 Average	7	7	1,129	1,112	81	77	1,848	1,774
1982 Average	7	7	552	530	92	81	854	736
1983 Average	(s)	0	337	321	30	18	632	533
1984 Average	5	4	325	309	117	90	819	634
1985 Average	(s)	0	168	132	45	35	472	300
1986 Average	13	12	685	618	44	38	1,162	854
1987 Average	0	0	751	642	61	56	1,274	965
1988 Average	0	0	1,073	911	29	23	1,839	1,415
1989 January	0	0	1,449	1,335	59	59	2,219	1,863
February	0	0	1,290	1,177	17	17	2,126	1,765
March	0	0	1,108	1,025	64	64	1,805	1,490
April	0	0	1,226	1,074	14	14	2,030	1,689
May	0	0	1,155	1,056	61	61	1,977	1,617
June	0	0	1,249	1,147	17	17	2,164	1,881
July	0	0	1,182	1,096	0	0	2,308	1,982
August	0	0	1,316	1,159	44	0	2,453	2,101
September	26	26	1,109	1,021	20	0	2,195	1,874
October	0	0	1,158	1,047	14	14	2,122	1,819
November	0	0	1,342	1,230	0	0	2,257	1,891
December	0	0	1,115	1,029	26	0	1,905	1,561
Average	2	2	1,224	1,116	28	21	2,130	1,794
1990 January	0	0	1,214	1,055	37	0	2,605	2,060
February	0	0	1,557	1,372	18	18	2,506	2,065
March	0	0	1,157	1,060	17	17	2,161	1,805
April	43	43	1,149	950	9	0	2,073	1,693
May	0	0	1,225	1,076	73	60	2,349	1,963
June	0	0	1,153	1,041	20	0	2,318	1,916
July	0	0	1,369	1,242	13	13	2,853	2,478
August	0	0	1,189	1,052	0	0	2,757	2,305
September	0	0	1,286	1,168	0	0	1,915	1,588
October	0	0	1,619	1,473	0	0	1,792	1,488
November	0	0	1,581	1,431	0	0	1,758	1,477
December	0	0	1,587	1,431	14	0	1,843	1,523
Average	4	4	1,339	1,195	17	9	2,244	1,864
1991 January	0	0	1,934	1,782	0	0	2,261	1,846
February	0	0	1,566	1,538	0	0	1,812	1,576
March	0	0	1,623	1,586	0	0	1,845	1,662
April	0	0	1,764	1,702	0	0	2,046	1,792
May	0	0	2,258	2,053	0	0	2,566	2,140
June	0	0	1,841	1,795	0	0	2,145	1,865
July	0	0	1,725	1,641	0	0	1,928	1,685
August	0	0	2,019	1,964	7	0	2,208	1,980
September	0	0	1,708	1,562	0	0	1,947	1,615
October	0	0	1,652	1,545	18	18	1,920	1,649
10-Month Average	0	0	1,812	1,719	3	2	2,070	1,783
1990 10-Month Average	4	4	1,290	1,148	19	11	2,333	1,937
1989 10-Month Average	3	3	1,224	1,113	31	25	2,140	1,809

See footnotes at end of Table 3.3h.

Table 3.3c Petroleum Imports: Ecuador, Gabon, Indonesia, and Iran

(Thousand Barrels per Day)

	Non-Arab OPEC[a]							
	Ecuador		Gabon		Indonesia		Iran	
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average	**48**	**47**	**0**	**0**	**213**	**200**	**223**	**216**
1974 Average	**42**	**42**	**23**	**23**	**300**	**284**	**469**	**463**
1975 Average	**57**	**57**	**27**	**27**	**390**	**379**	**280**	**278**
1976 Average	**51**	**51**	**28**	**26**	**539**	**537**	**298**	**298**
1977 Average	**57**	**55**	**42**	**35**	**541**	**507**	**535**	**530**
1978 Average	**54**	**38**	**41**	**38**	**573**	**533**	**555**	**554**
1979 Average	**42**	**30**	**42**	**42**	**420**	**380**	**304**	**297**
1980 Average	**27**	**17**	**26**	**25**	**348**	**314**	**9**	**8**
1981 Average	**48**	**38**	**35**	**35**	**366**	**318**	**0**	**0**
1982 Average	**42**	**32**	**40**	**40**	**248**	**226**	**35**	**35**
1983 Average	**61**	**56**	**59**	**59**	**338**	**315**	**48**	**48**
1984 Average	**55**	**47**	**58**	**57**	**343**	**304**	**10**	**10**
1985 Average	**67**	**56**	**52**	**51**	**314**	**292**	**27**	**27**
1986 Average	**77**	**64**	**26**	**25**	**318**	**297**	**19**	**19**
1987 Average	**29**	**23**	**35**	**35**	**285**	**262**	**98**	**98**
1988 Average	**47**	**33**	**16**	**15**	**205**	**186**	[d] **(s)**	[d] **(s)**
1989 January	52	46	0	0	218	201	0	0
February	74	67	11	11	292	244	0	0
March	100	85	10	10	167	107	0	0
April	116	111	72	72	128	97	0	0
May	123	112	19	12	264	264	0	0
June	75	75	88	88	138	129	0	0
July	86	86	42	37	113	108	0	0
August	97	79	87	87	115	100	0	0
September	115	109	32	32	113	91	0	0
October	122	105	50	50	167	130	0	0
November	71	62	99	99	231	208	0	0
December	41	23	85	85	263	222	0	0
Average	**89**	**80**	**50**	**49**	**183**	**158**	**0**	**0**
1990 January	48	35	75	75	153	118	0	0
February	60	40	43	43	254	189	0	0
March	49	38	134	134	138	97	0	0
April	31	29	32	28	88	80	0	0
May	17	12	27	27	85	77	0	0
June	98	86	59	59	138	129	0	0
July	60	43	69	69	143	137	0	0
August	81	69	119	119	69	55	0	0
September	43	37	59	59	111	111	0	0
October	49	43	50	50	88	88	0	0
November	13	13	71	71	72	72	0	0
December	35	12	30	30	45	36	0	0
Average	**49**	**38**	**64**	**64**	**114**	**98**	**0**	**0**
1991 January	12	6	41	41	61	61	0	0
February	66	55	95	95	162	153	0	0
March	67	58	29	29	93	93	0	0
April	35	24	72	72	61	61	0	0
May	109	103	96	96	111	111	0	0
June	129	126	70	70	187	187	0	0
July	62	47	137	137	88	88	81	81
August	112	93	56	56	93	87	48	48
September	31	25	91	91	83	64	152	152
October	30	24	137	137	118	91	43	43
10-Month Average	**65**	**56**	**82**	**82**	**105**	**99**	**33**	**33**
1990 10-Month Average	**53**	**43**	**67**	**67**	**126**	**107**	**0**	**0**
1989 10-Month Average	**96**	**88**	**41**	**40**	**171**	**147**	**0**	**0**

See footnotes at end of Table 3.3h.

Table 3.3d Petroleum Imports: Nigeria, Venezuela, Total Non-Arab OPEC, and Total OPEC

(Thousand Barrels per Day)

	Non-Arab OPEC[a]				Total Non-Arab OPEC[a]		Total OPEC[a]	
	Nigeria		Venezuela					
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average	**459**	**448**	**1,135**	**344**	**2,078**	**1,257**	**2,993**	**2,095**
1974 Average	**713**	**697**	**979**	**319**	**2,527**	**1,827**	**3,280**	**2,540**
1975 Average	**762**	**746**	**702**	**395**	**2,219**	**1,882**	**3,601**	**3,211**
1976 Average	**1,025**	**1,014**	**700**	**241**	**2,642**	**2,167**	**5,066**	**4,545**
1977 Average	**1,143**	**1,130**	**690**	**250**	**3,008**	**2,507**	**6,193**	**5,643**
1978 Average	**919**	**910**	**646**	**181**	**2,788**	**2,254**	**5,751**	**5,184**
1979 Average	**1,080**	**1,069**	**690**	**293**	**2,579**	**2,110**	**5,637**	**5,112**
1980 Average	**857**	**841**	**481**	**156**	**1,749**	**1,361**	**4,300**	**3,864**
1981 Average	**620**	**611**	**406**	**147**	**1,476**	**1,149**	**3,323**	**2,922**
1982 Average	**514**	**510**	**412**	**155**	**1,291**	**998**	**2,146**	**1,734**
1983 Average	**302**	**301**	**422**	**164**	**1,231**	**944**	**1,862**	**1,477**
1984 Average	**216**	**207**	**548**	**253**	**1,230**	**878**	**2,049**	**1,512**
1985 Average	**293**	**280**	**605**	**306**	**1,358**	**1,012**	**1,830**	**1,312**
1986 Average	**440**	**437**	**793**	**416**	**1,674**	**1,259**	**2,837**	**2,113**
1987 Average	**535**	**529**	**804**	**488**	**1,787**	**1,435**	**3,060**	**2,400**
1988 Average	**618**	**607**	**794**	**439**	**1,681**	**1,281**	**3,520**	**2,696**
1989 January	782	782	941	470	1,993	1,498	4,212	3,361
February	567	559	775	368	1,719	1,249	3,845	3,015
March	702	696	909	468	1,888	1,366	3,693	2,856
April	750	722	831	424	1,897	1,426	3,927	3,115
May	789	789	853	509	2,048	1,686	4,025	3,303
June	864	841	778	486	1,943	1,619	4,106	3,500
July	1,094	1,085	794	447	2,130	1,764	4,437	3,746
August	946	932	834	486	2,078	1,683	4,531	3,784
September	867	836	914	568	2,041	1,636	4,236	3,510
October	713	694	1,004	592	2,056	1,571	4,177	3,390
November	770	757	924	549	2,096	1,674	4,353	3,565
December	915	886	903	561	2,206	1,777	4,111	3,338
Average	**815**	**800**	**873**	**495**	**2,010**	**1,582**	**4,140**	**3,376**
1990 January	830	830	1,155	696	2,260	1,754	4,865	3,813
February	833	816	898	564	2,088	1,652	4,594	3,717
March	1,054	1,031	893	543	2,268	1,843	4,429	3,648
April	969	941	1,005	692	2,125	1,772	4,198	3,465
May	1,008	997	1,087	705	2,225	1,818	4,574	3,781
June	778	760	1,070	704	2,142	1,737	4,460	3,653
July	860	855	1,007	665	2,139	1,769	4,992	4,246
August	881	881	1,014	617	2,164	1,741	4,921	4,046
September	755	743	1,062	740	2,029	1,690	3,944	3,277
October	557	536	982	717	1,725	1,434	3,517	2,921
November	574	555	1,142	725	1,871	1,435	3,629	2,912
December	499	461	975	616	1,585	1,155	3,428	2,678
Average	**800**	**784**	**1,025**	**666**	**2,052**	**1,650**	**4,296**	**3,514**
1991 January	504	481	1,021	689	1,638	1,277	3,899	3,123
February	721	717	959	686	2,003	1,705	3,815	3,282
March	523	523	991	631	1,703	1,334	3,548	2,996
April	666	638	846	470	1,680	1,265	3,727	3,057
May	860	838	978	581	2,153	1,728	4,719	3,868
June	832	827	1,019	581	2,237	1,791	4,382	3,655
July	836	820	1,084	676	2,289	1,850	4,216	3,536
August	1,016	983	1,038	701	2,363	1,966	4,571	3,946
September	489	467	1,104	773	1,949	1,572	3,897	3,187
October	651	623	1,087	777	2,067	1,694	3,987	3,343
10-Month Average	**710**	**692**	**1,014**	**657**	**2,009**	**1,618**	**4,079**	**3,401**
1990 10-Month Average	**853**	**839**	**1,018**	**665**	**2,117**	**1,721**	**4,451**	**3,658**
1989 10-Month Average	**809**	**796**	**865**	**483**	**1,982**	**1,553**	**4,122**	**3,361**

See footnotes at end of Table 3.3h.

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

(Thousand Barrels per Day)

	Non-OPEC[b]											
	Angola		Australia		Bahama Islands		Brazil		Canada		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**	**0**	**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**	**0**
1982 Average	**44**	**42**	**5**	**(s)**	**65**	**0**	**47**	**19**	**482**	**214**	**40**	**8**
1983 Average	**78**	**71**	**4**	**0**	**125**	**0**	**41**	**2**	**547**	**274**	**34**	**6**
1984 Average	**90**	**85**	**38**	**25**	**88**	**0**	**60**	**(s)**	**630**	**341**	**46**	**15**
1985 Average	**110**	**104**	**37**	**21**	**40**	**0**	**61**	**0**	**770**	**468**	**59**	**36**
1986 Average	**112**	**102**	**41**	**30**	**37**	**0**	**50**	**0**	**807**	**570**	**90**	**68**
1987 Average	**192**	**180**	**58**	**49**	**37**	**0**	**84**	**0**	**848**	**608**	**82**	**63**
1988 Average	**212**	**203**	**64**	**59**	**32**	**0**	**98**	**0**	**999**	**681**	**88**	**82**
1989 January	160	160	19	19	53	0	93	0	1,065	696	38	38
February	249	237	32	27	24	0	131	0	1,007	639	32	26
March	295	285	16	0	41	0	119	0	961	633	25	24
April	256	256	43	41	55	0	76	0	877	599	97	83
May	294	294	12	12	29	0	65	0	901	647	125	119
June	256	245	31	31	28	0	92	0	921	673	66	60
July	305	305	20	20	32	0	80	0	849	596	150	135
August	317	306	39	30	19	0	67	0	911	616	68	67
September	321	321	59	45	8	0	73	0	949	668	87	87
October	335	335	58	53	44	0	66	0	857	590	85	84
November	378	368	76	76	41	0	86	0	911	594	94	94
December	238	238	23	16	29	0	39	0	973	613	90	90
Average	**284**	**279**	**36**	**31**	**34**	**0**	**82**	**0**	**931**	**630**	**80**	**76**
1990 January	262	262	41	41	80	0	48	0	982	605	121	121
February	346	346	58	55	78	0	45	0	946	585	53	51
March	296	296	41	41	35	0	8	0	850	583	83	83
April	281	281	25	20	51	0	40	0	925	617	80	74
May	235	235	69	69	29	0	114	0	981	654	66	65
June	260	260	44	44	36	0	82	0	942	699	49	43
July	303	303	126	101	25	0	93	0	899	659	132	122
August	134	134	56	33	40	0	45	0	952	676	79	77
September	135	123	57	45	45	0	8	0	924	632	47	42
October	139	139	31	31	9	0	12	0	917	636	85	85
November	238	238	28	28	0	0	74	0	902	645	113	113
December	224	224	64	60	13	0	16	0	987	713	47	47
Average	**237**	**236**	**53**	**47**	**37**	**0**	**49**	**0**	**934**	**643**	**80**	**77**
1991 January	232	232	21	21	25	0	29	0	967	722	68	63
February	202	202	0	0	14	0	13	0	1,123	877	102	96
March	186	186	0	0	0	0	0	0	1,051	764	96	96
April	337	337	55	55	35	0	17	0	1,092	764	113	113
May	220	220	57	57	42	0	31	0	1,022	752	119	113
June	205	205	43	31	30	0	41	0	1,081	806	144	139
July	264	264	12	12	19	0	21	0	831	606	88	88
August	298	298	37	22	78	0	27	0	995	687	85	75
September	230	230	24	24	29	0	19	0	1,132	849	91	86
October	300	300	13	0	51	0	16	0	925	639	29	24
10-Month Average	**248**	**248**	**26**	**22**	**33**	**0**	**21**	**0**	**1,020**	**745**	**93**	**89**
1990 10-Month Average	**238**	**237**	**55**	**48**	**43**	**0**	**50**	**0**	**932**	**635**	**80**	**77**
1989 10-Month Average	**279**	**275**	**33**	**28**	**33**	**0**	**86**	**0**	**929**	**636**	**78**	**73**

See footnotes at end of Table 3.3h.

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

(Thousand Barrels per Day)

	Non-OPEC[b]									
	Colombia		Italy		Malaysia		Mexico		Netherlands	
	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	0	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 January	261	204	19	0	62	62	809	748	57	0
February	146	105	77	12	10	10	756	706	153	0
March	185	146	59	0	15	15	667	621	30	0
April	168	140	9	0	47	47	1,002	941	48	0
May	122	68	26	10	22	22	808	764	31	0
June	139	113	33	0	110	110	688	639	46	0
July	108	71	1	0	16	16	758	708	34	0
August	191	159	30	14	13	13	806	765	32	0
September	163	146	22	0	10	10	721	659	54	0
October	147	116	74	0	28	28	837	760	43	0
November	227	188	42	0	97	97	743	715	33	0
December	199	173	19	0	33	33	610	566	37	0
Average	**172**	**136**	**34**	**3**	**39**	**39**	**767**	**716**	**49**	**0**
1990 January	188	146	124	0	14	14	776	691	129	0
February	203	168	76	0	42	38	725	669	80	0
March	177	146	47	0	28	28	815	757	21	0
April	198	143	53	0	38	38	466	414	47	0
May	220	175	101	10	0	0	788	688	63	0
June	180	117	95	0	9	9	912	815	92	0
July	169	111	56	11	20	20	706	651	54	0
August	203	132	43	0	142	142	773	676	39	0
September	97	84	38	0	105	105	871	807	20	0
October	183	159	21	0	78	78	828	793	37	0
November	209	177	32	0	8	8	761	706	49	0
December	161	121	13	0	6	6	637	595	28	0
Average	**182**	**140**	**58**	**2**	**41**	**40**	**755**	**689**	**55**	**0**
1991 January	194	174	25	0	0	0	779	759	6	0
February	151	98	42	13	9	9	742	693	8	0
March	157	127	29	0	21	21	791	772	33	0
April	163	131	41	12	0	0	889	819	35	0
May	163	112	60	0	66	66	757	736	45	0
June	169	124	46	0	49	49	919	872	49	0
July	163	111	54	0	9	9	835	748	47	0
August	219	179	57	11	14	14	878	797	30	0
September	157	103	89	0	10	10	805	768	44	0
October	128	80	41	0	64	64	799	754	16	0
10-Month Average	**167**	**124**	**48**	**4**	**24**	**24**	**820**	**772**	**31**	**0**
1990 10-Month Average	**182**	**138**	**65**	**2**	**48**	**47**	**767**	**697**	**58**	**0**
1989 10-Month Average	**163**	**127**	**35**	**3**	**33**	**33**	**785**	**731**	**52**	**0**

See footnotes at end of Table 3.3h.

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

(Thousand Barrels per Day)

	Non-OPEC[b]											
	Netherlands Antilles		Norway		Puerto Rico		Spain		Trinidad and Tobago		United Kingdom	
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average	**585**	**0**	**1**	**0**	**99**	**0**	**26**	**0**	**255**	**60**	**15**	**0**
1974 Average	**511**	**0**	**1**	**1**	**90**	**0**	**12**	**0**	**251**	**63**	**8**	**0**
1975 Average	**332**	**0**	**17**	**12**	**90**	**0**	**1**	**0**	**242**	**115**	**14**	**(s)**
1976 Average	**275**	**0**	**36**	**35**	**88**	**0**	**1**	**0**	**274**	**104**	**31**	**13**
1977 Average	**211**	**0**	**50**	**48**	**105**	**0**	**10**	**0**	**289**	**134**	**126**	**97**
1978 Average	**229**	**0**	**104**	**104**	**94**	**0**	**3**	**0**	**253**	**142**	**180**	**169**
1979 Average	**231**	**0**	**75**	**75**	**92**	**0**	**4**	**0**	**190**	**123**	**202**	**197**
1980 Average	**225**	**0**	**144**	**144**	**88**	**0**	**1**	**0**	**176**	**115**	**176**	**173**
1981 Average	**197**	**0**	**119**	**114**	**62**	**0**	**1**	**(s)**	**133**	**102**	**375**	**369**
1982 Average	**175**	**0**	**102**	**102**	**50**	**0**	**3**	**(s)**	**112**	**92**	**456**	**441**
1983 Average	**189**	**0**	**66**	**65**	**40**	**0**	**2**	**(s)**	**96**	**83**	**382**	**365**
1984 Average	**188**	**0**	**114**	**112**	**42**	**0**	**11**	**0**	**94**	**87**	**402**	**378**
1985 Average	**40**	**0**	**32**	**31**	**28**	**0**	**29**	**1**	**113**	**98**	**310**	**278**
1986 Average	**25**	**0**	**60**	**53**	**21**	**0**	**53**	**0**	**125**	**93**	**350**	**317**
1987 Average	**29**	**0**	**80**	**70**	**21**	**0**	**55**	**0**	**106**	**75**	**352**	**304**
1988 Average	**36**	**0**	**67**	**62**	**22**	**0**	**68**	**0**	**97**	**71**	**315**	**254**
1989 January	59	0	33	33	30	0	101	0	105	79	215	138
February	44	0	233	222	24	0	70	0	92	85	221	130
March	52	0	167	167	38	0	49	0	82	65	174	130
April	14	0	186	175	24	0	56	0	117	99	148	88
May	32	0	184	184	46	0	46	0	68	49	202	169
June	34	0	179	179	32	0	99	0	143	100	181	132
July	49	0	48	35	39	0	51	0	89	47	328	210
August	43	0	117	98	21	0	69	0	101	79	370	316
September	35	0	146	119	33	0	70	0	95	69	191	149
October	38	0	166	143	32	0	38	0	71	71	309	234
November	72	0	155	132	42	0	71	0	91	80	165	141
December	29	0	57	50	24	0	83	0	81	63	78	71
Average	**42**	**0**	**138**	**127**	**32**	**0**	**67**	**0**	**94**	**73**	**215**	**160**
1990 January	9	0	75	67	35	0	60	0	109	84	219	147
February	27	0	43	37	32	0	53	0	89	67	74	23
March	10	0	50	50	32	0	13	0	103	96	257	221
April	40	0	134	118	33	0	17	0	114	81	304	288
May	20	0	166	166	38	0	87	0	88	58	369	305
June	21	0	209	199	27	0	66	0	118	83	249	233
July	30	0	129	129	35	0	104	0	107	73	224	179
August	41	0	159	159	29	0	54	0	108	91	183	179
September	33	0	125	119	20	0	23	0	89	70	155	155
October	43	0	67	67	29	0	21	0	83	76	81	44
November	46	0	17	17	50	0	25	0	81	73	112	56
December	53	0	43	17	29	0	38	0	62	62	33	19
Average	**31**	**0**	**102**	**96**	**32**	**0**	**47**	**0**	**96**	**76**	**189**	**155**
1991 January	103	0	45	34	22	0	26	0	75	64	32	19
February	23	0	37	37	20	0	18	0	76	76	34	21
March	56	0	25	16	14	0	13	0	86	73	48	19
April	61	0	43	35	23	0	66	0	84	64	61	37
May	113	0	165	156	42	0	53	0	61	61	222	188
June	84	0	99	84	19	0	41	0	114	104	97	70
July	86	0	69	63	25	0	22	0	91	72	228	164
August	100	0	142	136	42	0	48	0	91	66	254	217
September	75	0	79	72	28	0	42	0	119	75	218	194
October	90	0	98	98	12	0	24	0	88	76	189	166
10-Month Average	**80**	**0**	**81**	**73**	**25**	**0**	**35**	**0**	**88**	**73**	**139**	**111**
1990 10-Month Average	**27**	**0**	**116**	**111**	**31**	**0**	**50**	**0**	**101**	**78**	**213**	**178**
1989 10-Month Average	**40**	**0**	**145**	**134**	**32**	**0**	**65**	**0**	**96**	**74**	**234**	**171**

See footnotes at end of Table 3.3h.

Table 3.3h Petroleum Imports: U.S.S.R., Virgin Islands, Total Non-OPEC, and Total Imports

(Thousand Barrels per Day)

	Non-OPEC[b]						Total Non-OPEC[b]		Total Imports	
	U.S.S.R.		Virgin Islands		Other Non-OPEC					
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average	**26**	**0**	**329**	**0**	**153**	**36**	**3,263**	**1,149**	**6,256**	**3,244**
1974 Average	**20**	**0**	**391**	**0**	**122**	**30**	**2,832**	**937**	**6,112**	**3,477**
1975 Average	**14**	**0**	**406**	**0**	**120**	**14**	**2,454**	**893**	**6,056**	**4,105**
1976 Average	**11**	**2**	**422**	**0**	**203**	**101**	**2,247**	**742**	**7,313**	**5,287**
1977 Average	**12**	**2**	**466**	**0**	**287**	**157**	**2,614**	**971**	**8,807**	**6,615**
1978 Average	**8**	**1**	**428**	**0**	**239**	**146**	**2,612**	**1,172**	**8,363**	**6,356**
1979 Average	**1**	**0**	**431**	**0**	**269**	**192**	**2,819**	**1,407**	**8,456**	**6,519**
1980 Average	**1**	**0**	**388**	**0**	**219**	**162**	**2,609**	**1,399**	**6,909**	**5,263**
1981 Average	**5**	**(s)**	**327**	**0**	**236**	**163**	**2,672**	**1,474**	**5,996**	**4,396**
1982 Average	**1**	**0**	**316**	**0**	**306**	**174**	**2,968**	**1,754**	**5,113**	**3,488**
1983 Average	**1**	**(s)**	**282**	**0**	**378**	**215**	**3,189**	**1,853**	**5,051**	**3,329**
1984 Average	**13**	**(s)**	**294**	**0**	**411**	**210**	**3,388**	**1,914**	**5,437**	**3,426**
1985 Average	**8**	**(s)**	**247**	**0**	**394**	**137**	**3,237**	**1,888**	**5,067**	**3,201**
1986 Average	**18**	**(s)**	**244**	**0**	**426**	**144**	**3,387**	**2,065**	**6,224**	**4,178**
1987 Average	**10**	**0**	**272**	**0**	**459**	**196**	**3,617**	**2,274**	**6,678**	**4,674**
1988 Average	**29**	**0**	**242**	**0**	**487**	**196**	**3,882**	**2,411**	**7,402**	**5,107**
1989 January	19	0	415	0	429	122	4,043	2,300	8,255	5,661
February	12	0	369	0	505	92	4,186	2,290	8,032	5,305
March	58	0	324	0	409	93	3,763	2,179	7,456	5,035
April	49	0	407	0	473	165	4,151	2,635	8,078	5,750
May	27	0	379	0	334	88	3,753	2,426	7,778	5,729
June	79	0	363	0	351	195	3,871	2,476	7,977	5,976
July	100	0	331	0	544	324	3,932	2,468	8,369	6,214
August	43	0	239	0	533	319	4,029	2,781	8,560	6,565
September	68	0	190	0	470	244	3,766	2,517	8,002	6,028
October	66	0	180	0	651	383	4,124	2,796	8,301	6,187
November	48	0	279	0	337	121	3,988	2,606	8,341	6,171
December	0	0	377	0	449	213	3,468	2,126	7,579	5,463
Average	**48**	**0**	**321**	**0**	**457**	**197**	**3,921**	**2,467**	**8,061**	**5,843**
1990 January	62	0	409	0	588	220	4,332	2,399	9,197	6,212
February	40	0	323	0	471	139	3,805	2,177	8,399	5,895
March	0	0	264	0	405	168	3,536	2,469	7,965	6,117
April	20	0	283	0	513	275	3,660	2,348	7,858	5,813
May	0	0	285	0	541	248	4,260	2,673	8,834	6,454
June	19	0	299	0	579	270	4,287	2,771	8,747	6,423
July	92	0	252	0	500	251	4,057	2,609	9,048	6,855
August	73	0	230	0	340	107	3,722	2,406	8,644	6,452
September	49	0	240	0	336	206	3,417	2,386	7,361	5,664
October	87	10	204	0	245	92	3,199	2,210	6,717	5,132
November	63	0	312	0	254	112	3,374	2,173	7,003	5,085
December	34	0	291	0	233	70	3,011	1,933	6,439	4,611
Average	**45**	**1**	**282**	**0**	**417**	**180**	**3,721**	**2,381**	**8,018**	**5,894**
1991 January	28	0	261	0	229	91	3,167	2,180	7,066	5,303
February	17	0	222	0	180	96	3,030	2,217	6,844	5,498
March	13	0	214	0	169	60	3,002	2,133	6,550	5,129
April	33	0	245	0	256	99	3,647	2,466	7,374	5,523
May	42	0	264	0	233	58	3,777	2,519	8,496	6,387
June	0	0	234	0	330	179	3,795	2,662	8,177	6,317
July	58	0	191	0	384	275	3,498	2,414	7,714	5,949
August	80	23	208	0	369	197	4,052	2,721	8,622	6,667
September	23	0	261	0	374	197	3,848	2,608	7,745	5,795
October	13	0	262	0	252	139	3,409	2,340	R7,396	R5,683
10-Month Average	**31**	**2**	**236**	**0**	**278**	**139**	**3,525**	**2,426**	**7,604**	**5,828**
1990 10-Month Average	**44**	**1**	**278**	**0**	**451**	**198**	**3,828**	**2,447**	**8,279**	**6,105**
1989 10-Month Average	**52**	**0**	**319**	**0**	**470**	**204**	**3,960**	**2,488**	**8,082**	**5,850**

[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] 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.

[c] Imports from the Neutral Zone between Kuwait and Saudi Arabia are included in Saudi Arabia.

[d] 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 29, 1987.

R=Revised data. (s)=Less than 500 barrels per day.

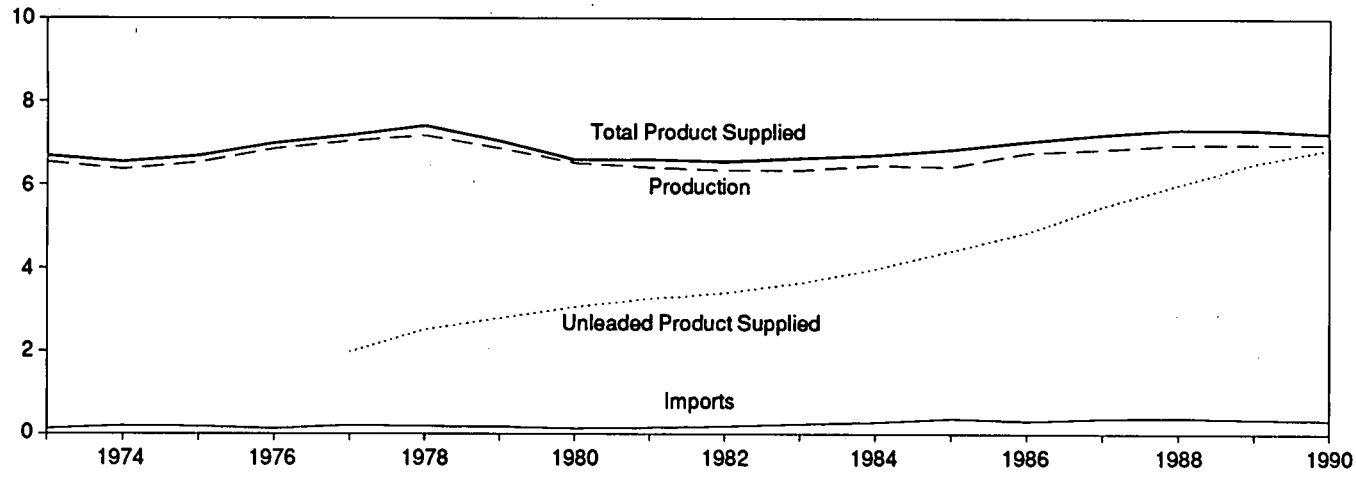
Notes: • Beginning in October 1977, Strategic Petroleum Reserve imports are included. • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration, *Petroleum Supply Monthly*, December 1991, Table S3.

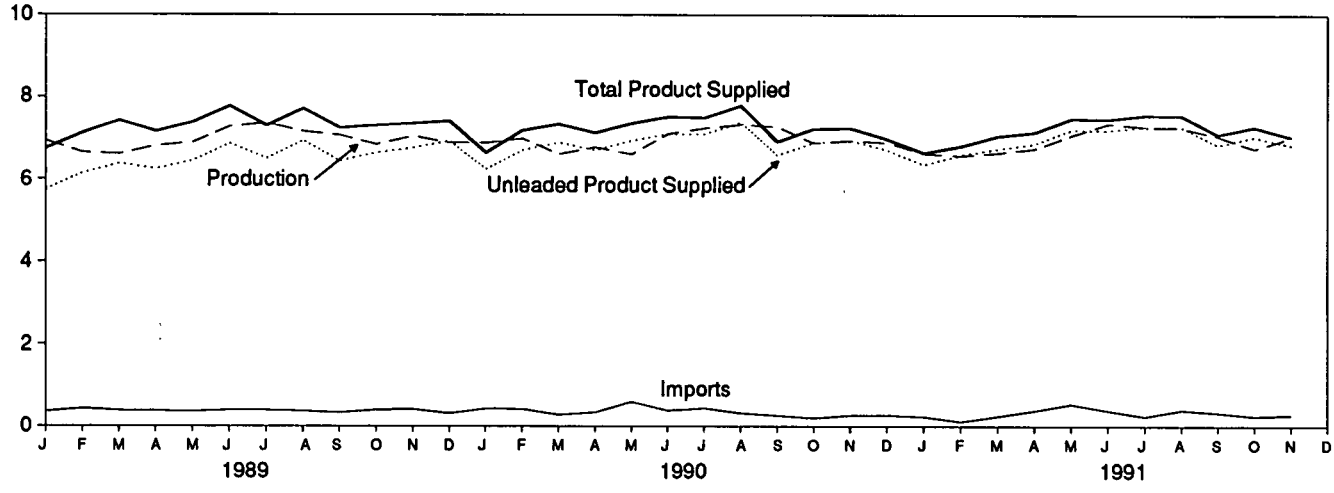
Figure 3.2 Finished Motor Gasoline

(Million Barrels per Day, Except as Noted)

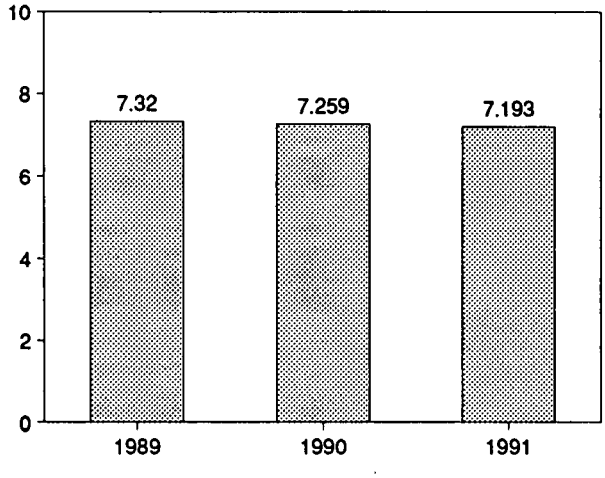
Overview, 1973-1990



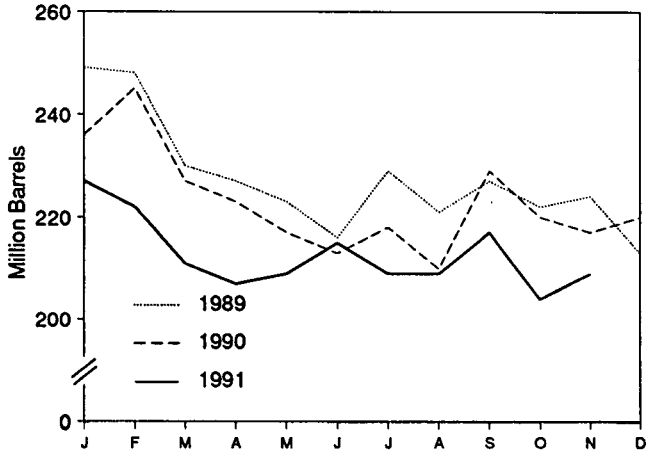
Overview, Monthly



Total Product Supplied, January-November



Total 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

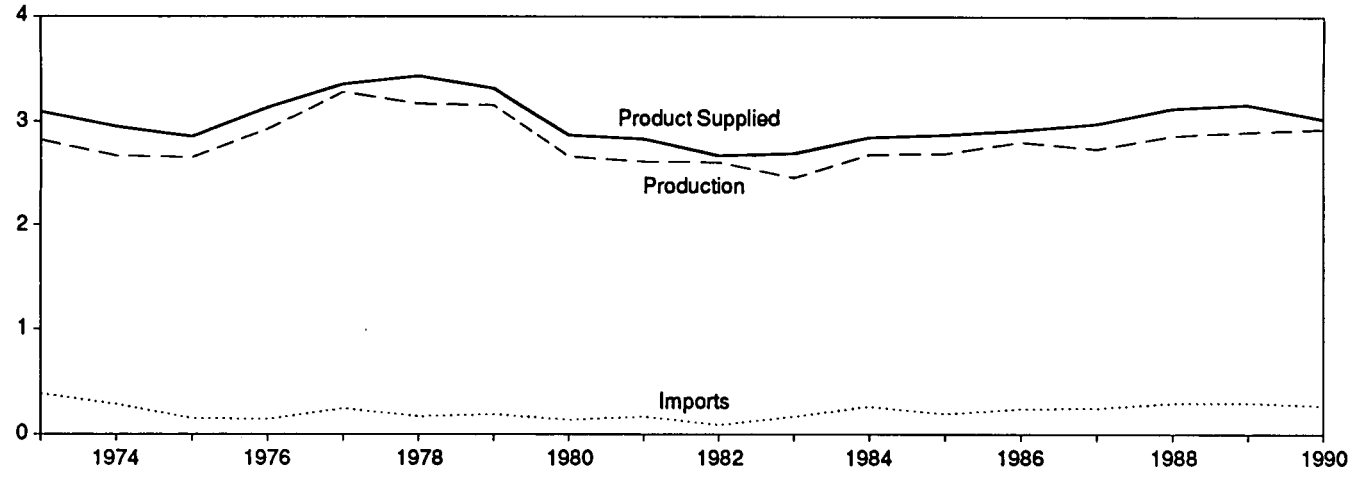
	Supply		Disposition					Ending Stocks[a]	
					Product Supplied				
	Total Production	Imports[b]	Stock Change[b,c]	Exports	Total	Unleaded[d]	Unleaded	Total Motor Gasoline[e]	Finished Motor Gasoline
	Thousand Barrels per Day						Percent of Total	Million Barrels	
1973 Average	**6,535**	**134**	**-9**	**4**	**6,674**	**–**	**–**	**209**	**–**
1974 Average	**6,360**	**204**	**24**	**2**	**6,537**	**–**	**–**	**[f]218**	**–**
1975 Average	**6,520**	**184**	**[f]28**	**2**	**6,675**	**–**	**–**	**235**	**–**
1976 Average	**6,841**	**131**	**-10**	**3**	**6,978**	**–**	**–**	**231**	**–**
1977 Average	**7,033**	**217**	**72**	**2**	**7,177**	**1,976**	**27.5**	**258**	**–**
1978 Average	**7,169**	**190**	**-54**	**1**	**7,412**	**2,521**	**34.0**	**238**	**–**
1979 Average	**6,852**	**181**	**-2**	**(s)**	**7,034**	**2,798**	**39.8**	**[f]237**	**–**
1980 Average	**6,506**	**140**	**66**	**1**	**6,579**	**3,067**	**46.6**	**[f]261**	**–**
1981 Average[g]	**6,405**	**157**	**[f]-28**	**2**	**6,588**	**3,264**	**49.5**	**253**	**203**
1982 Average	**6,338**	**197**	**-25**	**20**	**6,539**	**3,409**	**52.1**	**[f]235**	**[f]194**
1983 Average	**6,340**	**247**	**[f]-45**	**10**	**6,622**	**3,647**	**55.1**	**222**	**186**
1984 Average	**6,453**	**299**	**54**	**6**	**6,693**	**3,987**	**59.6**	**243**	**205**
1985 Average	**6,419**	**381**	**-41**	**10**	**6,831**	**4,406**	**64.5**	**223**	**190**
1986 Average	**6,752**	**326**	**11**	**33**	**7,034**	**4,854**	**69.0**	**233**	**194**
1987 Average	**6,841**	**384**	**-15**	**35**	**7,206**	**5,470**	**75.9**	**226**	**189**
1988 Average	**6,956**	**405**	**3**	**22**	**7,336**	**5,995**	**81.7**	**228**	**190**
1989 January	6,937	353	512	33	6,745	5,754	85.3	249	206
February	6,650	423	-70	24	7,119	6,141	86.3	248	204
March	6,612	381	-471	43	7,421	6,380	86.0	230	189
April	6,811	370	-22	46	7,157	6,248	87.3	227	188
May	6,894	355	-163	31	7,381	6,454	87.5	223	183
June	7,275	386	-180	60	7,780	6,864	88.2	216	178
July	7,360	383	390	57	7,296	6,509	89.2	229	190
August	7,155	360	-260	58	7,717	6,934	89.8	221	182
September	7,069	320	118	31	7,240	6,443	89.0	227	186
October	6,845	389	-97	29	7,302	6,642	91.0	222	183
November	7,046	406	81	18	7,353	6,756	91.9	224	185
December	6,884	306	-257	37	7,410	6,927	93.5	213	177
Average	**6,963**	**369**	**-35**	**39**	**7,328**	**6,507**	**88.8**	**213**	**177**
1990 January	6,879	417	621	31	6,643	6,246	94.0	236	196
February	6,989	411	169	53	7,179	6,703	93.4	245	201
March	6,613	270	-499	45	7,338	6,894	93.9	227	186
April	6,775	328	-45	28	7,121	6,704	94.1	223	184
May	6,610	585	-189	25	7,358	6,937	94.3	217	178
June	7,101	376	-93	52	7,519	7,099	94.4	213	176
July	7,238	432	133	41	7,496	7,090	94.6	218	180
August	7,326	313	-233	77	7,796	7,383	94.7	210	172
September	7,274	254	511	103	6,914	6,589	95.3	229	188
October	6,880	192	-244	90	7,226	6,883	95.3	220	180
November	6,940	259	-108	66	7,241	6,940	95.8	217	177
December	6,887	264	119	53	6,978	6,713	96.2	220	181
Average	**6,959**	**342**	**10**	**55**	**7,235**	**6,850**	**94.7**	**220**	**181**
1991 January	6,629	227	164	50	6,643	6,361	95.8	227	187
February	6,573	106	-229	102	6,806	6,592	96.9	222	181
March	6,642	235	-267	97	7,047	6,737	95.6	211	173
April	6,742	371	-77	53	7,137	6,860	96.1	207	170
May	7,063	528	56	59	7,475	7,195	96.3	209	172
June	7,351	371	159	99	7,465	7,193	96.4	215	177
July	7,278	232	-173	122	7,561	7,271	96.2	209	171
August	7,257	385	-10	98	7,555	7,271	96.2	209	171
September	7,044	321	210	63	7,091	6,838	96.4	217	177
October	[R]6,746	[R]236	[R]-350	[R]58	[R]7,273	[R]7,030	[R]96.6	204	167
November	[E]7,018	[E]270	[E]205	[E]55	[E]7,028	[E]6,830	[E]97.2	[E]209	[E]173
11-Month Average	**[E]6,942**	**[E]300**	**[E]-28**	**[E]78**	**[E]7,193**	**[E]6,928**	**[E]96.3**	**[E]209**	**[E]173**
1990 11-Month Average	**6,965**	**349**	**(s)**	**56**	**7,259**	**6,862**	**94.5**	**217**	**177**
1989 11-Month Average	**6,970**	**375**	**-14**	**39**	**7,320**	**6,468**	**88.4**	**224**	**185**

[a] Stocks are totals as of end of period.
[b] Beginning in 1981, excludes blending components.
[c] A negative number indicates a decrease in stocks and a positive number indicates an increase.
[d] Includes gasohol.
[e] Includes motor gasoline blending components.
[f] In January 1975, 1981, and 1983, numerous respondents were added to surveys, thereby affecting stocks reported and stock change calculations. See Note 4 at end of section.
[g] Beginning in January 1981, survey forms were modified. See Notes 1 and 2 at end of section.
R=Revised data. –=Not applicable. E=Estimate. (s)=Less than 500 barrels per day.
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.
Source: Energy Information Administration, *Petroleum Supply Monthly*, December 1991, Table S4.

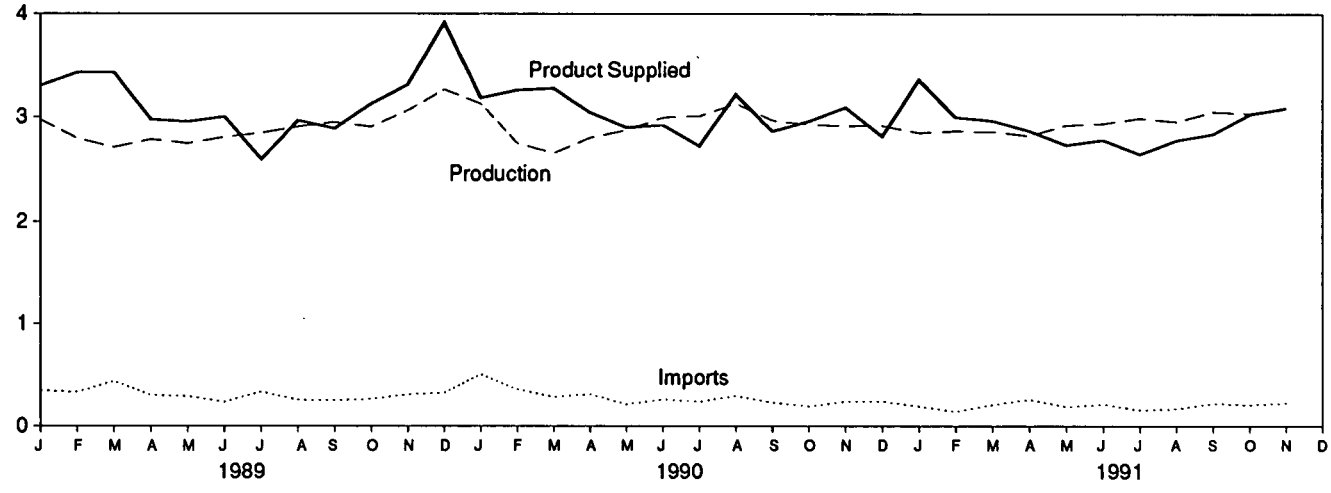
Figure 3.3 Distillate Fuel

(Million Barrels per Day, Except as Noted)

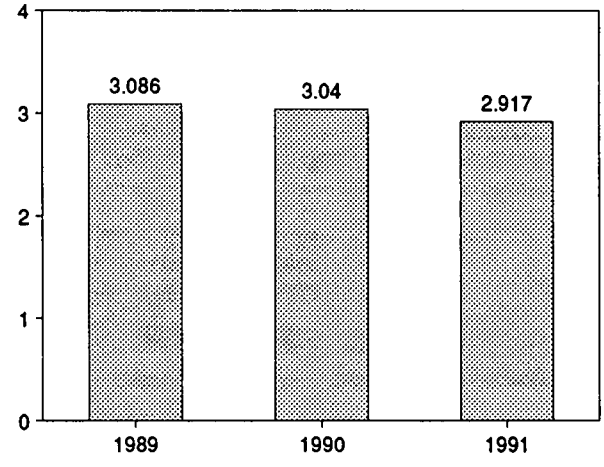
Overview, 1973-1990



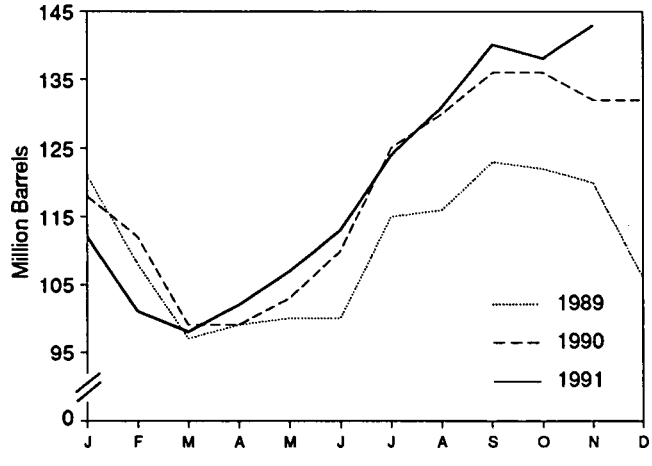
Overview, Monthly



Product Supplied, January-November



Stocks, End of Month



Source: Table 3.5.

Table 3.5 Distillate Fuel Oil Supply and Disposition

	Supply			Disposition			
	Total Production	Imports	Crude Used Directly[a]	Stock Change[b]	Exports	Product Supplied[a]	Ending Stocks[c]
	Thousand Barrels per Day						Million Barrels
1973 Average	**2,822**	**392**	**2**	**115**	**9**	**3,092**	**196**
1974 Average	**2,669**	**289**	**2**	***10**	**2**	**2,948**	**[d] 200**
1975 Average	**2,654**	**155**	**2**	**[d] *-41**	**1**	**2,851**	**209**
1976 Average	**2,924**	**146**	**1**	**-62**	**1**	**3,133**	**186**
1977 Average	**3,278**	**250**	**1**	**176**	**1**	**3,352**	**250**
1978 Average	**3,167**	**173**	**1**	**-93**	**3**	**3,432**	**216**
1979 Average	**3,153**	**193**	**1**	**34**	**3**	**3,311**	**229**
1980 Average	**2,662**	**142**	**1**	**-64**	**3**	**2,866**	**[d] 205**
1981 Average[e]	**2,613**	**173**	**10**	**[d] -38**	**5**	**2,829**	**192**
1982 Average	**2,606**	**93**	**10**	**-35**	**74**	**2,671**	**[d] 179**
1983 Average	**2,456**	**174**	**–**	**[d] -124**	**64**	**2,690**	**140**
1984 Average	**2,681**	**272**	**–**	**57**	**51**	**2,845**	**161**
1985 Average	**2,687**	**200**	**–**	**-48**	**67**	**2,868**	**144**
1986 Average	**2,798**	**247**	**–**	**31**	**100**	**2,914**	**155**
1987 Average	**2,731**	**255**	**–**	**-56**	**66**	**2,976**	**134**
1988 Average	**2,859**	**302**	**–**	**-30**	**69**	**3,122**	**124**
1989 January	2,974	346	–	-93	110	3,303	121
February	2,797	331	–	-463	164	3,427	108
March	2,713	439	–	-352	76	3,428	97
April	2,789	301	–	60	56	2,975	99
May	2,750	290	–	35	51	2,954	100
June	2,809	233	–	(s)	39	3,002	100
July	2,848	334	–	498	89	2,596	115
August	2,907	254	–	41	154	2,966	116
September	2,952	249	–	231	81	2,889	123
October	2,906	261	–	-50	90	3,127	122
November	3,063	307	–	-64	123	3,311	120
December	3,266	324	–	-454	130	3,914	106
Average	**2,899**	**306**	**–**	**-49**	**97**	**3,157**	**106**
1990 January	3,130	505	–	388	62	3,185	118
February	2,753	357	–	-215	65	3,260	112
March	2,657	281	–	-415	75	3,277	99
April	2,803	308	–	9	59	3,043	99
May	2,874	209	–	108	75	2,900	103
June	2,996	257	–	246	84	2,923	110
July	3,008	236	–	487	30	2,726	125
August	3,131	293	–	156	51	3,218	130
September	2,968	226	–	207	123	2,864	136
October	2,928	190	–	8	150	2,960	136
November	2,915	238	–	-129	188	3,094	132
December	2,917	239	–	-7	347	2,816	132
Average	**2,925**	**278**	**–**	**73**	**109**	**3,021**	**132**
1991 January	2,851	190	–	-648	332	3,356	112
February	2,867	138	–	-388	393	3,000	101
March	2,862	206	–	-96	198	2,966	98
April	2,822	258	–	130	81	2,869	102
May	2,924	185	–	156	218	2,735	107
June	2,940	209	–	216	150	2,783	113
July	2,992	153	–	348	149	2,649	124
August	2,959	167	–	203	144	2,779	131
September	3,054	221	–	298	136	2,840	140
October	R 3,039	R 206	–	R -42	R 259	R 3,029	R 138
November	E 3,089	E 224	–	E 106	E 120	E 3,088	E 143
11-Month Average	**E 2,946**	**E 196**	**–**	**E 27**	**E 197**	**E 2,917**	**E 143**
1990 11-Month Average	**2,925**	**282**	**–**	**80**	**87**	**3,040**	**132**
1989 11-Month Average	**2,864**	**304**	**–**	**-11**	**93**	**3,086**	**120**

* Due to differences internal to Energy Information Administration data processing systems, some small discrepancies exist between the data in this table and the data in the *Petroleum Supply Annual* and *Petroleum Supply Monthly*. See Note 6 at end of section.

[a] Beginning in January 1983, product supplied for distillate fuel oil does not include crude oil used directly.

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

[c] Stocks are totals as of end of period.

[d] In January 1975, 1981, and 1983, numerous respondents were added to surveys, thereby affecting stocks reported and stock change calculations. See Note 4 at end of section. Due to a rounding difference, the 1975 stock change value is -40 in the *Petroleum Supply Annual* and the *Petroleum Supply Monthly*.

[e] Beginning in January 1981, survey forms were modified. See Note 1 at end of section.

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

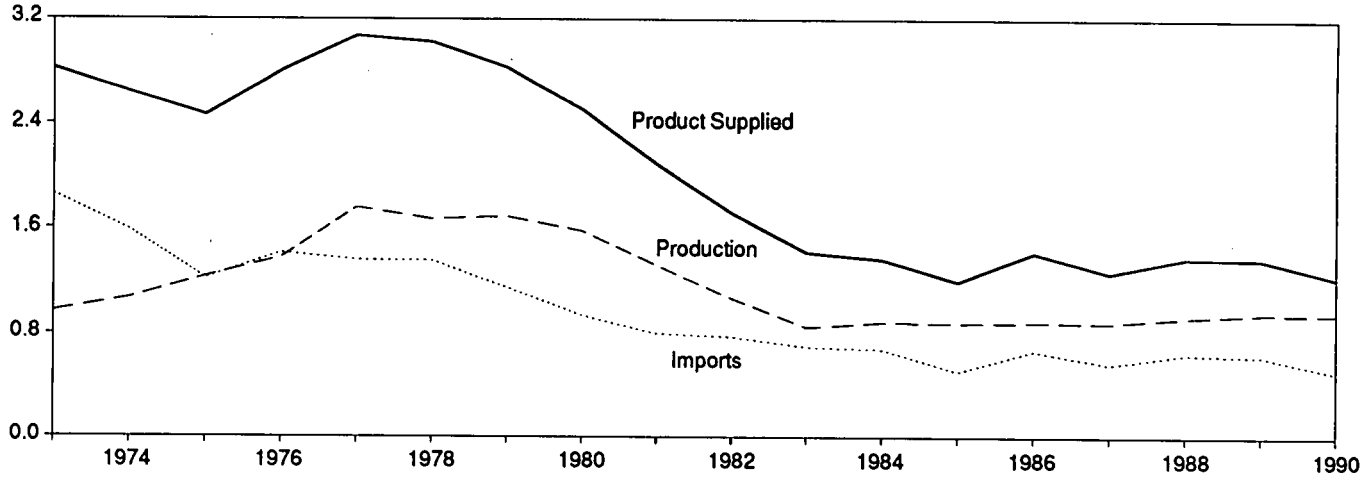
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration, *Petroleum Supply Monthly*, December 1991, Table S5.

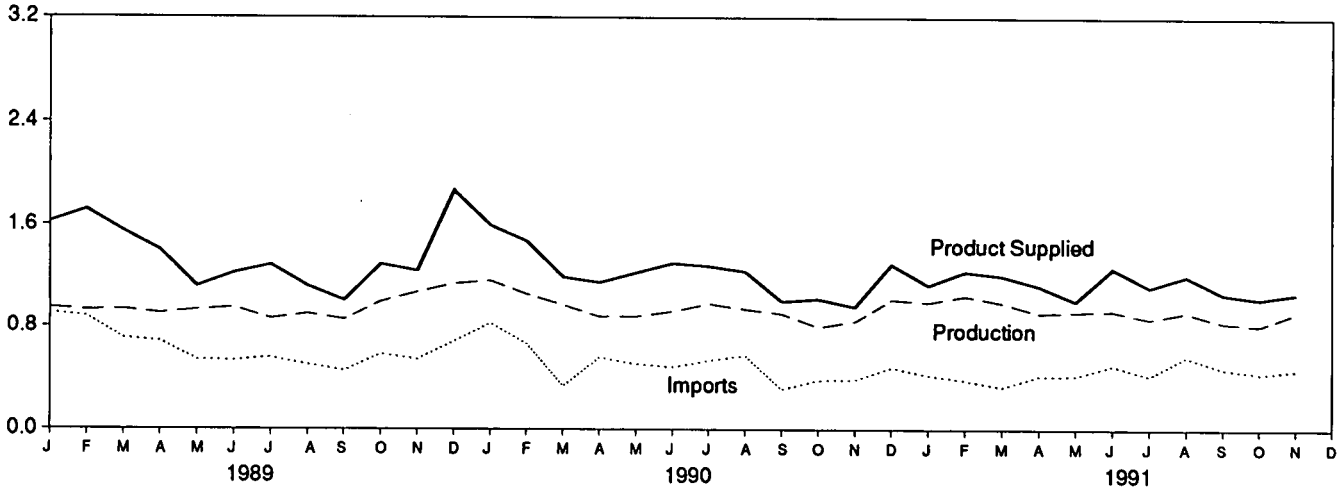
Figure 3.4 Residual Fuel

(Million Barrels per Day, Except as Noted)

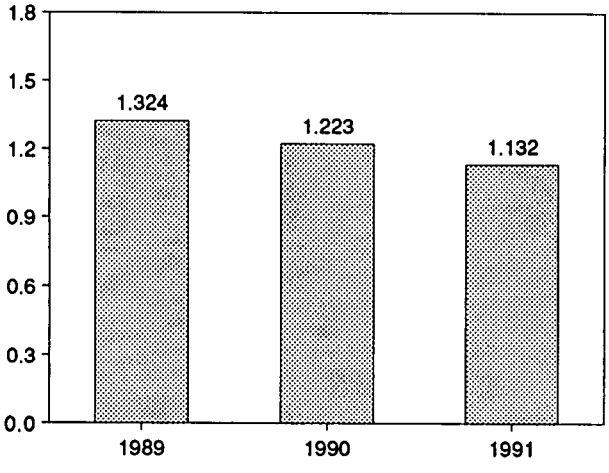
Overview, 1973-1990



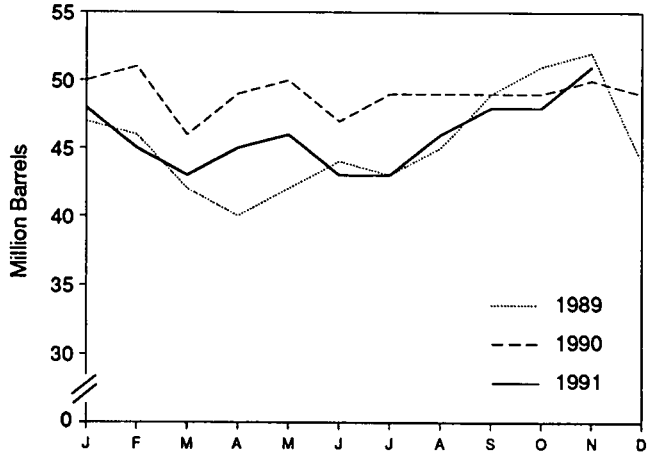
Overview, Monthly



Product Supplied, January-November



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

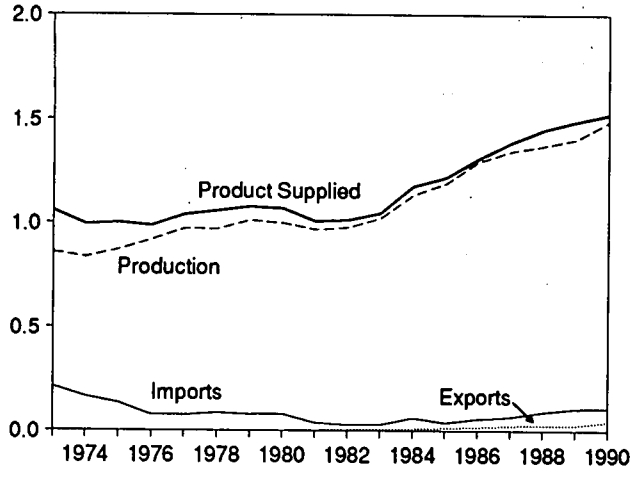
	Supply			Disposition			
	Total Production	Imports	Crude Used Directly[a]	Stock Change[b]	Exports	Product Supplied[a]	Ending Stocks[c]
	Thousand Barrels per Day						Million Barrels
1973 Average	**971**	**1,853**	**17**	**-5**	**23**	**2,822**	**53**
1974 Average	**1,070**	**1,587**	**13**	**17**	**14**	**2,639**	[d] **60**
1975 Average	**1,235**	**1,223**	**15**	[d] **-2**	**15**	**2,462**	**74**
1976 Average	**1,377**	**1,413**	**17**	**-5**	**12**	**2,801**	**72**
1977 Average	**1,754**	**1,359**	**13**	**48**	**6**	**3,071**	**90**
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**	**33**	**2,508**	[d] **92**
1981 Average[e]	**1,321**	**800**	**48**	[d] **-37**	**118**	**2,088**	**78**
1982 Average	**1,070**	**776**	**48**	**-32**	**209**	**1,716**	[d] **66**
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**	**147**	**1,418**	**47**
1987 Average	**885**	**565**	**–**	**(s)**	**186**	**1,264**	**47**
1988 Average	**926**	**644**	**–**	**-8**	**200**	**1,378**	**45**
1989 January	949	909	–	84	151	1,623	47
February	930	877	–	-58	146	1,719	46
March	937	706	–	-128	220	1,551	42
April	904	681	–	-52	236	1,401	40
May	934	538	–	77	276	1,119	42
June	953	533	–	54	208	1,223	44
July	862	556	–	-44	176	1,286	43
August	903	501	–	58	225	1,121	45
September	856	454	–	162	137	1,010	49
October	1,001	583	–	50	243	1,292	51
November	1,075	543	–	48	330	1,240	52
December	1,140	680	–	-275	226	1,870	44
Average	**954**	**629**	**–**	**-2**	**215**	**1,370**	**44**
1990 January	1,163	825	–	205	186	1,597	50
February	1,060	663	–	36	214	1,474	51
March	976	335	–	-158	277	1,192	46
April	882	559	–	90	200	1,151	49
May	884	507	–	22	141	1,227	50
June	926	485	–	-98	207	1,302	47
July	987	536	–	72	171	1,280	49
August	944	574	–	-1	280	1,238	49
September	909	313	–	15	200	1,007	49
October	799	383	–	-3	160	1,026	49
November	846	387	–	25	243	965	50
December	1,021	484	–	-50	259	1,296	49
Average	**950**	**504**	**–**	**13**	**211**	**1,229**	**49**
1991 January	1,000	422	–	-32	320	1,133	48
February	1,049	384	–	-106	299	1,239	45
March	997	331	–	-55	178	1,206	43
April	915	416	–	58	145	1,128	45
May	926	420	–	36	300	1,010	46
June	933	499	–	-78	245	1,265	43
July	870	419	–	-4	176	1,118	43
August	925	568	–	72	216	1,205	46
September	838	473	–	77	168	1,066	48
October	[R]813	[R]438	–	[R]7	[R]217	[R]1,028	48
November	[E]923	[E]463	–	[E]87	[E]230	[E]1,070	[E]51
11-Month Average	[E] **926**	[E] **440**	**–**	[E] **6**	[E] **226**	[E] **1,132**	[E] **51**
1990 11-Month Average	**943**	**505**	**–**	**19**	**207**	**1,223**	**50**
1989 11-Month Average	**937**	**624**	**–**	**23**	**214**	**1,324**	**52**

[a] Beginning in January 1983, product supplied for residual fuel oil does not include crude oil used directly.
[b] A negative number indicates a decrease in stocks and a positive number indicates an increase.
[c] Stocks are totals as of end of period.
[d] In January 1975, 1981, and 1983, numerous respondents were added to surveys, thereby affecting stocks reported and stock change calculations. See Note 4 at end of section.
[e] Beginning in January 1981, survey forms were modified. See Note 1 at end of section.
R=Revised data. – =Not applicable. E=Estimate. (s)=Less than 500 barrels per day.
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.
Source: Energy Information Administration, *Petroleum Supply Monthly*, December 1991, Table S6.

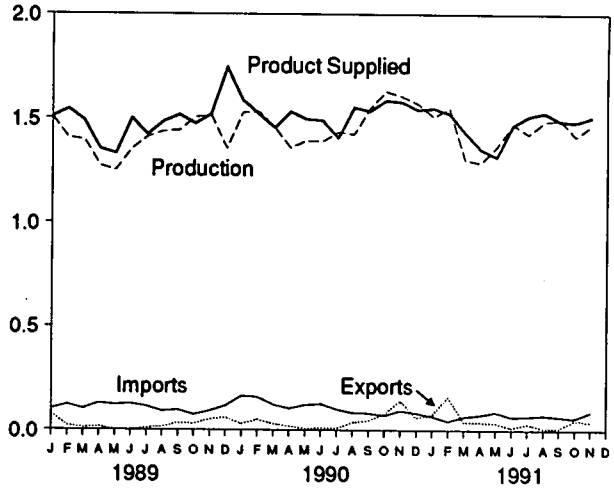
Figure 3.5 Jet Fuel

(Million Barrels per Day, Except as Noted)

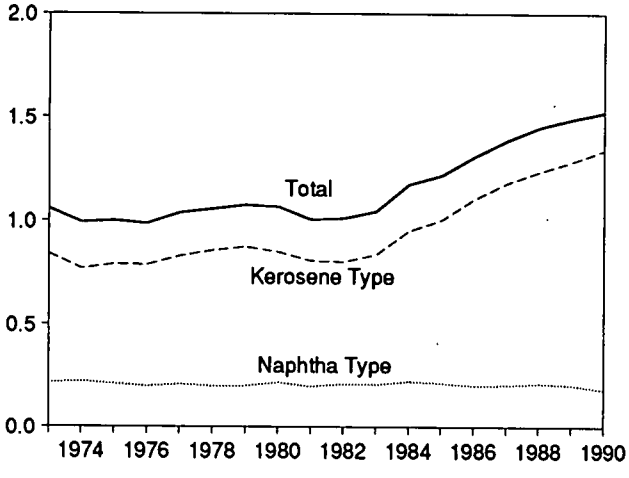
Total Jet Fuel Overview, 1973-1990



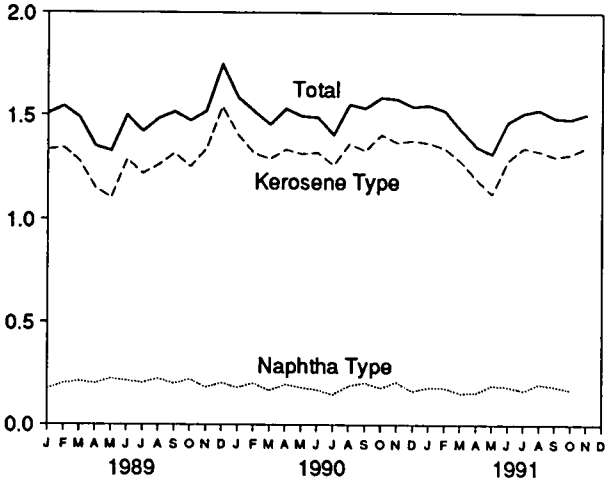
Total Jet Fuel Overview, Monthly



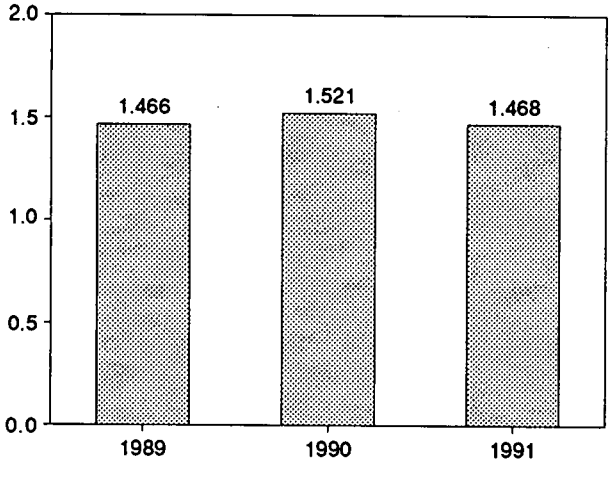
Product Supplied by Type, 1973-1990



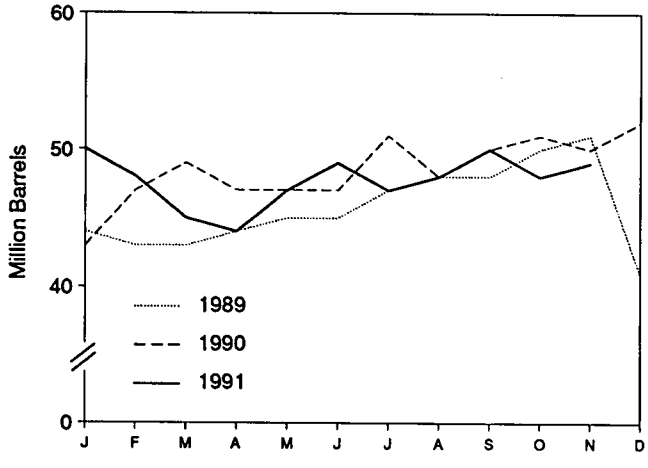
Product Supplied by Type, Monthly



Total Product Supplied, January-November



Total Stocks, End of Month



Source: Table 3.7.

Table 3.7 Jet Fuel Supply and Disposition

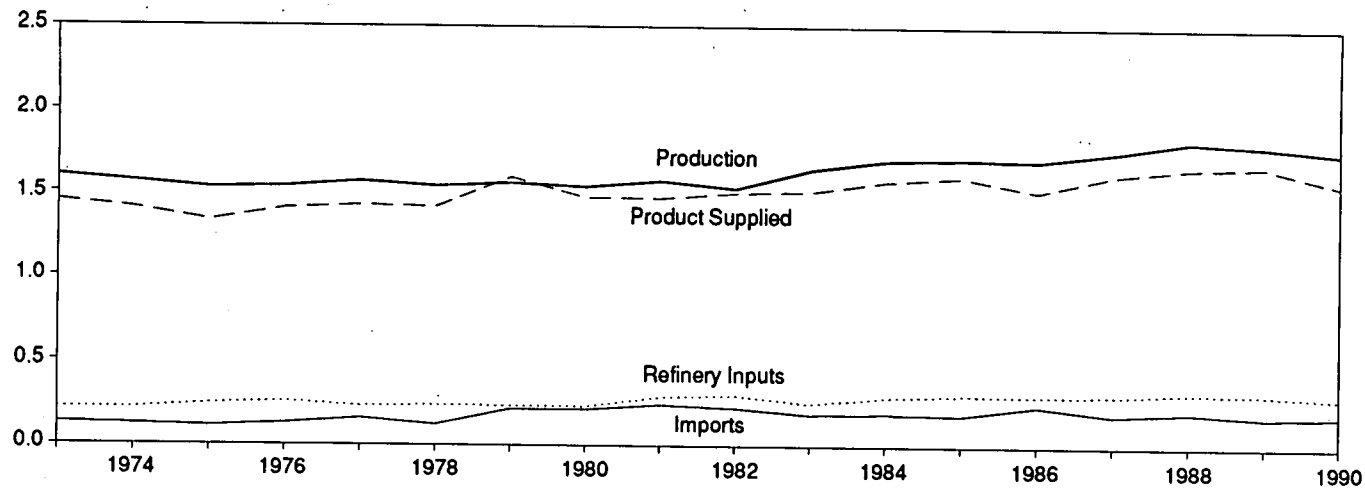
	Supply			Disposition				Ending Stocks[a]	
	Production		Imports	Stock Change[b]	Exports	Product Supplied			
	Total	Kerosene Type				Total	Kerosene Type	Total	Kerosene Type
	Thousand Barrels per Day							Million Barrels	
1973 Average	859	679	212	8	4	1,059	842	29	23
1974 Average	836	641	163	2	3	993	771	[c] 29	[c] 24
1975 Average	871	691	133	[c] 2	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] 42	[c] 36
1981 Average	968	775	38	[c] -4	2	1,007	809	41	34
1982 Average	978	778	29	-12	6	1,013	804	[c] 37	[c] 31
1983 Average	1,022	817	29	[c] (s)	6	1,046	839	39	32
1984 Average	1,132	919	62	9	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 January	1,503	1,312	101	21	75	1,508	1,334	44	38
February	1,404	1,214	120	-40	21	1,542	1,342	43	37
March	1,396	1,188	101	-2	11	1,488	1,277	43	37
April	1,270	1,074	127	31	16	1,351	1,150	44	38
May	1,249	1,031	120	40	1	1,328	1,103	45	39
June	1,350	1,139	124	-27	1	1,500	1,286	45	38
July	1,410	1,194	113	90	11	1,422	1,219	47	41
August	1,437	1,237	90	28	15	1,484	1,260	48	42
September	1,442	1,218	95	-13	34	1,516	1,316	48	41
October	1,504	1,300	74	74	30	1,474	1,252	50	44
November	1,514	1,305	91	34	52	1,519	1,337	51	44
December	1,354	1,149	115	-335	59	1,745	1,541	41	34
Average	1,403	1,197	106	-8	27	1,489	1,284	41	34
1990 January	1,527	1,340	163	76	30	1,584	1,404	43	37
February	1,530	1,330	158	120	50	1,519	1,316	47	40
March	1,457	1,256	120	92	30	1,455	1,289	49	42
April	1,357	1,179	103	-91	19	1,531	1,335	47	40
May	1,392	1,194	119	8	8	1,495	1,313	47	40
June	1,388	1,214	125	13	10	1,490	1,320	47	40
July	1,434	1,307	99	117	10	1,406	1,259	51	45
August	1,424	1,250	83	-82	37	1,552	1,363	48	43
September	1,548	1,339	81	48	47	1,534	1,329	50	44
October	1,630	1,463	71	39	77	1,585	1,406	51	45
November	1,606	1,445	93	-19	141	1,578	1,369	50	45
December	1,570	1,411	82	51	60	1,541	1,378	52	46
Average	1,488	1,311	108	31	43	1,522	1,340	52	46
1991 January	1,508	1,353	67	-46	73	1,548	1,367	50	44
February	1,548	1,384	44	-91	159	1,523	1,342	48	42
March	1,299	1,157	65	-109	40	1,433	1,279	45	39
April	1,286	1,135	73	-29	38	1,350	1,195	44	38
May	1,365	1,190	87	104	35	1,314	1,123	47	41
June	1,473	1,300	64	56	13	1,468	1,282	49	43
July	1,426	1,255	67	-49	31	1,511	1,344	47	41
August	1,486	1,316	72	20	11	1,527	1,328	48	42
September	1,495	1,322	65	63	10	1,488	1,302	50	45
October	[R] 1,415	[R] 1,253	[R] 59	[R] -60	[R] 50	[R] 1,483	[R] 1,313	[R] 48	[R] 43
November	[E] 1,470	[E] 1,327	[E] 88	[E] 11	[E] 40	[E] 1,507	[E] 1,350	[E] 49	[E] 44
11-Month Average	[E] 1,433	[E] 1,271	[E] 68	[E] -11	[E] 45	[E] 1,468	[E] 1,293	[E] 49	[E] 44
1990 11-Month Average	1,481	1,301	110	29	42	1,521	1,337	50	45
1989 11-Month Average	1,407	1,201	105	22	24	1,466	1,261	51	44

[a] Stocks are totals as of end of period.
[b] A negative number indicates a decrease in stocks and a positive number indicates an increase.
[c] In January 1975, 1981, and 1983, a new stock basis was established, thereby affecting stocks reported and stock change calculations. See Note 4 at end of section.
R=Revised data. E=Estimate. (s)=Less than 500 barrels per day.
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.
Source: Energy Information Administration, *Petroleum Supply Monthly*, December 1991, Table S7.

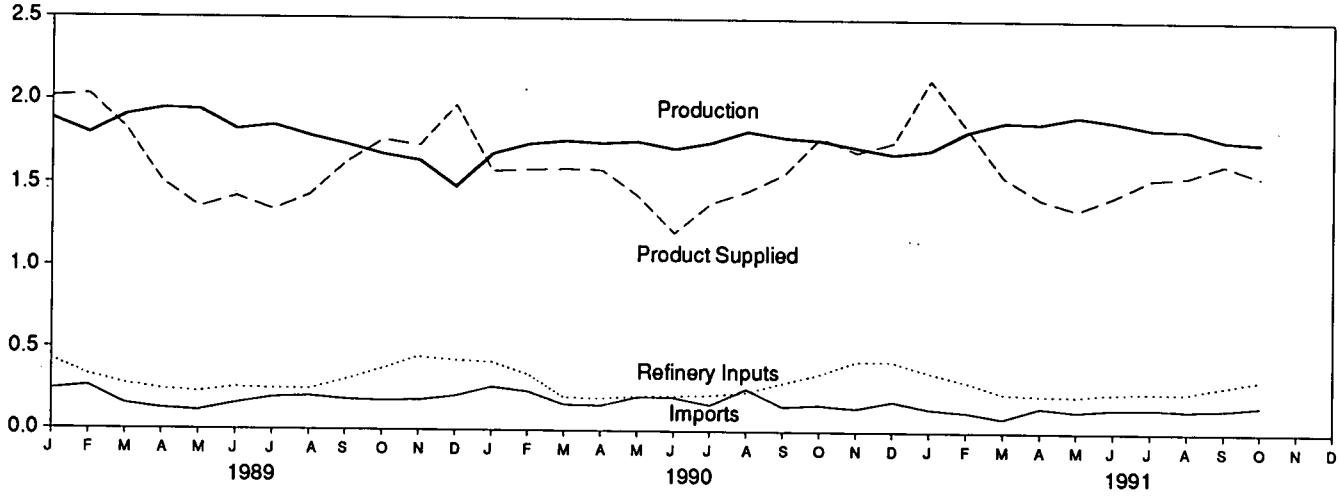
Figure 3.6 Liquefied Petroleum Gases

(Million Barrels per Day, Except as Noted)

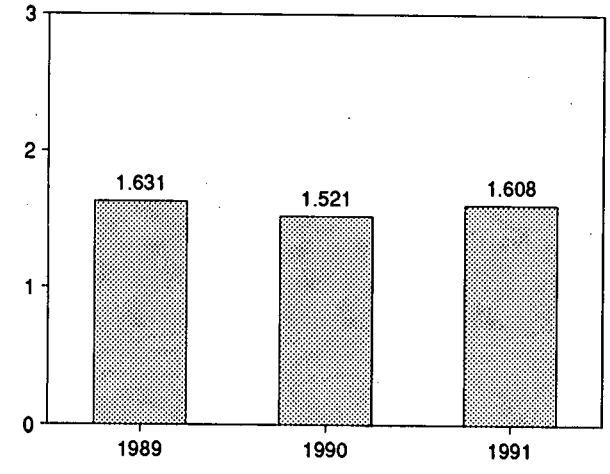
Overview, 1973-1990



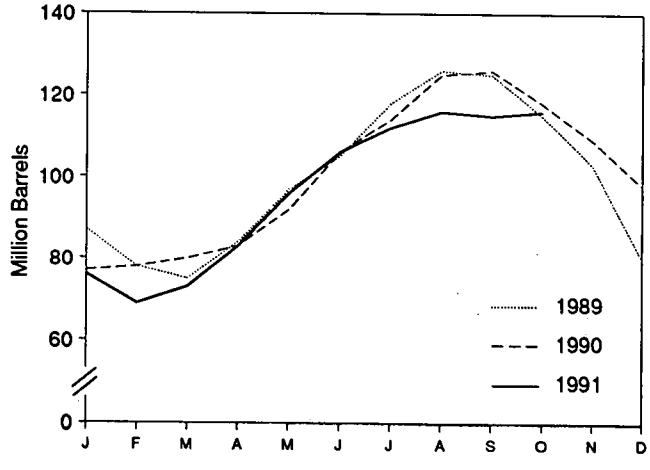
Overview, Monthly



Product Supplied, January-October



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

	Supply		Disposition				Ending Stocks[b]
	Total Production	Imports	Stock Change[a]	Refinery Inputs	Exports	Product Supplied	
	Thousand Barrels 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**	**[c]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**	**[c]132**
1979 Average	**1,556**	**217**	**[c]-70**	**236**	**15**	**1,592**	**111**
1980 Average	**1,535**	**216**	**27**	**233**	**21**	**1,469**	**[c]120**
1981 Average	**1,571**	**244**	**[c]18**	**289**	**42**	**1,466**	**135**
1982 Average	***1,527**	**226**	**-111**	**300**	**65**	**1,499**	**[c]94**
1983 Average	**1,642**	**190**	**[c]-4**	**253**	**73**	**1,509**	**[c]101**
1984 Average	**1,697**	**195**	**[c]-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 January	1,885	239	-335	422	19	2,018	87
February	1,798	260	-333	328	31	2,032	78
March	1,909	150	-85	274	43	1,827	75
April	1,950	121	294	242	27	1,507	84
May	1,943	110	428	226	43	1,357	97
June	1,824	155	269	254	35	1,422	105
July	1,850	192	407	247	45	1,343	118
August	1,787	202	272	245	40	1,433	126
September	1,737	182	-46	303	31	1,631	125
October	1,679	176	-313	371	31	1,766	115
November	1,643	179	-389	446	33	1,732	103
December	1,483	205	-749	424	37	1,975	80
Average	**1,791**	**181**	**-47**	**315**	**35**	**1,668**	**80**
1990 January	1,684	261	-92	414	44	1,580	77
February	1,743	235	11	339	42	1,587	78
March	1,763	155	80	199	44	1,595	80
April	1,751	150	91	195	25	1,589	83
May	1,761	204	287	209	36	1,433	92
June	1,719	202	469	212	28	1,211	106
July	1,756	157	268	217	36	1,392	114
August	1,825	256	339	236	43	1,463	125
September	1,789	149	37	293	41	1,567	126
October	1,773	159	-243	348	38	1,790	118
November	1,731	140	-296	427	39	1,702	109
December	1,692	184	-370	427	58	1,762	98
Average	**1,749**	**188**	**48**	**293**	**40**	**1,556**	**98**
1991 January	1,716	137	-700	359	56	2,139	76
February	1,829	119	-267	304	60	1,850	69
March	1,887	81	121	234	56	1,556	73
April	1,881	149	353	224	31	1,423	83
May	1,924	127	425	221	45	1,360	96
June	1,894	143	324	238	32	1,443	106
July	1,851	146	181	244	24	1,548	112
August	1,844	137	153	244	18	1,566	116
September	1,782	143	-30	284	31	1,640	115
October	1,768	163	12	323	31	1,564	116
10-Month Average	**1,838**	**135**	**59**	**267**	**38**	**1,608**	**116**
1990 10-Month Average	**1,757**	**193**	**125**	**266**	**38**	**1,521**	**118**
1989 10-Month Average	**1,837**	**178**	**58**	**291**	**34**	**1,631**	**115**

* Due to differences internal to Energy Information Administration data processing systems, some small discrepancies exist between the data in this table and the data in the *Petroleum Supply Annual* and *Petroleum Supply Monthly*. See Note 6 at end of section.

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

[b] Stocks are totals as of end of period.

[c] In January 1975, 1979, 1981, 1983, and 1984, a new stock basis was established, thereby affecting stocks reported and stock change calculations. See Note 4 at end of section.

Notes: • Liquefied petroleum gases include ethane, propane, normal butane, and isobutane. • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration, *Petroleum Supply Monthly*, December 1991, Table S8.

Table 3.9 Other Petroleum Products Supply and Disposition

	Supply		Disposition				
	Total Production	Imports	Stock Change[a]	Refinery Inputs	Exports	Products Supplied	Ending Stocks[b]
	Thousand Barrels 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**
1975 Average	**2,547**	**144**	**[c] -6**	**537**	**158**	**2,001**	**188**
1976 Average	**2,725**	**129**	**(s)**	**524**	**172**	**2,158**	**188**
1977 Average	**2,939**	**130**	**20**	**514**	**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**	**[c] 205**
1981 Average	**2,771**	**188**	**[c] -42**	**723**	**197**	**2,081**	**241**
1982 Average	**2,475**	**305**	**-68**	**787**	**205**	*** 1,857**	**[c] 216**
1983 Average	**2,437**	**382**	**[c] -6**	**712**	**236**	**1,877**	**[c] 217**
1984 Average	**2,500**	**503**	**[c] -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 January	2,696	646	375	706	236	2,024	220
February	2,553	717	231	726	281	2,032	226
March	2,671	644	114	660	311	2,230	230
April	2,683	727	102	808	290	2,210	233
May	2,882	635	181	688	258	2,391	239
June	3,025	571	-179	838	388	2,549	233
July	3,044	576	-159	955	333	2,491	228
August	2,998	587	-244	893	313	2,623	221
September	2,986	675	125	737	309	2,490	224
October	2,687	632	-42	730	308	2,323	223
November	2,608	645	-77	900	299	2,131	221
December	2,409	486	-266	918	332	1,910	213
Average	**2,771**	**627**	**12**	**797**	**305**	**2,285**	**213**
1990 January	2,567	814	86	735	225	2,335	215
February	2,781	680	387	654	298	2,122	226
March	2,670	687	78	795	276	2,207	229
April	2,774	596	-138	869	318	2,320	224
May	2,847	756	295	544	292	2,471	234
June	2,907	879	-160	919	334	2,692	229
July	3,146	732	-148	958	317	2,752	224
August	3,097	673	-291	998	297	2,766	215
September	3,029	674	68	760	265	2,611	217
October	2,848	590	-436	1,211	329	2,334	204
November	2,788	800	206	1,010	270	2,102	210
December	2,644	575	-288	1,172	249	2,087	201
Average	**2,842**	**705**	**-32**	**887**	**289**	**2,402**	**201**
1991 January	2,640	720	167	835	317	2,041	207
February	2,683	555	391	723	275	1,849	218
March	2,585	504	145	832	239	1,873	223
April	2,735	584	125	790	228	2,176	226
May	2,884	762	209	921	327	2,190	233
June	3,032	574	-125	1,102	304	2,325	229
July	3,036	747	-129	1,082	321	2,508	225
August	3,005	625	-173	1,019	296	2,489	220
September	3,012	728	83	827	267	2,563	222
October	2,812	610	-224	940	211	2,495	215
10-Month Average	**2,843**	**642**	**44**	**909**	**279**	**2,254**	**215**
1990 10-Month Average	**2,867**	**708**	**-29**	**846**	**295**	**2,464**	**204**
1989 10-Month Average	**2,824**	**640**	**49**	**774**	**303**	**2,338**	**223**

* Due to differences internal to Energy Information Administration data processing systems, some small discrepancies exist between the data in this table and the data in the *Petroleum Supply Annual* and *Petroleum Supply Monthly*. See Note 6 at end of section.

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

[b] Stocks are totals as of end of period.

[c] In January 1975, 1981, 1983, and 1984, a new stock basis was established, thereby affecting stocks reported and stock change calculations. See Note 4 at end of section.

(s)=Less than 500 barrels per day.

Notes: • Other petroleum products include pentanes plus, other hydrocarbons and alcohol, unfinished oil, gasoline blending components, and all finished petroleum products except finished motor gasoline, distillate fuel oil, residual fuel oil, jet fuel, and liquefied petroleum gases. • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration, *Petroleum Supply Monthly*, December 1991, Table S9.

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.

Every 3 years an extensive survey is conducted to update the frames completely. The updating involves consolidating information from every known source, including State agencies, Federal agencies (e.g., Environmental Protection Agency, Corps of Engineers, Census Bureau, etc.), and private industry directories. The effort also includes the evaluation of the impact of potential frame changes on the historical time series of data published from these respondents. The results of this frame study are usually implemented in January to provide a full year under the same frame.

2. **Motor Gasoline:** Beginning in January 1981, the EIA expanded its universe to include non-refinery blenders; redefined motor gasoline into two categories (finished leaded and finished unleaded); and separated blending components from finished motor gasoline as a reporting category. Also, survey forms were modified to describe refinery operations more accurately. For further details, see the EIA, *Petroleum Supply Monthly.*

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 number typically exceeded the number for 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 an unfinished oil input 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. 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; 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.
- Other Petroleum Products: 1974—190; 1980—207; and 1982—219.

Stock change calculations beginning in 1975, 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 "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.
- Other Petroleum Products: 1983—210.

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* and the *Petroleum Supply Annual* and *Petroleum Supply Monthly.* The data that have discrepancies are noted with an asterisk in Section 3 tables and are summarized on the following page.

6. Data Discrepancies (Continued). This listing summarizes the data discrepancies between the *Monthly Energy Review (MER)* and the *Petroleum Supply Annual (PSA)* and *Petroleum Supply Monthly (PSM).*

Table	Data Series	Year Average	*MER* Data	*PSA/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
3.9	Products Supplied	1982	1,857	1,856

Section 4. Natural Gas

Total dry natural gas production in the United States during October 1991 was an estimated 1.5 trillion cubic feet, the same as production during the previous October.

Consumption of natural and supplemental gas in October 1991 was 1.4 trillion cubic feet, 2 percent[4] above the level in October 1990.

Deliveries to residential consumers in September 1991 (latest data available) were 139 billion cubic feet, 5 percent above the previous September. Deliveries to residential consumers during the first three quarters of 1991 were 3,230, 2 percent more than residential deliveries during the first three quarters of 1990.

Total deliveries to industrial consumers during September 1991 were 594 billion cubic feet, 7 percent above the previous September. Deliveries to industrial consumers during the first three quarters of 1991 were 5,412, 5 percent more than industrial deliveries during the first three quarters of 1990.

Imports of natural gas in October 1991 were 125 billion cubic feet, 12 percent lower than imports in the previous October.

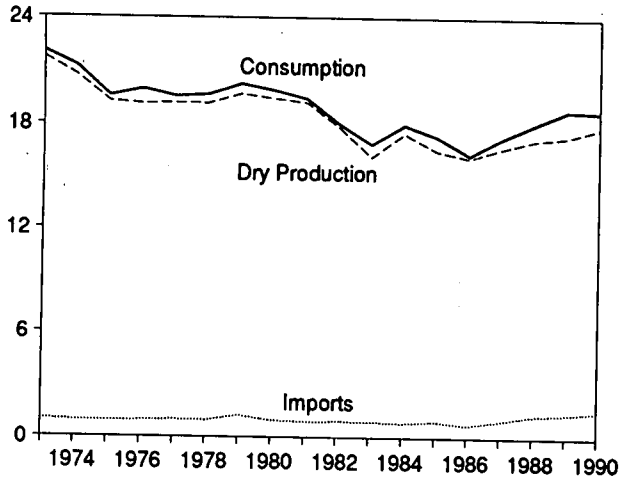
Stocks of working gas[5] in underground natural gas storage reservoirs at the end of October 1991 totaled 3.4 trillion cubic feet, 4 percent below the level of stocks available 1 year earlier. Net injections into storage during October 1991 were 160 billion cubic feet, up 8 percent from the previous October's injections.

[4]Percentage changes are calculated using unrounded data.
[5]Gas available for withdrawal.

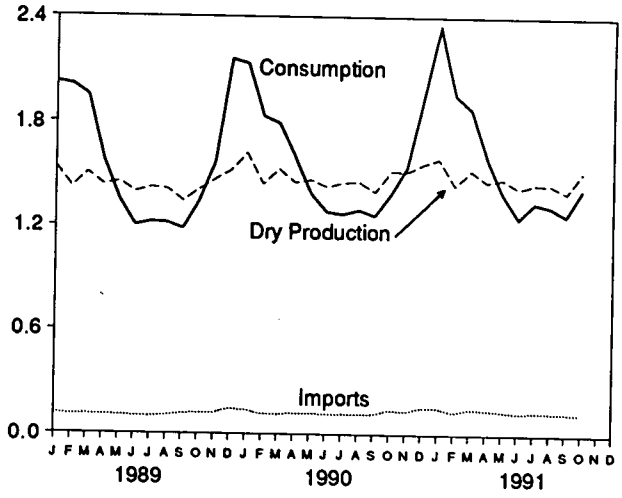
Figure 4.1 Natural Gas

(Trillion Cubic Feet)

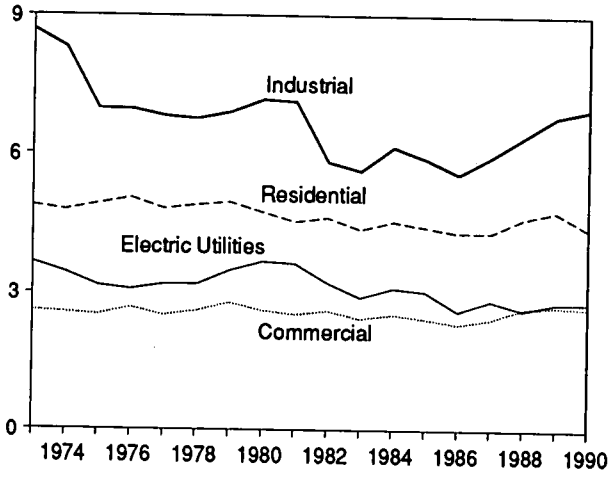
Overview, 1973-1990



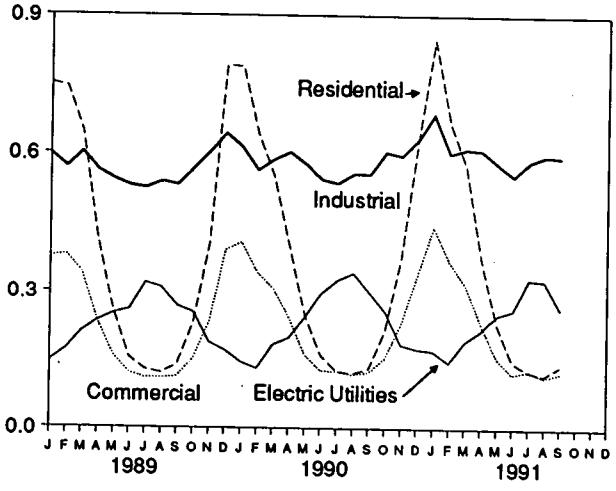
Overview, Monthly



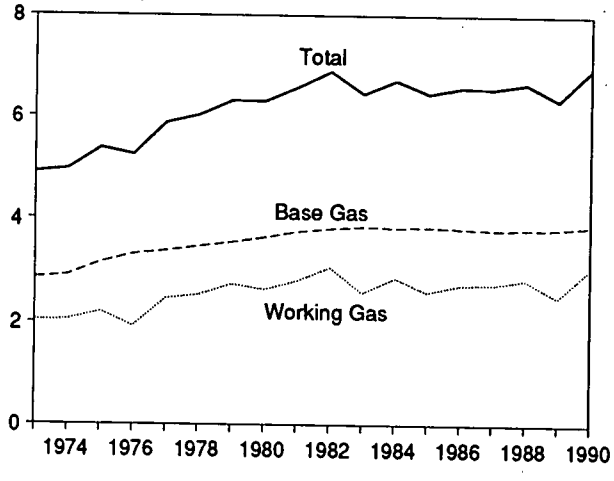
Consumption by Sector, 1973-1990



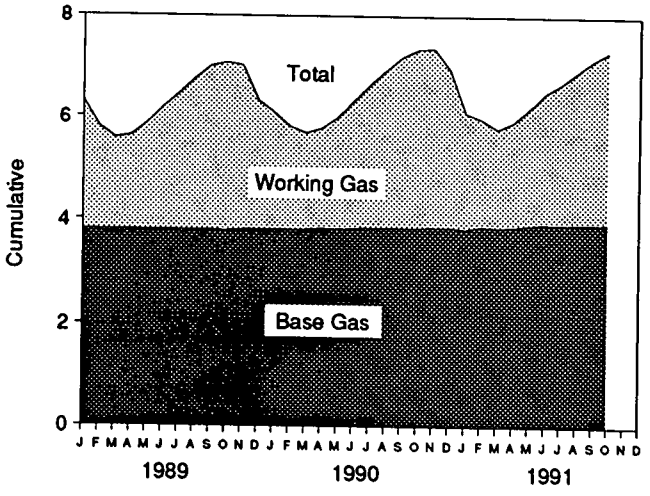
Consumption by Sector, Monthly



Underground Storage, End of Year, 1973-1990



Underground Storage, End of Month



Note: Because vertical scales differ, graphs should not be compared.
Sources: Tables 4.2, 4.3, and 4.4.

Table 4.1 Natural Gas Production

(Billion Cubic Feet)

	Gross Withdrawals[a]	Repressuring[b]	Nonhydrocarbon Gases Removed[c]	Vented and Flared[d]	Marketed Production (Wet)[e]	Extraction Loss[f]	Total Dry Gas Production[g]
1973 Total	24,067	1,171	NA	248	[h] 22,648	917	[h] 21,731
1974 Total	22,850	1,080	NA	169	[h] 21,601	887	[h] 20,713
1975 Total	21,104	861	NA	134	[h] 20,109	872	[h] 19,236
1976 Total	20,944	859	NA	132	[h] 19,952	854	[h] 19,098
1977 Total	21,097	935	NA	137	[h] 20,025	863	[h] 19,163
1978 Total	21,309	1,181	NA	153	[h] 19,974	852	[h] 19,122
1979 Total	21,883	1,245	NA	167	[h] 20,471	808	[h] 19,663
1980 Total	21,870	1,365	199	125	20,180	777	19,403
1981 Total	21,587	1,312	222	98	19,956	775	19,181
1982 Total	[R] 20,272	1,388	208	93	[R] 18,582	762	[R] 17,820
1983 Total	[R] 18,659	1,458	222	95	[R] 16,884	790	[R] 16,094
1984 Total	[R] 20,266	1,630	224	108	[R] 18,304	838	[R] 17,466
1985 Total	[R] 19,607	1,915	326	95	[R] 17,270	816	[R] 16,454
1986 Total	[R] 19,131	1,838	337	98	[R] 16,859	800	[R] 16,059
1987 Total	[R] 20,140	2,208	376	124	[R] 17,433	812	[R] 16,621
1988 Total	[R] 20,999	2,478	460	143	[R] 17,918	816	[R] 17,102
1989 January	[R] 1,872	219	34	11	[R] 1,607	70	[R] 1,537
February	[R] 1,717	193	29	11	[R] 1,484	64	[R] 1,420
March	[R] 1,815	197	31	13	[R] 1,573	68	[R] 1,505
April	[R] 1,742	203	29	12	[R] 1,499	65	[R] 1,434
May	[R] 1,775	214	31	12	[R] 1,519	66	[R] 1,453
June	[R] 1,688	192	28	12	[R] 1,456	63	[R] 1,393
July	[R] 1,725	199	30	12	[R] 1,484	64	[R] 1,420
August	[R] 1,720	207	28	12	[R] 1,473	63	[R] 1,410
September	[R] 1,649	207	28	12	[R] 1,402	60	[R] 1,342
October	[R] 1,724	211	29	12	[R] 1,472	64	[R] 1,408
November	[R] 1,789	214	31	12	[R] 1,533	66	[R] 1,467
December	[R] 1,856	219	33	12	[R] 1,592	72	[R] 1,520
Total	[R] 21,074	2,475	362	142	[R] 18,095	785	[R] 17,311
1990 January	[R] 1,940	[R] 211	[R] 25	15	[R] 1,689	[R] 69	[R] 1,620
February	[R] 1,718	[R] 183	[R] 22	[R] 10	[R] 1,503	[R] 62	[R] 1,441
March	[R] 1,841	[R] 211	[R] 24	[R] 11	[R] 1,595	[R] 66	[R] 1,529
April	[R] 1,754	[R] 206	[R] 24	[R] 11	[R] 1,513	[R] 62	[R] 1,451
May	[R] 1,781	[R] 213	[R] 26	[R] 13	[R] 1,529	[R] 63	[R] 1,466
June	[R] 1,711	191	[R] 24	[R] 9	[R] 1,487	[R] 61	[R] 1,426
July	[R] 1,759	[R] 207	[R] 26	[R] 13	[R] 1,513	[R] 62	[R] 1,451
August	[R] 1,764	[R] 207	[R] 25	[R] 14	[R] 1,518	[R] 62	[R] 1,456
September	[R] 1,693	[R] 199	[R] 24	[R] 13	[R] 1,457	[R] 60	[R] 1,397
October	[R] 1,843	[R] 224	[R] 23	[R] 13	[R] 1,583	[R] 65	[R] 1,518
November	[R] 1,827	[R] 211	[R] 23	[R] 13	[R] 1,580	[R] 65	[R] 1,515
December	[R] 1,890	[R] 225	[R] 24	[R] 14	[R] 1,627	[R] 67	[R] 1,560
Total	[R] 21,521	[R] 2,489	[R] 289	[R] 150	[R] 18,594	[R] 764	[R] 17,830
1991 January	[R] 1,928	[R] 226	[R] 25	[R] 14	[R] 1,663	[R] 73	[R] 1,590
February	[R] 1,740	[R] 202	[R] 24	[R] 12	[R] 1,502	[R] 66	[R] 1,436
March	[R] 1,845	[R] 210	[R] 28	[R] 12	[R] 1,595	[R] 70	[R] 1,525
April	[R] 1,765	[R] 200	[R] 29	[R] 11	[R] 1,525	[R] 67	[R] 1,458
May	[R] 1,782	[R] 198	31	10	[R] 1,543	[R] 68	[R] 1,475
June	[R] 1,718	[R] 191	30	10	[R] 1,487	[R] 66	[R] 1,421
July	[R] 1,747	[R] 194	31	10	[R] 1,512	[R] 67	[R] 1,445
August	[R] 1,731	[R] 185	[R] 29	[E] 10	[R] 1,507	[R] 63	[R] 1,444
September	[R] 1,687	[R] 188	30	10	1,459	[R] 64	[R] 1,395
October	[E] 1,833	[E] 202	[E] 32	[E] 11	[E] 1,588	[E] 70	[E] 1,518
10-Month Total	[E] 17,776	[E] 1,996	[E] 289	[E] 110	[E] 15,381	[E] 674	[E] 14,707
1990 10-Month Total	17,804	2,052	243	122	15,386	632	14,755
1989 10-Month Total	17,427	2,042	297	119	14,971	647	14,322

[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: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.
Sources: • **1973-1984:** Energy Information Administration (EIA), *Natural Gas Annual 1990, Vol. I*, Table 95. • **1985 forward:** EIA, *Natural Gas Monthly*, December 1991, Table 1.

Annual revisions reflect data in the *Natural Gas Annual 1990.*

Table 4.2 Natural Gas Supply and Disposition

(Billion Cubic Feet)

	Supply						Disposition		
	Total Dry Gas Production	Withdrawals from Storage[a]	Supplemental Gaseous Fuels[b]	Imports[b]	Balancing Item[b]	Total Supply/ Disposition[c]	Additions to Storage[a]	Exports[b]	Consumption[b]
1973 Total	[d] 21,731	1,533	NA	1,033	-196	24,101	1,974	77	22,049
1974 Total	[d] 20,713	1,701	NA	959	-289	23,084	1,784	77	21,223
1975 Total	[d] 19,236	1,760	NA	953	-235	21,714	2,104	73	19,538
1976 Total	[d] 19,098	1,921	NA	964	-216	21,767	1,756	65	19,946
1977 Total	[d] 19,163	1,750	NA	1,011	-41	21,883	2,307	56	19,521
1978 Total	[d] 19,122	2,158	NA	966	-287	21,958	2,278	53	19,627
1979 Total	[d] 19,663	2,047	NA	1,253	-372	22,591	2,295	56	20,241
1980 Total	19,403	1,972	155	985	-640	21,875	1,949	49	19,877
1981 Total	19,181	1,930	176	904	-500	21,691	2,228	59	19,404
1982 Total	[R] 17,820	2,164	145	933	[R] -537	20,525	2,472	52	18,001
1983 Total	[R] 16,094	2,270	132	918	[Re] -703	18,712	1,822	55	16,835
1984 Total	[R] 17,466	2,098	110	843	[Re] -217	20,300	2,295	55	17,951
1985 Total	[R] 16,454	2,397	126	950	[R] -428	19,499	2,163	55	17,281
1986 Total	[R] 16,059	1,837	113	750	[R] -493	18,266	1,984	61	16,221
1987 Total	[R] 16,621	1,905	101	993	[R] -444	19,176	1,911	54	17,211
1988 Total	[R] 17,102	2,270	101	1,294	[R] -452	20,315	2,211	74	18,030
1989 January	[R] 1,537	[R] 427	11	119	[R] -10	2,084	53	7	2,024
February	[R] 1,420	614	10	110	[R] -106	2,048	32	7	2,009
March	[R] 1,505	369	10	113	[R] 67	2,064	106	11	1,947
April	[R] 1,434	138	8	110	[R] 86	[R] 1,776	[R] 183	11	1,582
May	[R] 1,453	44	8	108	[R] 72	[R] 1,685	[R] 327	8	1,350
June	[R] 1,393	20	7	104	[R] 67	1,591	[R] 380	9	[R] 1,202
July	[R] 1,420	29	8	101	[R] 49	[R] 1,607	377	9	[R] 1,221
August	[R] 1,410	29	8	108	[R] 33	1,588	362	9	1,217
September	[R] 1,342	39	7	117	[R] 11	1,516	325	9	1,182
October	[R] 1,408	96	9	123	[R] -62	1,574	225	10	1,339
November	[R] 1,467	[R] 228	9	123	[R] -146	1,681	105	8	1,568
December	[R] 1,520	[R] 822	12	145	[R] -282	2,217	52	8	2,157
Total	[R] 17,311	[R] 2,854	107	1,382	[R] -221	[R] 21,433	[R] 2,528	107	[R] 18,798
1990 January	[R] 1,620	[R] 356	11	140	[R] 115	[R] 2,242	[R] 96	14	[R] 2,132
February	[R] 1,441	[R] 345	9	118	[R] -1	[R] 1,912	[R] 71	8	[R] 1,833
March	[R] 1,529	[R] 267	10	116	[R] 10	[R] 1,932	[R] 128	11	1,793
April	[R] 1,451	[R] 141	9	123	[R] 73	[R] 1,797	[R] 194	6	[R] 1,597
May	[R] 1,466	[R] 44	8	123	[R] 55	[R] 1,696	[R] 304	6	[R] 1,386
June	[R] 1,426	[R] 41	[R] 8	117	[R] 31	[R] 1,623	[R] 335	6	[R] 1,282
July	[R] 1,451	[R] 26	9	120	[R] 5	[R] 1,611	[R] 337	5	[R] 1,269
August	[R] 1,456	[R] 40	8	118	[R] 7	[R] 1,629	[R] 330	5	[R] 1,294
September	[R] 1,397	36	8	120	[R] 2	[R] 1,563	[R] 295	7	[R] 1,261
October	[R] 1,518	[R] 66	8	142	[R] -127	[R] 1,607	[R] 217	6	[R] 1,384
November	[R] 1,515	[R] 151	9	140	[R] -127	[R] 1,688	[R] 139	6	[R] 1,543
December	[R] 1,560	[R] 490	11	156	[R] -199	[R] 2,018	[R] 71	7	[R] 1,940
Total	[R] 17,830	[R] 2,002	[R] 106	1,532	[R] -150	[R] 21,320	[R] 2,517	86	[R] 18,717
1991 January	[R] 1,590	632	[R] 11	156	[R] 20	[R] 2,409	57	8	[R] 2,344
February	[R] 1,436	360	[R] 10	131	[R] 84	[R] 2,021	60	7	[R] 1,954
March	[R] 1,525	262	[R] 11	[R] 149	[R] 34	[R] 1,981	98	9	[R] 1,874
April	[R] 1,458	83	[R] 10	145	[R] 121	[R] 1,817	212	8	[R] 1,597
May	[R] 1,475	31	9	[R] 137	[R] 47	[R] 1,699	306	6	[R] 1,387
June	[R] 1,421	20	[R] 8	[R] 129	[R] -13	[R] 1,565	308	8	[R] 1,249
July	[R] 1,445	46	9	132	[R] -23	[R] 1,609	266	6	[R] 1,337
August	[R] 1,444	54	9	131	[R] -60	1,578	256	7	1,315
September	[R] 1,395	48	8	128	[R] -26	[R] 1,553	279	8	[R] 1,266
October	[E] 1,518	69	10	125	-72	1,650	229	7	1,414
10-Month Total	[E] 14,707	1,605	95	1,363	112	17,882	2,071	74	15,737
1990 10-Month Total	14,755	1,362	88	1,237	170	17,612	2,307	74	15,231
1989 10-Month Total	14,322	1,805	86	1,113	207	17,533	2,370	90	15,073

[a] Data for 1980-1989 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] Data for 1978 forward do not include in-transit receipts and deliveries.

[d] May include unknown quantities of nonhydrocarbon gases.

[e] See Note 7 at end of section.

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

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

Sources: • **1973-1984: Total Dry Gas Production**—Energy Information Administration (EIA), *Natural Gas Annual 1990, Vol. I*, Table 96. **Supplemental Gaseous Fuels**—EIA, *Natural Gas Annual 1988, Volume II*, Table 12. **Withdrawals from Storage—1973-1975 and 1980-1984:** EIA, *Natural Gas Annual 1989*, Table 93. **1976-1979:** EIA, *Natural Gas Production and Consumption 1979*, Table 1. **Imports; Additions to Storage; Exports; and Consumption**—EIA, *Natural Gas Annual 1989*, Table 93. **Total Supply/Disposition**—Sum of disposition items. **Balancing Item**—Total supply/disposition minus all other supply items. • **1985 forward:** EIA, *Natural Gas Monthly*, December 1991, Table 2.

Annual revisions reflect data in the *Natural Gas Annual 1990*.

Table 4.3 Natural Gas Consumption by End-Use Sector

(Billion Cubic Feet)

	Lease and Plant Fuel	Pipeline Fuel[a]	Delivered to Consumers					Total Consumption
			Residential	Commercial	Industrial	Electric Utilities	Total	
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 January	95	57	751	376	598	147	1,872	2,024
February	88	57	R743	380	570	172	1,864	2,009
March	93	54	R646	342	602	211	1,800	1,947
April	88	49	414	233	563	235	1,445	1,582
May	89	51	R257	159	544	251	1,210	1,350
June	86	50	155	121	R530	260	R1,066	R1,202
July	88	50	129	110	525	320	R1,083	R1,221
August	87	50	121	110	539	310	1,080	1,217
September	82	48	139	113	532	268	1,052	1,182
October	87	49	R229	152	568	254	1,203	1,339
November	90	50	405	231	603	189	1,428	1,568
December	97	65	R791	391	643	171	1,995	2,157
Total	**1,070**	R629	R4,781	R2,718	**6,816**	**2,787**	R17,102	R18,798
1990 January	R112	R64	R788	R408	R614	146	R1,956	R2,132
February	99	R54	R642	R342	R564	132	R1,680	R1,833
March	R106	R56	R552	R308	R587	184	R1,631	1,793
April	R100	R54	R400	R242	R603	199	R1,443	R1,597
May	101	R55	R248	R162	R577	244	R1,230	R1,386
June	R98	R54	R161	R127	R544	297	R1,130	R1,282
July	R100	R54	126	R126	R536	326	R1,115	R1,269
August	R100	R55	121	R118	R557	342	R1,139	R1,294
September	R96	R52	R132	R124	R556	301	R1,113	R1,261
October	R105	R50	R214	R155	R604	256	R1,229	R1,384
November	R105	R53	R376	R229	R596	185	R1,385	R1,543
December	R108	R58	R630	R338	R631	175	R1,774	R1,940
Total	R1,231	R660	R4,391	R2,680	R6,970	**2,786**	R16,826	R18,717
1991 January	R111	R86	R848	R443	R685	171	R2,147	R2,344
February	R100	R71	668	R368	R601	146	R1,783	R1,954
March	R106	R71	R576	R318	R611	192	R1,697	R1,874
April	R101	R67	375	R231	R608	215	R1,429	R1,597
May	R103	R69	230	R157	R579	249	R1,215	R1,387
June	R99	R67	148	R121	R553	260	R1,083	R1,249
July	R101	R67	127	R129	R584	330	R1,169	R1,337
August	R95	R64	R118	R114	R597	326	R1,156	1,315
September	97	50	139	124	594	262	1,119	R1,266
9-Month Total	**913**	**612**	**3,230**	**2,005**	**5,412**	**2,151**	**12,797**	**14,323**
1990 9-Month Total	**912**	**498**	**3,171**	**1,958**	**5,139**	**2,170**	**12,438**	**13,847**
1989 9-Month Total	**796**	**466**	**3,356**	**1,944**	**5,002**	**2,173**	**12,472**	**13,734**

[a] Natural gas consumed in the operation of pipelines, primarily in compressors.

R=Revised data.

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

Sources: • **1973-1984:** Energy Information Administration (EIA), *Natural Gas Annual 1989*, Table 94. • **1985 forward:** EIA, *Natural Gas Monthly*, December 1991, Table 3.

Table 4.4 Natural Gas in Underground Storage

(Volumes in Billion Cubic Feet)

	Natural Gas in Underground Storage, End of Period			Change in Working Gas from Same Period Previous Year		Storage Activity		
	Base Gas	Working Gas	Total[a]	Volume	Percent	Injections[b]	Withdrawals[b]	Net[c]
1973 Total	**2,864**	**2,034**	**4,898**	**305**	**17.6**	**1,974**	**1,533**	**442**
1974 Total	**2,912**	**2,050**	**4,962**	**16**	**.8**	**1,784**	**1,701**	**84**
1975 Total	**3,162**	**2,212**	**5,374**	**162**	**7.9**	**2,104**	**1,760**	**344**
1976 Total	**3,323**	**1,926**	**5,250**	**-286**	**-12.9**	**1,756**	**1,921**	**-165**
1977 Total	**3,391**	**2,475**	**5,866**	**549**	**28.5**	**2,307**	**1,750**	**557**
1978 Total	**3,473**	**2,547**	**6,020**	**72**	**2.9**	**2,278**	**2,158**	**120**
1979 Total	**3,553**	**2,753**	**6,306**	**207**	**8.1**	**2,295**	**2,047**	**248**
1980 Total	**3,642**	**2,655**	**6,297**	**-99**	**-3.6**	**1,896**	**1,910**	**-14**
1981 Total	**3,752**	**2,817**	**6,569**	**162**	**6.1**	**2,180**	**1,887**	**293**
1982 Total	**3,808**	**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	**3,830**	**2,876**	**6,706**	**281**	**10.8**	**2,252**	**2,064**	**188**
1985 Total	**3,842**	**2,607**	**6,448**	**-270**	**-9.4**	**2,128**	**2,359**	**-231**
1986 Total	**3,819**	**2,749**	**6,567**	**142**	**5.5**	**1,952**	**1,812**	**140**
1987 Total	**3,792**	**2,756**	**6,548**	**7**	**.3**	**1,887**	**1,881**	**6**
1988 Total	**3,800**	**2,850**	**6,650**	**94**	**3.4**	**2,174**	**2,244**	**-69**
1989 January	3,798	2,509	6,307	281	12.6	53	418	-365
February	3,801	1,994	5,796	168	9.2	32	602	-570
March	3,801	1,776	5,578	94	5.6	106	362	-256
April	3,801	1,823	5,624	54	3.0	R180	138	R42
May	3,802	2,062	5,863	34	1.7	321	44	277
June	3,802	2,374	6,176	82	3.6	R374	20	R354
July	3,802	2,644	6,446	77	3.0	371	29	341
August	3,802	2,938	6,740	103	3.6	356	29	328
September	3,802	3,187	6,990	67	2.2	320	39	281
October	3,792	3,268	7,061	25	.8	221	96	124
November	3,809	3,199	7,008	28	.9	105	223	-118
December	3,812	2,513	6,325	-337	-11.8	52	805	-752
Total	**3,812**	**2,513**	**6,325**	**-337**	**-11.8**	**R2,491**	**2,804**	**R-313**
1990 January	3,818	R2,268	R6,086	R-241	R-9.6	R94	R345	R-251
February	3,814	R1,999	R5,813	R5	R.3	70	R335	R-265
March	3,818	R1,867	R5,685	R91	R5.1	R125	R261	R-136
April	3,839	R1,939	R5,778	R116	R6.4	R189	R138	R51
May	3,823	R2,175	R5,998	R113	R5.5	R295	R43	R252
June	3,844	R2,482	R6,326	R108	R4.5	R326	R40	R286
July	3,850	R2,790	R6,640	R146	R5.5	R328	R26	R302
August	3,851	R3,073	R6,924	R135	R4.6	321	R39	R282
September	3,852	R3,326	R7,178	R139	R4.4	R287	R35	R252
October	3,852	R3,474	R7,326	R206	R6.3	R211	R63	R148
November	3,868	R3,478	R7,346	R279	R8.7	R135	R147	R-12
December	3,868	R3,070	R6,938	R557	R22.2	R70	R478	R-408
Total	**3,868**	**R3,070**	**R6,938**	**R557**	**R22.2**	**R2,451**	**R1,949**	**R502**
1991 January	3,831	2,262	6,094	R-6	R-.3	57	632	-576
February	3,889	2,080	5,969	R81	R4.1	60	360	-300
March	3,865	1,912	5,777	R45	R2.4	98	262	-164
April	3,878	2,039	5,917	R100	R5.2	212	83	129
May	3,914	2,279	6,192	R104	R4.8	306	31	276
June	3,942	2,548	6,490	R66	R2.7	308	20	288
July	3,923	2,750	6,673	R-40	R-1.4	266	46	220
August	3,939	2,971	6,910	R-102	R-3.3	256	54	202
September	3,939	3,194	7,133	R-132	R-4.0	279	48	231
October	3,949	3,351	7,300	-123	-3.5	229	69	160

[a] Total underground storage capacity at the end of each calendar year (in billion cubic feet): 1975--6,280(first data available); 1976--6,544; 1977--6,678; 1978--6,890; 1979--6,929; 1980--7,434; 1981--7,805; 1982--7,915; 1983--7,985; 1984--8,043; 1985--8,087; 1986--8,145; 1987 and 1988--8,124; and 1989--8,124. Current capacity is 8,125.

[b] For 1980-1989, data differ from those shown on Table 4.2, which includes liquefied natural gas storage for that period.

[c] 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.

R=Revised data.

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

Sources: • **Storage Activity—1973-1975:** Energy Information Administration (EIA), *Natural Gas Annual 1988, Volume II*, Table 9. **1976-1979:** EIA, *Natural Gas Production and Consumption 1979*, Table 1. **1980-1984:** EIA, *Natural Gas Annual 1988, Volume II*, Table 11. **1985 forward:** EIA, *Natural Gas Monthly*, December 1991, Table 17. • **Other Data—1973:** American Gas Association (AGA), *Gas Facts, 1972 Data*, Table 57, and *Gas Facts, 1973 Data, Table 57. 1974: AGA, Gas Facts, 1974 Data*, Table 40. **1975 and 1976:** Federal Energy Administration, Form FEA-G318-M-O, and Federal Power Commission (FPC), Form FPC-8. **1977 and 1978:** EIA, Form FEA-G318-M-O, and Federal Energy Regulatory Commission (FERC), Form FERC-8.**1979-1984:** EIA, Form EIA-191, and FERC, Form FERC-8. **1985 forward:** EIA, *Natural Gas Monthly*, December 1991, Table 17.

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) 1989.* Data are not available for periods 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 for extraction loss are from the EIA *NGA*, where they are estimated on the basis of the type and quantity of liquid products extracted from the gas stream and the calculated volume of such products at standard conditions. For a detailed explanation of the calculations used to derive estimated extraction losses, see the EIA *NGA*.

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

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

4. Supplemental Gaseous Fuels: Supplemental gaseous fuels are mainly synthetic natural gas, propane-air, and refinery gas. Other gases, such as coke oven gas, biomass gas, manufactured gas, and air injected for Btu stabilization, may also be included.

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 imported natural gas via pipeline from Mexico (until 1984) and Canada and liquefied natural gas (LNG) (except in 1986) via tanker from Algeria. One shipment of LNG was received in December 1986 from Indonesia. The United States exports natural gas via pipeline to Mexico and Canada and LNG via tanker to Japan.

Annual and final monthly data are from the annual 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 com-

ponents 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 trillion cubic feet 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 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 1980-1989 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.

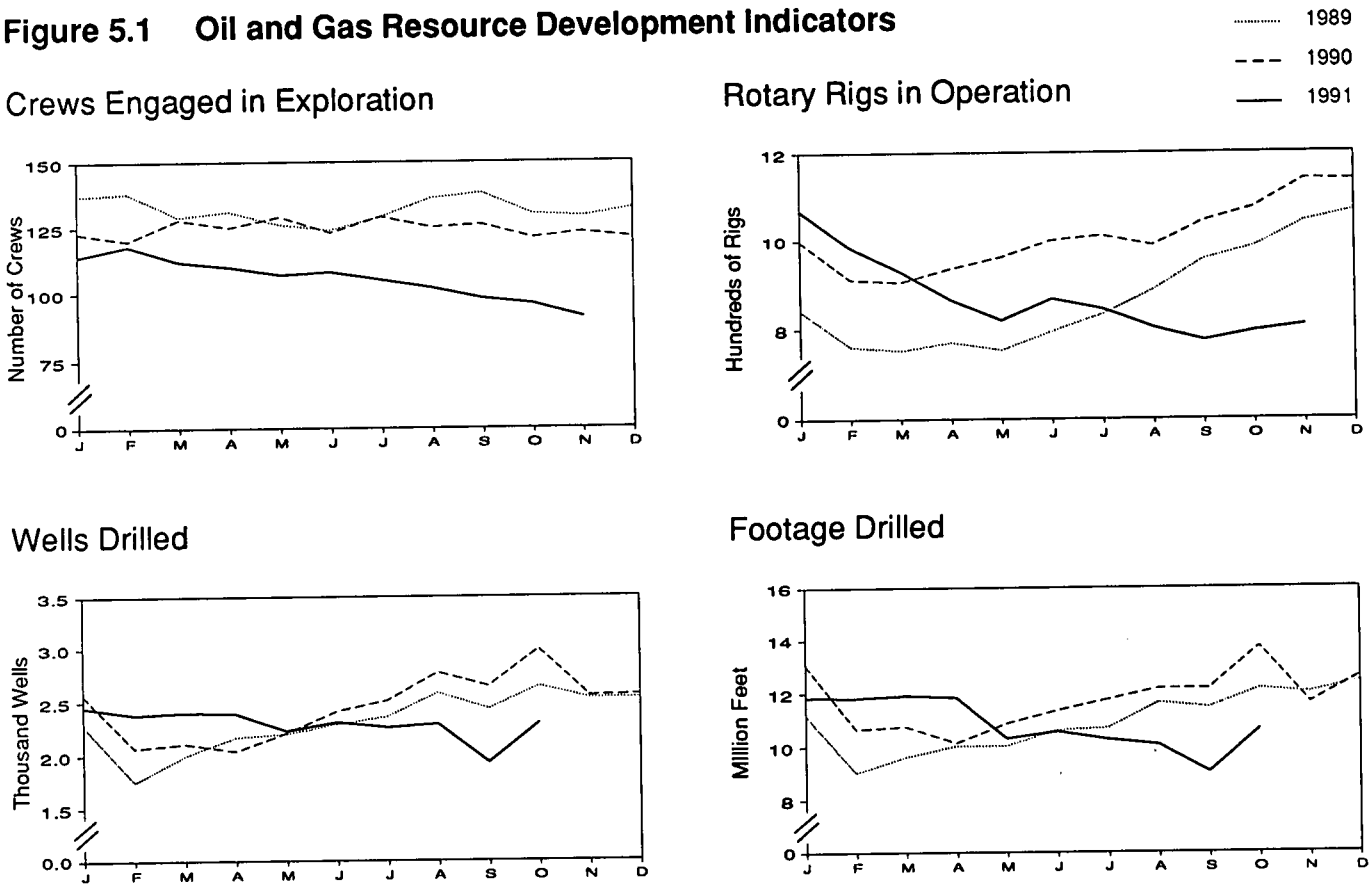
Section 5. Oil and Gas Resource Development

A total of 91 seismic exploration crews were active in November 1991, 32 fewer than a year earlier. Of the total, 73 were land crews and 18 were aboard marine vessels. The number of land crews was down by 27, and the number of operating marine vessels decreased by 5 vessels from the November 1990 count.

The November 1991 rotary rig count of 808 was 2 percent higher than in the previous month but 29 percent lower than in November 1990. Of the total number of rigs in operation, 736 were onshore and 72 were offshore. The number of onshore rigs was down 29 percent from the number in November 1990, and the number of offshore rigs was down 32 percent.

The estimated number of exploratory and development gas and oil wells drilled during October 1991 was 1,690, 19 percent higher than in September 1991 but 24 percent lower than in October 1990. The estimated number of oil wells drilled was 850 and the estimated number of gas wells was 840, down 29 percent and 18 percent, respectively, from the October 1990 levels. The estimated number of dry holes drilled in October 1991 was 620, up 22 percent from September 1991 but 19 percent lower than in October 1990. Total footage drilled in October 1991 was 10.67 million feet, up 18 percent from footage drilled in September 1991 but down 22 percent from that drilled in October 1990.

Figure 5.1 Oil and Gas Resource Development Indicators



Sources: Tables 5.1 and 5.2.

Table 5.1 Seismic Crews and Rotary Rigs

	Crews Engaged in Seismic Exploration			Rotary Rigs in Operation[a]		
	Offshore	Onshore	Total	Offshore	Onshore	Total
	Monthly Average			Weekly Average		
1973 Average	**23**	**227**	**250**	**84**	**1,110**	**1,194**
1974 Average	**31**	**274**	**305**	**94**	**1,378**	**1,472**
1975 Average	**30**	**254**	**284**	**106**	**1,554**	**1,660**
1976 Average	**25**	**237**	**262**	**129**	**1,529**	**1,658**
1977 Average	**27**	**281**	**308**	**167**	**1,834**	**2,001**
1978 Average	**25**	**327**	**352**	**185**	**2,074**	**2,259**
1979 Average	**30**	**370**	**400**	**207**	**1,970**	**2,177**
1980 Average	**37**	**493**	**530**	**231**	**2,678**	**2,909**
1981 Average	**44**	**637**	**681**	**256**	**3,714**	**3,970**
1982 Average	**57**	**531**	**588**	**243**	**2,862**	**3,105**
1983 Average	**47**	**426**	**473**	**199**	**2,033**	**2,232**
1984 Average	**49**	**445**	**494**	**213**	**2,215**	**2,428**
1985 Average	**45**	**333**	**378**	**206**	**1,774**	**1,980**
1986 Average	**24**	**176**	**201**	**99**	**865**	**964**
1987 Average	**24**	**153**	**176**	**95**	**841**	**936**
1988 Average	**29**	**153**	**182**	**123**	**813**	**936**
1989 January	25	112	137	110	731	841
February	23	115	138	95	667	762
March	21	108	129	93	660	753
April	22	109	131	92	679	771
May	22	104	126	92	662	754
June	22	102	124	103	692	795
July	22	107	129	114	718	832
August	26	110	136	114	772	886
September	24	114	138	107	848	955
October	21	109	130	106	878	984
November	20	109	129	119	922	1,041
December	20	112	132	117	948	1,065
Average	**23**	**109**	**132**	**105**	**764**	**869**
1990 January	20	103	123	113	885	998
February	20	100	120	105	806	911
March	21	107	128	108	797	905
April	24	101	125	111	824	935
May	25	104	129	120	841	961
June	23	100	123	113	886	999
July	24	105	129	108	902	1,010
August	23	102	125	108	879	987
September	25	101	126	107	935	1,042
October	23	98	121	99	974	1,073
November	23	100	123	106	1,031	1,137
December	23	98	121	101	1,035	1,136
Average	**23**	**102**	**125**	**108**	**902**	**1,010**
1991 January	22	92	114	91	977	1,068
February	21	97	118	88	896	984
March	24	88	112	81	848	929
April	23	87	110	95	770	865
May	22	85	107	98	721	819
June	21	87	108	93	774	867
July	16	89	105	80	764	844
August	15	87	102	68	735	803
September	14	84	98	71	704	775
October	15	81	96	68	727	795
November	18	73	91	72	736	808
11-Month Average	**19**	**86**	**106**	**80**	**785**	**865**
1990 11-Month Average	**23**	**102**	**125**	**109**	**888**	**997**
1989 11-Month Average	**23**	**109**	**132**	**104**	**748**	**852**

[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.

NA=Not available.

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

Sources • Crews Engaged in Seismic Exploration: Society of Exploration Geophysicists, "Monthly Seismic Crew Count," and annual reports in *Geophysics: The Leading Edge of Exploration.* • Rotary Rigs in Operation: Hughes Tool Company, "Rotary Rigs Running--by State."

Table 5.2 Oil and Gas Exploratory and Development Wells

	Wells Drilled				Footage Drilled
	Oil	Gas	Dry	Total	
	Thousand Wells				Million Feet
1973 Total	**10.25**	**6.98**	**10.47**	**27.69**	**139.42**
1974 Total	**13.66**	**7.17**	**12.21**	**33.04**	**153.79**
1975 Total	**16.98**	**8.17**	**13.74**	**38.89**	**181.05**
1976 Total	**17.70**	**9.44**	**13.81**	**40.94**	**187.29**
1977 Total	**18.70**	**12.12**	**15.04**	**45.86**	**215.70**
1978 Total	**19.07**	**14.41**	**16.59**	**50.06**	**238.39**
1979 Total	**20.70**	**15.17**	**16.04**	**51.91**	**243.69**
1980 Total	**32.28**	**17.22**	**20.34**	**69.84**	**312.30**
1981 Total	**42.84**	**19.91**	**27.28**	**90.03**	**408.84**
1982 Total	**39.13**	**18.94**	**26.38**	**84.45**	**378.39**
1983 Total	**37.12**	**14.53**	**24.30**	**75.95**	**318.09**
1984 Total	**42.51**	**16.99**	**25.73**	**85.23**	**370.20**
1985 Total	**34.94**	**14.23**	**21.09**	**70.26**	**311.77**
1986 Total	**18.76**	**8.20**	**12.89**	**39.85**	**178.19**
1987 Total	**16.22**	**7.82**	**11.63**	**35.68**	**162.17**
1988 Total	**13.42**	**8.33**	**10.19**	**31.93**	**153.51**
1989 January	.84	.79	.66	2.28	11.19
February	.61	.66	.49	1.75	9.03
March	.70	.66	.63	2.00	9.63
April	.89	.61	.66	2.17	10.03
May	.90	.63	.67	2.20	10.03
June	.84	.73	.71	2.29	10.62
July	.87	.78	.70	2.36	10.70
August	.99	.85	.73	2.58	11.64
September	.85	.84	.74	2.43	11.46
October	R.95	R.86	R.83	R2.64	R12.15
November	.94	.84	.75	2.53	12.00
December	.94	.83	.75	2.53	12.43
Total	**R10.33**	**R9.09**	**R8.33**	**R27.75**	**R130.92**
1990 January	1.00	.85	.72	2.56	13.05
February	.85	.70	.52	2.07	10.67
March	.86	R.69	.56	R2.11	R10.76
April	.83	.62	.59	2.04	10.14
May	.86	.75	.60	2.21	10.87
June	.90	.85	.67	2.41	11.35
July	.93	.90	.68	2.51	11.75
August	1.08	.97	.72	2.77	12.16
September	1.03	.92	.69	2.64	12.16
October	R1.20	R1.02	.77	R2.99	R13.73
November	1.00	.76	.79	2.55	11.63
December	1.02	.86	.69	2.56	12.61
Total	**R11.54**	**R9.88**	**8.00**	**R29.42**	**R140.87**
1991 January	1.10	.80	.56	2.45	11.84
February	1.12	.67	.58	2.38	11.82
March	1.07	.72	.61	2.40	11.91
April	R1.07	.70	R.63	R2.39	R11.84
May	.94	.67	.61	2.23	10.31
June	1.00	.76	.55	2.31	10.57
July	.95	.72	.58	2.26	10.27
August	.97	.75	.58	2.29	10.07
September	.69	.73	.51	1.93	9.04
October	.85	.84	.62	2.30	10.67
10-Month Total	**9.76**	**7.37**	**5.81**	**22.94**	**108.33**
1990 10-Month Total	**9.53**	**8.26**	**6.52**	**24.31**	**116.64**
1989 10-Month Total	**8.45**	**7.42**	**6.83**	**22.69**	**106.49**

R=Revised data.

Notes: • Includes exploratory and development wells; excludes service wells, stratigraphic tests, and core tests. • Geographic coverage is the 50 States and the District of Columbia. • Totals and averages may not equal sum of components due to subsequent revisions and independent rounding. • Due to the method of estimation, data shown on this page are frequently revised. See end of section.

Sources: Energy Information Administration computations, which are based on well reports submitted to the American Petroleum Institute by the Petroleum Information Corporation.

Oil and Gas Resource Development Notes

Three well types are considered in the *Monthly Energy Review (MER)* drilling statisitics: "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 Energy 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 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 that 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. 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 October 1991 totaled 90 million short tons, 3 percent[6] lower than the 93 million short tons produced in October 1990.

Electric utility coal consumption in September 1991 totaled 65 million short tons, 3 percent lower than the consumption level in September 1990. Coal consumption at utility plants for the first 9 months of 1991 totaled 580 million short tons compared to 578 million short tons in the comparable period of 1990.

Electric utility coal stocks were 154 million short tons at the end of September 1991, compared to stocks of 149 million short tons at the end of September 1990.

Exports of coal in September 1991 totaled 11 million short tons, 3 percent more than exports in September 1990. Exports for the first 9 months in 1991 totaled 80 million short tons, slightly higher than in the comparable period of 1990.

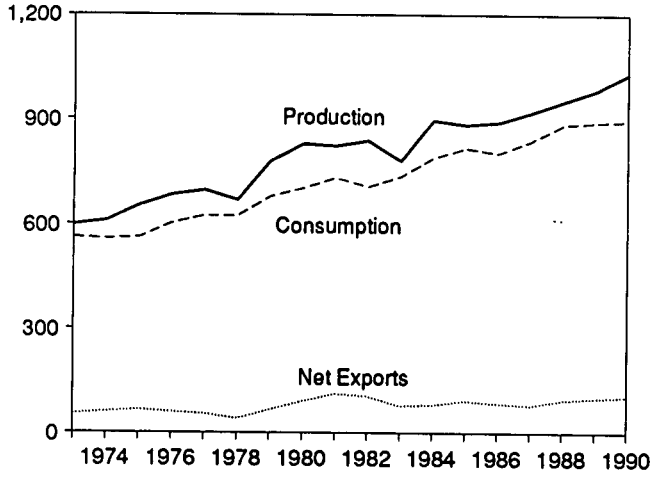
Coal imports for September 1991 totaled 387 thousand short tons, double the import level of 194 thousand short tons for September 1990. Coal imports for the first 9 months of 1991 totaled 2.7 million short tons, 38 percent above the level of 1.9 million short tons imported in the first 9 months of 1990.

[6]Calculated values are computed using unrounded data.

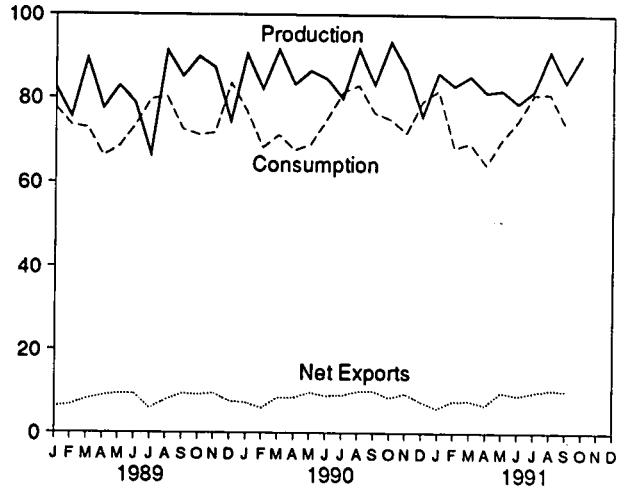
Figure 6.1 Coal

(Million Short Tons)

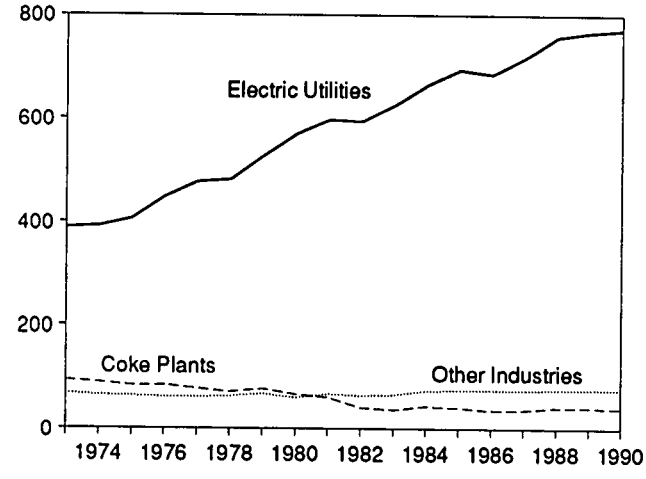
Overview, 1973-1990



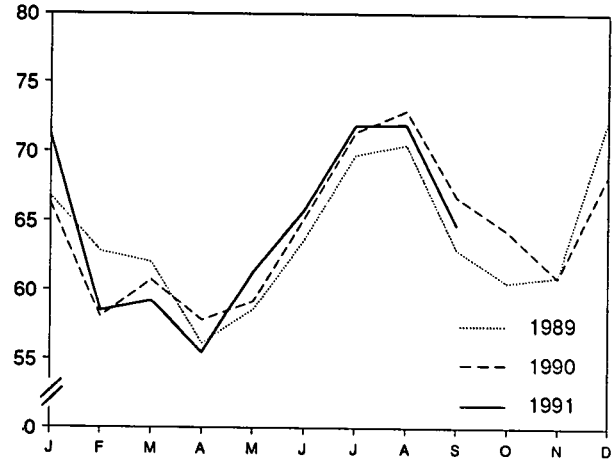
Overview, Monthly



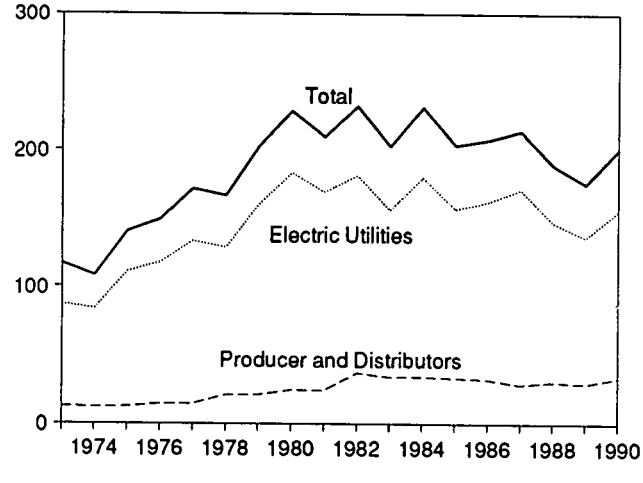
Consumption by Sector, 1973-1990



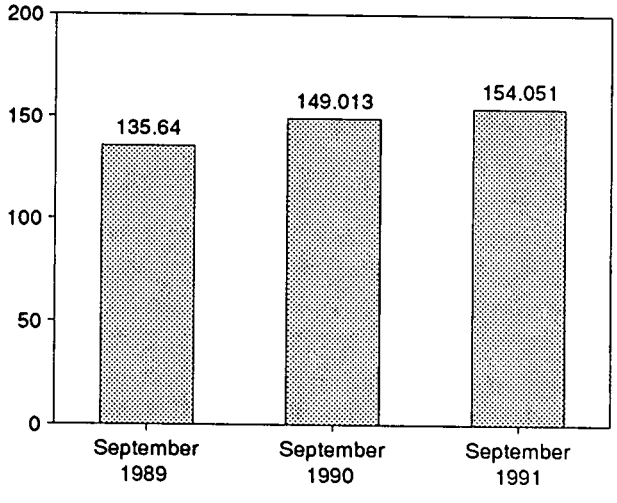
Consumption by Electric Utilities, Monthly



Stocks, End of Year, 1973-1990



Stocks at Electric Utilities, End of Month



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

Table 6.1 Coal Overview

(Thousand Short Tons)

	Production	Consumption	Imports[a]	Exports	Stocks[b]
1973 Total	**598,568**	**562,584**	**127**	**53,587**	**116,865**
1974 Total	**610,023**	**558,402**	**2,080**	**60,661**	**107,957**
1975 Total	**654,641**	**562,640**	**940**	**66,309**	**140,158**
1976 Total	**684,913**	**603,790**	**1,203**	**60,021**	**148,659**
1977 Total	**697,205**	**625,291**	**1,647**	**54,312**	**171,323**
1978 Total	**670,164**	**625,225**	**2,953**	**40,714**	**166,246**
1979 Total	**781,134**	**680,524**	**2,059**	**66,042**	**202,472**
1980 Total	**829,700**	**702,729**	**1,194**	**91,742**	**228,407**
1981 Total	**823,775**	**732,628**	**1,043**	**112,541**	**209,423**
1982 Total	**838,111**	**706,910**	**742**	**106,277**	**232,037**
1983 Total	**782,091**	**736,671**	**1,271**	**77,772**	**202,585**
1984 Total	**895,921**	**791,291**	**1,286**	**81,483**	**231,300**
1985 Total	**883,638**	**818,049**	**1,952**	**92,680**	**203,367**
1986 Total	**890,315**	**804,312**	**2,212**	**85,518**	**207,319**
1987 Total	**918,762**	**836,941**	**1,747**	**79,607**	**213,780**
1988 Total	**950,265**	**883,664**	**2,134**	**95,023**	**188,831**
1989 January	82,331	77,638	66	6,306	185,952
February	75,414	73,391	131	6,748	181,866
March	89,421	72,834	334	8,375	184,630
April	77,456	66,355	158	9,104	188,578
May	82,776	68,438	312	9,685	193,282
June	78,795	73,372	218	9,657	189,507
July	66,601	79,619	375	6,209	175,341
August	91,349	80,170	247	8,122	174,372
September	85,115	72,413	303	9,661	176,013
October	89,873	71,200	160	9,293	182,271
November	87,236	71,653	245	9,768	186,815
December	74,363	83,478	303	7,888	175,087
Total	**980,729**	**890,559**	**2,851**	**100,815**	**175,087**
1990 January	90,561✓	76,890✓	175✓	7,447✓	178,857✓
February	82,021	68,252	268	6,243	185,776
March	91,602	71,171	292	8,693	195,112
April	83,167	67,690	182	8,590	202,460
May	86,519	69,007	144	9,827	208,968
June	84,592	74,908	348	9,316	208,871
July	79,798	81,260	200	9,194	199,995
August	91,842	82,951	120	10,065	196,323
September	83,120	76,469	194	10,238	194,398
October	93,424	74,982	284	8,756	200,602
November	86,763	71,729	224	9,621	205,332
December	75,666✓	79,247✓	268✓	7,813✓	200,626✓
Total	**1,029,076**	**894,556**	**2,699**	**105,804**	**200,626**
1991 January	86,058	81,734	263	6,214	196,651
February	82,835	68,309	429	8,127	202,570
March	85,271	69,321	246	7,977	209,852
April	81,311	R64,394	198	6,917	R215,146
May	81,816	R70,214	248	10,018	R217,347
June	78,764	R74,716	284	9,278	R212,796
July	81,770	E80,872	348	10,099	E204,322
August	91,237	E81,050	248	10,541	E201,675
September	83,800	E73,672	387	10,557	E154,100
October	90,441	NA	NA	NA	NA
10-Month Total	**843,304**	**NA**	**NA**	**NA**	**NA**
1990 10-Month Total	**866,646**	**743,580**	**2,207**	**88,369**	**200,602**
1989 10-Month Total	**819,129**	**735,429**	**2,303**	**83,158**	**182,271**

[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. E=Estimate.

Notes: • Geographic coverage is the 50 States and the District of Columbia. • Data through 1988 are final. Subsequent data are preliminary. • Annual and year-to-date totals are rounded sums of rounded data. Accordingly, they may not equal the sum of the months and may differ from values published elsewhere by the Energy Information Administration (EIA). • For methodology used to calculate production, consumption, and stocks, see Notes 1, 2, and 3 at end of section.

Sources: • **Production, 1973-September 1977**—U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook* and *Minerals Industry Surveys*. **October 1977 forward**—EIA, *Weekly Coal Production*. • **Consumption**—See Table 6.2. • **Imports and Exports**—U.S. Department of Commerce, Bureau of the Census, Monthly Reports IM-145 (Imports) and EM-522 (Exports). • **Stocks**—See Table 6.3.

ACHCPUS + BCHCPUS ACKCPUS + BCKCCPUS ACOCPUS + BCOCPUS CLEUPUS (Elec gen)

Table 6.2 Coal Consumption by End-Use Sector

(Thousand Short Tons)

	Residential and Commercial	Industrial		Electric Utilities	Total
		Coke Plants	Other Industrial Including Transportation		
1973 Total	**11,117**	**94,101**	**68,154**	**389,212**	**562,584**
1974 Total	**11,417**	**90,191**	**64,983**	**391,811**	**558,402**
1975 Total	**9,410**	**83,598**	**63,670**	**405,962**	**562,640**
1976 Total	**8,916**	**84,704**	**61,799**	**448,371**	**603,790**
1977 Total	**8,954**	**77,739**	**61,472**	**477,126**	**625,291**
1978 Total	**9,511**	**71,394**	**63,085**	**481,235**	**625,225**
1979 Total	**8,388**	**77,368**	**67,717**	**527,051**	**680,524**
1980 Total	**6,452**	**66,657**	**60,347**	**569,274**	**702,729**
1981 Total	**7,422**	**61,015**	**67,395**	**596,797**	**732,628**
1982 Total	**8,240**	**40,908**	**64,096**	**593,666**	**706,910**
1983 Total	**8,448**	**37,033**	**65,979**	**625,211**	**736,671**
1984 Total	**9,128**	**44,022**	**73,744**	**664,399**	**791,291**
1985 Total	**7,779**	**41,056**	**75,372**	**693,841**	**818,049**
1986 Total	**7,667**	**36,006**	**75,583**	**685,056**	**804,312**
1987 Total	**6,914**	**36,957**	**75,175**	**717,894**	**836,941**
1988 Total	**7,130**	**41,910**	**76,252**	**758,372**	**883,664**
1989 January	632	3,568	6,671	66,767	77,638
February	693	3,295	6,619	62,784	73,391
March	512	3,722	6,595	62,005	72,834
April	511	3,613	6,088	56,144	66,355
May	336	3,525	6,050	58,527	68,438
June	296	3,368	6,073	63,635	73,372
July	496	3,527	5,875	69,720	79,619
August	449	3,336	5,891	70,493	80,170
September	318	3,320	5,865	62,910	72,413
October	210	3,599	6,829	60,561	71,200
November	530	3,301	6,815	61,006	71,653
December	1,184	3,195	6,764	72,336	83,478
Total	**6,167**	**41,369**	**76,134**	**766,888**	**890,559**
1990 January	713 ✓	3,354 ✓	6,533 ✓	66,290	76,890
February	656	3,025	6,576	57,996	68,252
March	551	3,369	6,504	60,748	71,171
April	532	3,357	6,025	57,776	67,690
May	360	3,501	6,007	59,140	69,007
June	373	3,331	6,037	65,167	74,908
July	535	3,275	6,075	71,376	81,260
August	498	3,397	6,113	72,942	82,951
September	409	3,276	6,056	66,727	76,469
October	413	3,450	6,853	64,264	74,982
November	624	3,351	6,838	60,916	71,729
December	1,059 ✓	3,139 ✓	6,713 ✓	68,335	79,247
Total	**6,724**	**39,824**	**76,330**	**771,678**	**894,556**
1991 January	862	3,031	6,651	71,190	81,734
February	605	2,566	6,695	58,443	68,309
March	541	2,985	6,601	59,195	69,321
April	R 445	R 2,675	R 5,791	55,483	R 64,394
May	R 365	R 2,710	R 5,841	61,298	R 70,214
June	R 355	R 2,690	R 5,893	65,777	R 74,716
July	E 467	E 2,718	E 5,825	71,862	E 80,872
August	E 450	E 2,734	E 5,947	71,919	E 81,050
September	E 502	E 2,717	E 5,801	64,652	E 73,672
9-Month Total	**E 4,592**	**E 24,826**	**E 55,045**	**579,819**	**E 664,282**
1990 9-Month Total	**4,627**	**29,883**	**55,925**	**578,163**	**668,598**
1989 9-Month Total	**4,243**	**31,274**	**55,726**	**572,985**	**664,229**

R=Revised data. E=Estimate.

Notes: • For sector-specific reporting and estimating information, see Note 2 at end of section. • Geographic coverage is the 50 States and the District of Columbia. • Data through 1988 are final. Subsequent data are preliminary. • Annual and year-to-date totals are rounded sums of rounded data. Accordingly, they may not equal the sum of the months and may differ from values published elsewhere by the Energy Information Administration (EIA).

Sources: • **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**—EIA, Form EIA-2, "Monthly Coal Report, Retail Dealers-Upper Lake Docks." **1980 forward**—EIA, Form EIA-6, "Coal Distribution Report." • **Coke Plants, 1973-September 1977**—DOI, BOM, *Minerals Yearbook* and *Minerals Industry Surveys*. **October 1977-1980**—EIA, Form EIA-5/5A, "Coke and Coal Chemicals-Monthly/Annual." **1981-1984**—EIA, Form EIA-5/5A, "Coke Plant Report-Quarterly/Annual Supplement." **1985 forward**—EIA Form EIA-5, "Coke Plant Report," quarterly. • **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." • **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."

CLSKPUS CLSOPUS CLSEPUS (Elec Ut.) CLSDPUS

Table 6.3 Coal Stocks, End of Period

(Thousand Short Tons)

	Consumer				Producers and Distributors	
	Coke Plants	Other Industrial	Electric Utilities	Total[a]		Total[a]
1973 Year	6,998	10,370	86,967	104,335	12,530	116,865
1974 Year	6,209	6,605	83,509	96,323	11,634	107,957
1975 Year	8,797	8,529	110,724	128,050	12,108	140,158
1976 Year	9,902	7,100	117,436	134,438	14,221	148,659
1977 Year	12,816	11,063	133,219	157,098	14,225	171,323
1978 Year	8,278	9,048	128,225	145,551	20,695	166,246
1979 Year	10,155	11,777	159,714	181,646	20,826	202,472
1980 Year	9,067	11,951	183,010	204,028	24,379	228,407
1981 Year	6,475	9,906	168,893	185,274	24,149	209,423
1982 Year	4,642	9,479	181,132	195,253	36,784	232,037
1983 Year	4,346	8,710	155,598	168,654	33,931	202,585
1984 Year	6,166	11,317	179,727	197,210	34,090	231,300
1985 Year	3,420	10,438	156,376	170,234	33,133	203,367
1986 Year	2,992	10,429	161,806	175,226	32,093	207,319
1987 Year	3,884	10,777	170,797	185,459	28,321	213,780
1988 Year	3,137	8,768	146,507	158,413	30,418	188,831
1989 January	3,264	8,073	142,538	153,876	32,076	185,952
February	3,391	7,378	137,363	148,132	33,734	181,866
March	3,518	6,683	139,036	149,238	35,392	184,630
April	3,466	6,679	144,674	154,819	33,759	188,578
May	3,413	6,675	151,067	161,155	32,127	193,282
June	3,361	6,671	148,981	159,013	30,494	189,507
July	3,476	7,054	134,865	145,395	29,946	175,341
August	3,591	7,436	133,948	144,975	29,397	174,372
September	3,707	7,818	135,640	147,165	28,848	176,013
October	3,426	7,666	142,280	153,372	28,899	182,271
November	3,145	7,515	147,207	157,866	28,949	186,815
December	2,864	7,363	135,860	146,087	29,000	175,087
1990 January	3,123 ✓	7,237 ✓	137,465	147,824	31,033 ✓	178,857
February	3,382	7,110	142,218	152,711	33,066	185,776
March	3,641	6,984	149,388	160,013	35,099	195,112
April	3,674	7,127	155,962	166,763	35,698	202,460
May	3,706	7,270	161,695	172,672	36,296	208,968
June	3,739	7,413	160,823	171,976	36,895	208,871
July	3,387	7,810	152,982	164,179	35,816	199,995
August	3,255	8,206	150,123	161,585	34,738	196,323
September	3,124	8,603	149,013	160,739	33,659	194,398
October	3,192	8,640	155,191	167,023	33,579	200,602
November	3,260	8,678	159,895	171,834	33,499	205,332
December	3,329 ✓	8,716 ✓	155,163	167,208	33,418 ✓	200,626
1991 January	3,262	8,226	148,736	160,224	36,428	196,651
February	3,196	7,735	152,202	163,133	39,437	202,570
March	3,130	7,245	157,031	167,406	42,446	209,852
April	R 3,181	R 7,113	162,804	R 173,098	R 42,049	R 215,146
May	R 3,232	R 6,982	165,483	R 175,696	R 41,651	R 217,347
June	R 3,283	R 6,850	161,410	R 171,543	R 41,253	R 212,796
July	E 3,525	E 8,129	155,668	E 167,322	E 37,000	E 204,322
August	E 3,250	E 8,194	153,231	E 164,675	E 37,000	E 201,675
September	E 3,104	E 8,549	154,051	E 165,704	E 37,000	E 202,704

[a] Excludes stocks held at retail dealers for consumption by the residential and commercial sector.

R=Revised data. E=Estimate.

Notes: • For sector-specific reporting and estimating information, see Note 3 at end of section. •Geographic coverage is the 50 States and the District of Columbia. • Data through 1988 are final. Subsequent data are preliminary. • Totals may not equal sum of components due to independent rounding.

Sources: • **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," 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." • **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." • **Producers and Distributors**—EIA, Form EIA-6, "Coal Distribution Report."

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 insures 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, August, 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 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 directly from reported data.

- Coke Plants—Prior to 1980, monthly coke plant consumption data were 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 (i.e., 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 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 (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 directly from reported data.

3. Stocks: Coal stocks 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, August, 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 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 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 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 directly from reported data.

- Producers and Distributors—Quarterly stocks at producers and distributors are 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 directly from data reported monthly by the Bureau of the Census.

5. Additional Information: More information concerning coal production, consumption, and stocks data and estimation procedures may be obtained in EIA's *Quarterly Coal Report.*

Section 7. Electricity

During September 1991, electric utilities generated 234 billion kilowatthours of electricity, 2 percent[7] below the September 1990 generation level. Coal-fired generation totaled 129 billion kilowatthours, 5 percent below the September 1990 level. Nuclear generation totaled 52 billion kilowatthours, 7 percent above the level 1 year earlier. Natural gas-fired generation was 25 billion kilowatthours, 12 percent below the September 1990 level. Hydroelectric generation totaled 18 billion kilowatthours, 8 percent above the September 1990 level. Petroleum-fired generation totaled 9 billion kilowatthours, 8 percent above the level 1 year earlier.

During the first three quarters of 1991, electric utilities generated 2,144 billion kilowatthours of electricity, 1 percent above the first three quarters of 1990. Comparing generation during the first three quarters of 1991 and 1990, nuclear generation increased 6 percent, hydroelectric power was slightly higher, while petroleum-fired generation decreased 8 percent, and both coal-fired generation and natural gas-fired generation were down 1 percent.

Sales of electricity to all ultimate consumers in the United States in September 1991 were 244 billion kilowatthours, slightly lower than the September 1990 level. Sales to residential consumers during September 1991 were 85 billion kilowatthours, 2 percent below the level of sales during the previous September. Sales to industrial consumers during September 1991 were 82 billion kilowatthours, 1 percent above the September 1990 level. Commercial sales were 69 billion kilowatthours, slightly higher than the amount sold to commercial consumers 1 year earlier. In September 1991, other sales totaled 8 billion kilowatthours, 4 percent above the September 1990 level.

During the first three quarters of 1991, sales of electricity to all ultimate consumers in the United States were 2,093 billion kilowatthours, 2 percent above sales during the first three quarters of 1990. Sales to residential consumers were 735 billion kilowatthours, 4 percent above the level of sales during the same period in 1990. Industrial sales were 705 billion kilowatthours, slightly higher than the amount sold to industrial consumers in the first three quarters of 1990. Sales to commercial consumers totaled 580 billion kilowatthours, 2 percent above the level of sales 1 year earlier. During the first three quarters of 1991, other sales totaled 74 billion kilowatthours, 3 percent more than the level of sales during the first three quarters of 1990.

Electric utility consumption of petroleum (excluding petroleum coke) during September 1991 was 14 million barrels, 8 percent above the September 1990 level. Coal consumption during September 1991 was 65 million short tons, 3 percent lower than consumption in September 1990. During September 1991, electric utilities consumed 262 billion cubic feet of natural gas, 13 percent below the September 1990 consumption level.

During the first three quarters of 1991, electric utility petroleum (excluding petroleum coke) was 9 percent lower than during the first three quarters of 1990. Coal consumption increased slightly and natural gas consumption decreased 1 percent compared with the first three quarters of 1990.

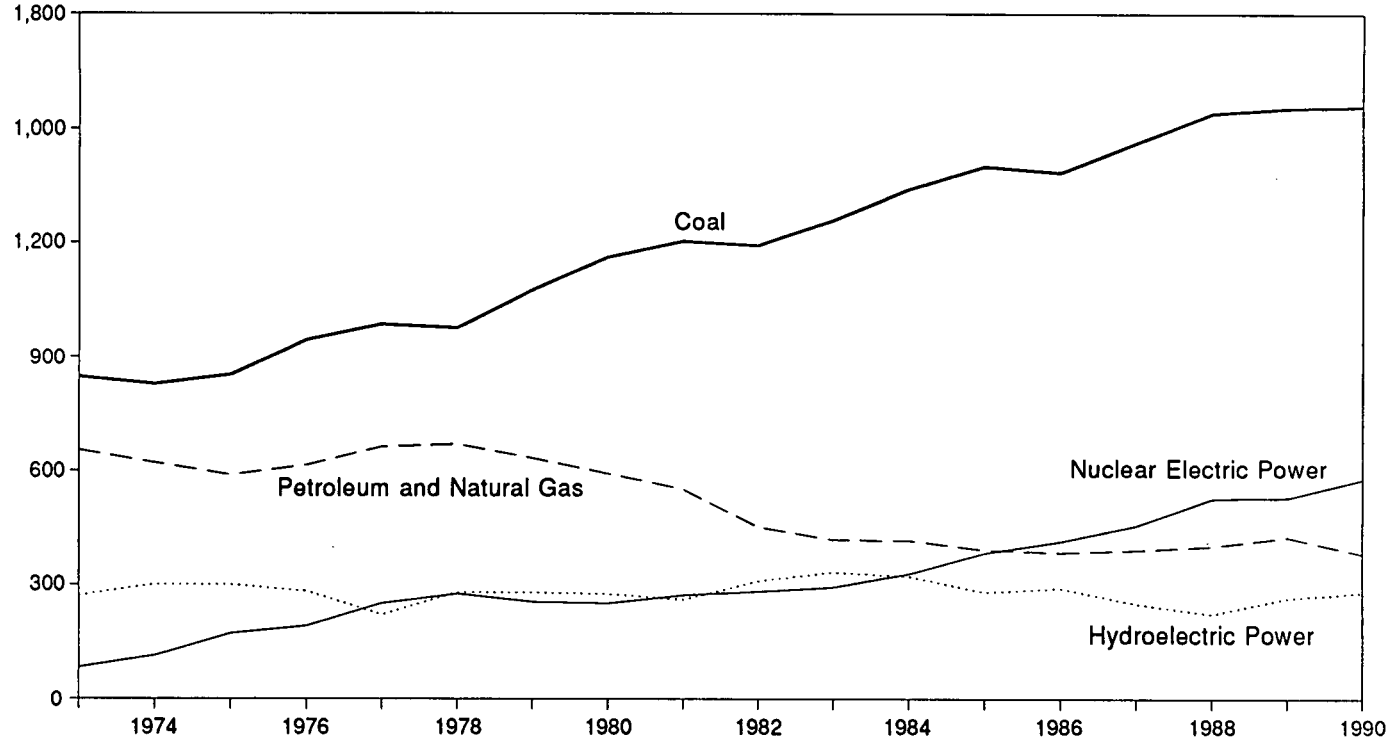
On September 30, 1991, electric utility stocks of all types of coal totaled 154 million short tons, 3 percent higher than the level on September 30, 1990. Stocks of petroleum (excluding petroleum coke) on September 30, 1991, totaled 75 million barrels, 2 percent below the level on September 30, 1990.

[7]Percentage changes are based on numbers shown in the following tables.

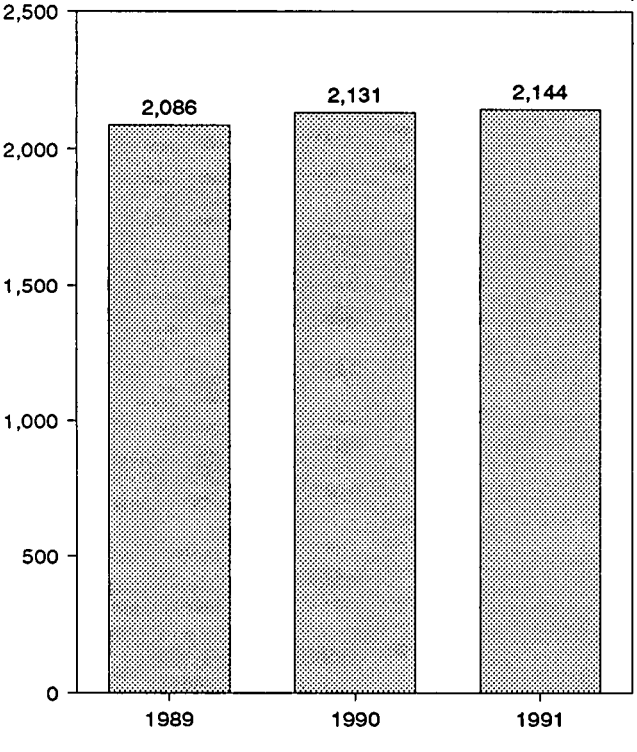
Figure 7.1 Electric Utility Net Generation of Electricity

(Billion Kilowatthours)

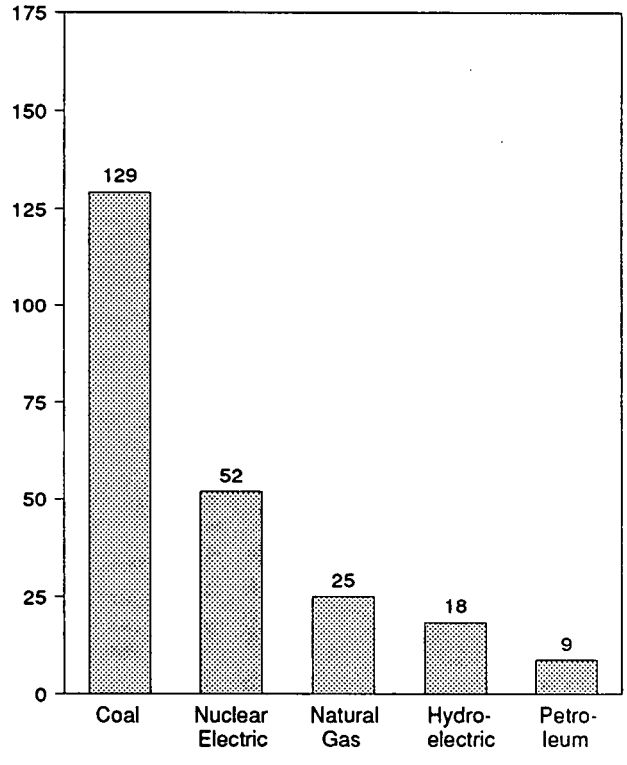
Net Generation by Source, 1973-1990



Net Generation, January-September



Net Generation by Source, September 1991



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)

	Coal	Natural Gas[a]	Petroleum[b]	Nuclear Electric Power	Hydro-Electric Power	Other[c]	Total
1973 Total	**847,651**	**340,858**	**314,343**	**83,479**	**272,083**	**2,294**	**1,860,710**
1974 Total	**828,433**	**320,065**	**300,931**	**113,976**	**301,032**	**2,703**	**1,867,140**
1975 Total	**852,786**	**299,778**	**289,095**	**172,505**	**300,047**	**3,437**	**1,917,649**
1976 Total	**944,391**	**294,624**	**319,988**	**191,104**	**283,707**	**3,883**	**2,037,696**
1977 Total	**985,219**	**305,505**	**358,179**	**250,883**	**220,475**	**4,063**	**2,124,323**
1978 Total	**975,742**	**305,391**	**365,060**	**276,403**	**280,419**	**3,315**	**2,206,331**
1979 Total	**1,075,037**	**329,485**	**303,525**	**255,155**	**279,783**	**4,387**	**2,247,372**
1980 Total	**1,161,562**	**346,240**	**245,994**	**251,116**	**276,021**	**5,506**	**2,286,439**
1981 Total	**1,203,203**	**345,777**	**206,421**	**272,674**	**260,684**	**6,054**	**2,294,812**
1982 Total	**1,192,004**	**305,260**	**146,797**	**282,773**	**309,213**	**5,164**	**2,241,211**
1983 Total	**1,259,424**	**274,098**	**144,499**	**293,677**	**332,130**	**6,456**	**2,310,285**
1984 Total	**1,341,681**	**297,394**	**119,808**	**327,634**	**321,150**	**8,638**	**2,416,304**
1985 Total	**1,402,128**	**291,946**	**100,202**	**383,691**	**281,149**	**10,724**	**2,469,841**
1986 Total	**1,385,831**	**248,508**	**136,585**	**414,038**	**290,844**	**11,503**	**2,487,310**
1987 Total	**1,463,781**	**272,621**	**118,493**	**455,270**	**249,695**	**12,267**	**2,572,127**
1988 Total	**1,540,653**	**252,801**	**148,900**	**526,973**	**222,940**	**11,984**	**2,704,250**
1989 January	135,181	14,014	15,332	46,328	20,930	961	232,747
February	127,187	16,672	17,748	38,725	18,620	874	219,826
March	126,725	20,072	16,667	39,636	22,642	1,000	226,742
April	115,451	22,571	11,561	33,495	24,077	886	208,042
May	119,108	23,747	9,939	38,339	28,049	942	220,124
June	128,615	24,680	12,591	42,976	25,882	945	235,689
July	138,638	30,351	12,081	52,331	22,671	977	257,050
August	141,901	29,709	10,983	54,948	20,187	959	258,687
September	126,898	25,515	10,072	44,837	18,919	909	227,150
October	122,393	24,664	8,263	43,558	20,076	956	219,910
November	124,338	18,107	11,343	43,399	21,186	927	219,300
December	147,227	16,496	21,737	50,784	21,823	972	259,038
Total	**1,553,661**	**266,598**	**158,318**	**529,355**	**265,063**	**11,309**	**2,784,304**
1990 January	132,672	13,687	11,515	55,119	23,412	933	237,339
February	115,898	12,450	9,385	49,963	24,151	861	212,708
March	122,958	17,647	10,172	46,087	28,042	948	225,854
April	117,278	18,991	10,141	38,516	25,387	775	211,088
May	119,785	22,867	9,442	42,945	27,001	868	222,908
June	132,461	28,285	13,353	46,332	27,621	883	248,935
July	144,225	30,969	12,824	53,645	23,658	907	266,228
August	147,135	32,603	11,020	55,758	21,048	919	268,483
September	135,345	28,213	7,981	48,485	16,971	875	237,869
October	130,282	24,381	7,225	43,395	18,605	905	224,794
November	123,841	17,647	6,221	45,034	19,993	860	213,596
December	136,576	16,326	7,902	51,582	23,952	919	237,257
Total	**1,558,457**	**264,067**	**117,182**	**576,862**	**279,839**	**10,651**	**2,807,058**
1991 January	141,677	16,165	9,206	54,369	25,671	897	247,984
February	117,536	13,731	8,685	47,863	21,918	764	210,497
March	118,066	18,432	8,815	49,121	25,820	863	221,117
April	112,177	20,569	8,032	41,662	25,687	809	208,936
May	123,664	23,309	10,999	46,755	28,457	808	233,991
June	131,681	24,380	11,215	54,208	25,832	848	248,165
July	143,586	31,089	10,993	60,735	24,250	839	271,492
August	143,898	30,855	11,863	58,473	21,744	865	267,698
September	129,244	24,922	8,644	51,874	18,387	827	233,897
9-Month Total	**1,161,528**	**203,452**	**88,451**	**465,059**	**217,766**	**7,520**	**2,143,776**
1990 9-Month Total	**1,167,758**	**205,713**	**95,834**	**436,850**	**217,289**	**7,967**	**2,131,412**
1989 9-Month Total	**1,159,703**	**207,331**	**116,975**	**391,614**	**201,978**	**8,454**	**2,086,057**

[a] Includes supplemental gaseous fuel.

[b] Includes fuel oil Nos. 2, 4, 5, and 6, crude oil, kerosene, and petroleum coke.

[c] Other is electricity produced from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems.

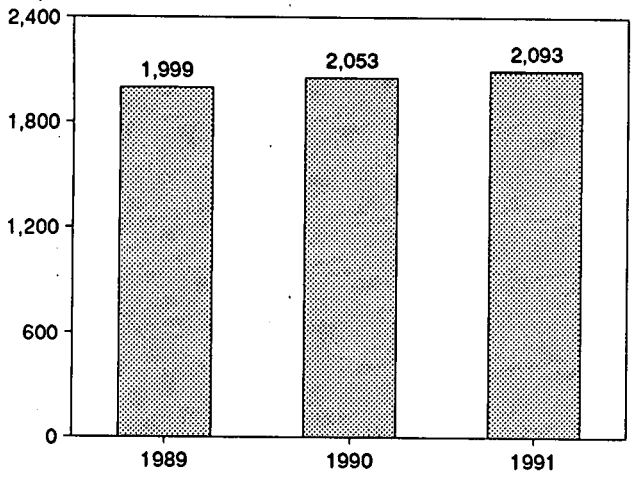
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Sources: • **1973-September 1977:** Federal Power Commission, Form FPC-4, "Monthly Power Plant Report." • **October 1977-1979:** Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report." • **1980 forward:** Energy Information Administration, *Electric Power Monthly*, December 1991, Table 4.

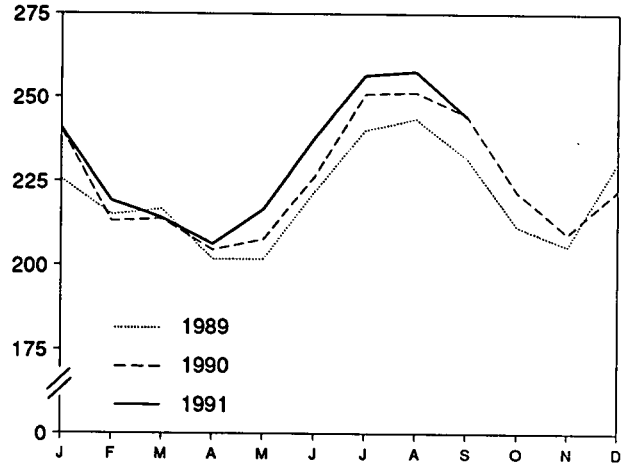
Figure 7.2 Electricity Sales

(Billion Kilowatthours)

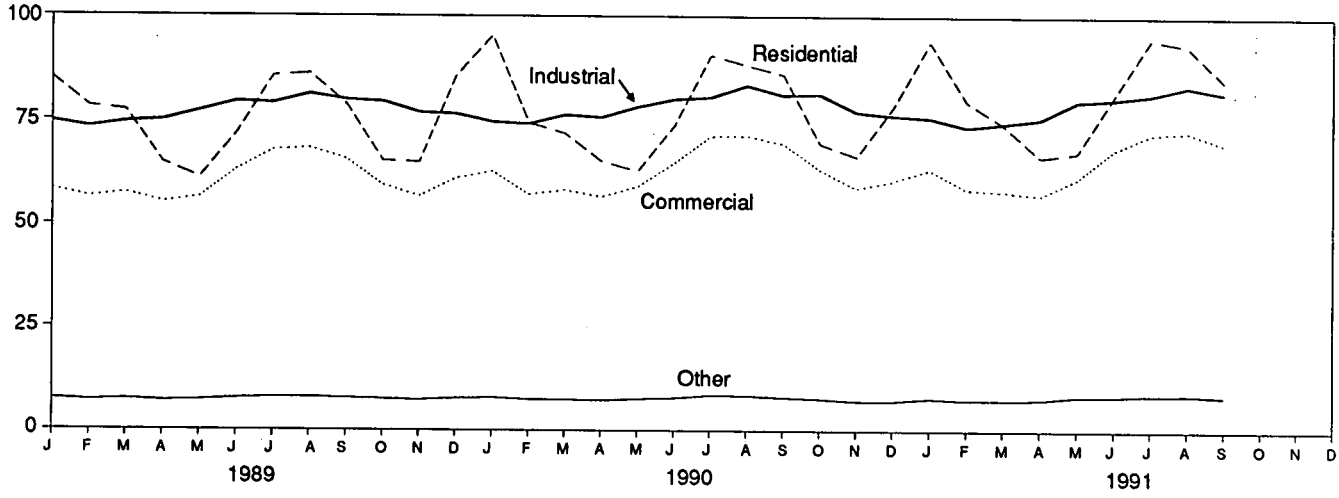
Total Sales, January-September



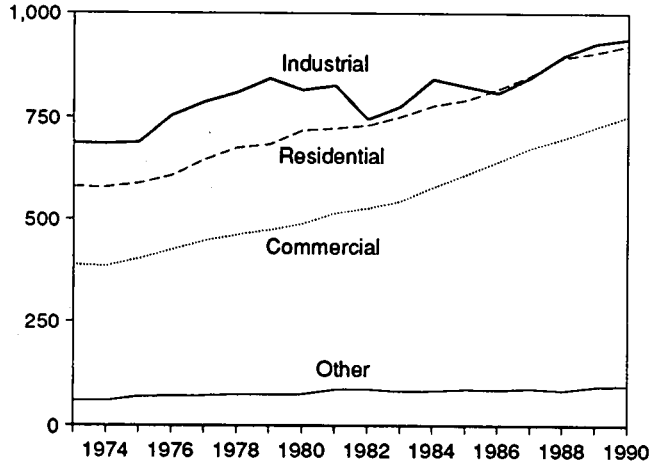
Total Sales, Monthly



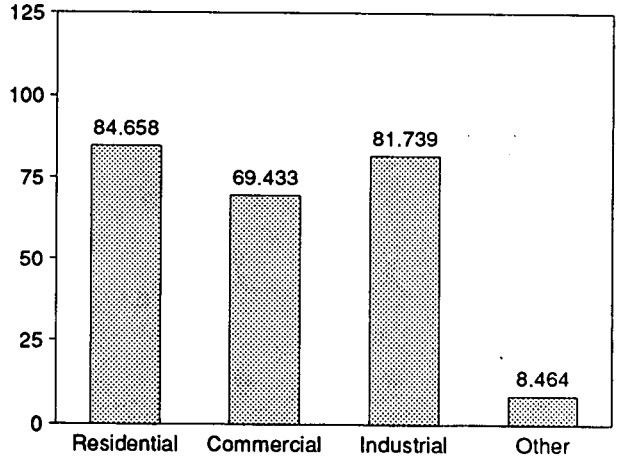
Sales by Sector, Monthly



Sales by Sector, 1973-1990



Sales by Sector, September 1991



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

Table 7.2 Electricity Sales by End-Use Sector

(Million Kilowatthours)

	Residential		Commercial		Industrial		Other[a]		Total	
	Monthly Series[b]	Annual Series	Monthly Series[b]	Annual Series	Monthly Series[b]	Annual Series	Monthly Series[b]	Annual Series	Monthly Series[b]	Annual Series
1973 Total	**579,231**	**NA**	**388,266**	**NA**	**686,085**	**NA**	**59,326**	**NA**	**1,712,909**	**NA**
1974 Total	**578,184**	**NA**	**384,826**	**NA**	**684,875**	**NA**	**58,039**	**NA**	**1,705,924**	**NA**
1975 Total	**588,140**	**NA**	**403,049**	**NA**	**687,680**	**NA**	**68,222**	**NA**	**1,747,091**	**NA**
1976 Total	**606,452**	**NA**	**425,094**	**NA**	**754,069**	**NA**	**69,631**	**NA**	**1,855,246**	**NA**
1977 Total	**645,239**	**NA**	**446,514**	**NA**	**786,037**	**NA**	**70,571**	**NA**	**1,948,361**	**NA**
1978 Total	**674,466**	**NA**	**461,163**	**NA**	**809,078**	**NA**	**73,215**	**NA**	**2,017,922**	**NA**
1979 Total	**682,819**	**NA**	**473,307**	**NA**	**841,903**	**NA**	**73,070**	**NA**	**2,071,099**	**NA**
1980 Total	**717,495**	**NA**	**488,155**	**NA**	**815,067**	**NA**	**73,732**	**NA**	**2,094,449**	**NA**
1981 Total	**722,265**	**NA**	**514,338**	**NA**	**825,743**	**NA**	**84,756**	**NA**	**2,147,103**	**NA**
1982 Total	**729,520**	**NA**	**526,397**	**NA**	**744,949**	**NA**	**85,575**	**NA**	**2,086,441**	**NA**
1983 Total	**750,948**	**NA**	**543,788**	**NA**	**775,999**	**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**	**2,278,372**	**2,285,796**
1985 Total	**790,977**	**793,934**	**608,968**	**605,989**	**824,523**	**836,772**	**85,075**	**87,279**	**2,309,543**	**2,323,974**
1986 Total	**817,663**	**819,088**	**641,469**	**630,520**	**808,292**	**830,531**	**83,409**	**88,615**	**2,350,835**	**2,368,753**
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 January	85,075	–	58,324	–	74,590	–	7,597	–	225,587	–
February	78,158	–	56,433	–	73,175	–	7,190	–	214,956	–
March	77,215	–	57,453	–	74,448	–	7,484	–	216,600	–
April	64,698	–	55,210	–	74,923	–	7,094	–	201,926	–
May	61,108	–	56,428	–	77,119	–	7,278	–	201,933	–
June	71,675	–	62,969	–	79,379	–	7,758	–	221,781	–
July	85,596	–	67,624	–	79,011	–	8,033	–	240,263	–
August	86,143	–	68,187	–	81,240	–	8,046	–	243,615	–
September	78,725	–	65,532	–	79,845	–	7,824	–	231,926	–
October	65,136	–	59,352	–	79,421	–	7,592	–	211,500	–
November	64,844	–	56,716	–	76,788	–	7,394	–	205,742	–
December	85,605	–	61,001	–	76,437	–	7,777	–	230,820	–
Total	**903,979**	**905,525**	**725,229**	**725,861**	**926,376**	**925,659**	**91,066**	**89,765**	**2,646,651**	**2,646,809**
1990 January	95,245	–	62,633	–	74,539	–	7,992	–	240,409	–
February	74,340	–	57,166	–	74,070	–	7,515	–	213,090	–
March	71,742	–	58,253	–	76,263	–	7,516	–	213,774	–
April	65,067	–	56,595	–	75,665	–	7,324	–	204,651	–
May	62,763	–	59,092	–	78,173	–	7,725	–	207,753	–
June	73,688	–	64,694	–	80,047	–	7,932	–	226,361	–
July	90,629	–	71,121	–	80,540	–	8,652	–	250,942	–
August	88,278	–	71,286	–	83,438	–	8,502	–	251,504	–
September	86,014	–	69,346	–	81,051	–	8,136	–	244,548	–
October	69,413	–	63,219	–	81,324	–	7,785	–	221,741	–
November	66,275	–	58,763	–	77,045	–	7,298	–	209,381	–
December	78,285	–	60,595	–	76,208	–	7,272	–	222,359	–
Total	**921,739**	**NA**	**752,763**	**NA**	**938,362**	**NA**	**93,649**	**NA**	**2,706,512**	**NA**
1991 January	93,890	–	63,265	–	75,678	–	7,953	–	240,787	–
February	79,607	–	58,542	–	73,466	–	7,474	–	219,090	–
March	74,055	–	58,102	–	74,372	–	7,513	–	214,041	–
April	66,172	–	57,145	–	75,421	–	7,647	–	206,386	–
May	67,301	–	61,136	–	79,694	–	8,446	–	216,576	–
June	81,090	–	68,070	–	80,237	–	8,472	–	237,868	–
July	94,694	–	71,812	–	81,271	–	8,822	–	256,599	–
August	93,066	–	72,460	–	83,349	–	8,864	–	257,739	–
September	84,658	–	69,433	–	81,739	–	8,464	–	244,295	–
9-Month Total	**734,533**	**–**	**579,964**	**–**	**705,228**	**–**	**73,656**	**–**	**2,093,381**	**–**
1990 9-Month Total	**707,766**	**–**	**570,187**	**–**	**703,785**	**–**	**71,294**	**–**	**2,053,032**	**–**
1989 9-Month Total	**688,394**	**–**	**548,160**	**–**	**693,730**	**–**	**68,304**	**–**	**1,998,588**	**–**

[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.

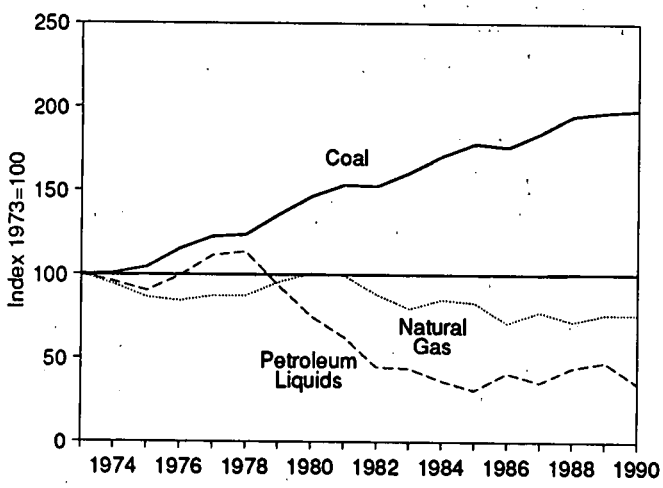
NA=Not available. – =Not applicable.

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

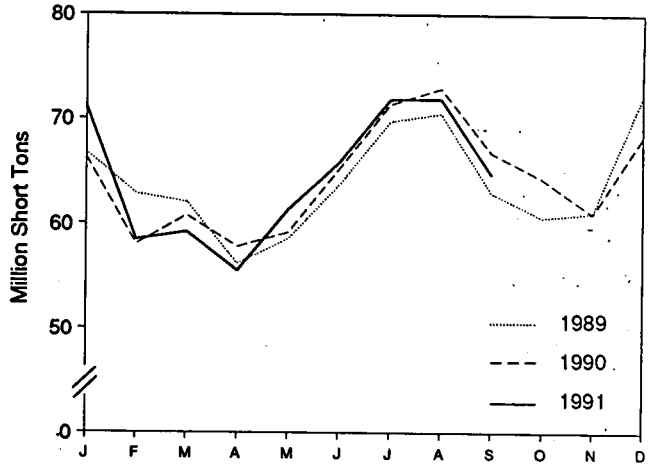
Sources: **1973-1979:** • **1973-September 1977**—Federal Power Commission, Form FPC-5, "Monthly Statement of Electric Operating Revenue and Income." • **October 1977-1979**—Federal Energy Regulatory Commission, Form FERC-5, "Electric Operating Revenue and Income." **1980 forward**—Energy Information Administration, *Electric Power Monthly*, December 1991, Table 51.

Figure 7.3 Electric Utility Consumption and Stocks of Fossil Fuels

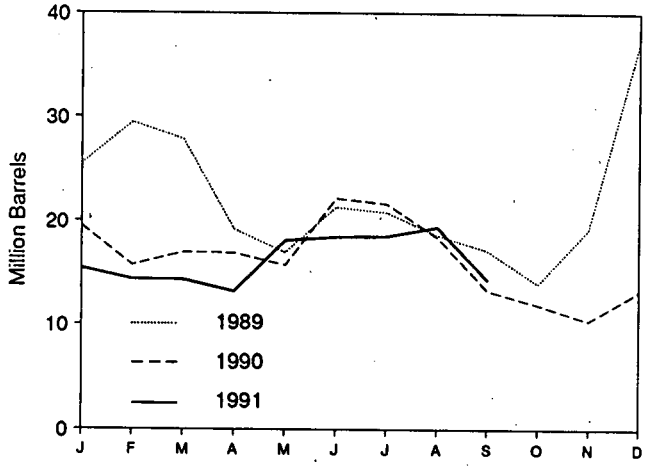
Fuels Consumed, 1973-1990



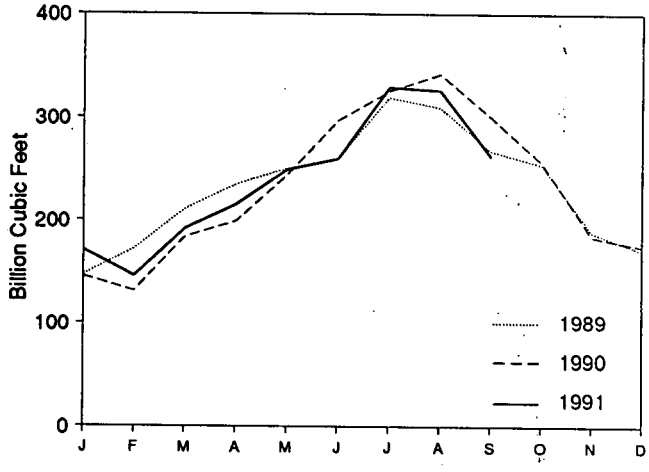
Coal Consumed, Monthly



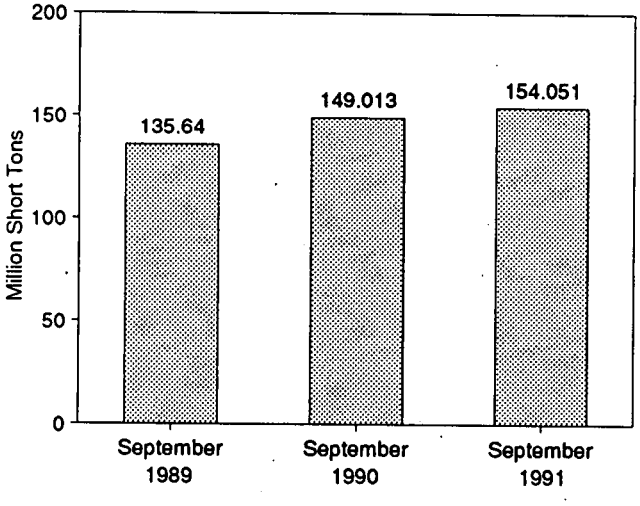
Petroleum Liquids Consumed, Monthly



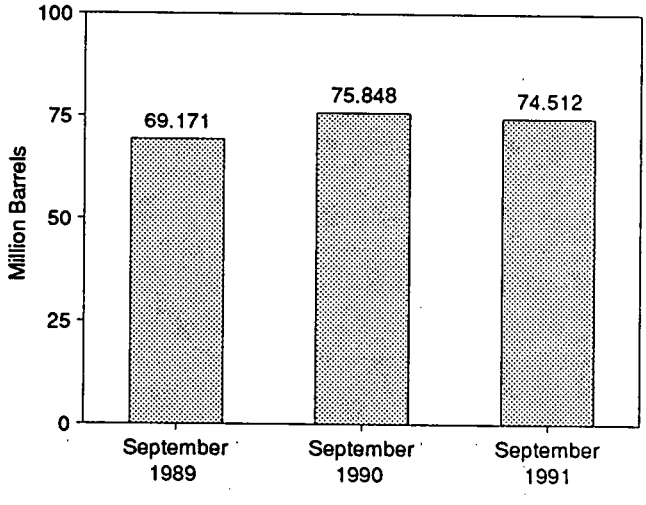
Natural Gas Consumed, Monthly



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

	Coal				Petroleum						
					By Type of Petroleum		By Prime Mover Type				
	Anthracite	Bituminous Coal	Lignite	Total	Heavy Oil[a]	Light Oil[b]	Steam Plants	GT/IC[c]	Total Liquids	Petroleum Coke	Natural Gas[d]
	Thousand Short Tons				Thousand Barrels					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	**1,480**	**388,523**	**15,960**	**405,962**	**NA**	**NA**	**467,221**	**38,907**	**506,128**	**70**	**3,157,669**
1976 Total	**1,350**	**425,205**	**21,817**	**448,371**	**NA**	**NA**	**514,077**	**41,843**	**555,920**	**68**	**3,080,868**
1977 Total	**1,425**	**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**	**2,635,613**
1989 January	98	59,707	6,962	66,767	23,425	2,055	24,273	1,206	25,479	47	147,141
February	75	56,764	5,945	62,784	27,056	2,427	27,981	1,502	29,483	33	172,379
March	82	55,937	5,986	62,005	25,133	2,691	25,900	1,924	27,824	35	211,095
April	96	50,259	5,789	56,144	18,144	1,045	18,652	538	19,190	38	234,726
May	98	52,420	6,009	58,527	15,448	1,522	16,014	957	16,970	36	250,555
June	75	56,841	6,719	63,635	19,253	2,070	19,832	1,490	21,322	38	259,941
July	97	62,322	7,302	69,720	18,643	2,180	19,233	1,590	20,822	58	319,709
August	95	63,278	7,121	70,493	17,133	1,530	17,623	1,040	18,663	58	309,597
September	81	56,533	6,295	62,910	15,642	1,526	16,126	1,041	17,168	54	267,545
October	87	54,775	5,699	60,561	12,807	1,180	13,334	653	13,987	39	254,074
November	85	54,628	6,294	61,006	17,762	1,484	18,371	875	19,247	33	188,924
December	81	65,040	7,215	72,336	31,514	5,781	32,975	4,320	37,295	50	171,326
Total	**1,049**	**688,504**	**77,335**	**766,888**	**241,960**	**25,491**	**250,315**	**17,136**	**267,451**	**517**	**2,787,012**
1990 January	92	58,978	7,220	66,290	18,294	1,234	18,900	628	19,528	40	145,641
February	85	51,598	6,313	57,996	14,769	974	15,194	549	15,743	62	131,593
March	91	54,557	6,101	60,748	16,068	916	16,541	442	16,984	62	183,982
April	81	52,319	5,376	57,776	15,882	1,035	16,364	554	16,917	61	198,996
May	90	53,062	5,988	59,140	14,586	1,146	15,113	619	15,732	77	243,760
June	90	58,184	6,892	65,167	20,619	1,555	21,145	1,028	22,174	66	297,052
July	96	64,097	7,183	71,376	20,041	1,615	20,514	1,141	21,655	74	325,760
August	93	65,532	7,317	72,942	16,835	1,618	17,333	1,121	18,454	72	342,469
September	84	60,187	6,455	66,727	12,037	1,318	12,491	863	13,354	79	300,596
October	82	58,002	6,181	64,264	10,772	1,186	11,272	686	11,958	86	256,480
November	71	54,802	6,043	60,916	9,473	910	9,998	385	10,383	61	184,820
December	75	61,129	7,132	68,335	11,979	1,313	12,785	507	13,292	78	175,003
Total	**1,031**	**692,447**	**78,201**	**771,678**	**181,354**	**14,821**	**187,651**	**8,523**	**196,175**	**819**	**2,786,153**
1991 January	74	63,563	7,553	71,190	14,264	1,189	14,911	542	15,453	74	171,140
February	68	51,919	6,456	58,443	13,595	798	14,021	372	14,393	57	145,947
March	93	52,847	6,255	59,195	13,513	848	14,019	342	14,361	73	191,879
April	92	50,172	5,219	55,483	12,142	1,098	12,722	518	13,240	72	215,213
May	73	55,300	5,926	61,298	16,311	1,821	16,919	1,214	18,132	75	249,071
June	72	58,415	7,290	65,777	17,325	1,153	17,879	600	18,478	50	259,673
July	101	64,213	7,548	71,862	17,289	1,259	17,784	764	18,548	61	329,512
August	90	64,315	7,514	71,919	18,041	1,374	18,500	916	19,416	56	326,342
September	90	57,728	6,833	64,652	13,209	1,159	13,633	734	14,368	52	262,308
9-Month Total	**753**	**518,472**	**60,594**	**579,819**	**135,689**	**10,700**	**140,387**	**6,001**	**146,389**	**570**	**2,151,085**
1990 9-Month Total	**802**	**518,515**	**58,846**	**578,163**	**149,130**	**11,412**	**153,597**	**6,945**	**160,541**	**594**	**2,169,850**
1989 9-Month Total	**797**	**514,061**	**58,127**	**572,985**	**179,877**	**17,045**	**185,635**	**11,287**	**196,922**	**395**	**2,172,689**

[a] Heavy oil includes Grade Nos. 4, 5, and 6, and residual fuel oils.
[b] Light oil includes Grade No. 2 heating oil, kerosene, and jet fuel.
[c] GT/IC = Gas turbine and internal combustion plants.
[d] Includes supplemental gaseous fuels.
NA=Not available.
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.
Sources: **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, 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**—Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report." • **1980 forward**—EIA, *Electric Power Monthly*, December 1991, Table 17.

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

	Coal				Petroleum					
					By Type of Petroleum		By Prime Mover Type			
	Anthracite	Bituminous Coal	Lignite	Total	Heavy Oil[a]	Light Oil[b]	Steam Plants	GT/IC[c]	Total Liquids	Petroleum Coke
	Thousand Short Tons				Thousand Barrels					Thousand Short Tons
1973 Year	1,066	84,941	961	86,967	NA	NA	79,121	10,095	89,216	312
1974 Year	930	81,712	867	83,509	NA	NA	97,718	15,199	112,917	35
1975 Year	982	107,927	1,815	110,724	NA	NA	108,825	16,432	125,257	31
1976 Year	1,000	114,130	2,306	117,436	NA	NA	106,993	14,703	121,696	32
1977 Year	2,321	128,210	2,688	133,219	NA	NA	124,750	19,281	144,031	44
1978 Year	2,178	123,020	3,027	128,225	NA	NA	102,402	16,386	118,788	198
1979 Year	3,274	152,981	3,459	159,714	NA	NA	111,121	20,301	131,422	183
1980 Year	4,741	174,154	4,115	183,010	105,351	30,023	117,227	18,147	135,374	52
1981 Year	5,537	158,258	5,098	168,893	102,042	26,094	112,380	15,756	128,136	42
1982 Year	6,080	170,480	4,573	181,132	95,515	23,369	105,287	13,597	118,884	41
1983 Year	6,507	145,250	3,841	155,598	70,573	18,801	78,285	11,090	89,375	55
1984 Year	6,710	167,118	5,899	179,727	68,503	19,116	76,836	10,784	87,619	50
1985 Year	7,189	142,144	7,043	156,376	57,304	16,386	64,704	8,985	73,689	49
1986 Year	7,099	148,665	6,042	161,806	56,841	16,269	64,258	8,853	73,111	40
1987 Year	6,940	156,670	7,187	170,797	55,069	15,759	61,705	9,123	70,827	51
1988 Year	6,561	133,434	6,512	146,507	54,187	15,099	60,311	8,974	69,285	86
1989 January	6,513	129,937	6,088	142,538	55,845	14,809	61,627	9,027	70,654	58
February	6,494	124,652	6,217	137,363	50,063	13,980	55,683	8,360	64,043	56
March	6,475	126,195	6,367	139,036	45,142	13,370	50,500	8,013	58,513	62
April	6,447	131,750	6,477	144,674	47,237	13,607	52,789	8,055	60,844	102
May	6,416	137,884	6,767	151,067	52,595	13,279	57,994	7,879	65,873	64
June	6,427	136,126	6,428	148,981	51,922	14,621	57,610	8,934	66,544	77
July	6,413	122,227	6,226	134,865	52,883	14,405	58,368	8,921	67,289	81
August	6,440	121,281	6,227	133,948	55,608	14,724	61,248	9,085	70,332	69
September	6,437	122,912	6,291	135,640	54,346	14,825	60,233	8,938	69,171	92
October	6,437	129,679	6,164	142,280	56,660	15,090	62,708	9,042	71,750	107
November	6,423	134,309	6,475	147,207	56,258	15,332	62,610	8,980	71,590	115
December	6,403	122,967	6,490	135,860	47,446	13,824	53,309	7,962	61,270	105
1990 January	6,360	124,936	6,169	137,465	54,365	15,410	60,421	9,353	69,775	114
February	6,315	129,981	5,922	142,218	58,169	15,622	64,454	9,337	73,791	108
March	6,294	137,216	5,879	149,388	57,728	15,249	63,746	9,231	72,977	104
April	6,298	143,355	6,308	155,962	55,419	14,837	61,314	8,942	70,256	93
May	6,315	148,823	6,557	161,695	56,321	15,432	62,341	9,412	71,753	102
June	6,376	148,023	6,424	160,823	53,347	15,356	59,397	9,306	68,703	110
July	6,420	140,211	6,352	152,982	56,294	15,618	62,386	9,525	71,911	109
August	6,441	137,477	6,206	150,123	57,357	15,468	63,380	9,446	72,826	113
September	6,486	136,500	6,027	149,013	60,274	15,574	66,336	9,512	75,848	95
October	6,513	142,220	6,459	155,191	61,835	16,142	68,143	9,833	77,977	83
November	6,528	146,866	6,501	159,895	65,160	16,411	71,414	10,157	81,571	84
December	6,499	142,428	6,237	155,163	67,030	16,471	73,306	10,195	83,501	94
1991 January	6,470	136,584	5,681	148,736	64,240	16,450	70,434	10,257	80,690	103
February	6,442	140,184	5,576	152,202	60,470	16,882	67,337	10,015	77,352	111
March	6,384	145,073	5,574	157,031	58,220	16,385	64,748	9,857	74,605	101
April	6,347	150,766	5,690	162,804	58,835	16,173	65,389	9,619	75,008	90
May	6,387	152,539	6,556	165,483	57,232	15,495	63,541	9,186	72,727	81
June	6,441	149,184	5,784	161,410	58,245	15,683	64,499	9,429	73,928	89
July	6,484	142,792	6,392	155,668	57,932	15,889	64,119	9,701	73,820	86
August	6,506	140,454	6,272	153,231	56,576	15,444	62,802	9,219	72,021	79
September	6,514	141,607	5,930	154,051	59,035	15,477	65,189	9,323	74,512	73

[a] Heavy oil includes Grade Nos. 4, 5, and 6, and residual fuel oils.
[b] Light oil includes Grade No. 2 heating oil, kerosene, and jet fuel.
[c] GT/IC = Gas turbine and internal combustion plants.
NA=Not available.

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

Sources: **Prime Mover Type Data:** • **1973-September 1977**—Federal Power Commission, Form FPC-4, "Monthly Power Plant Report." • **October 1977-1981**—Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report." • **1982 forward**—Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report." **All Other Data:** • **1973-September 1977**—Federal Power Commission, Form FPC-4, "Monthly Power Plant Report." • **October 1977-1979**—Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report." • **1980 forward**—EIA, *Electric Power Monthly*, December 1991, Table 28.

Section 8. Nuclear Energy

In September 1991, U.S. nuclear generating units produced a total of 52 net terawatthours (billion kilowatthours) of electricity, 7 percent[8] more than in September 1990. Nuclear units generated at an average capacity factor of 72.3 percent, 5 percentage points more than in September 1990. Nuclear power supplied 22.2 percent of the total electric utility-generated electricity in September 1991, compared with 20.4 percent in September 1990.

Nuclear generation for the first 9 months of 1991, increased 6 percent compared with the first 9 months of 1990. The average nuclear share of electricity for the first 9 months of 1991 was 21.7 percent compared with 20.5 percent for the same period in 1990. During the same period, the average capacity factor for U.S. nuclear units was 71.3 percent in 1991 and 66.9 percent in 1990.

No low- or full-power licenses for nuclear power plants were issued by the Nuclear Regulatory Commission during September 1991.

On September 30, 1991, there were 111 operable nuclear generating units in the United States, with a collective net summer capability of 99.6 million kilowatts of electricity. Of the 111 operable units, 16 units generated at less than 25 percent of capacity because of maintenance, refueling, or repair outage and 10 of the 16 units generated no electricity during the month.

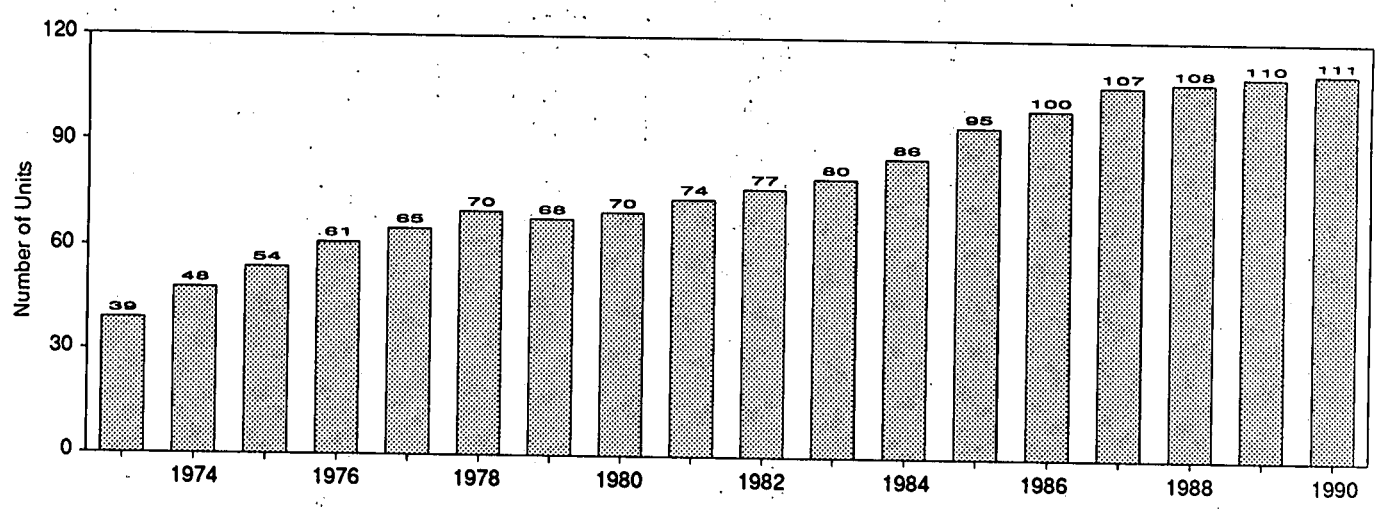
Two operable units, Browns Ferry 1 and 3, have been shut down since March 1985. Each unit had a capacity of 1,065 megawatts electric.

As of September 30, there were 119 domestic nuclear generating units in all stages of construction and operation. The aggregate net design capacity of operable units was 101.6 million kilowatts, and the design capacity of units under construction was 9.7 million kilowatts, for a total design capacity of 111.3 million kilowatts.

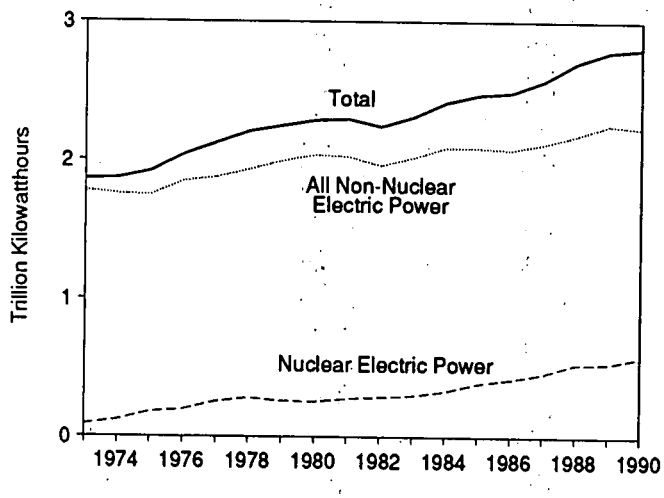
[8]Percentage changes are based on numbers shown in the following tables.

Figure 8.1 Nuclear Power Plant Operations

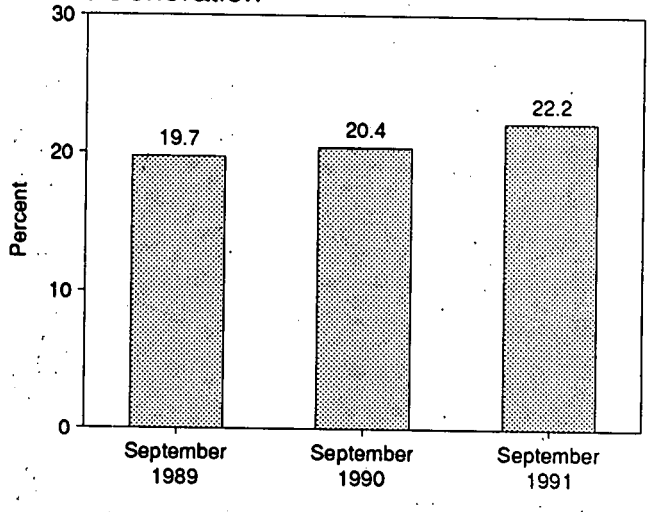
Operable Units, End of Year, 1973-1990



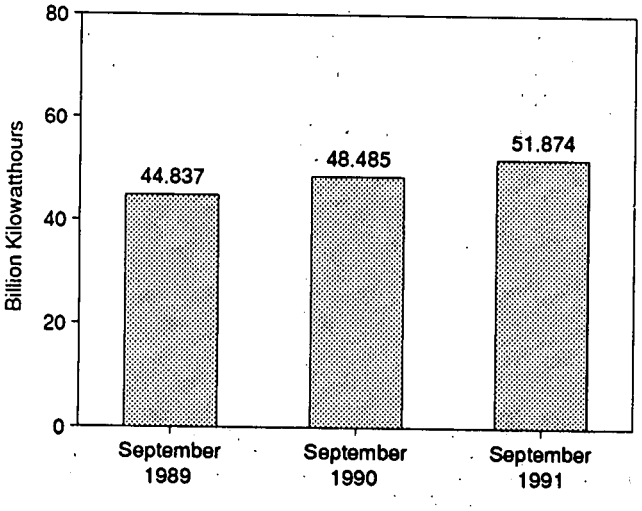
Net Generation of Electricity, 1973-1990



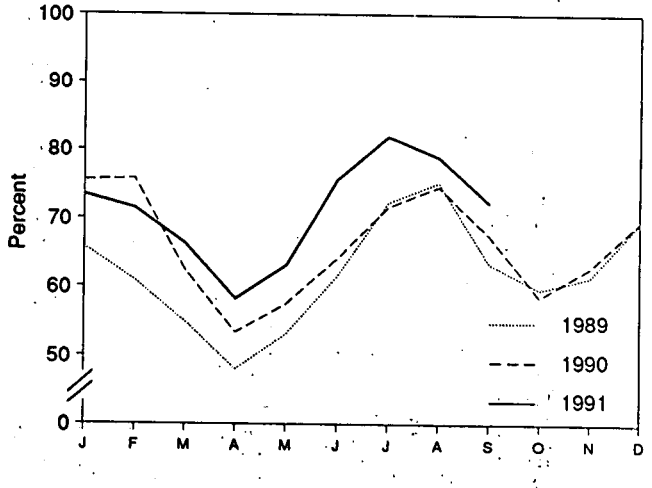
Nuclear Portion of Domestic Electricity Net Generation



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

	Operable Units[a,b]	Nuclear Electricity Net Generation	Nuclear Portion of Domestic Electricity Net Generation	Net Summer Capability of Operable Units[a,c]	Capacity Factor[d]
	Number	Million Kilowatthours	Percent	Million Kilowatts	Percent
1973 Year	39	83,479	4.5	22.683	53.5
1974 Year	48	113,976	6.1	31.867	47.8
1975 Year	54	172,505	9.0	37.267	55.9
1976 Year	61	191,104	9.4	43.822	54.7
1977 Year	65	250,883	11.8	46.303	63.3
1978 Year	70	276,403	12.5	50.824	64.5
1979 Year	68	255,155	11.4	49.747	58.4
1980 Year	70	251,116	11.0	51.810	56.3
1981 Year	74	272,674	11.9	56.042	58.2
1982 Year	77	282,773	12.6	60.035	56.6
1983 Year	80	293,677	12.7	63.009	54.4
1984 Year	86	327,634	13.6	69.652	56.3
1985 Year	95	383,691	15.5	79.397	58.0
1986 Year	100	414,038	16.6	85.241	56.9
1987 Year	107	455,270	17.7	93.583	57.4
1988 Year	108	526,973	19.5	94.695	63.5
1989 January	108	46,328	19.9	94.695	65.8
February	108	38,725	17.6	94.695	60.9
March	110	39,636	17.5	97.031	54.9
April	110	33,495	16.1	97.031	48.0
May	110	38,339	17.4	97.031	53.1
June	110	42,976	18.2	97.031	61.5
July	110	52,331	20.4	97.323	72.3
August	110	54,948	21.2	98.161	75.2
September	110	44,837	19.7	98.161	63.4
October	110	43,558	19.8	98.161	59.6
November	110	43,399	19.8	98.161	61.4
December	110	50,784	19.6	98.161	69.5
Year	110	529,355	19.0	98.161	62.2
1990 January	110	55,119	23.2	98.161	75.5
February	110	49,963	23.5	98.161	75.7
March	111	46,087	20.4	99.311	62.4
April	112	38,516	18.2	100.461	53.3
May	112	42,945	19.3	100.461	57.5
June	112	46,332	18.6	100.461	64.1
July	112	53,645	20.1	100.497	71.7
August	112	55,758	20.8	100.497	74.6
September	111	48,485	20.4	99.624	67.5
October	111	43,395	19.3	99.624	58.5
November	111	45,034	21.1	99.624	62.8
December	111	51,582	21.7	99.624	69.6
Year	111	576,862	20.6	99.624	66.0
1991 January	111	54,369	21.9	99.624	73.4
February	111	47,863	22.7	99.624	71.5
March	111	49,121	22.2	99.624	66.3
April	111	41,662	19.9	99.624	58.2
May	111	46,755	20.0	99.624	63.1
June	111	54,208	21.8	99.624	75.6
July	111	60,735	22.4	99.624	81.9
August	111	58,473	21.8	99.624	78.9
September	111	51,874	22.2	99.624	72.3
9-Month Total	111	465,059	21.7	99.624	71.3
1990 9-Month Total	111	436,850	20.5	99.624	66.9
1989 9-Month Total	110	391,614	18.8	98.161	61.7

[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 .
[d] For an explanation of the method of calculating the capacity factor, see Note 4 at end of section.

Notes: • Geographic coverage is the 50 States and the District of Columbia. • Nuclear electricity net generation totals may not equal sum of components due to independent rounding.

Sources: • **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 Generation Report." • **Capacity Factor:** EIA, Office of Coal, Nuclear, Electric and Alternate Fuels.

Table 8.2 Nuclear Generating Units, End of Period

	Licensed for Operation		Construction Permits		On Order	Announced	Total	Total Design Capacity[c]
	Operable[a]	In Startup[b]	Granted	Pending				
	Number of Units							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
1977 Year	65	2	78	49	13	2	209	203
1978 Year	70	0	88	32	5	0	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	0	132	123
1985 Year	95	3	30	0	2	0	130	121
1986 Year	100	7	19	0	2	0	128	119
1987 Year	107	4	14	0	2	0	127	119
1988 Year	108	3	12	0	0	0	123	115
1989 January	108	3	12	0	0	0	123	115
February	108	3	12	0	0	0	123	115
March	110	2	11	0	0	0	123	115
April	[d] 110	1	11	0	0	0	[d] 122	114
May	110	1	11	0	0	0	122	114
June	110	1	11	0	0	0	122	114
July	110	2	10	0	0	0	122	114
August	110	1	10	0	0	0	121	113
September	110	1	10	0	0	0	121	113
October	110	1	10	0	0	0	121	113
November	110	1	10	0	0	0	121	113
December	110	1	10	0	0	0	121	113
1990 January	110	1	10	0	0	0	121	113
February	110	2	9	0	0	0	121	113
March	111	1	9	0	0	0	121	113
April	112	0	9	0	0	0	121	113
May	112	0	9	0	0	0	121	113
June	112	0	9	0	0	0	121	113
July	112	0	9	0	0	0	121	113
August	112	0	9	0	0	0	121	113
September	[e] 111	0	9	0	0	0	[e] 120	113
October	111	0	9	0	0	0	120	113
November	111	0	9	0	0	0	120	113
December	111	0	8	0	0	0	119	111
1991 January	111	0	8	0	0	0	119	111
February	111	0	8	0	0	0	119	111
March	111	0	8	0	0	0	119	111
April	111	0	8	0	0	0	119	111
May	111	0	8	0	0	0	119	111
June	111	0	8	0	0	0	119	111
July	111	0	8	0	0	0	119	111
August	111	0	8	0	0	0	119	111
September	111	0	8	0	0	0	119	111

[a] See Note 1 at end of section.
[b] See Note 2 at end of section.
[c] 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 at end of section.
[d] Shoreham received a full-power license in April 1989. Because the unit is not currently scheduled to operate, it is deleted from the total.
[e] As of September 1990, Rancho Seco is deleted from this category, because the unit is not currently scheduled to operate.
Note: Geographic coverage is the 50 States and the District of Columbia.
Sources: • **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"; 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."

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 MWe) and the Hanford-N (840 MWe) 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-August 1977 due to a major core modification outage. Hanford-N, an unlicensed unit used for defense material production, was included in the operable category because power was produced as by-product and sold commercially. Three Mile Island 2 (880 MWe) 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 MWe) 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 (EBR-2) unit is not a commercial reactor and is therefore not included in the operable category.

In addition, six units have been retired and therefore removed from the operable category. Those units are: Peach Bottom 1 (40 MWe) and Indian Point 1 (265 MWe), both retired in 1974; Humboldt Bay (65 MWe), officially retired in 1976; Dresden 1 (200 MWe), retired in August 1979; LaCrosse (51 MWe), retired in May 1987; and Fort Saint Vrain (217 MWe), retired in August 1989.

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 the 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.

Section 9. Energy Prices

Crude Oil. The average price of domestic crude oil purchased at the wellhead was $16.67 per barrel in September 1991, 41 percent below the level in September 1990. The refiner acquisition cost of imported crude oil in September 1991 was $18.94 per barrel, 36 percent below the September 1990 level. The cost of domestic crude oil in September 1991 was $19.31, 36 percent less than the September 1990 average.

Motor Gasoline. The national city average retail price of unleaded regular gasoline at all types of stations was $1.12 per gallon in October 1991, 19 percent lower than the price in October 1990. The price of unleaded premium gasoline averaged $1.31 per gallon in October 1991, 16 percent lower than the price in October 1990.

Residual Fuel Oil. The average price, excluding taxes, of residual fuel oil sold to end users in September 1991 was 31 cents per gallon, 1 percent lower than the previous month's price and 39 percent below the September 1990 average. The average resale price, excluding taxes, of residual fuel oil in September 1991 was 28 cents per gallon, the same as the August 1991 average and 45 percent below the price 1 year earlier.

Aviation Fuel. The average price, excluding taxes, of aviation gasoline sold to end users in September 1991 was $1.06 per gallon, slightly lower than the previous month's price and 16 percent lower than the September 1990 price. The average price, excluding taxes, of kerosene-type jet fuel sold to end users in September 1991 was 67 cents per gallon, 4 percent higher than the previous month's price but 27 percent lower than the September 1990 average price.

No. 2 Distillate Fuel Oil. The September 1991 national average price, excluding taxes, of heating oil sold to residential customers was 90 cents per gallon, 3 percent above the August 1991 price but 21 percent lower than the September 1990 price. The average price of No. 2 fuel oil sold to all end users was 64 cents per gallon in September 1991, 2 percent above the August 1991 price but 27 percent lower than the September 1990 price.

Electricity. The average price of electricity sold to all ultimate consumers in the United States in September 1991 was 7.0 cents per kilowatthour, 1 percent above the September 1990 mean price. The price of electricity sold to residential consumers in September 1991 averaged 8.4 cents per kilowatthour, 2 percent higher than the price 1 year earlier. The price of electricity sold to commercial consumers averaged 7.7 cents per kilowatthour in September 1991, 3 percent above the September 1990 price. The price of electricity sold to other consumers in September 1991 averaged 6.5 cents per kilowatthour, 2 percent more than the September 1990 price. The price of electricity sold to industrial users in September 1991 averaged 5.1 cents per kilowatthour, 2 percent above the price 1 year earlier.

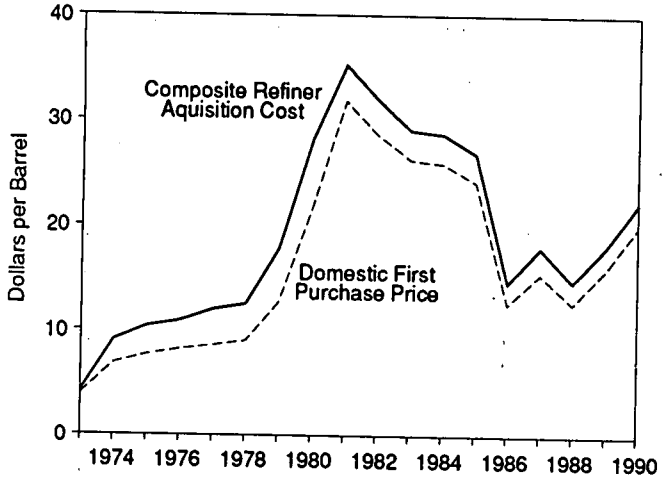
Beginning with January 1986, there were new series of national average price estimates based on a statistically derived sample of both publicly and privately owned electric utilities. Previously, average price estimates were derived from selected privately owned electric utilities and were not national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

Natural Gas. In August 1991, (the latest data available) the average wellhead price of natural gas was $1.37 per thousand cubic feet, 9 percent below the August 1990 price.

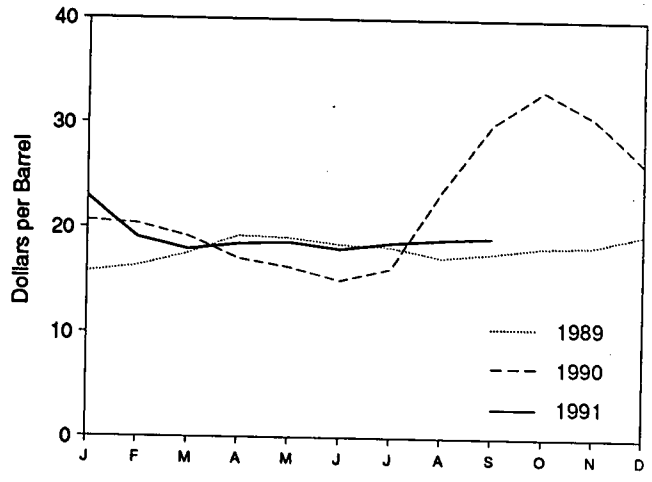
The average price of natural gas delivered to electric utility plants was $1.96 per thousand cubic feet in August 1991, 12 percent below the August 1990 price. The average price of natural gas used by residential consumers in September 1991 was $6.92 per thousand cubic feet, slightly higher than the September 1990 price. The average price of natural gas used by commercial consumers in September 1991 was $5.03 per thousand cubic feet, 11 percent higher than the September 1990 price. The average price of natural gas used by industrial consumers in September 1991 was $2.45 per thousand cubic feet, 6 percent below the September 1990 price.

Figure 9.1 Petroleum Prices

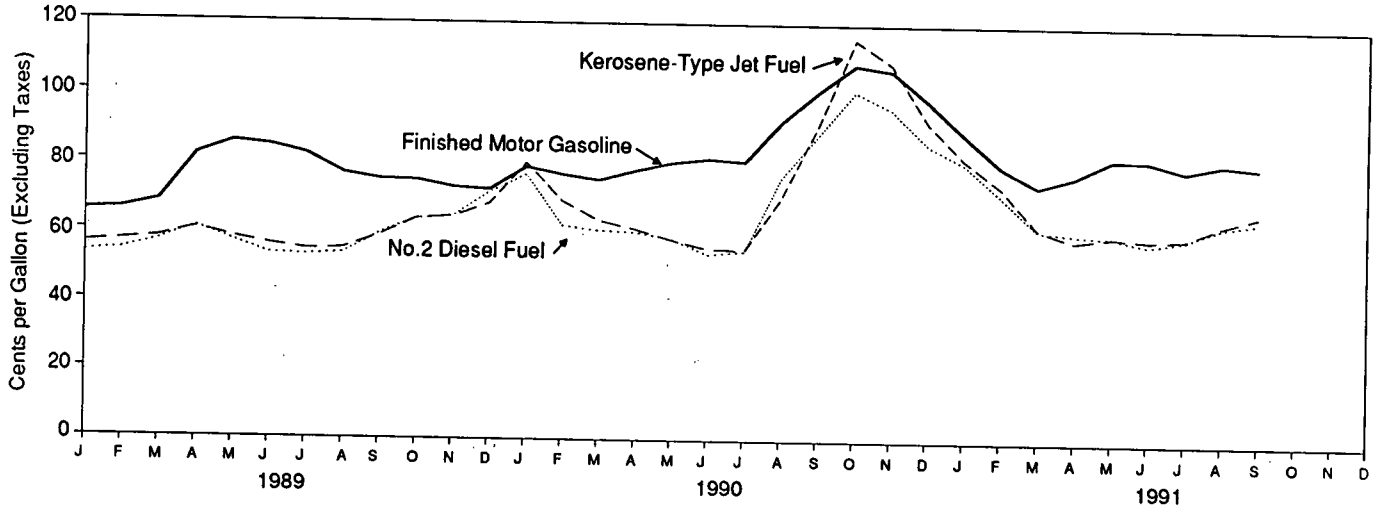
Crude Oil Prices, 1973-1990



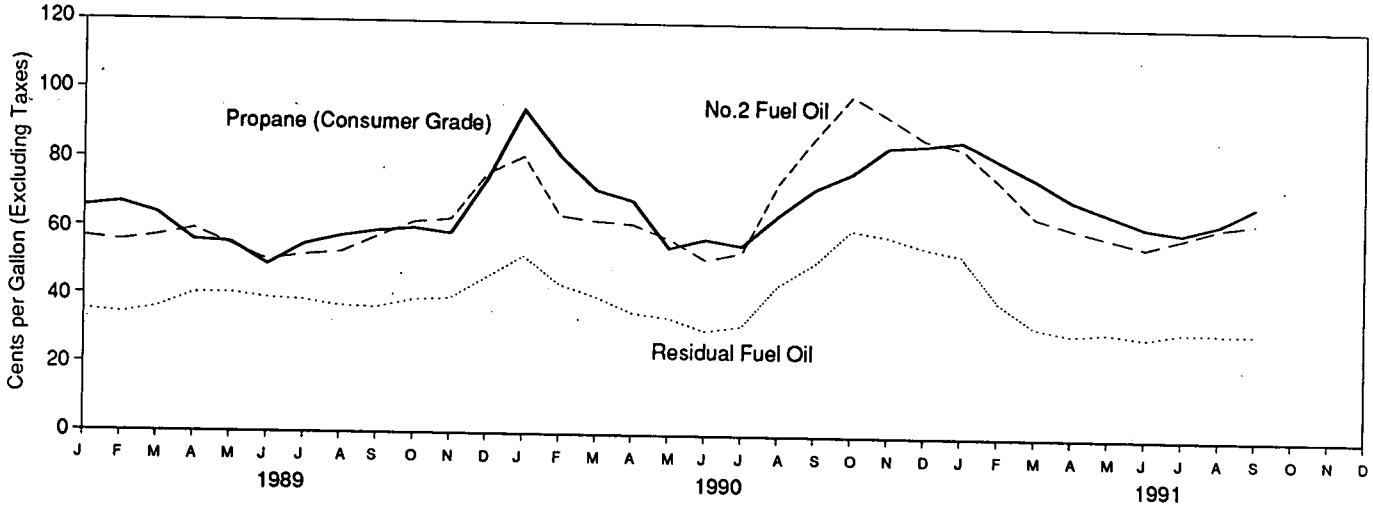
Composite Refiner Acquisition Cost, Monthly



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)

	Domestic First Purchase Price[b]	F.O.B. Cost of Imports[c]	Landed Cost of Imports[d]	Refiner Acquisition Cost[a]		
				Domestic	Imported	Composite
1973 Average	3.89	[e] 5.21	[e] 6.41	[E] 4.17	[E] 4.08	[E] 4.15
1974 Average	6.87	10.91	12.32	7.18	12.52	9.07
1975 Average	7.67	11.18	12.70	8.39	13.93	10.38
1976 Average	8.19	12.15	13.32	8.84	13.48	10.89
1977 Average	8.57	13.24	14.36	9.55	14.53	11.96
1978 Average	9.00	13.29	14.35	10.61	14.57	12.46
1979 Average	12.64	20.07	21.45	14.27	21.67	17.72
1980 Average	21.59	32.37	33.67	24.23	33.89	28.07
1981 Average	31.77	35.15	36.47	34.33	37.05	35.24
1982 Average	28.52	32.02	33.18	31.22	33.55	31.87
1983 Average	26.19	27.81	28.93	28.87	29.30	28.99
1984 Average	25.88	27.60	28.54	28.53	28.88	28.63
1985 Average	24.09	25.84	26.67	26.66	26.99	26.75
1986 Average	12.51	12.52	13.49	14.82	14.00	14.55
1987 Average	15.40	16.69	17.65	17.76	18.13	17.90
1988 Average	12.58	13.25	14.08	14.74	14.56	14.67
1989 January	13.80	14.67	15.68	15.50	16.04	15.73
February	14.24	15.49	16.41	16.11	16.61	16.32
March	15.65	16.73	17.47	17.34	17.77	17.52
April	17.04	18.23	18.97	18.91	19.59	19.22
May	16.76	17.51	18.33	19.01	19.05	19.03
June	16.42	16.80	17.61	18.56	18.27	18.43
July	16.32	16.47	17.39	18.32	17.99	18.18
August	15.01	16.12	16.83	17.23	17.23	17.23
September	15.58	16.49	17.28	17.70	17.62	17.66
October	16.25	17.10	17.93	18.20	18.29	18.24
November	16.30	17.34	18.16	18.45	18.32	18.39
December	17.01	18.80	19.54	19.16	20.05	19.54
Average	15.86	16.89	17.68	17.87	18.08	17.97
1990 January	18.50	18.84	19.82	20.75	20.51	20.64
February	18.18	18.01	18.97	20.75	19.84	20.35
March	16.58	16.91	17.96	19.32	18.94	19.14
April	14.52	14.94	15.98	17.37	16.71	17.06
May	13.82	14.57	15.36	16.46	16.03	16.26
June	12.79	13.81	14.93	15.07	14.89	14.98
July	14.02	16.52	17.65	15.87	16.45	16.15
August	21.85	23.83	24.64	23.00	24.26	23.57
September	28.44	28.98	29.38	30.16	29.82	30.01
October	30.87	30.75	31.47	33.32	32.98	33.18
November	27.53	27.84	28.57	30.75	30.40	30.61
December	22.63	23.24	24.12	26.46	25.84	26.21
Average	20.03	20.39	21.16	22.60	21.78	22.23
1991 January	19.58	19.94	20.89	23.25	22.41	22.90
February	16.22	16.31	17.26	19.53	18.30	19.02
March	15.08	15.88	17.16	18.12	17.59	17.89
April	16.14	16.64	17.81	18.56	18.27	18.43
May	16.41	16.42	17.82	18.98	18.14	18.60
June	15.55	15.84	17.17	18.16	17.78	17.98
July	16.32	16.67	[R] 17.78	18.91	18.14	18.57
August	[R] 16.57	[R] 16.92	[R] 18.09	[R] 19.10	18.71	[R] 18.92
September	16.67	17.31	18.44	19.31	18.94	19.14

[a] See Note 4 at end of section.
[b] See Note 1 at end of section.
[c] See Note 2 at end of section.
[d] See Note 3 at end of section.
[e] Based on October, November, and December data only.
R=Revised data. E=Estimate.

Notes: • Geographic coverage is the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, and all U.S. Territories and Possessions. • Values for Domestic First Purchase Price and Refiner Acquisition Cost for the current month and for F.O.B. and Landed Cost of Imports for the current 2 months are preliminary. • F.O.B. and landed costs through 1980 reflect the period of reporting; prices after 1980 reflect the period of loading • Annual averages are the averages of the monthly prices, weighted by volumes.

Sources: See end of section.

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

(Dollars per Barrel)

	Algeria	Indonesia	Iran	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela	Other Countries	Arab OPEC[a]	Total OPEC[b]
1973 Average[c]	**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**	**10.71**	**10.02**	**10.96**	**11.33**
1975 Average	**11.93**	**12.55**	**10.81**	**11.44**	**11.82**	**10.87**	**NA**	**11.04**	**10.86**	**11.18**	**11.34**
1976 Average	**13.05**	**12.76**	**11.61**	**12.22**	**13.08**	**11.62**	**W**	**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**	**([d])**	**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**	**([d])**	**12.18**	**15.16**	**12.16**	**14.80**	**12.96**	**13.45**	**12.57**	**13.43**
1989 January	W	14.52	([d])	13.98	16.11	W	W	13.10	15.05	14.91	14.77
February	W	17.14	([d])	14.25	17.15	W	16.33	14.00	15.83	16.35	15.98
March	W	17.05	([d])	14.98	18.37	W	W	16.62	17.29	17.45	17.37
April	W	17.78	([d])	17.44	19.81	W	W	17.77	18.75	16.85	18.35
May	W	W	([d])	16.95	18.60	W	W	16.78	17.97	15.98	17.28
June	W	17.78	([d])	16.62	17.68	15.54	W	15.42	17.12	16.01	16.49
July	W	17.61	([d])	16.41	17.67	W	17.66	14.34	16.74	15.66	16.02
August	W	W	([d])	15.22	17.25	W	17.11	15.82	16.08	15.91	16.36
September	W	16.37	([d])	15.37	18.00	W	17.22	16.02	16.62	16.50	16.68
October	W	16.35	([d])	16.12	18.99	W	17.78	15.45	17.37	17.05	17.20
November	W	17.28	([d])	16.44	19.11	18.09	18.37	15.56	17.45	17.53	17.52
December	W	W	([d])	17.74	19.93	W	19.57	19.32	18.43	18.70	19.24
Average	**W**	**17.01**	**([d])**	**15.96**	**18.31**	**16.29**	**17.89**	**16.09**	**17.12**	**16.72**	**17.06**
1990 January	W	19.25	([d])	18.03	21.22	W	21.00	16.73	19.20	18.03	18.71
February	W	19.43	([d])	16.68	20.41	W	W	16.01	18.36	16.64	18.11
March	W	18.98	([d])	16.24	18.41	W	W	15.95	16.82	14.98	16.85
April	W	17.38	([d])	13.30	16.79	12.37	16.13	15.57	14.77	13.24	15.10
May	W	16.19	([d])	12.11	16.50	12.97	15.69	14.60	14.39	12.82	14.78
June	W	15.20	([d])	10.68	15.58	W	W	13.11	13.92	14.63	14.58
July	W	15.06	([d])	12.84	17.12	W	15.10	16.66	17.80	20.27	18.17
August	W	19.12	([d])	21.16	25.65	29.70	21.18	24.33	22.63	28.34	25.39
September	W	W	([d])	27.04	32.74	W	33.05	27.71	30.02	27.46	29.06
October	W	35.41	([d])	29.15	37.31	28.73	32.53	26.39	33.13	29.85	30.39
November	W	W	([d])	27.23	33.56	24.11	W	22.96	29.56	25.51	27.30
December	W	W	([d])	22.58	29.38	14.41	W	20.41	25.32	16.17	21.87
Average	**W**	**21.29**	**([d])**	**19.25**	**22.52**	**20.48**	**23.43**	**19.55**	**19.93**	**18.96**	**20.45**
1991 January	W	W	([d])	19.39	24.68	12.69	W	17.04	21.22	16.04	19.45
February	W	20.82	([d])	13.62	20.48	14.06	W	14.50	17.12	14.56	16.73
March	W	W	([d])	13.59	19.44	W	24.50	14.90	16.18	15.21	16.47
April	W	16.80	([d])	15.34	19.12	15.51	W	15.38	16.90	16.01	16.98
May	W	W	W	15.24	19.30	15.05	W	14.79	16.95	15.64	16.65
June	W	16.77	([d])	14.65	18.38	14.88	W	13.54	16.33	15.54	16.10
July	W	W	W	15.25	19.44	W	19.45	14.85	17.44	15.52	16.73
August	W	W	W	[R]15.49	[R]20.12	15.74	W	[R]14.62	[R]17.79	16.33	[R]17.07
September	W	W	([d])	15.32	21.00	16.18	W	15.49	18.60	17.00	17.45

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

[b] "Total OPEC" consists of Ecuador, Gabon, Indonesia, Iran, Nigeria, and Venezuela, as well as the Arab members. The cost of imports from the Neutral Zone between Kuwait and Saudi Arabia is included in the cost of imports from "Total OPEC."

[c] Based on October, November, and December data only.

[d] No data reported.

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

Notes: • The Free on Board (F.O.B) cost at the country of origin excludes all costs related to insurance and transportation. See Note 2 at end of section. • Values for the current 2 months are preliminary. • Prices through 1980 reflect the period of reporting; prices after 1980 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.

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*, December 1991, Table 21.

Table 9.3 Landed Costs of Crude Oil Imports from Selected Countries

(Dollars per Barrel)

	Algeria	Canada	Indonesia	Iran	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela	Other Countries	Arab OPEC[a]	Total OPEC[b]
1973 Average[c]	8.39	5.33	7.22	6.48	NA	9.08	5.37	NA	5.99	6.99	5.92	6.85
1974 Average	13.97	11.48	13.20	12.48	W	13.16	11.63	NA	11.25	12.93	12.39	12.49
1975 Average	12.86	12.84	13.83	12.51	12.61	12.70	12.50	NA	12.36	12.66	12.71	12.70
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	(d)	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	29.61	25.78	30.85	29.27	30.67	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 January	W	14.47	16.30	(d)	14.48	17.54	15.90	17.17	14.05	15.88	15.73	15.98
February	W	14.97	17.86	(d)	14.55	18.19	16.60	17.88	14.62	17.22	16.52	16.74
March	W	15.88	18.67	(d)	15.37	19.32	17.00	17.90	17.30	18.34	17.33	17.80
April	22.13	17.42	19.11	(d)	17.78	20.53	18.95	20.00	18.45	19.36	18.90	19.23
May	W	17.81	19.37	(d)	17.35	19.65	17.43	20.04	17.32	18.79	17.58	18.15
June	W	17.69	18.92	(d)	16.99	18.90	16.84	18.74	16.13	17.96	17.01	17.45
July	W	17.89	18.92	(d)	16.84	18.68	16.72	18.81	15.13	17.44	16.73	17.13
August	W	16.62	W	(d)	15.62	18.01	16.42	18.20	16.50	16.89	16.45	16.86
September	W	17.00	17.82	(d)	15.76	18.72	16.84	18.11	16.67	17.54	16.97	17.29
October	W	17.44	17.70	(d)	16.52	19.82	17.90	18.71	16.13	18.27	17.82	17.97
November	18.55	17.08	18.16	(d)	16.85	20.14	18.08	19.31	16.38	18.74	18.16	18.27
December	W	17.49	19.20	(d)	18.01	20.98	19.28	20.32	20.16	19.84	19.52	19.93
Average	19.13	16.81	18.35	(d)	16.35	19.19	17.34	18.74	16.78	18.08	17.41	17.78
1990 January	W	18.52	20.86	(d)	18.48	22.36	19.18	21.56	17.86	20.50	19.36	19.79
February	W	18.52	21.21	(d)	17.13	21.46	18.32	W	16.69	19.59	18.28	18.99
March	W	17.30	20.65	(d)	16.64	19.69	16.67	20.71	16.64	18.28	16.69	17.72
April	W	15.65	18.98	(d)	13.83	18.06	14.58	17.92	16.30	16.19	14.74	15.86
May	W	15.52	17.83	(d)	12.78	17.53	14.21	17.12	15.47	15.38	14.13	15.21
June	W	14.00	16.43	(d)	11.23	16.63	16.04	17.01	14.00	15.25	15.45	15.47
July	17.67	15.03	15.96	(d)	13.37	18.04	19.89	16.68	17.40	18.57	19.85	19.01
August	W	21.26	20.23	(d)	21.50	26.71	28.72	23.80	25.08	23.23	26.94	26.31
September	W	27.80	25.50	(d)	27.38	33.41	29.83	30.26	28.56	29.46	29.89	30.09
October	W	31.04	36.61	(d)	29.61	37.72	30.46	33.75	27.00	34.51	30.75	31.08
November	W	28.60	W	(d)	27.69	34.55	27.25	W	23.77	30.42	27.51	28.19
December	W	23.60	28.53	(d)	23.00	30.45	21.05	W	21.30	27.59	21.49	23.38
Average	W	20.51	22.42	(d)	19.63	23.38	21.89	22.68	20.31	20.55	20.71	21.28
1991 January	W	20.81	W	(d)	19.98	26.00	18.56	W	18.35	24.07	18.98	20.21
February	W	17.05	22.61	(d)	14.23	21.66	16.15	W	15.76	19.42	16.26	17.43
March	W	15.20	20.03	(d)	14.15	20.60	17.07	25.77	16.18	18.59	17.22	17.88
April	W	16.26	18.80	(d)	15.85	20.31	17.65	20.56	16.34	18.76	17.75	18.22
May	W	16.28	W	W	15.81	20.50	17.29	20.21	15.85	19.55	17.45	17.99
June	W	16.22	18.25	(d)	15.16	19.78	16.95	19.35	14.54	18.36	17.10	17.36
July	W	17.20	17.70	17.03	15.85	20.68	R17.36	20.41	15.92	R18.82	R17.49	R17.87
August	W	17.60	W	W	R15.74	R21.15	R17.79	R20.71	R15.63	R19.23	R17.95	R18.26
September	W	17.78	W	W	15.71	21.98	18.04	21.08	16.40	20.25	18.31	18.55

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

[b] "Total OPEC" consists of Ecuador, Gabon, Indonesia, Iran, Nigeria, and Venezuela, as well as the Arab members. The cost of imports from the Neutral Zone between Kuwait and Saudi Arabia is included in the cost of imports from "Total OPEC."

[c] Based on October, November, and December data only.

[d] No data reported.

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

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.

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*, December 1991, Table 22.

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

(Cents per Gallon, Including Taxes)

	Leaded Regular	Unleaded Regular	Unleaded Premium	All Types[a]
1973 Average	**38.8**	**NA**	**NA**	**NA**
1974 Average	**53.2**	**NA**	**NA**	**NA**
1975 Average	**56.7**	**NA**	**NA**	**NA**
1976 Average	**59.0**	**61.4**	**NA**	**NA**
1977 Average	**62.2**	**65.6**	**NA**	**NA**
1978 Average	**62.6**	**67.0**	**NA**	**NA**
1979 Average	**85.7**	**90.3**	**NA**	**65.2**
1980 Average	**119.1**	**124.5**	**NA**	**88.2**
1981 Average[b]	**131.1**	**137.8**	**[c] 147.0**	**122.1**
1982 Average	**122.2**	**129.6**	**141.5**	**135.3**
1983 Average	**115.7**	**124.1**	**138.3**	**128.1**
1984 Average	**112.9**	**121.2**	**136.6**	**122.5**
1985 Average	**111.5**	**120.2**	**134.0**	**119.8**
1986 Average	**85.7**	**92.7**	**108.5**	**119.6**
1987 Average	**89.7**	**94.8**	**109.3**	**93.1**
1988 Average	**89.9**	**94.6**	**110.7**	**95.7**
				96.3
1989 January	87.6	91.8	109.1	94.4
February	88.6	92.6	110.0	95.5
March	90.7	94.0	111.5	97.4
April	104.7	106.5	122.1	109.8
May	109.8	111.9	127.8	115.2
June	109.3	111.4	127.8	115.0
July	107.5	109.2	126.4	113.2
August	103.4	105.7	123.3	109.6
September	100.7	102.9	121.3	107.3
October	100.1	102.7	120.9	107.1
November	97.5	99.9	118.7	104.6
December	96.1	98.0	117.0	103.0
Average	**99.8**	**102.1**	**119.7**	**106.0**
1990 January	100.6	104.2	123.0	109.0
February	101.1	103.7	122.7	108.6
March	99.9	102.3	121.8	107.6
April	102.7	104.4	123.3	109.6
May	104.4	106.1	124.8	111.4
June	107.7	108.8	127.1	114.0
July	108.9	108.4	127.2	113.9
August	119.8	119.0	136.9	124.6
September	129.7	129.4	146.7	134.7
October	135.4	137.8	155.4	143.1
November	135.1	137.7	155.9	143.2
December	133.5	135.4	153.7	141.0
Average	**114.9**	**116.4**	**134.9**	**121.7**
1991 January	124.6	124.7	143.1	130.4
February	113.7	114.3	132.1	119.8
March	104.7	108.2	126.4	113.8
April	106.2	110.4	128.1	115.9
May	NA	115.6	133.1	120.9
June	NA	116.0	133.8	121.4
July	NA	112.7	131.3	118.5
August	NA	114.0	131.8	119.6
September	NA	114.3	132.4	119.9
October	NA	112.2	130.7	118.0

[a] Also includes types of motor gasoline not shown separately.

[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.

[c] Based on September through December data only.

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 (BLS), *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.

Table 9.5 Refiner Prices of Residual Fuel Oil

(Cents per Gallon, Excluding Taxes)

	Residual Fuel Oil Sulfur Content Less Than or Equal to 1 Percent		Residual Fuel Oil Sulfur Content Greater Than 1 Percent		Average	
	Sales for Resale	Sales to End Users	Sales for Resale	Sales to End Users	Sales for Resale	Sales to End Users
1978 Average	**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**
1983 Average	**64.3**	**69.5**	**59.1**	**61.1**	**60.9**	**65.1**
1984 Average	**68.5**	**72.0**	**63.9**	**65.9**	**65.4**	**68.7**
1985 Average	**61.0**	**64.4**	**56.0**	**58.2**	**57.7**	**61.0**
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 January	38.8	41.7	29.1	30.5	32.8	35.4
February	37.0	39.8	30.5	29.9	33.2	34.3
March	38.8	42.0	28.1	29.7	32.1	36.1
April	44.1	46.6	34.2	34.9	38.1	40.3
May	43.6	46.5	34.7	36.3	37.6	40.5
June	39.3	42.8	33.9	36.2	35.5	39.1
July	39.0	42.1	34.0	35.5	35.7	38.5
August	37.3	39.6	33.0	34.5	34.4	36.8
September	38.2	40.2	32.3	34.2	35.1	36.5
October	40.2	43.2	34.5	35.9	36.9	38.8
November	40.5	44.1	34.2	36.2	36.6	39.3
December	47.7	53.4	38.3	39.5	42.1	45.7
Average	**40.7**	**43.6**	**33.1**	**34.4**	**36.0**	**38.5**
1990 January	56.0	60.0	41.9	45.1	48.1	52.0
February	44.6	51.3	34.7	37.2	38.2	43.6
March	39.8	45.3	31.2	35.4	34.4	40.1
April	36.1	39.6	31.1	32.5	33.3	35.5
May	34.2	37.9	28.5	31.4	30.5	34.1
June	31.4	34.2	24.8	27.6	27.2	30.4
July	33.4	36.3	25.3	28.3	29.1	31.9
August	49.5	50.7	41.1	39.5	44.4	44.1
September	56.8	59.4	46.1	46.2	50.8	50.7
October	63.4	68.6	53.1	54.6	57.3	60.5
November	63.3	66.5	49.7	53.9	55.6	58.7
December	56.6	62.2	44.1	50.2	48.6	55.5
Average	**47.1**	**50.4**	**37.2**	**39.9**	**41.2**	**44.4**
1991 January	51.4	59.4	48.7	49.7	49.7	53.4
February	34.9	43.7	32.3	37.1	33.4	39.7
March	36.2	38.2	24.2	28.2	28.2	32.3
April	33.6	37.6	25.8	27.1	28.7	30.2
May	36.5	36.6	27.7	27.6	30.3	31.0
June	32.0	35.3	28.6	26.9	29.7	29.5
July	32.6	36.4	27.6	28.2	29.0	31.2
August	R33.4	R36.8	25.9	27.7	27.9	R31.1
September	33.6	36.8	25.4	27.6	27.9	30.9

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 the ultimate consumer, including bulk customers such as agriculture, industry, and electric utilities, as well as commercial customers. • Geographic coverage is the 50 States and the District of Columbia. • Values for the current month are preliminary. • Prices prior to 1983 are Energy Information Administration estimates. See Note 6 at end of section.

Sources: Energy Information Administration, *Petroleum Marketing Monthly*, December 1991, Table 17.

Table 9.6 Refiner Prices of Petroleum Products for Resale

(Cents per Gallon, Excluding Taxes)

	Finished Motor Gasoline[a]	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 January	56.3	84.8	56.2	63.1	53.2	51.1	24.0
February	57.4	86.0	55.4	59.5	51.1	52.8	22.7
March	61.2	86.6	56.5	61.3	54.4	56.0	22.5
April	74.0	94.2	59.5	60.3	56.5	59.5	22.7
May	76.3	101.8	56.6	55.9	52.6	54.0	22.1
June	73.8	101.3	54.4	53.8	49.6	50.8	21.4
July	69.0	100.9	53.5	57.0	50.4	50.5	20.7
August	62.7	97.7	54.5	59.9	51.2	52.4	21.7
September	65.7	96.2	58.6	63.6	56.4	58.5	23.1
October	64.2	93.3	63.2	67.5	60.1	62.2	24.4
November	61.4	92.5	63.4	68.5	60.4	62.0	24.3
December	61.6	92.8	67.3	81.7	72.8	68.4	36.4
Average	**65.4**	**95.0**	**58.3**	**66.9**	**56.5**	**56.7**	**24.7**
1990 January	69.2	96.8	77.0	87.0	73.8	69.3	54.5
February	67.2	95.0	66.9	67.9	57.7	57.1	34.0
March	66.3	93.8	61.7	64.8	57.9	57.7	27.1
April	69.7	96.4	59.9	62.4	57.5	57.5	25.2
May	72.6	97.4	57.4	59.2	54.5	55.4	24.0
June	72.2	99.6	54.8	53.9	49.4	50.5	24.9
July	70.6	100.2	56.0	57.1	51.9	52.0	27.3
August	85.6	110.4	71.3	80.7	72.1	73.7	36.3
September	95.0	122.3	93.2	100.4	85.2	87.3	43.6
October	98.6	127.9	114.4	115.6	95.0	99.4	53.5
November	95.4	126.2	107.0	106.5	90.7	93.6	50.5
December	80.3	116.1	90.1	92.6	80.9	79.8	44.7
Average	**78.6**	**106.3**	**77.3**	**83.9**	**69.7**	**69.4**	**38.7**
1991 January	76.1	110.8	82.2	87.9	76.3	75.5	42.2
February	68.0	104.1	73.8	75.7	67.8	67.4	31.6
March	67.2	97.4	62.2	66.0	59.6	57.7	31.3
April	70.7	97.8	58.8	62.8	57.2	57.4	31.6
May	74.2	100.3	60.8	60.7	56.0	57.2	32.0
June	70.5	99.5	58.8	58.8	54.0	54.5	29.3
July	69.1	98.9	59.4	63.0	56.7	57.1	27.6
August	72.7	100.2	63.3	66.9	60.6	61.8	29.6
September	69.1	99.9	65.9	68.8	62.1	62.9	35.0

[a] See Note 5 at end of section.

Notes: • Sales for resale are those made to purchasers other than ultimate consumers. Sales to end users are those made directly to the ultimate consumer, including bulk customers such as agriculture, industry, and electric utilities, as well as residential and commercial customers. • Geographic coverage is the 50 States and the District of Columbia. • Values for the current month are preliminary. • Prices prior to 1983 are Energy Information Administration estimates. See Note 6 at end of section.

Sources: Energy Information Administration, *Petroleum Marketing Monthly*, December 1991, Table 4.

Table 9.7 Refiner Prices of Petroleum Products to End Users

(Cents per Gallon, Excluding Taxes)

	Finished Motor Gasoline[a]	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**	**86.6**	**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 January	65.6	89.2	56.2	71.4	56.7	53.5	65.6
February	66.1	89.7	57.0	72.2	55.6	54.3	66.8
March	68.4	90.6	57.9	67.6	57.1	57.0	63.8
April	81.7	99.1	60.6	66.2	59.2	61.0	55.9
May	85.5	107.0	58.1	59.7	54.8	57.1	55.4
June	84.5	107.1	56.2	53.9	50.3	53.4	49.0
July	82.0	105.5	54.7	55.3	51.9	53.1	54.9
August	76.6	101.9	55.1	58.0	52.7	53.7	57.4
September	74.9	100.7	58.9	66.8	57.3	59.5	59.0
October	74.7	100.4	63.8	73.6	61.7	63.7	59.9
November	72.7	98.6	64.4	77.7	62.6	64.5	58.4
December	72.1	97.3	68.1	90.0	76.0	71.3	74.4
Average	**75.6**	**99.5**	**59.2**	**70.9**	**58.7**	**58.5**	**61.5**
1990 January	78.6	102.0	79.7	99.9	81.0	76.4	94.5
February	76.5	102.4	68.9	81.2	63.9	61.9	81.2
March	75.0	100.9	63.5	82.3	62.4	60.6	71.5
April	77.8	101.4	61.1	74.2	61.6	60.2	68.5
May	80.1	103.5	58.1	65.4	57.4	58.4	54.8
June	81.3	104.0	55.6	58.5	51.5	54.0	57.4
July	80.6	103.6	55.3	59.3	53.6	54.9	55.6
August	92.2	112.6	70.3	87.4	74.1	76.1	64.7
September	100.9	125.4	91.2	101.8	87.3	88.4	72.5
October	108.6	134.4	115.8	118.7	99.5	101.0	77.1
November	107.1	131.7	108.8	116.7	93.5	96.0	84.6
December	98.4	122.5	92.2	112.1	86.9	85.8	85.3
Average	**88.2**	**111.9**	**76.7**	**90.2**	**73.2**	**72.5**	**74.7**
1991 January	88.7	112.1	81.6	105.0	84.5	80.4	86.6
February	79.6	106.4	73.7	93.5	75.3	71.3	81.3
March	74.1	101.3	62.1	88.8	64.8	61.7	76.0
April	77.1	101.1	58.7	73.8	61.6	60.6	69.8
May	82.1	105.3	60.1	69.3	58.9	60.1	66.0
June	81.9	105.2	59.3	62.3	56.3	57.9	62.1
July	79.0	103.6	59.7	64.7	59.1	59.5	60.6
August	R81.2	105.8	63.8	68.7	62.3	R63.3	63.4
September	80.2	105.7	66.6	73.6	63.8	64.8	NA

[a] See Note 5 at end of section.

R=Revised data. NA=Not available.

Notes: • Sales for resale are those made to purchasers other than ultimate consumers. Sales to end users are those made directly to the ultimate consumer, including bulk customers such as agriculture, industry, and electric utilities, as well as residential and commercial customers. • Geographic coverage is the 50 States and the District of Columbia. • Values for the current month are preliminary. • Prices prior to 1983 are Energy Information Administration estimates. See Note 6 at end of section.

Sources: Energy Information Administration, *Petroleum Marketing Monthly*, December 1991, Table 2.

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

(Cents per Gallon, Excluding Taxes)

	Maine	New Hampshire	Vermont	Massachusetts	Rhode Island	Connecticut	New York	New Jersey	Pennsylvania
1978 Average	**48.6**	**50.3**	**50.8**	**48.8**	**50.7**	**50.1**	**50.1**	**49.6**	**48.8**
1979 Average	**68.8**	**72.5**	**72.5**	**70.9**	**72.8**	**72.0**	**71.2**	**71.0**	**69.8**
1980 Average	**96.3**	**100.4**	**101.5**	**97.8**	**101.1**	**98.3**	**98.2**	**97.9**	**96.4**
1981 Average	**120.4**	**123.7**	**125.4**	**121.3**	**123.8**	**121.7**	**123.2**	**121.5**	**118.1**
1982 Average	**115.5**	**117.4**	**120.1**	**117.6**	**120.1**	**118.3**	**120.5**	**117.4**	**113.7**
1983 Average	**102.8**	**104.1**	**112.9**	**109.1**	**110.5**	**109.1**	**112.1**	**107.9**	**105.8**
1984 Average	**103.9**	**108.4**	**111.9**	**111.6**	**111.4**	**112.1**	**115.5**	**111.0**	**107.9**
1985 Average	**99.7**	**102.4**	**107.7**	**107.0**	**106.7**	**108.0**	**111.3**	**105.9**	**102.3**
1986 Average	**74.4**	**75.9**	**86.6**	**82.1**	**82.8**	**89.0**	**91.1**	**90.2**	**81.4**
1987 Average	**74.7**	**76.5**	**81.1**	**80.6**	**82.5**	**83.4**	**85.2**	**84.3**	**76.9**
1988 Average	**77.7**	**78.2**	**82.6**	**82.1**	**83.6**	**85.3**	**86.3**	**84.8**	**77.8**
1989 January	85.6	83.0	86.0	87.1	87.5	88.4	91.0	87.3	81.6
February	87.4	83.8	86.9	86.3	88.3	88.7	92.2	87.0	82.2
March	88.3	84.8	87.8	88.1	90.0	89.8	93.4	88.9	83.2
April	87.4	83.2	87.5	87.8	89.9	89.4	93.8	87.8	83.2
May	81.0	83.1	86.4	86.8	88.8	88.1	92.9	87.2	82.2
June	73.5	79.5	84.3	83.4	87.6	85.6	92.0	83.0	77.6
July	72.1	77.8	82.9	81.1	85.4	84.9	90.9	82.3	74.1
August	70.0	78.2	82.0	81.1	84.1	84.6	90.1	80.1	72.6
September	74.6	79.4	82.6	84.9	86.5	85.2	86.6	81.8	74.2
October	82.7	83.2	85.3	88.5	90.3	88.9	91.0	87.3	78.9
November	86.7	87.5	86.1	91.1	92.3	90.3	93.7	89.7	81.6
December	106.0	112.1	109.8	115.2	114.0	112.5	113.0	108.5	103.1
Average	**89.4**	**89.3**	**90.5**	**92.6**	**93.9**	**92.9**	**95.8**	**91.8**	**85.1**
1990 January	115.4	118.6	121.5	116.9	122.6	119.8	122.2	117.3	113.7
February	84.8	96.0	98.4	99.7	98.5	100.8	103.1	99.5	93.4
March	83.4	92.9	95.6	98.6	97.3	97.7	101.6	98.5	90.3
April	82.9	89.9	94.2	95.1	95.9	96.3	100.2	96.5	87.6
May	81.0	86.9	91.7	92.4	93.9	92.7	99.2	94.4	84.4
June	76.2	82.8	86.9	88.9	89.1	87.0	94.8	88.6	78.3
July	74.2	80.7	85.4	88.0	86.9	85.4	93.3	85.4	74.3
August	97.7	99.2	97.4	102.3	102.3	104.1	102.6	102.1	92.5
September	118.3	110.9	114.6	117.1	115.8	114.7	116.3	114.3	108.9
October	126.0	120.0	124.1	126.7	120.0	128.2	128.8	126.9	122.6
November	116.3	116.0	123.4	122.7	119.8	128.1	127.8	125.8	120.0
December	113.4	110.8	119.6	120.0	114.9	124.7	126.5	120.9	119.3
Average	**98.4**	**102.9**	**107.0**	**108.3**	**108.5**	**109.7**	**112.4**	**108.6**	**102.5**
1991 January	114.4	107.2	117.5	117.2	112.9	122.6	123.7	119.7	117.7
February	105.9	100.7	111.3	111.3	109.5	116.0	119.7	113.3	110.9
March	95.4	90.5	104.0	102.7	101.6	109.0	112.8	104.3	101.8
April	87.1	83.9	98.3	96.1	94.6	101.4	106.7	97.6	95.5
May	81.9	79.4	93.5	91.7	89.7	96.5	101.1	93.5	89.9
June	79.4	77.3	91.3	88.9	87.1	92.7	97.9	90.3	85.7
July	82.2	77.6	88.1	88.4	88.8	90.0	93.9	88.5	80.8
August	83.4	R80.6	R88.6	R88.7	R88.7	89.7	R92.9	R89.0	R81.8
September	87.3	83.9	91.6	90.7	91.3	92.0	98.9	92.1	84.5

See footnotes at end of Table 9.8c.

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

(Cents per Gallon, Excluding Taxes)

	Delaware	District of Columbia	Maryland	Virginia	West Virginia	Ohio	Michigan	Indiana	Illinois	Wisconsin	Minnesota
1978 Average	**47.8**	**50.7**	**49.2**	**49.1**	**46.2**	**47.4**	**47.9**	**48.5**	**46.5**	**44.7**	**47.8**
1979 Average	**68.2**	**74.2**	**70.1**	**70.4**	**65.1**	**68.6**	**70.9**	**72.7**	**68.8**	**67.3**	**72.4**
1980 Average	**95.4**	**102.6**	**97.9**	**98.5**	**92.2**	**91.9**	**97.8**	**99.6**	**95.8**	**91.5**	**99.9**
1981 Average	**117.3**	**127.4**	**121.4**	**120.5**	**115.0**	**113.2**	**118.3**	**118.5**	**114.9**	**109.1**	**118.4**
1982 Average	**111.3**	**124.5**	**117.1**	**117.7**	**109.3**	**110.2**	**113.9**	**114.3**	**110.9**	**107.8**	**115.1**
1983 Average	**106.0**	**117.0**	**110.3**	**108.7**	**101.0**	**101.3**	**106.4**	**100.7**	**100.4**	**101.2**	**103.1**
1984 Average	**109.6**	**118.7**	**113.5**	**110.5**	**102.1**	**102.1**	**105.0**	**103.1**	**100.1**	**101.0**	**104.1**
1985 Average	**104.6**	**114.3**	**108.8**	**106.3**	**98.0**	**99.7**	**102.1**	**99.1**	**97.5**	**98.3**	**101.9**
1986 Average	**85.0**	**93.1**	**91.4**	**86.6**	**74.6**	**77.7**	**81.0**	**74.8**	**NA**	**75.6**	**79.2**
1987 Average	**79.3**	**91.8**	**86.6**	**79.5**	**76.4**	**74.7**	**77.5**	**75.4**	**79.8**	**75.1**	**74.6**
1988 Average	**80.1**	**91.6**	**87.0**	**80.5**	**74.2**	**74.7**	**77.5**	**75.4**	**77.6**	**73.9**	**73.5**
1989 January	82.4	94.0	88.1	82.6	75.8	77.5	78.8	77.8	76.6	73.9	75.3
February	81.8	95.1	88.8	82.3	76.2	76.7	79.3	77.0	75.8	74.0	75.7
March	82.9	96.0	89.4	82.5	76.7	77.5	80.1	77.6	76.6	75.6	77.1
April	84.8	95.4	90.3	82.1	77.0	79.4	81.5	79.7	79.8	76.3	82.3
May	83.4	92.1	89.6	81.5	77.4	78.5	81.2	78.1	78.5	78.0	82.1
June	80.3	92.0	88.4	79.6	80.9	79.3	80.1	76.5	77.0	78.0	81.0
July	79.0	90.7	86.5	78.4	78.1	79.4	80.3	77.0	74.5	75.7	80.8
August	78.8	90.1	85.7	77.9	73.6	78.1	79.1	76.5	78.4	75.4	79.4
September	78.8	91.4	83.1	79.7	79.3	77.5	82.9	80.1	77.5	76.5	80.7
October	82.4	92.0	88.2	84.0	81.7	78.4	86.4	83.3	81.9	79.5	82.5
November	86.1	94.7	91.1	86.0	83.1	78.8	88.2	84.0	82.8	82.2	86.1
December	111.6	110.8	110.6	105.2	100.0	97.2	102.2	98.6	93.9	97.5	95.6
Average	**88.2**	**98.6**	**93.8**	**87.0**	**83.0**	**81.6**	**85.3**	**83.2**	**80.9**	**81.1**	**82.4**
1990 January	119.8	119.0	120.0	118.1	109.2	96.0	103.5	99.7	95.2	91.6	100.9
February	97.1	104.9	101.4	101.7	89.4	82.8	92.0	85.6	83.2	83.9	88.1
March	93.2	94.4	98.8	96.8	87.1	81.2	88.7	83.1	83.4	83.1	85.5
April	91.8	93.1	97.5	95.8	83.7	80.8	86.5	83.7	82.2	82.9	85.6
May	89.9	94.2	95.0	90.6	83.0	81.9	83.7	82.4	78.3	81.0	85.2
June	83.2	93.2	89.5	88.2	83.4	82.6	81.1	72.8	73.8	79.5	80.4
July	77.9	97.6	86.2	89.7	79.2	81.6	82.4	74.7	76.7	77.5	83.0
August	93.1	107.1	100.2	102.4	98.1	93.3	100.2	98.1	96.9	92.0	101.6
September	111.2	116.1	115.8	114.8	115.2	115.2	113.2	110.4	NA	107.0	111.7
October	122.3	134.9	130.6	128.3	124.4	120.9	123.9	123.3	117.8	117.1	121.7
November	118.8	134.3	130.4	126.1	121.7	117.0	121.0	119.1	113.1	114.8	119.7
December	113.7	128.4	125.3	122.8	112.9	111.8	113.5	111.4	105.0	108.3	111.1
Average	**106.0**	**108.5**	**111.9**	**110.5**	**98.9**	**97.8**	**100.9**	**98.8**	**96.1**	**94.2**	**101.7**
1991 January	113.0	124.1	122.7	117.7	110.4	105.5	109.1	105.8	102.4	102.4	105.5
February	105.4	118.6	116.1	110.5	101.2	94.5	97.0	95.4	93.0	92.3	93.6
March	98.4	112.3	107.7	102.6	90.8	85.8	90.9	87.9	85.9	87.6	87.2
April	92.3	105.6	102.8	96.2	87.4	83.2	90.9	85.7	88.3	84.0	87.7
May	91.4	101.1	98.8	90.7	85.5	83.1	88.5	86.3	88.5	82.9	88.0
June	83.1	94.6	95.9	87.8	83.5	80.7	87.5	80.3	86.8	80.8	87.0
July	81.5	98.6	93.7	86.9	81.7	79.6	83.4	79.1	82.2	78.0	84.3
August	85.8	98.6	[R]94.0	[R]87.5	82.3	81.1	[R]84.5	[R]85.5	[R]86.4	[R]78.8	86.3
September	87.3	101.7	96.9	89.9	84.8	84.7	86.9	85.5	84.3	82.7	83.8

See footnotes at end of Table 9.8c.

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

(Cents per Gallon, Excluding Taxes)

	Idaho	Washington	Oregon	Alaska	U.S. Average
1978 Average	**43.6**	**48.6**	**45.8**	**53.2**	**49.0**
1979 Average	**62.1**	**69.7**	**68.0**	**68.2**	**70.4**
1980 Average	**91.6**	**100.8**	**97.3**	**97.8**	**97.4**
1981 Average	**110.4**	**116.5**	**111.4**	**118.0**	**119.4**
1982 Average	**110.4**	**117.6**	**111.6**	**117.4**	**116.0**
1983 Average	**101.8**	**109.0**	**103.6**	**108.8**	**107.8**
1984 Average	**98.5**	**102.6**	**99.3**	**106.9**	**109.1**
1985 Average	**97.2**	**101.1**	**97.1**	**108.3**	**105.3**
1986 Average	**73.8**	**77.5**	**70.4**	**94.9**	**83.6**
1987 Average	**68.8**	**79.5**	**72.5**	**86.5**	**80.3**
1988 Average	**68.8**	**78.5**	**70.9**	**86.9**	**81.3**
1989 January	68.1	76.9	66.3	86.7	84.9
February	71.5	86.0	76.7	90.9	85.5
March	78.3	92.8	84.2	96.0	87.1
April	85.8	94.2	87.3	99.5	87.8
May	83.5	87.3	79.6	100.1	86.6
June	80.3	77.6	74.9	101.5	84.1
July	77.3	74.7	71.1	105.8	82.1
August	77.2	78.2	71.2	101.6	81.5
September	80.3	83.9	81.5	96.0	81.5
October	82.2	91.7	86.4	97.8	85.6
November	84.9	93.4	86.4	97.9	88.3
December	84.5	93.1	86.1	98.1	107.6
Average	**77.8**	**96.4**	**80.2**	**96.4**	**90.0**
1990 January	85.7	96.0	88.7	98.6	114.0
February	80.8	89.0	83.9	99.6	96.3
March	80.9	88.6	84.4	104.2	94.7
April	81.7	90.0	85.1	97.9	93.1
May	79.4	84.3	84.6	101.7	90.7
June	74.6	85.0	81.9	102.1	86.4
July	70.5	76.3	79.3	97.8	83.8
August	90.7	90.0	95.3	116.8	98.8
September	108.3	115.3	111.9	119.3	113.7
October	121.0	133.3	128.2	128.9	125.4
November	127.1	134.4	126.8	127.5	123.4
December	119.7	122.0	109.2	128.2	119.6
Average	**97.4**	**102.7**	**97.0**	**112.6**	**106.2**
1991 January	110.8	118.4	108.3	129.3	116.8
February	97.3	112.0	102.9	122.8	110.3
March	84.1	95.3	89.4	109.5	102.6
April	83.5	94.0	86.4	101.9	96.9
May	84.4	94.9	86.5	101.3	92.5
June	83.4	91.7	85.6	98.2	89.3
July	80.0	85.4	84.5	98.6	86.6
August	84.6	R92.3	R87.3	96.8	R87.0
September	85.5	93.5	90.9	92.4	89.8

R=Revised data.

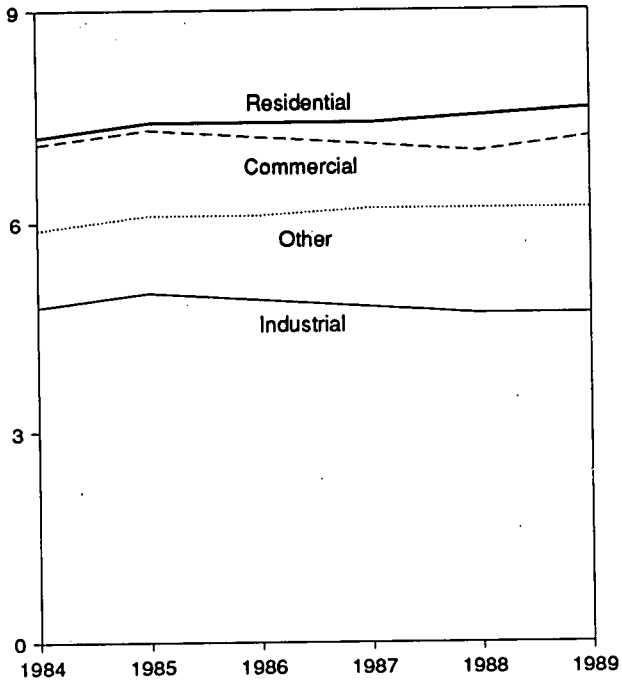
Notes: • States are grouped in Tables 9.8a, 9.8b, and 9.8c by geographic region of the country. • Values for the current month are preliminary. • Prices prior to 1983 are Energy Information Administration estimates. See Note 6 at end of section.

Sources: Energy Information Administration, *Petroleum Marketing Monthly*, December 1991, Table 16.

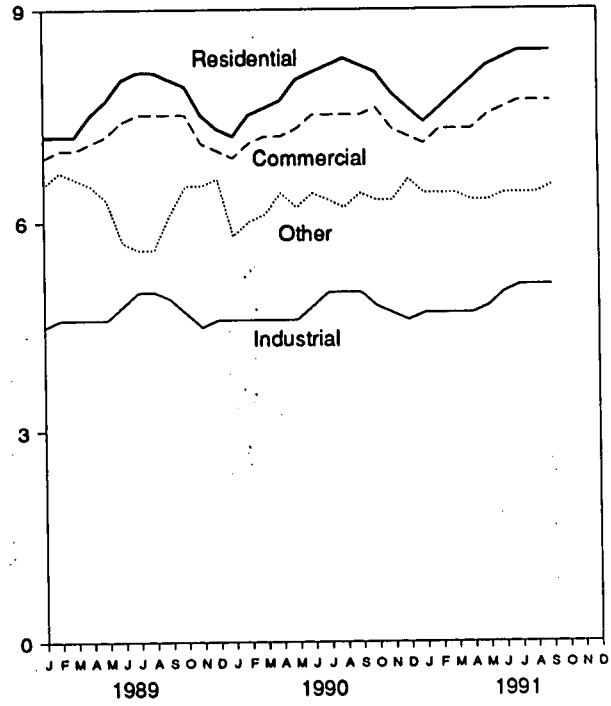
Figure 9.2 Electricity Retail Prices

(Cents per Kilowatthour)

Prices by Sector, 1984-1989



Prices by Sector, Monthly

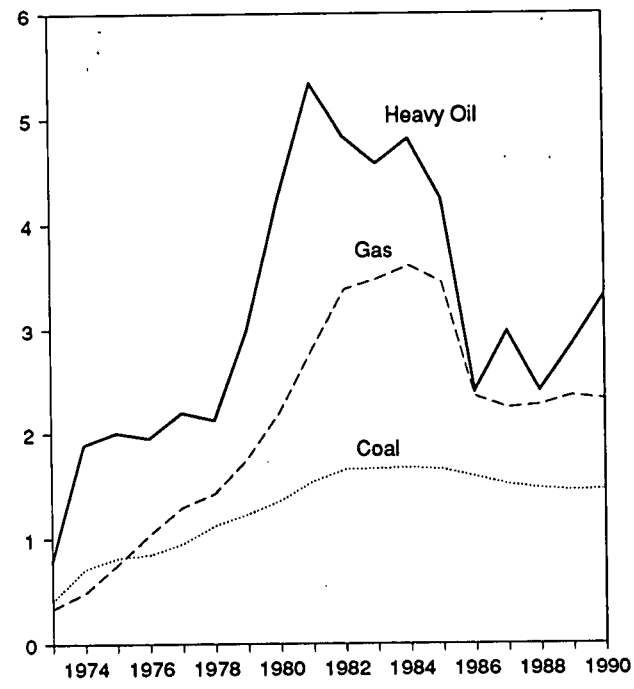


Source: Table 9.9.

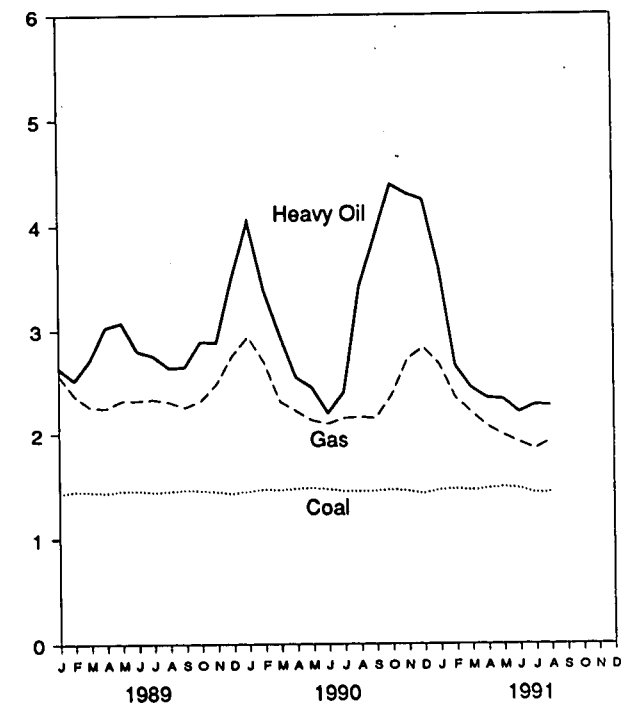
Figure 9.3 Cost of Fossil-Fuel Receipts at Steam-Electric Plants

(Dollars per Million Btu)

Fossil Fuels Costs, 1973-1990



Fossil Fuel Costs, Monthly



Source: Table 9.10.

Table 9.9 Electricity Retail Prices

(Cents per Kilowatthour)

	Residential		Commercial		Industrial		Other[a]		Total[b]	
	Monthly Series[c]	Annual Series	Monthly Series[c]	Annual Series	Monthly Series[c]	Annual Series	Monthly Series[c]	Annual Series	Monthly Series[c]	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**	**7.2**	**7.3**	**7.1**	**5.0**	**4.8**	**6.8**	**5.9**	**6.5**	**6.3**
1985 Average	**7.8**	**7.4**	**7.5**	**7.3**	**5.2**	**5.0**	**7.0**	**6.1**	**6.7**	**6.4**
1986 Average	**7.4**	**7.4**	**7.1**	**7.2**	**4.9**	**4.9**	**6.6**	**6.1**	**6.4**	**6.4**
1987 Average	**7.4**	**7.4**	**7.0**	**7.1**	**4.7**	**4.8**	**6.6**	**6.2**	**6.3**	**6.4**
1988 Average	**7.5**	**7.5**	**7.1**	**7.0**	**4.6**	**4.7**	**6.0**	**6.2**	**6.3**	**6.4**
1989 January	7.2	–	6.9	–	4.5	–	6.5	–	6.2	–
February	7.2	–	7.0	–	4.6	–	6.7	–	6.2	–
March	7.2	–	7.0	–	4.6	–	6.6	–	6.2	–
April	7.5	–	7.1	–	4.6	–	6.5	–	6.3	–
May	7.7	–	7.2	–	4.6	–	6.3	–	6.3	–
June	8.0	–	7.4	–	4.8	–	5.7	–	6.6	–
July	8.1	–	7.5	–	5.0	–	5.6	–	6.8	–
August	8.1	–	7.5	–	5.0	–	5.6	–	6.8	–
September	8.0	–	7.5	–	4.9	–	6.1	–	6.7	–
October	7.9	–	7.5	–	4.7	–	6.5	–	6.5	–
November	7.5	–	7.1	–	4.5	–	6.5	–	6.2	–
December	7.3	–	7.0	–	4.6	–	6.6	–	6.3	–
Average	**7.6**	**7.6**	**7.2**	**7.2**	**4.7**	**4.7**	**6.2**	**6.2**	**6.4**	**6.5**
1990 January	7.2	–	6.9	–	4.6	–	5.8	–	6.3	–
February	7.5	–	7.1	–	4.6	–	6.0	–	6.3	–
March	7.6	–	7.2	–	4.6	–	6.1	–	6.4	–
April	7.7	–	7.2	–	4.6	–	6.4	–	6.4	–
May	8.0	–	7.3	–	4.6	–	6.2	–	6.5	–
June	8.1	–	7.5	–	4.8	–	6.4	–	6.7	–
July	8.2	–	7.5	–	5.0	–	6.3	–	6.9	–
August	8.3	–	7.5	–	5.0	–	6.2	–	6.9	–
September	8.2	–	7.5	–	5.0	–	6.4	–	6.9	–
October	8.1	–	7.6	–	4.8	–	6.3	–	6.7	–
November	7.8	–	7.3	–	4.7	–	6.3	–	6.5	–
December	7.6	–	7.2	–	4.6	–	6.6	–	6.4	–
Average	**7.8**	**NA**	**7.3**	**NA**	**4.8**	**NA**	**6.2**	**NA**	**6.6**	**NA**
1991 January	7.4	–	7.1	–	4.7	–	6.4	–	6.4	–
February	7.6	–	7.3	–	4.7	–	6.4	–	6.5	–
March	7.8	–	7.3	–	4.7	–	6.4	–	6.6	–
April	8.0	–	7.3	–	4.7	–	6.3	–	6.5	–
May	8.2	–	7.5	–	4.8	–	6.3	–	6.7	–
June	8.3	–	7.6	–	5.0	–	6.4	–	6.9	–
July	8.4	–	7.7	–	5.1	–	6.4	–	7.1	–
August	8.4	–	7.7	–	5.1	–	6.4	–	7.1	–
September	8.4	–	7.7	–	5.1	–	6.5	–	7.0	–
9-Month Average	**8.1**	**–**	**7.5**	**–**	**4.9**	**–**	**6.4**	**–**	**6.8**	**–**
1990 9-Month Average	**7.9**	**–**	**7.3**	**–**	**4.8**	**–**	**6.2**	**–**	**6.6**	**–**
1989 9-Month Average	**7.7**	**–**	**7.2**	**–**	**4.7**	**–**	**6.1**	**–**	**6.5**	**–**

[a] 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.

[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.

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: **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 forward**—Energy Information Administration (EIA), *Electric Power Monthly*, December 1991, Table 59. **Annual Series:** EIA, *Electric Power Monthly*, December 1991, Table 59.

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

	Coal		Petroleum				Gas[a]		All Fossil Fuels[b]
			Heavy Oil[b]		Total[b,c]				
	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	**490,415**	**94.7**	**563,685**	**219.8**	**635,556**	**224.9**	**3,106,403**	**129.1**	**129.7**
1978 Year	**476,169**	**111.6**	**546,197**	**212.5**	**616,040**	**219.1**	**3,140,654**	**142.2**	**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	**684,111**	**166.4**	**193,832**	**481.2**	**202,372**	**486.3**	**2,878,808**	**360.3**	**219.1**
1985 Year	**666,743**	**164.8**	**156,410**	**424.4**	**164,947**	**431.7**	**2,808,921**	**344.4**	**209.4**
1986 Year	**686,964**	**157.9**	**220,585**	**240.1**	**228,522**	**243.7**	**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 January	62,443	142.7	25,855	264.1	26,516	267.4	124,572	257.5	164.8
February	56,634	145.0	20,489	251.9	21,179	256.0	150,950	237.2	164.6
March	63,218	144.4	22,427	271.8	23,199	276.0	180,668	225.7	165.0
April	62,076	143.6	19,831	303.0	20,292	305.6	207,401	224.6	166.7
May	64,796	145.3	20,569	307.2	21,211	310.1	226,859	232.0	169.7
June	61,272	145.5	18,677	279.9	19,354	283.5	234,010	232.1	168.5
July	55,429	144.1	19,778	275.6	20,364	278.6	285,117	233.3	172.2
August	70,147	144.7	19,701	264.2	20,563	268.9	282,481	230.6	166.6
September	64,539	146.0	14,967	264.8	15,609	270.6	239,696	225.4	164.9
October	66,578	145.4	15,779	289.1	16,495	295.6	230,629	231.6	166.1
November	65,570	144.2	16,862	288.0	17,602	294.5	162,361	248.1	164.9
December	60,515	142.8	22,734	350.2	24,040	359.0	147,763	275.4	176.7
Year	**753,217**	**144.5**	**237,668**	**284.6**	**246,422**	**289.3**	**2,472,506**	**235.5**	**167.5**
1990 January	67,636	144.6	26,481	403.9	27,415	409.6	126,806	293.8	182.3
February	62,296	146.6	19,190	338.2	19,683	340.7	113,552	269.3	171.2
March	67,536	145.7	15,023	295.2	15,494	299.3	166,055	231.0	163.1
April	63,888	147.3	13,521	254.7	13,977	260.4	181,153	221.7	162.1
May	64,958	147.8	15,000	244.7	15,534	250.6	220,420	212.5	162.4
June	63,649	146.6	18,068	219.4	18,612	224.1	267,995	209.3	161.9
July	63,427	144.6	22,149	239.9	22,783	243.8	294,671	214.6	164.8
August	70,571	144.5	18,773	341.1	19,321	346.2	304,429	215.9	169.1
September	65,715	144.7	13,520	389.9	14,038	397.8	269,002	214.3	168.6
October	69,170	146.2	13,254	438.8	13,969	452.4	225,855	236.8	173.2
November	65,393	144.8	13,378	430.1	13,900	439.0	164,781	271.9	174.0
December	62,386	142.4	13,923	424.7	14,625	434.0	156,262	283.1	174.3
Year	**786,627**	**145.5**	**202,281**	**331.9**	**209,350**	**338.4**	**2,490,979**	**232.1**	**168.9**
1991 January	63,356	145.7	11,478	359.5	12,325	373.8	164,872	266.8	170.2
February	61,059	146.9	10,417	265.6	10,887	275.7	137,559	234.7	161.3
March	63,537	145.4	11,269	244.2	11,667	251.2	182,833	220.0	159.2
April	60,747	147.3	13,119	234.2	13,468	239.5	203,862	206.7	160.3
May	63,005	148.3	14,730	233.1	15,276	240.1	233,424	198.2	160.8
June	61,488	147.2	17,122	220.2	17,671	226.1	244,415	191.2	159.3
July	64,752	142.7	17,169	227.2	17,701	233.0	310,723	184.6	156.0
August	69,552	143.2	16,831	226.7	17,298	232.4	306,419	192.7	156.7
8 Months	**507,496**	**145.8**	**112,135**	**246.4**	**116,292**	**254.2**	**1,784,106**	**206.3**	**160.3**
1990 8 Months	**523,963**	**145.9**	**148,205**	**299.4**	**152,818**	**304.1**	**1,675,080**	**225.7**	**167.1**
1989 8 Months	**496,015**	**144.4**	**167,327**	**276.7**	**172,675**	**280.2**	**1,692,057**	**232.8**	**167.3**

[a] Includes supplemental gaseous fuels.

[b] Heavy fuel oil includes fuel oils No. 4, No. 5, and No. 6 and topped crude oil. The weighted averages for petroleum and all fossil fuels include both heavy and light oil (No. 2 fuel oil, kerosene, and jet fuel) prices. Data do not include petroleum coke.

[c] Data for 1973-1982 do not include small quantities of rerefined motor oil, bunker oil, and liquefied petroleum gas.

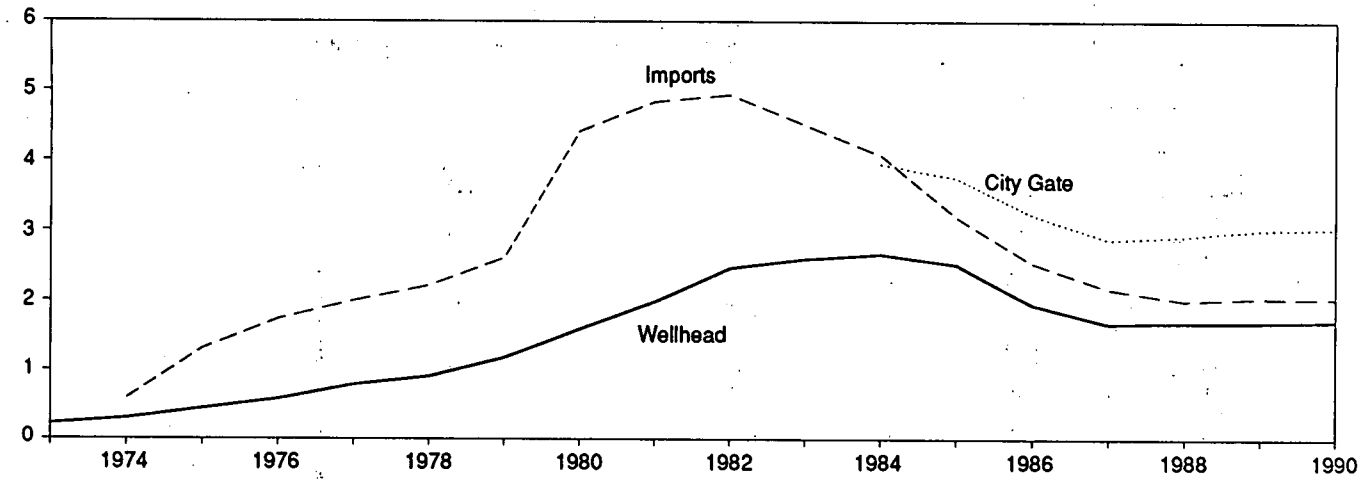
Notes: • Data for 1973-1982 cover all electric generating plants at which the generator nameplate capacity of all steam-electric units combined totaled 25 megawatts or greater. From 1974-1982, peaking units were included in the data and counted towards the 25-megawatt-or-greater total. Data for 1983-1990 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 combined totaled 50 megawatts or greater. • Geographic coverage is the 50 States and the District of Columbia.

Sources: **1973-1979:** Annual data for quantity are simple sums of unrounded monthly values and for cost are averages of monthly values, weighted by quantities, 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." **1978-1980**—Energy Information Administration (EIA), Form FERC-423, "Monthly Report on Cost and Quality of Fuels for Electric Utility Plants." **1980 forward:** EIA, *Electric Power Monthly*, December 1991, Table 33.

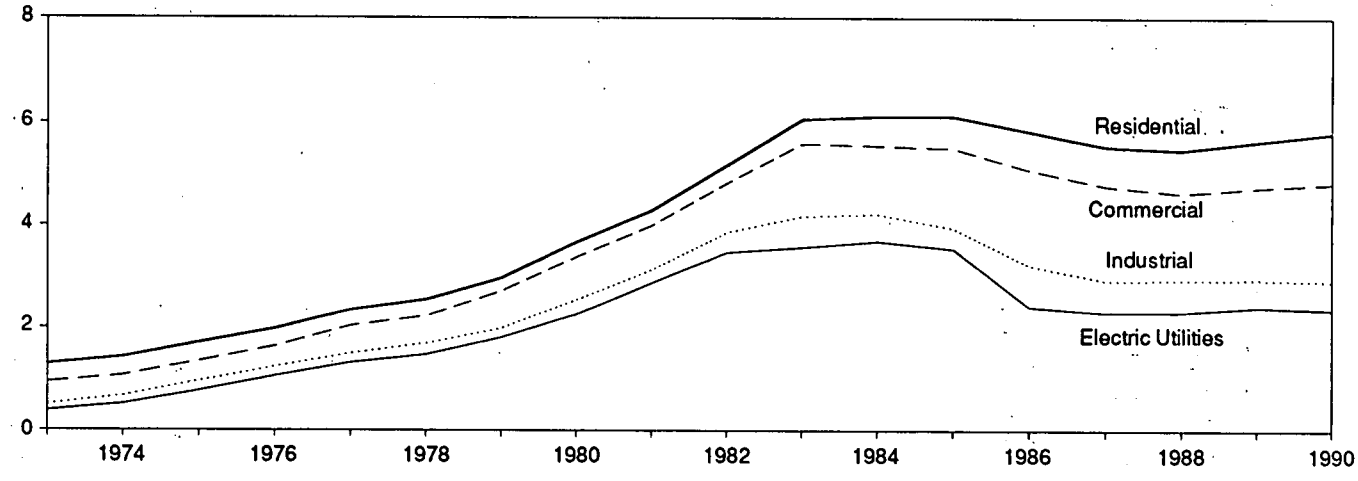
Figure 9.4 Natural Gas Prices

(Dollars per Thousand Cubic Feet)

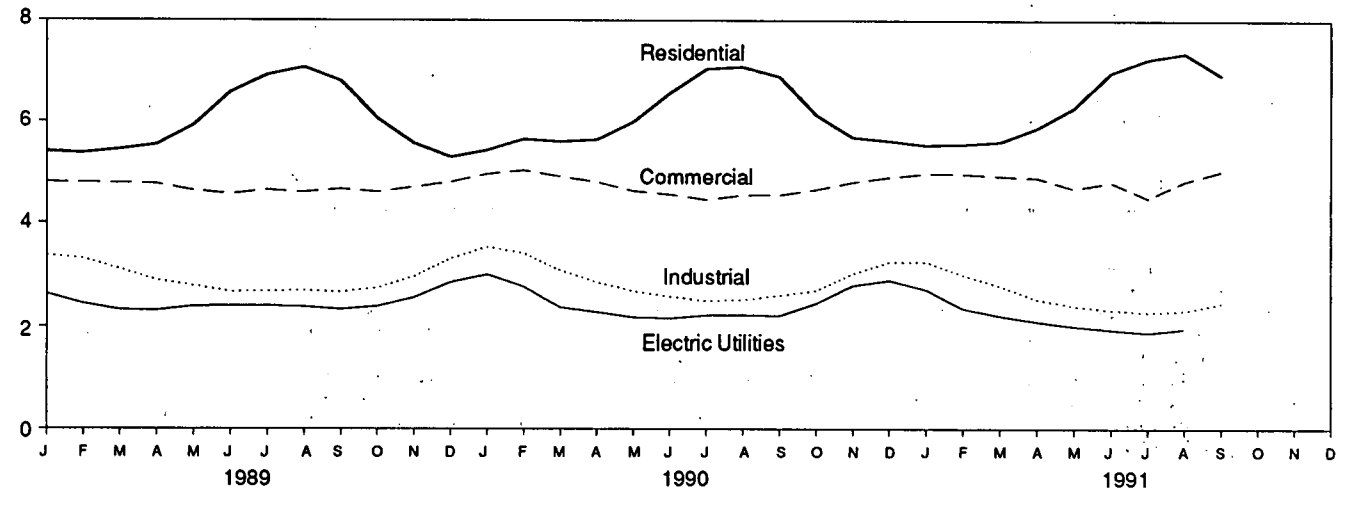
Selected Prices, 1973-1990



Delivered to Consumers, 1973-1990



Delivered to Consumers, Monthly



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

Table 9.11 Natural Gas Prices

(Dollars per Thousand Cubic Feet)

	Wellhead	Major Interstate Pipeline Companies: Imports	Major Interstate Pipeline Companies: Purchases from Producers	City Gate	Delivered to Consumers[a,b]: Residential	Commercial	Industrial	Electric Utilities[b]
1973 Average	**0.22**	**NA**	**NA**	**NA**	**1.29**	**0.94**	**0.50**	**0.38**
1974 Average	**.30**	**.59**	**.27**	**NA**	**1.43**	**1.07**	**.67**	**.51**
1975 Average	**.44**	**1.31**	**.37**	**NA**	**1.71**	**1.35**	**.96**	**.77**
1976 Average	**.58**	**1.73**	**.48**	**NA**	**1.98**	**1.64**	**1.24**	**1.06**
1977 Average	**.79**	**1.99**	**.70**	**NA**	**2.35**	**2.04**	**1.50**	**1.32**
1978 Average	**.91**	**2.21**	**.83**	**NA**	**2.56**	**2.23**	**1.70**	**1.48**
1979 Average	**1.18**	**2.60**	**1.22**	**NA**	**2.98**	**2.73**	**1.99**	**1.81**
1980 Average	**1.59**	**4.42**	**1.63**	**NA**	**3.68**	**3.39**	**2.56**	**2.27**
1981 Average	**1.98**	**4.84**	**2.15**	**NA**	**4.29**	**4.00**	**3.14**	**2.89**
1982 Average	**2.46**	**4.94**	**2.72**	**NA**	**5.17**	**4.82**	**3.87**	**3.48**
1983 Average	**2.59**	**4.51**	**2.93**	**NA**	**6.06**	**5.59**	**4.18**	**3.58**
1984 Average	**2.66**	**4.08**	**2.91**	**3.95**	**6.12**	**5.55**	**4.22**	**3.70**
1985 Average	**2.51**	**3.19**	**2.85**	**3.75**	**6.12**	**5.50**	**3.95**	**3.55**
1986 Average	**1.94**	**2.53**	**2.39**	**3.22**	**5.83**	**5.08**	**3.23**	**2.43**
1987 Average	**1.67**	**2.17**	**2.10**	**2.87**	**5.54**	**4.77**	**2.94**	**2.32**
1988 Average	**1.69**	**2.00**	**2.13**	**2.92**	**5.47**	**4.63**	**2.95**	**2.33**
1989 January	1.99	1.77	2.35	3.17	5.41	4.81	R3.37	2.63
February	1.81	2.20	2.16	3.10	5.38	4.80	R3.31	2.44
March	1.69	1.99	2.14	2.89	5.45	4.79	R3.10	2.32
April	1.56	2.01	2.19	2.83	5.54	4.77	R2.89	2.31
May	1.61	2.00	2.11	2.94	5.93	4.64	R2.78	2.39
June	1.65	2.04	2.05	2.98	6.58	4.57	R2.67	2.40
July	1.65	1.88	2.00	3.08	6.92	4.65	R2.68	2.40
August	1.61	2.27	2.11	3.04	7.07	4.61	R2.69	2.38
September	1.55	2.02	2.08	2.99	6.80	4.67	R2.66	2.33
October	1.58	2.17	2.13	2.84	6.06	4.61	R2.74	2.39
November	1.66	2.13	2.23	2.98	5.56	4.71	R2.96	2.56
December	1.92	2.08	2.39	3.10	5.30	4.81	R3.31	2.85
Average	**1.69**	**2.04**	**2.18**	**3.01**	**5.64**	**4.74**	**R2.96**	**R2.43**
1990 January	2.22	2.04	2.42	3.24	R5.43	R4.97	R3.53	3.00
February	1.85	2.25	2.17	3.10	R5.65	5.04	R3.41	2.76
March	1.56	1.99	1.94	2.94	R5.60	4.92	R3.08	2.37
April	1.50	2.00	2.17	2.83	R5.64	R4.81	R2.85	2.28
May	1.47	2.08	1.98	2.81	R6.00	4.63	R2.68	2.18
June	1.49	1.91	2.18	3.00	R6.56	R4.56	R2.58	2.16
July	1.50	1.88	2.00	3.03	R7.04	R4.46	R2.50	2.22
August	1.51	1.93	1.86	2.91	R7.08	R4.55	R2.52	2.23
September	1.57	1.89	1.93	2.92	R6.89	R4.55	R2.60	2.21
October	1.79	1.90	2.18	2.81	R6.14	R4.66	R2.69	2.45
November	1.99	2.21	2.45	3.14	R5.69	4.81	R3.02	2.79
December	2.07	2.27	2.58	3.19	R5.62	R4.91	R3.25	2.89
Average	**R1.71**	**2.03**	**2.19**	**3.03**	**R5.80**	**R4.82**	**R2.93**	**2.38**
1991 January	1.95	2.24	2.23	3.08	5.53	4.98	3.25	2.71
February	1.57	2.12	1.98	2.94	5.55	4.97	2.99	2.35
March	1.46	1.94	2.06	2.79	5.60	4.93	2.78	2.21
April	1.47	2.05	1.91	2.75	5.88	4.90	2.53	2.10
May	1.42	2.00	2.04	2.77	6.28	4.68	2.40	2.01
June	1.39	2.05	1.98	2.85	6.97	4.81	2.33	1.94
July	1.31	2.13	1.87	2.76	7.23	4.49	2.28	1.88
August	1.37	R1.71	R1.77	2.80	7.35	R4.83	2.31	1.96
September	NA	1.85	1.81	2.91	6.92	5.03	2.45	NA
9-Month Average	**NA**	**2.01**	**1.96**	**2.88**	**5.90**	**4.89**	**2.63**	**NA**
1990 9-Month Average	**1.63**	**2.00**	**2.07**	**3.00**	**5.82**	**4.82**	**2.91**	**2.31**
1989 9-Month Average	**1.68**	**2.02**	**2.13**	**3.01**	**5.70**	**4.74**	**2.94**	**2.39**

[a] Includes supplemental gaseous fuels.

[b] See Note 8 at end of section.

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

Notes: • Prices shown on this page are intended to include all taxes. See Note 8 at end of section. • Geographic coverage is the 50 States and the District of Columbia. • Data through 1988 are final. Subsequent data are preliminary. • 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.

Sources: **1973-1983:** Wellhead: Energy Information Administration (EIA), *Natural Gas Annual 1988, Volume 1*, Table 92. Major Interstate Pipeline Companies, **1974 through 1977:** Calculated from revenue and sales data reported to the Federal Power Commission (FPC) on Form FPC-11, "Natural Gas Pipeline Company Monthly Statement." **1978-1983:** EIA, *Natural Gas Monthly*, December 1984, Table 10. Delivered to Consumers: EIA, *Natural Gas Annual 1988, Volume 1*, Table 95. **1984-forward:** EIA, *Natural Gas Monthly*, December 1991, Table 4.

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 Form EIA-14, "Refiners' Monthly Cost Report." Those costs were previously published from data collected on 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. Also, the respondents for the two forms are essentially the same. However, due to possible different interpretations of the filing requirements and a different method for handling prior period adjustments, care must be taken when comparing the data collected on the two forms.

The refiner acquisition cost of crude oil is the average price paid by refiners for crude oil booked into their refineries in accordance with accounting procedures generally accepted and consistently and historically applied by the refiners concerned. Domestic crude oil is that oil produced in the United States or from the outer continental shelf as defined in 43 USC Section 1331. Imported crude oil is either that oil reported on Form ERA-51, "Transfer Pricing Report," or any crude oil that is not domestic oil. The composite cost is the weighted average of domestic and imported crude oil costs.

Crude oil costs and volumes reported on Form ERA-49 excluded unfinished oils but included the Strategic Petroleum Reserve (SPR). Crude oil costs and volumes reported on 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. For the period 1974-1977, prices were collected in 56 urban areas. For the period 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 Energy Information Administration (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, as well as 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 include sales among resellers. However, bulk sales to 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 the bulk utility, industrial, and commercial sales. 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 more than 3,000 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 400 utilities statistically chosen as a stratified 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 using cut-off, rather than stratification, techniques.

8. Natural gas prices are intended to include all taxes. Instructions on the data collection forms specifically direct that all U.S., State, and local taxes, surcharges, and/or adjustments billed to consumers are to be included. However, sales and other taxes itemized on 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 4.3. Additional information is available in the Energy Information Administration *Natural Gas Monthly*, Appendix C.

Electric utility 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-or-greater 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 cover all electric generating plants at which the generator nameplate capacity of all steam-electric units and combined-cycle units combined totaled 50 megawatts or greater.

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*, December 1991, 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*, December 1991, 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*, December 1991, Table 1.

Section 10. International Energy

Crude Oil Production. World crude oil production during September 1991 was 60 million barrels per day, up 1.0 million barrels per day from the level in the previous month. World crude oil production in the first three quarters of 1991 averaged 60 million barrels per day, down 1 percent compared with production in the first three quarters of 1990.

Organization of Petroleum Exporting Countries (OPEC) production during September 1991 averaged 24 million barrels per day, down 0.1 million barrels per day from the level during the previous month. OPEC production during the first three quarters of 1991 averaged 24 million barrels per day, down less than 1 percent compared with production in the same period in 1990. Production by the Arab members of OPEC during September 1991 averaged 15 million barrels per day, up 0.1 million barrels per day from the August 1991 level. Production by the Arab members of OPEC during the first three quarters of 1991 averaged 14 million barrels per day, 7 percent below the level in the first three quarters of 1990. During September 1991, production increased in Kuwait by 105 thousand barrels per day and in Libya by 50 thousand barrels per day. Production decreased in Saudi Arabia by 65 thousand barrels per day. Production was unchanged in Algeria, Iraq, Qatar, and the United Arab Emirates. Among the non-Arab members of OPEC, production during September 1991 decreased in Iran by 100 thousand barrels per day and in Indonesia by 50 thousand barrels per day. Production was unchanged in Nigeria and Venezuela.

Among the non-OPEC nations, production during September 1991 increased in the U.S.S.R. by 470 thousand barrels per day, in the United Kingdom by 69 thousand barrels per day, in the United States by 60 thousand barrels per day, and in Mexico by 40 thousand barrels per day. Production decreased in China by 5 thousand barrels per day and remained unchanged in Canada.

Petroleum Consumption. In July 1991, consumption in all Organization for Economic Cooperation and Development (OECD) countries was 37.1 million barrels per day, lower by 2 percent than the July 1990 level. Consumption was lower in the United States by 1 percent and slightly lower in Japan, compared with levels 1 year earlier. In July 1991, consumption in all European OECD countries combined was 12.4 million barrels per day, 5 percent lower than consumption in the previous July. Consumption was lower in Italy by 6 percent and slightly lower in Canada, France, and the United Kingdom, compared with levels 1 year earlier. Beginning with January 1991, data for Germany are for the unified Germany, formerly East Germany and West Germany.

Petroleum Stocks. For all OECD countries, petroleum stocks at the end of July 1991 totaled 3.6 billion barrels, lower by 2 percent than the ending stock level in July 1990. Stocks were higher in Japan by 2 percent but lower in the United States by 4 percent, compared with levels 1 year earlier. In July 1991, stock levels in all European OECD countries totaled 1.1 billion barrels, 2 percent lower than in the previous July. Stocks were higher in Italy by 8 percent, lower in France by 8 percent, lower in United Kingdom by 5 percent, and lower in Canada by 3 percent, compared with levels 1 year earlier. Beginning with January 1991, data for Germany are for the unified Germany, formerly East Germany and West Germany.

Nuclear Electricity Generation. Based on *Nucleonics Week* information for September 1991, reporting countries with nuclear capacity generated 150 gross terawatthours (billion kilowatthours) of nuclear-generated electricity, 7 percent more than in September 1990.

As of September 30, 1991, there were 355 operable nuclear generating units in the reporting countries. The units had a collective gross generating capacity of 298.3 gigawatts (million kilowatts). The 111 U.S. units accounted for 106.0 gross gigawatts, 35.5 percent of the total reported nuclear generating capacity.

Table 10.1a World Crude Oil Production: Algeria Through Venezuela

(Thousand Barrels per Day)

	Algeria	Iraq	Kuwait[a]	Libya	Qatar	Saudi Arabia[a]	United Arab Emirates	Arab OPEC[b]	Indonesia	Iran	Nigeria	Venezuela
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 January	1,085	2,720	1,237	1,102	389	4,918	1,647	13,098	1,401	2,748	1,474	1,862
February	1,085	2,720	1,336	1,102	408	4,673	1,566	12,889	1,401	2,797	1,474	1,862
March	1,085	2,720	1,375	1,102	330	4,515	1,590	12,718	1,401	3,141	1,626	1,862
April	1,085	2,823	1,677	1,154	321	4,914	1,618	13,592	1,401	2,846	1,677	1,862
May	1,085	2,823	1,984	1,154	398	5,022	1,618	14,084	1,401	2,454	1,677	1,862
June	1,085	2,772	2,083	1,154	408	4,825	1,875	14,201	1,401	2,748	1,778	1,913
July	1,105	2,926	1,885	1,154	389	4,923	1,823	14,204	1,384	2,748	1,879	1,875
August	1,105	3,080	1,885	1,154	389	5,022	1,861	14,494	1,434	2,945	1,778	1,926
September	1,105	2,977	1,885	1,154	389	5,219	2,046	14,774	1,384	2,797	1,778	1,926
October	1,105	3,080	1,885	1,154	389	5,317	2,141	15,070	1,434	2,896	1,677	1,977
November	1,105	3,028	2,073	1,207	369	5,701	2,236	15,718	1,434	2,748	1,879	1,977
December	1,105	3,080	2,068	1,207	384	5,696	2,283	15,821	1,434	2,846	1,879	1,977
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 January	1,190	2,946	1,998	1,222	370	5,571	2,054	15,352	1,306	2,700	1,754	1,990
February	1,190	2,946	1,998	1,375	380	5,670	2,029	15,589	1,306	3,000	1,754	2,140
March	1,190	2,946	2,179	1,324	400	5,800	2,054	15,893	1,411	3,000	1,754	2,040
April	1,190	2,997	1,953	1,273	400	5,924	2,099	15,837	1,463	2,900	1,855	2,040
May	1,190	3,150	1,953	1,273	365	5,426	2,109	15,466	1,411	3,200	1,754	2,040
June	1,190	3,251	1,758	1,273	365	5,431	2,049	15,317	1,411	3,100	1,754	2,040
July	1,190	3,454	1,853	1,273	370	5,426	2,049	15,616	1,442	3,050	1,754	2,040
August	1,190	1,016	100	1,426	400	5,825	1,649	11,606	1,516	3,300	1,855	2,090
September	1,220	508	100	1,426	400	7,706	2,199	13,560	1,536	3,300	1,905	2,290
October	1,241	457	75	1,579	400	7,776	2,309	13,837	1,542	3,000	1,955	2,275
November	1,241	432	75	1,528	400	8,274	2,374	14,324	1,568	3,200	1,955	2,320
December	1,241	432	75	1,528	370	8,533	2,449	14,628	1,620	3,300	1,955	2,340
Average	**1,205**	**2,040**	**1,172**	**1,375**	**385**	**6,449**	**2,119**	**14,745**	**1,462**	**3,088**	**1,834**	2,137
1991 January	1,210	250	50	1,500	350	8,140	2,500	14,000	1,630	3,200	1,960	2,390
February	1,210	0	0	1,500	390	8,200	2,525	13,825	1,630	3,300	1,960	2,390
March	1,210	0	0	1,450	390	8,000	2,550	13,600	1,630	3,400	1,960	2,390
April	1,210	200	0	1,450	390	7,400	2,550	13,200	1,630	3,300	1,960	2,340
May	1,210	350	0	1,450	390	7,400	2,350	13,150	1,630	3,300	1,960	2,340
June	1,210	350	75	1,450	390	8,150	2,350	13,975	1,630	3,300	1,910	2,340
July	1,210	350	165	1,450	390	8,475	2,350	14,390	1,680	3,400	1,910	2,340
August	1,210	350	195	1,450	390	8,465	2,350	14,410	1,630	3,400	1,960	2,340
September	1,210	350	300	1,500	390	8,400	2,350	14,500	1,580	3,300	1,960	2,340
9-Mo. Avg.	**1,210**	**247**	**88**	**1,466**	**385**	**8,070**	**2,430**	**13,895**	**1,630**	**3,323**	**1,949**	2,356
1990 9-Mo. Avg.	**1,193**	**2,579**	**1,542**	**1,318**	**383**	**5,861**	**2,031**	**14,908**	**1,423**	**3,061**	**1,793**	2,078
1989 9-Mo. Avg.	**1,092**	**2,841**	**1,707**	**1,137**	**380**	**4,894**	**1,739**	**13,789**	**1,401**	**2,803**	**1,684**	1,883

[a] 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 September 1991, Neutral Zone production by both Kuwait and Saudi Arabia totaled about 200 thousand barrels per day.

[b] The Arab members of the Organization of Petroleum Exporting Countries (OPEC) are Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and the United Arab Emirates. Production in the Neutral Zone between Kuwait and Saudi Arabia is included in Arab OPEC.

[c] Total OPEC consists of Algeria, Ecuador, 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.

[d] 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."

[e] Other is a calculated total derived from the difference between World and the sum of production in Total OPEC, Canada, Mexico, the United Kingdom, the United States, China, and the U.S.S.R.

Footnotes continued on following page.

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

(Thousand Barrels per Day)

	Total OPEC[c]	Persian Gulf Nations[d]	Canada	Mexico	United Kingdom	United States	China	U.S.S.R.	Other[e]	Market Economies[f]	World
1973 Average	**30,988**	**20,668**	**1,798**	**465**	**2**	**9,208**	**1,090**	**8,329**	**3,804**	**45,805**	**55,684**
1974 Average	**30,729**	**21,282**	**1,551**	**571**	**2**	**8,774**	**1,315**	**8,856**	**3,862**	**45,021**	**55,660**
1975 Average	**27,154**	**18,934**	**1,430**	**705**	**12**	**8,375**	**1,490**	**9,472**	**4,139**	**41,338**	**52,777**
1976 Average	**30,737**	**21,514**	**1,314**	**831**	**245**	**8,132**	**1,670**	**9,985**	**4,355**	**45,132**	**57,269**
1977 Average	**31,299**	**21,725**	**1,321**	**981**	**768**	**8,245**	**1,874**	**10,485**	**4,616**	**46,745**	**59,589**
1978 Average	**29,875**	**20,606**	**1,316**	**1,209**	**1,082**	**8,707**	**2,082**	**10,950**	**4,782**	**46,497**	**60,003**
1979 Average	**30,998**	**21,066**	**1,500**	**1,461**	**1,568**	**8,552**	**2,122**	**11,187**	**5,089**	**48,725**	**62,477**
1980 Average	**26,985**	**17,961**	**1,435**	**1,936**	**1,622**	**8,597**	**2,114**	**11,460**	**5,204**	**45,355**	**59,353**
1981 Average	**22,843**	**15,245**	**1,285**	**2,313**	**1,811**	**8,572**	**2,012**	**11,552**	**5,390**	**41,784**	**55,778**
1982 Average	**19,145**	**12,156**	**1,271**	**2,748**	**2,065**	**8,649**	**2,045**	**11,615**	**5,646**	**39,069**	**53,184**
1983 Average	**17,891**	**11,081**	**1,356**	**2,689**	**2,291**	**8,688**	**2,120**	**11,684**	**6,248**	**38,703**	**52,967**
1984 Average	**17,857**	**10,784**	**1,438**	**2,780**	**2,480**	**8,879**	**2,296**	**11,576**	**6,897**	**39,893**	**54,203**
1985 Average	**16,634**	**9,630**	**1,471**	**2,745**	**2,530**	**8,971**	**2,505**	**11,250**	**7,540**	**39,463**	**53,646**
1986 Average	**18,734**	**11,696**	**1,474**	**2,435**	**2,539**	**8,680**	**2,620**	**11,540**	**7,850**	**41,282**	**55,872**
1987 Average	**18,846**	**12,103**	**1,535**	**2,548**	**2,406**	**8,349**	**2,690**	**11,690**	**8,242**	**41,507**	**56,306**
1988 Average	**20,785**	**13,457**	**1,616**	**2,512**	**2,232**	**8,140**	**2,730**	**11,823**	**8,669**	**43,562**	**58,507**
1989 January	21,049	13,702	1,580	2,538	1,829	7,937	2,787	11,595	9,155	43,695	58,470
February	20,861	13,543	1,570	2,507	1,779	7,788	2,787	11,595	9,104	43,216	57,991
March	21,189	13,715	1,540	2,548	1,824	7,575	2,787	11,595	9,335	43,617	58,393
April	21,838	14,242	1,555	2,533	1,723	7,772	2,687	11,480	9,237	44,254	58,825
May	21,919	14,342	1,560	2,533	1,567	7,816	2,697	11,480	9,175	44,185	58,746
June	22,512	14,754	1,600	2,533	1,377	7,624	2,697	11,425	9,018	44,278	58,784
July	22,561	14,737	1,535	2,528	1,767	7,444	2,737	11,425	9,307	44,757	59,302
August	23,086	15,220	1,540	2,528	1,854	7,544	2,767	11,425	9,451	45,613	60,194
September	23,168	15,355	1,580	2,462	1,965	7,548	2,801	11,314	9,440	45,773	60,279
October	23,609	15,749	1,525	2,523	2,061	7,453	2,826	11,239	9,614	46,390	60,850
November	24,303	16,198	1,595	2,523	1,980	7,536	2,767	11,239	9,668	47,210	61,610
December	24,486	16,400	1,545	2,482	1,890	7,337	2,742	11,239	9,533	46,878	61,253
Average	**22,558**	**14,837**	**1,560**	**2,520**	**1,802**	**7,613**	**2,757**	**11,420**	**9,338**	**44,999**	**59,568**
1990 January	23,643	15,683	1,477	2,520	1,911	7,546	2,796	11,296	9,578	46,297	60,767
February	24,340	16,066	1,498	2,520	1,811	7,497	2,776	10,933	9,655	46,944	61,030
March	24,658	16,420	1,604	2,510	1,935	7,433	2,746	11,296	9,744	47,507	61,927
April	24,655	16,315	1,548	2,510	1,916	7,407	2,746	11,109	9,766	47,420	61,657
May	24,402	16,245	1,528	2,485	1,886	7,328	2,746	10,940	9,774	47,021	61,089
June	24,173	15,997	1,508	2,465	1,831	7,106	2,756	10,766	9,659	46,364	60,264
July	24,453	16,245	1,543	2,485	1,743	7,173	2,716	10,679	9,577	46,597	60,370
August	20,936	12,333	1,543	2,535	1,624	7,287	2,751	10,560	9,593	43,140	56,830
September	23,162	14,256	1,548	2,626	1,753	7,224	2,811	10,472	9,795	45,730	59,391
October	23,194	14,061	1,599	2,646	1,857	7,542	2,776	10,205	9,921	46,395	59,740
November	23,957	14,798	1,568	2,666	1,820	7,387	2,801	10,153	10,211	47,239	60,562
December	24,433	15,201	1,594	2,666	1,671	7,338	2,761	10,181	10,141	47,470	60,784
Average	**23,828**	**15,295**	**1,547**	**2,553**	**1,813**	**7,355**	**2,765**	**10,715**	**9,785**	**46,505**	**60,361**
1991 January	23,770	14,532	1,580	2,660	1,675	E7,418	2,785	10,295	10,118	46,861	60,301
February	23,700	14,455	1,560	2,674	1,905	E7,548	2,795	9,600	10,152	47,177	59,934
March	23,550	14,383	1,560	2,669	2,069	E7,481	2,790	10,010	10,145	47,112	60,274
April	23,000	13,881	1,530	2,655	1,525	E7,467	2,795	9,955	10,036	45,854	58,963
May	22,930	13,832	1,545	2,695	1,395	E7,368	2,795	9,870	10,135	45,707	58,733
June	23,705	14,652	1,565	2,720	1,525	E7,282	2,805	9,470	9,873	46,308	58,945
July	24,290	15,168	1,605	2,690	1,805	E7,326	2,805	9,470	R9,939	R47,295	R59,930
August	24,310	15,188	1,600	R2,660	1,827	E7,272	2,805	9,095	R9,593	R46,903	R59,162
September	24,250	15,128	1,600	2,700	1,896	E7,332	2,800	9,565	9,989	47,408	60,132
9-Mo. Avg.	**23,724**	**14,582**	**1,572**	**2,680**	**1,735**	**E7,387**	**2,797**	**9,705**	**9,996**	**46,734**	**59,596**
1990 9-Mo. Avg.	**23,817**	**15,500**	**1,533**	**2,517**	**1,823**	**7,333**	**2,760**	**10,895**	**9,682**	**46,327**	**60,361**
1989 9-Mo. Avg.	**22,028**	**14,406**	**1,562**	**2,524**	**1,743**	**7,671**	**2,749**	**11,481**	**9,249**	**44,385**	**59,006**

Footnotes continued.

[f] Market Economies is World excluding Albania, Bulgaria, Cambodia, China, Cuba, Czechoslovakia, East Germany, Hungary, Laos, Mongolia, North Korea, Poland, Romania, U.S.S.R., Vietnam, and Yugoslavia.

R=Revised data. E=Estimate.

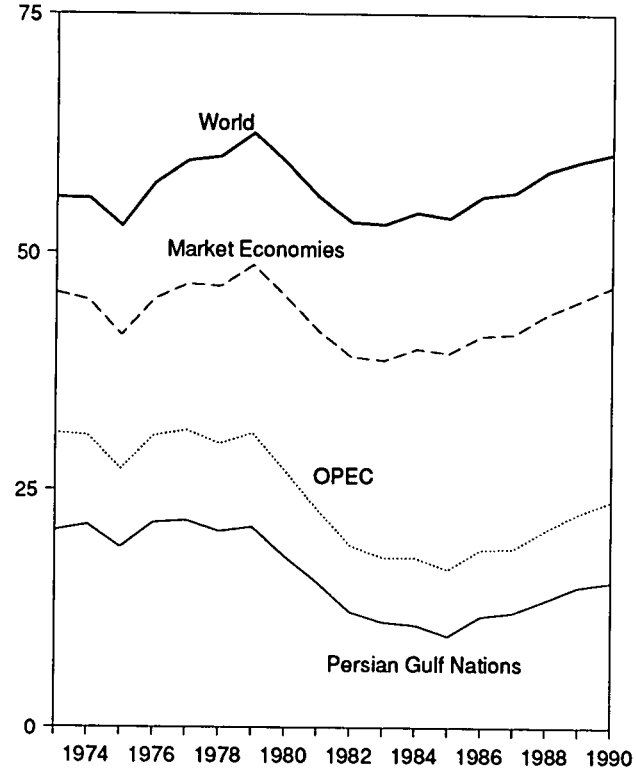
Notes: • Crude oil includes lease condensate but excludes natural gas plant liquids. • U.S. geographic coverage is the 50 States and the District of Columbia. • Monthly data are often preliminary figures and may not average to the annual totals because of rounding or because updates to the preliminary monthly data are not available.

Sources: • **United States:** Table 3.1a. • **Other Countries: 1973-1979 annual data**—Energy Information Administration (EIA), *International Energy Annual 1981*, Table 8. **1980 annual data**—EIA, *International Energy Annual 1989*, Table 1. **1981-1990 annual data**—EIA, *International Energy Annual 1990*, Table 1. **Monthly data**—*Petroleum Intelligence Weekly*, the *Oil and Gas Journal*, and other industry sources. • **World: 1973-1979**—EIA, *International Energy Annual 1981*, Table 8. **1980 annual data**—EIA, *International Energy Annual 1989*, Table 1. **1981-1990 annual data**—EIA, *International Energy Annual 1990*, Table 1. **1989 monthly data**—EIA, Office of Energy Markets and End Use, International Energy Database. **1990 forward monthly data**—EIA, *International Petroleum Statistics Report*, sum of all countries' monthly data.

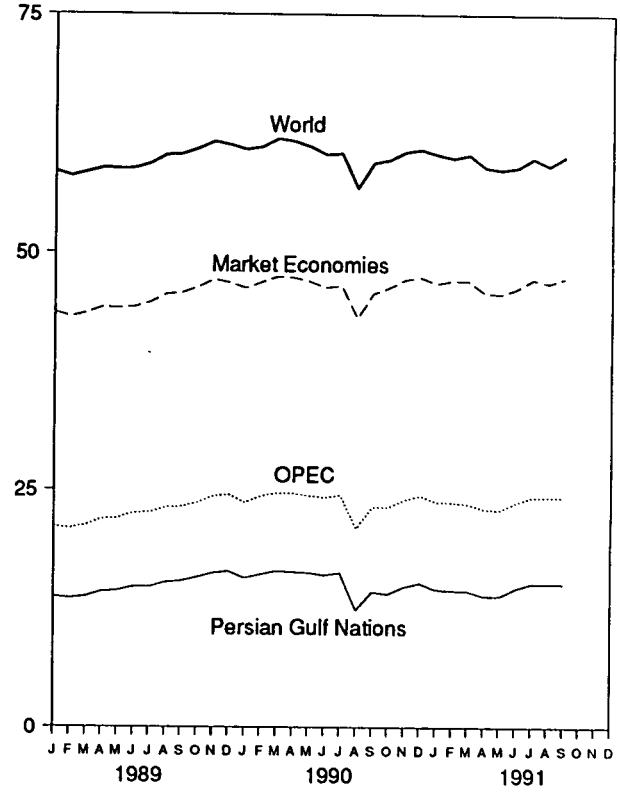
Figure 10.1 Crude Oil Production

(Million Barrels per Day)

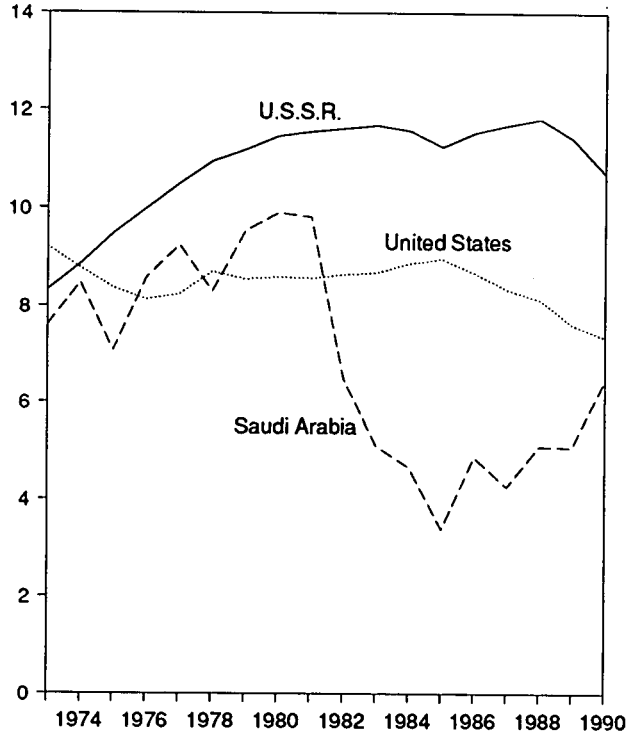
World Production, 1973-1990



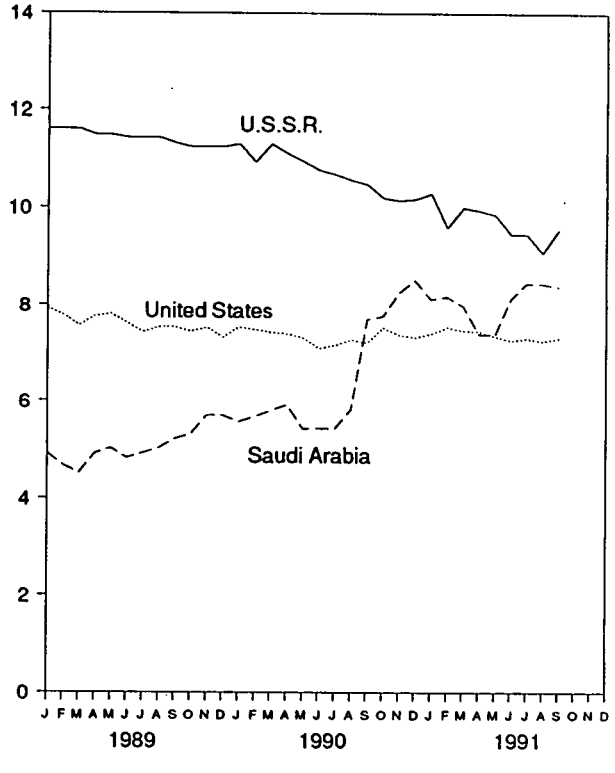
World Production, Monthly



Leading Producers, 1973-1990



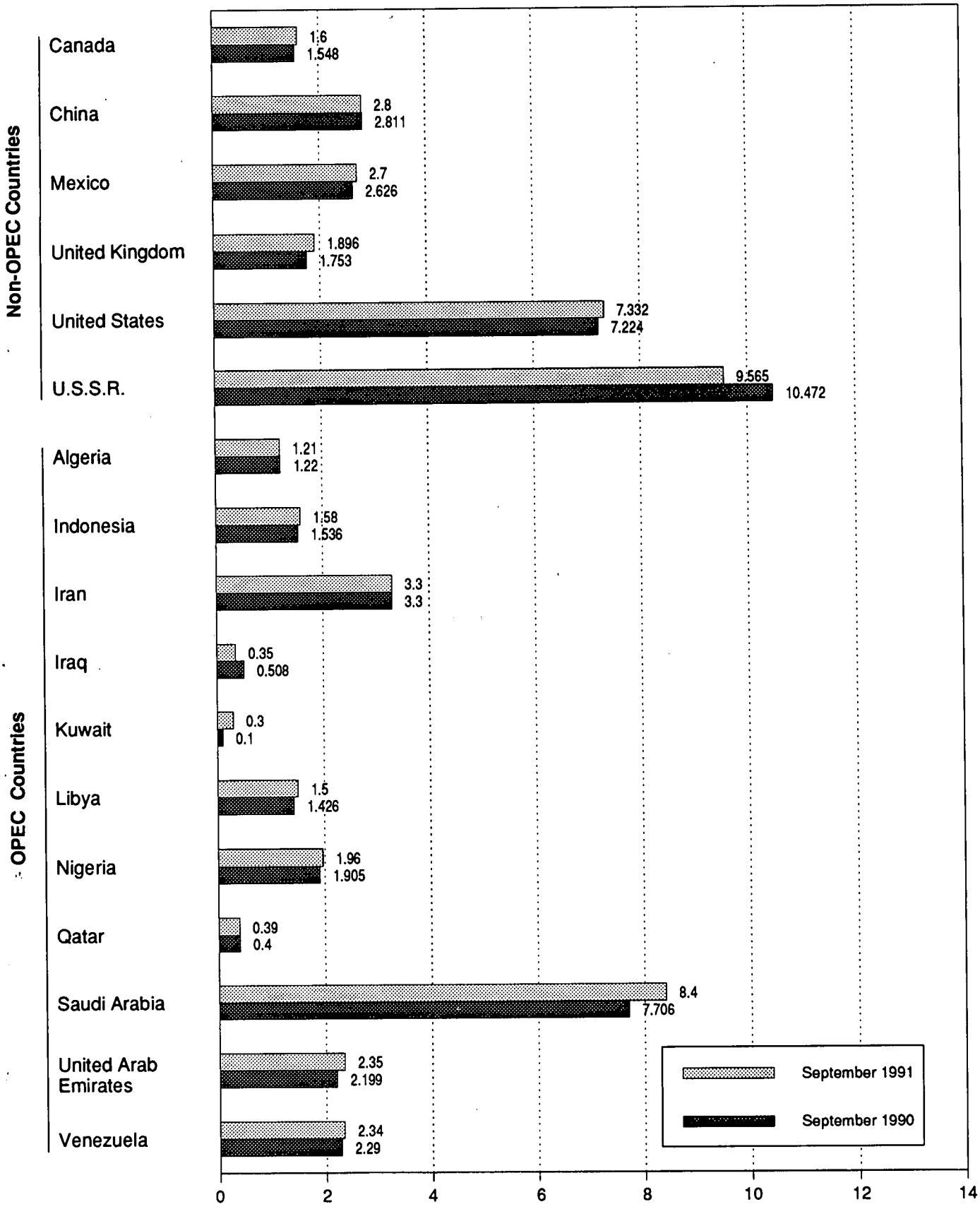
Leading Producers, Monthly



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

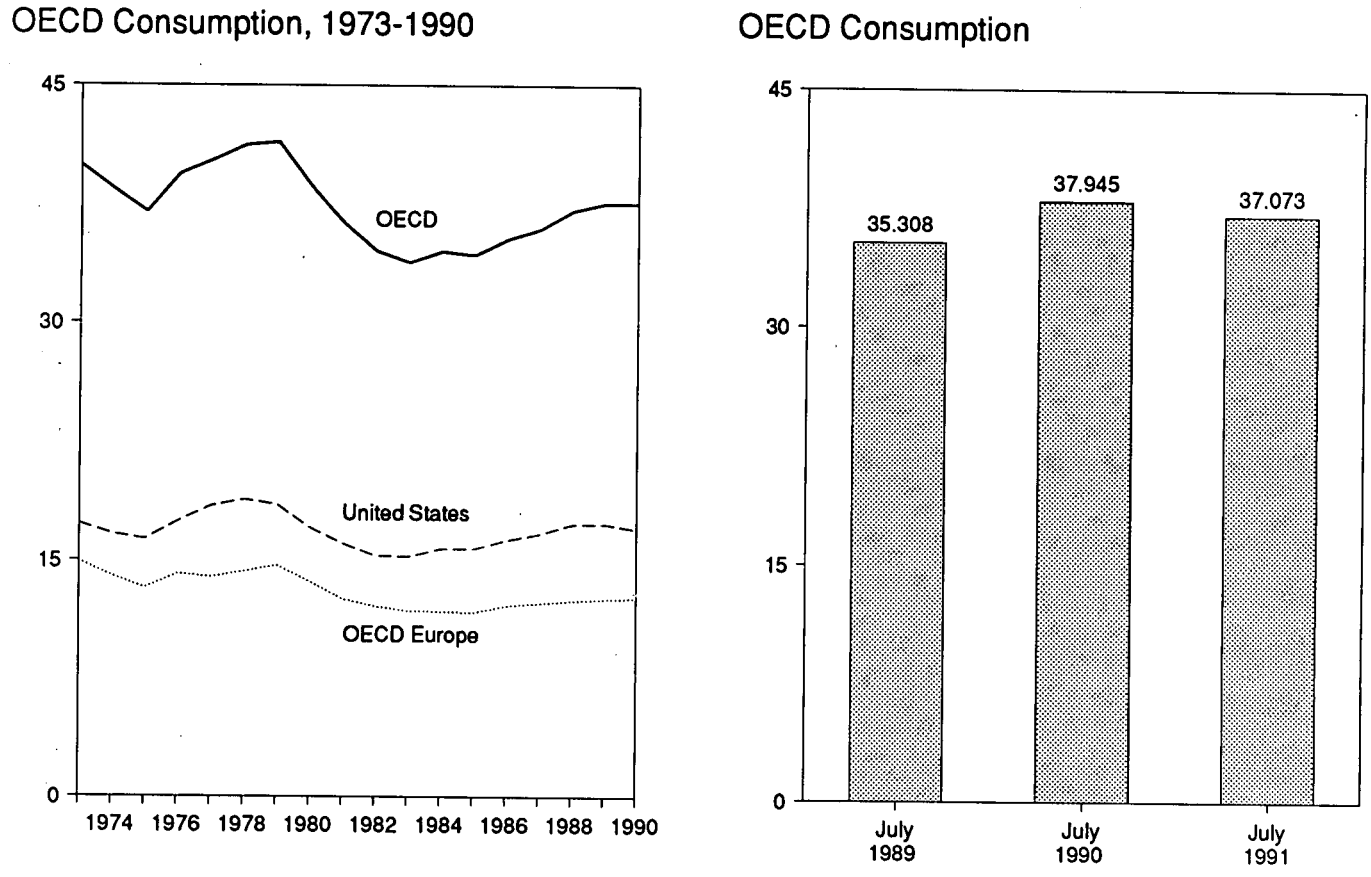
(Million Barrels per Day)

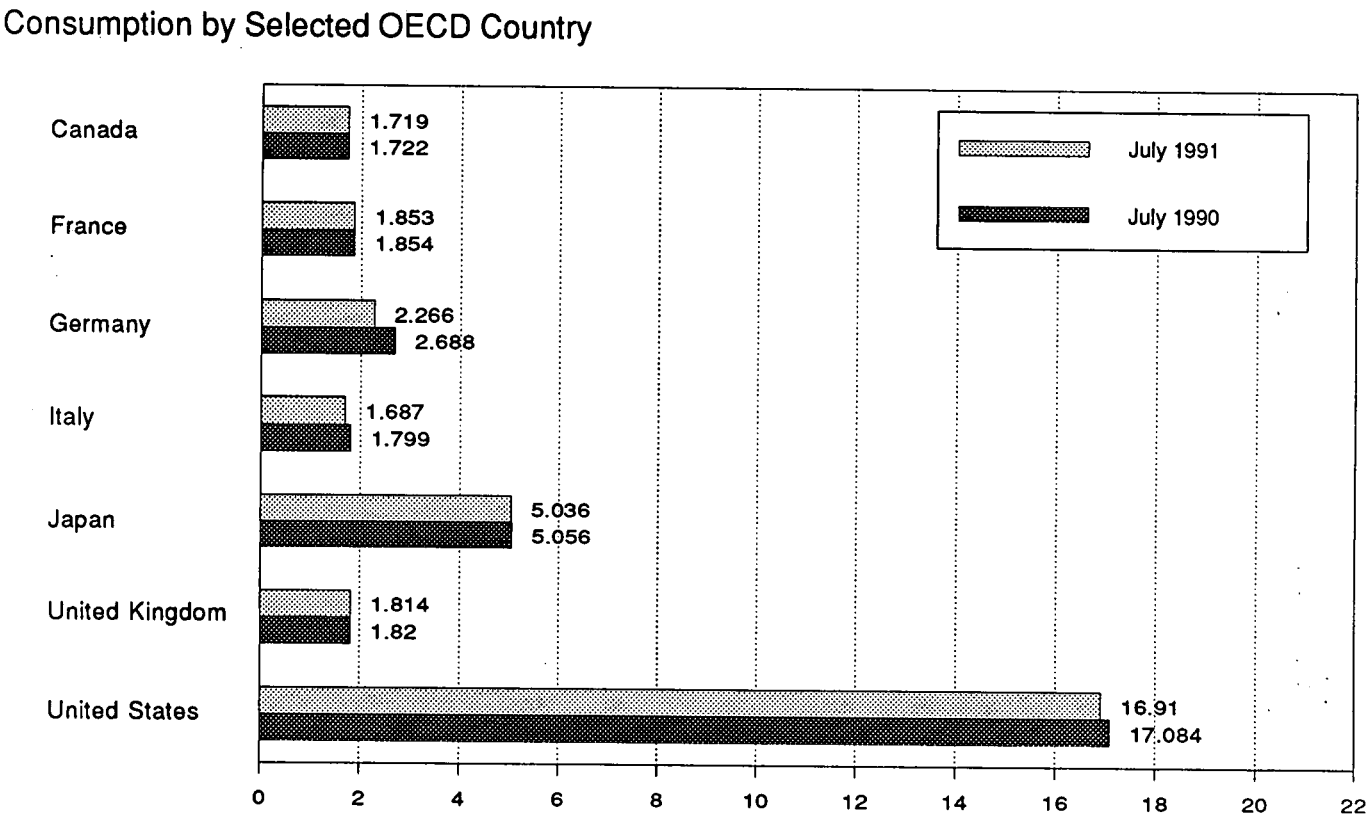


Note: OPEC is the Organization of Petroleum Exporting Countries.
Sources: Tables 10.1a and 10.1b.

Figure 10.3 Petroleum Consumption in OECD Countries

(Million Barrels per Day)





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[a]	Italy	Japan	United Kingdom	United States	OECD Europe[b]	Other OECD[c]	OECD
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**	**958**	**35,911**
1988 Average	**1,693**	**1,797**	**2,422**	**1,836**	**4,752**	**1,697**	**17,283**	**12,427**	**939**	**37,093**
1989 January	1,690	1,924	1,880	2,029	5,225	1,702	17,269	12,204	R915	R37,303
February	1,771	2,090	2,173	2,133	5,607	1,770	17,920	12,976	R1,063	R39,336
March	1,701	1,946	2,256	1,929	5,571	1,796	17,989	12,848	R971	R39,080
April	1,643	1,719	2,150	1,743	4,583	1,733	16,624	11,883	R999	R35,732
May	1,692	1,623	2,129	1,782	4,361	1,651	16,546	11,713	R1,046	R35,358
June	1,672	1,763	2,238	1,874	4,457	1,694	17,497	12,319	R1,064	R37,009
July	1,652	1,669	2,326	1,655	4,570	1,602	16,453	11,625	R1,007	R35,308
August	1,841	1,652	2,503	1,727	4,586	1,723	17,360	12,355	R1,051	R37,193
September	1,693	1,847	2,440	1,907	4,632	1,713	16,795	12,611	R922	R36,653
October	1,741	1,956	2,439	2,049	4,747	1,780	17,304	13,021	R948	R37,761
November	1,790	2,015	2,521	2,158	5,321	1,886	17,311	13,582	R995	R38,999
December	1,908	2,096	2,306	2,194	6,162	1,808	18,858	13,230	R1,003	R41,161
Average	**1,733**	**1,857**	**2,280**	**1,930**	**4,983**	**1,738**	**17,325**	**12,531**	**R998**	**R37,570**
1990 January	1,671	2,028	2,208	2,116	5,615	1,726	16,964	12,869	973	38,092
February	1,771	1,981	2,390	1,969	5,942	1,834	17,175	13,029	1,000	38,917
March	1,708	1,871	2,343	1,791	5,563	1,924	17,087	12,635	1,083	38,075
April	R1,602	1,782	2,299	1,547	4,737	1,729	16,778	12,098	966	R36,182
May	R1,684	1,604	2,382	1,714	4,542	1,759	16,915	12,112	1,039	36,292
June	R1,641	1,760	2,504	1,721	4,607	1,809	17,165	12,629	1,020	R37,061
July	R1,722	1,854	2,688	1,799	5,056	1,820	17,084	13,071	1,013	R37,945
August	R1,883	1,818	2,383	1,662	5,306	1,752	18,050	12,798	1,127	R39,163
September	R1,661	1,672	2,280	1,790	5,086	1,623	16,512	12,055	1,015	R36,331
October	1,738	1,696	2,320	1,913	4,993	1,591	16,934	12,269	1,049	36,982
November	1,688	1,831	2,434	2,023	5,245	1,705	16,695	12,777	1,030	37,434
December	1,594	1,967	2,353	2,021	5,986	1,607	16,494	12,777	1,069	37,919
Average	**1,697**	**1,822**	**2,382**	**1,839**	**5,221**	**1,739**	**16,988**	**12,596**	**1,032**	**37,534**
1991 January	1,628	2,137	2,993	2,252	5,880	1,768	16,882	14,315	1,056	39,762
February	1,623	1,986	2,781	2,076	6,169	1,797	16,284	13,654	1,032	38,762
March	1,472	1,754	2,853	1,729	5,848	1,689	16,100	12,536	1,080	37,036
April	R1,601	1,765	2,949	1,860	R5,049	1,751	16,103	R12,973	R1,077	R36,803
May	R1,654	1,739	2,909	1,745	R4,918	1,763	16,098	R12,748	R1,102	R36,521
June	R1,610	1,675	3,264	1,630	R4,801	1,732	16,764	R13,058	R943	R37,175
July	1,719	1,853	2,266	1,687	5,036	1,814	16,910	12,415	994	37,073
7-Mo. Average	**1,615**	**1,843**	**2,858**	**1,852**	**5,379**	**1,759**	**16,451**	**13,093**	**1,041**	**37,579**
1990 7-Mo. Average	**1,685**	**1,839**	**2,402**	**1,808**	**5,145**	**1,800**	**17,022**	**12,632**	**1,014**	**37,498**
1989 7-Mo. Average	**1,688**	**1,816**	**2,164**	**1,875**	**4,904**	**1,706**	**17,176**	**12,215**	**1,008**	**36,991**

[a] 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.

[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.

[c] "Other OECD" consists of Australia, New Zealand, and the U.S. Territories.

R=Revised data.

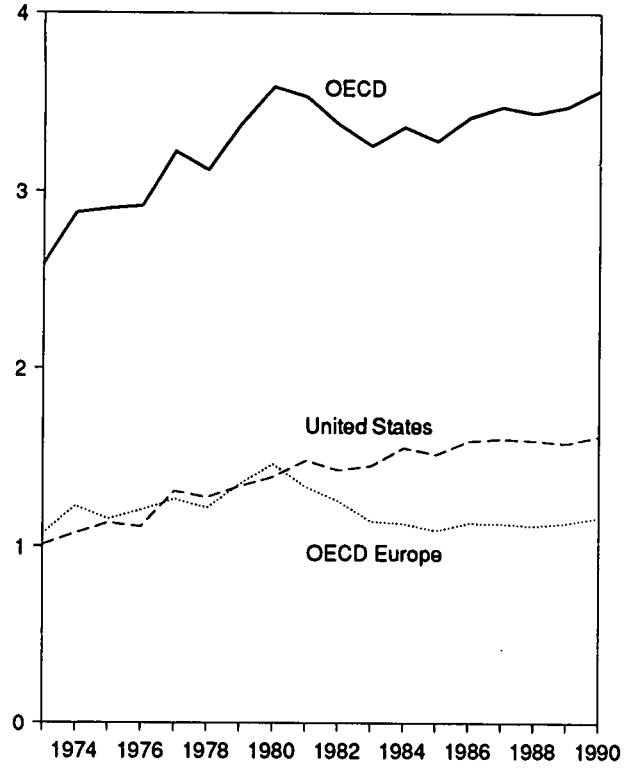
Notes: • The Organization for Economic Cooperation and Development (OECD) consists of Canada, Japan, and the United States, as well as "OECD Europe" and "Other OECD." • U.S. geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding. • Data through 1989 are final. Subsequent data are preliminary.

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

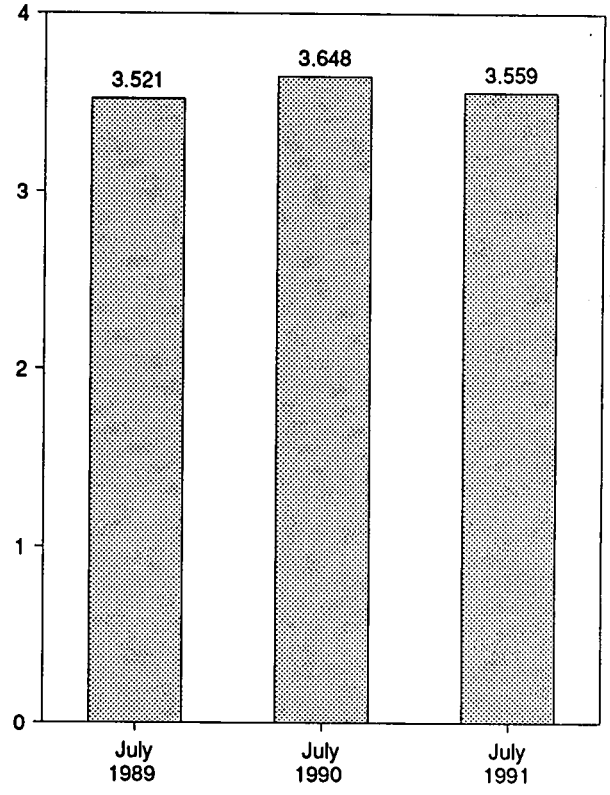
Figure 10.4 Petroleum Stocks in OECD Countries

(Billion Barrels)

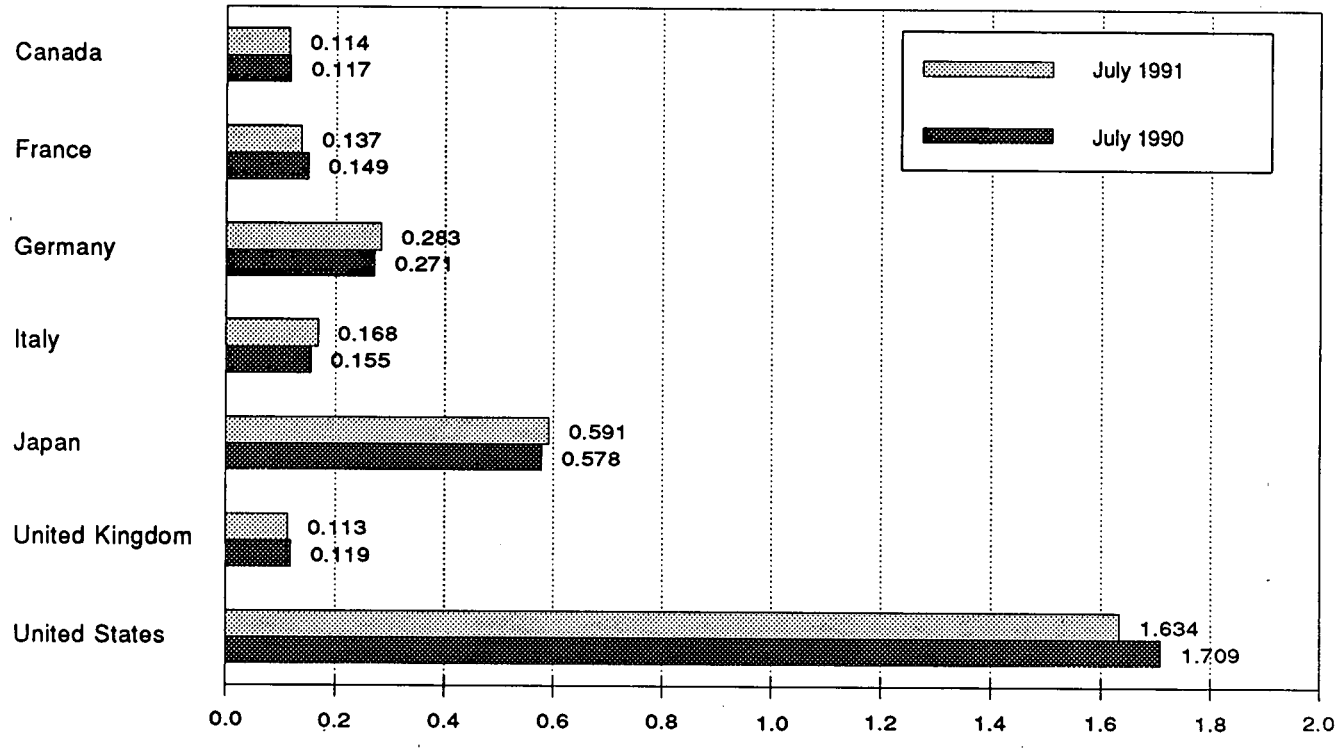
OECD Stocks, End of Year, 1973-1990



OECD Stocks, End of Month



Stocks 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)

	Canada	France	Germany[a]	Italy	Japan	United Kingdom	United States	OECD Europe[b]	Other OECD[c]	OECD
1973 Year	**140**	**201**	**181**	**152**	**303**	**156**	**1,008**	**1,070**	**67**	**2,588**
1974 Year	**145**	**249**	**213**	**167**	**370**	**191**	**1,074**	**1,227**	**64**	**2,880**
1975 Year	**174**	**225**	**187**	**143**	**375**	**165**	**1,133**	**1,154**	**67**	**2,903**
1976 Year	**153**	**234**	**208**	**143**	**380**	**165**	**1,112**	**1,205**	**68**	**2,918**
1977 Year	**167**	**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	**150**	**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	**121**	**153**	**249**	**149**	**470**	**118**	**1,454**	**1,142**	**68**	**3,255**
1984 Year	**128**	**152**	**239**	**159**	**479**	**112**	**1,556**	**1,130**	**69**	**3,362**
1985 Year	**113**	**139**	**233**	**157**	**494**	**123**	**1,519**	**1,092**	**66**	**3,284**
1986 Year	**111**	**127**	**252**	**155**	**509**	**124**	**1,593**	**1,133**	**72**	**3,418**
1987 Year	**126**	**127**	**259**	**169**	**540**	**121**	**1,607**	**1,130**	**72**	**3,474**
1988 Year	**116**	**140**	**266**	**155**	**538**	**112**	**1,597**	**1,118**	**71**	**3,440**
1989 January	117	138	277	159	547	121	1,620	1,133	69	3,486
February	116	129	272	154	548	121	1,601	1,103	69	3,437
March	111	123	270	148	552	115	1,568	1,085	68	3,384
April	118	131	271	152	549	114	1,596	1,091	71	3,425
May	117	132	272	152	553	121	1,623	1,111	73	3,476
June	119	128	269	154	557	112	1,608	1,096	71	3,450
July	125	133	270	155	557	119	1,649	1,120	70	3,521
August	123	135	271	165	567	118	1,654	1,133	72	3,549
September	121	135	274	165	572	120	1,667	1,137	66	3,563
October	117	134	272	165	580	117	1,658	1,121	70	3,547
November	121	139	267	163	588	117	1,663	1,125	75	3,571
December	**114**	**138**	**271**	**164**	**577**	**118**	**1,581**	**1,133**	**71**	**3,476**
1990 January	112	133	273	162	[R]574	119	1,630	1,128	68	[R]3,512
February	116	134	267	158	569	116	1,635	1,135	74	3,529
March	121	131	268	163	581	121	1,642	1,126	71	3,541
April	126	135	270	159	578	114	1,640	1,145	77	3,566
May	121	146	268	155	590	125	1,672	1,173	77	3,633
June	119	147	270	160	579	120	1,685	1,175	75	3,633
July	117	149	271	155	578	119	1,709	1,172	71	3,648
August	114	150	274	167	583	122	1,699	1,176	72	3,644
September	114	150	269	173	585	123	1,698	1,179	73	3,648
October	113	148	268	172	592	119	1,674	1,184	76	3,640
November	116	142	263	167	596	117	1,654	1,151	72	3,589
December	**121**	**139**	**265**	**172**	**590**	**112**	**1,621**	**1,163**	**73**	**3,569**
1991 January	118	133	276	173	585	114	1,587	[R]1,157	72	[R]3,520
February	115	136	276	169	567	117	1,574	[R]1,153	71	[R]3,480
March	119	141	278	177	587	123	1,559	1,179	74	3,518
April	111	137	274	176	563	119	1,578	[R]1,162	74	[R]3,489
May	108	137	277	173	570	112	1,628	[R]1,149	74	[R]3,529
June	108	137	272	172	573	116	1,634	[R]1,140	71	[R]3,526
July	114	137	283	168	591	113	1,634	1,148	72	3,559

[a] 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.

[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.

[c] "Other OECD" consists of Australia, New Zealand, and the U.S. Territories.

R=Revised data.

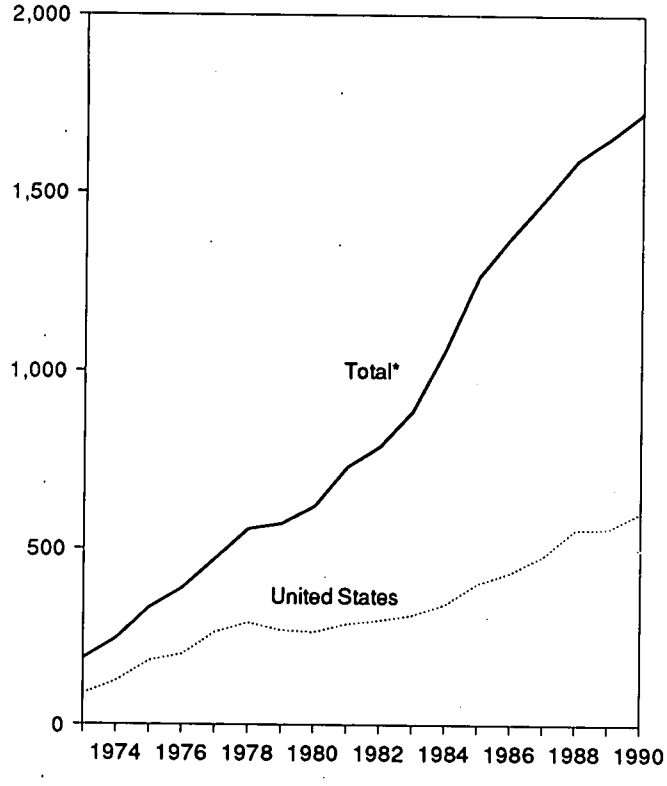
Notes: • Petroleum stocks include crude oil (including strategic reserves), unfinished oils, natural gas plant liquids, and refined products. Petroleum stocks include all nonmilitary petroleum held for storage, regardless of ownership, within each country in bulk terminals, refinery tanks, pipeline tankage, intercoastal tankers, tankers in port, and inland ship bunkers. Data exclude oil held in pipelines (except for the United States), rail and truck cars, sea-going ships' bunkers, service stations, retail stores, and tankers at sea. • The Organization for Economic Cooperation and Development (OECD) consists of Canada, Japan, and the United States, as well as "OECD Europe" and "Other OECD." • U.S. geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding. • In the United States in January 1975, 1981, and 1983, numerous respondents were added to bulk terminal and pipeline surveys affecting subsequent stocks reported. Using the new basis, the 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 1989 are final. Subsequent data are preliminary.

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

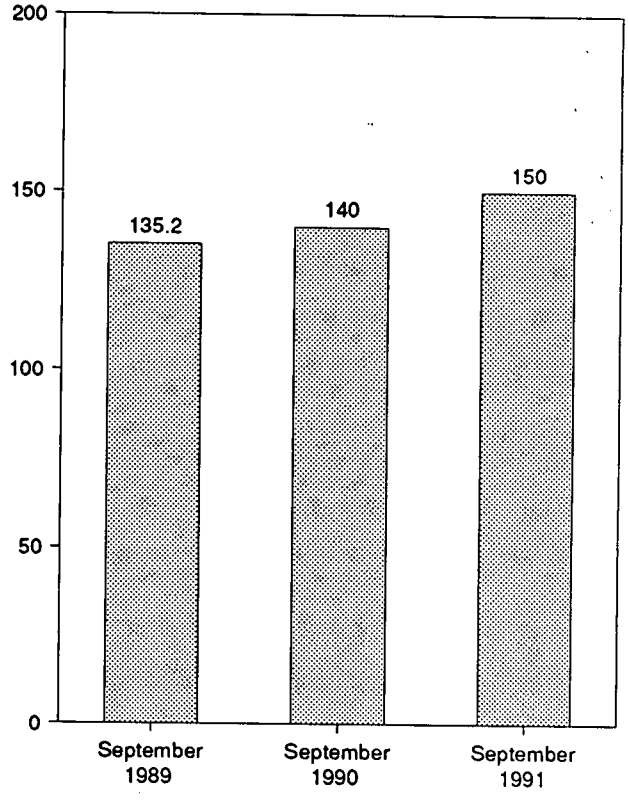
Figure 10.5 Nuclear Electricity Gross Generation

(Billion Kilowatthours)

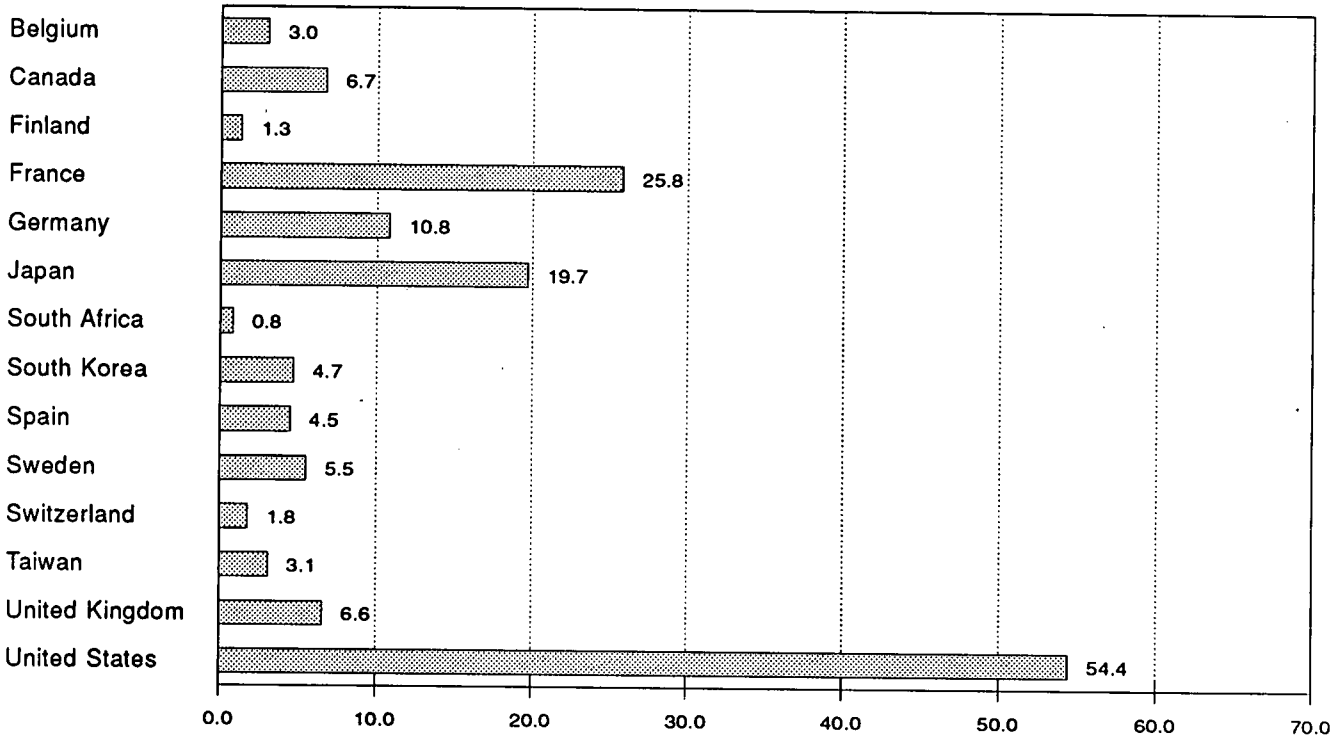
U.S. and Total* Generation, 1973-1990



Total* Generation



Generation by Selected Country, September 1991



*Total equals nuclear-generated electricity from all countries except Bulgaria, China, Cuba, Czechoslovakia, Hungary, North Korea, Poland, Romania, U.S.S.R., and Yugoslavia.

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

Sources: Tables 10.4a-10.4c.

Table 10.4a Nuclear Electricity Gross Generation: Argentina Through India

(Billion Kilowatthours)

	Argentina	Belgium	Brazil	Canada	Finland	France	Germany[a]	India
1973 Total	0.0	0.0	0.0	15.3	0.0	14.7	11.9	2.5
1974 Total	1.0	.1	.0	15.4	.0	14.7	12.0	1.9
1975 Total	2.5	6.8	.0	13.2	.0	18.3	21.7	2.5
1976 Total	2.6	10.0	.0	18.0	.0	15.8	24.5	3.2
1977 Total	1.6	11.9	.0	26.6	2.7	17.9	36.0	2.8
1978 Total	2.9	12.5	.0	33.0	3.3	30.6	35.7	2.3
1979 Total	2.7	11.4	.0	38.4	6.7	39.9	42.2	3.2
1980 Total	2.3	12.5	.0	40.4	7.0	61.2	43.7	2.9
1981 Total	2.6	12.8	.0	43.3	14.5	105.2	53.4	3.1
1982 Total	1.9	15.6	.1	42.6	16.5	108.9	63.4	2.2
1983 Total	3.4	24.1	.2	53.0	17.4	144.2	65.8	2.9
1984 Total	4.5	27.7	2.1	53.8	18.5	191.2	92.6	4.1
1985 Total	5.8	34.5	3.4	62.9	18.8	224.0	125.8	4.5
1986 Total	5.7	38.6	.1	74.6	18.8	254.3	118.9	5.1
1987 Total	5.2	41.9	1.0	80.6	19.4	265.5	130.2	5.5
1988 Total	5.1	43.1	.3	85.6	19.3	274.9	145.2	6.1
1989 January	.5	4.1	.2	8.1	1.8	30.5	13.5	.3
February	.4	3.4	.2	6.9	1.6	27.1	13.5	.3
March	.5	3.6	.2	7.7	1.8	27.8	14.8	.3
April	.4	3.0	.3	7.3	1.7	25.5	13.4	.4
May	.5	3.0	(s)	6.2	1.2	23.2	11.1	.4
June	.5	3.0	.2	5.8	1.6	23.9	9.6	.4
July	.5	3.2	.2	7.1	1.4	23.7	8.7	.3
August	(s)	3.7	.0	6.9	1.5	21.0	11.4	.2
September	.5	3.3	.2	6.6	1.3	22.6	11.4	.3
October	.5	3.6	.0	6.6	1.4	24.6	13.5	.4
November	.5	3.6	.0	6.3	1.7	24.9	14.2	.5
December	.4	3.6	.0	7.6	1.8	27.8	14.4	.4
Total	5.0	41.2	1.6	83.2	18.8	302.5	149.6	4.0
1990 January	.5	3.9	.1	7.3	1.8	28.7	15.4	.4
February	.4	3.5	.2	5.8	1.6	23.5	12.8	.5
March	.7	4.2	.0	6.2	1.7	25.8	13.2	.5
April	.6	3.6	.1	5.8	1.7	26.6	12.8	.5
May	.6	2.9	.2	4.4	1.3	23.9	12.2	.4
June	.7	2.9	.2	5.1	1.3	23.3	9.8	.4
July	.7	3.5	.1	6.6	1.6	23.9	10.0	.5
August	.7	3.7	.3	6.2	1.2	23.3	9.3	.5
September	.5	3.3	.1	5.5	1.4	26.5	9.6	.5
October	.6	3.4	.2	7.1	1.8	27.6	13.0	.5
November	.7	3.6	.3	7.0	1.7	25.8	13.9	.5
December	.7	4.3	.2	7.2	1.8	30.4	15.2	.6
Total	7.4	42.7	2.0	75.8	18.9	316.4	147.2	5.9
1991 January	.6	4.2	.2	7.6	1.8	33.5	15.2	.5
February	.6	3.9	.2	7.4	1.6	30.0	13.6	.4
March	.6	4.2	.2	7.8	1.8	28.4	14.3	.6
April	.7	3.5	.2	6.7	1.4	25.3	12.5	.4
May	.7	3.4	.2	6.7	1.5	25.3	10.6	.4
June	.7	2.9	.2	7.1	1.6	23.6	10.0	.4
July	[E].7	3.5	.2	7.7	1.7	23.9	11.7	.3
August	.7	3.8	.0	8.6	1.4	24.5	10.0	.4
September	[E].7	3.0	.0	6.7	1.3	25.8	10.8	.4
9-Month Total	[E]6.2	32.4	1.4	66.3	14.2	240.3	108.5	3.9
1990 9-Month Total	5.4	31.5	1.4	52.9	13.7	225.6	105.2	4.3
1989 9-Month Total	3.7	30.4	1.6	62.7	13.9	225.3	107.5	2.8

See footnotes at end of Table 10.4c.

Table 10.4b Nuclear Electricity Gross Generation: Italy Through Spain

(Billion Kilowatthours)

	Italy	Japan	Mexico	Netherlands	Pakistan	South Africa	South Korea	Spain
1973 Total	3.1	9.4	0.0	1.1	0.5	0.0	0.0	6.5
1974 Total	3.4	18.9	.0	3.3	.6	.0	.0	7.2
1975 Total	3.8	21.3	.0	3.3	.5	.0	.0	7.5
1976 Total	3.8	36.6	.0	3.9	.5	.0	.0	7.6
1977 Total	3.4	28.2	.0	3.7	.3	.0	.1	6.5
1978 Total	4.5	53.1	.0	4.1	.2	.0	2.3	7.6
1979 Total	2.6	62.0	.0	3.5	(s)	.0	3.2	6.7
1980 Total	2.2	82.8	.0	4.2	.1	.0	3.5	5.2
1981 Total	2.7	86.0	.0	3.7	.2	.0	2.9	9.4
1982 Total	6.8	104.5	.0	3.9	.1	.0	3.8	8.8
1983 Total	5.8	109.1	.0	3.6	.2	.0	9.0	10.7
1984 Total	6.9	127.2	.0	3.8	.3	4.2	11.8	23.1
1985 Total	7.0	152.0	.0	3.9	.3	5.7	16.5	28.0
1986 Total	8.7	164.8	.0	4.2	.5	9.3	26.1	37.5
1987 Total	.2	182.8	.0	3.6	.3	6.6	37.8	41.2
1988 Total	.0	173.6	.0	3.7	.2	11.1	38.7	49.2
1989 January	.0	15.2	.0	.4	.0	1.1	3.4	4.9
February	.0	14.4	.0	(s)	.0	.5	3.7	4.2
March	.0	16.2	.0	.2	.0	.6	4.4	4.2
April	.0	13.3	.0	.4	.0	.7	3.7	4.8
May	.0	13.8	.0	.4	.0	.7	3.8	4.7
June	.0	14.3	.0	.4	.0	1.1	3.4	4.2
July	.0	17.4	.0	.4	.0	1.1	4.0	5.4
August	.0	18.1	.0	.4	.0	1.1	4.9	5.2
September	.0	15.5	.0	.4	.0	1.3	4.1	4.6
October	.0	14.8	.0	.4	(s)	1.3	4.5	4.7
November	.0	14.7	.0	.4	(s)	1.2	3.6	4.6
December	.0	16.0	.0	.4	(s)	1.1	3.6	4.7
Total	.0	183.7	.0	4.0	.1	11.7	47.2	56.1
1990 January	.0	15.0	.0	.3	(s)	.6	4.0	5.4
February	.0	12.0	.0	(s)	(s)	.5	4.6	4.5
March	.0	14.6	.0	(s)	(s)	.5	4.8	4.5
April	.0	15.6	.0	(s)	(s)	.6	4.3	4.8
May	.0	16.6	.0	.4	.1	1.2	4.0	4.1
June	.0	16.0	.0	.3	.1	1.2	4.4	3.5
July	.0	18.5	.0	.4	.1	1.1	5.1	4.4
August	.0	19.2	.4	.4	.1	.8	5.2	5.0
September	.0	15.8	.4	.4	(s)	.6	4.2	4.1
October	.0	15.8	.5	.4	.0	.6	4.4	3.9
November	.0	14.8	.4	.4	(s)	.5	4.0	4.7
December	.0	16.7	.4	.4	(s)	.6	3.8	5.4
Total	.0	191.9	2.1	3.5	.4	8.9	52.9	54.2
1991 January	.0	18.0	.5	.3	(s)	.6	4.1	5.3
February	.0	14.0	.4	.2	(s)	.5	4.5	4.6
March	.0	15.6	.5	.1	(s)	1.1	4.5	4.3
April	.0	13.4	.5	.2	(s)	.7	4.1	4.2
May	.0	12.6	.5	.4	.1	.7	4.1	4.8
June	.0	14.8	.4	.4	(s)	.6	4.8	4.4
July	.0	19.5	.4	.4	(s)	.7	5.5	4.7
August	.0	22.1	.4	.4	(s)	.7	5.2	5.2
September	.0	19.7	.0	.1	(s)	.8	4.7	4.5
9-Month Total	.0	149.7	3.5	2.5	.3	6.3	41.3	41.8
1990 9-Month Total	.0	143.3	.8	2.3	.3	7.2	40.6	40.3
1989 9-Month Total	.0	138.2	.0	2.9	.0	8.2	35.5	42.1

See footnotes at end of Table 10.4c.

Table 10.4c Nuclear Electricity Gross Generation: Sweden Through United States and Total

(Billion Kilowatthours)

	Sweden	Switzerland	Taiwan	United Kingdom[b]	Total[c] Excluding U.S.	United States	Total[c]
1973 Total	**2.1**	**6.2**	**0.0**	**28.2**	**101.4**	**87.8**	**189.3**
1974 Total	**2.3**	**7.0**	**.0**	**33.8**	**121.7**	**124.3**	**246.0**
1975 Total	**12.0**	**7.7**	**.0**	**30.5**	**151.8**	**182.3**	**334.1**
1976 Total	**16.0**	**7.9**	**.0**	**36.8**	**187.1**	**201.8**	**388.9**
1977 Total	**19.9**	**8.1**	**.1**	**38.1**	**207.8**	**264.2**	**472.0**
1978 Total	**23.8**	**8.3**	**2.7**	**36.6**	**263.5**	**292.4**	**555.9**
1979 Total	**21.0**	**11.8**	**6.3**	**38.5**	**300.1**	**270.6**	**570.7**
1980 Total	**26.7**	**14.3**	**8.2**	**37.2**	**354.3**	**265.4**	**619.8**
1981 Total	**37.7**	**15.2**	**10.7**	**38.9**	**442.4**	**288.5**	**730.9**
1982 Total	**38.8**	**15.0**	**13.1**	**44.1**	**489.9**	**298.6**	**788.5**
1983 Total	**40.4**	**15.5**	**18.9**	**49.6**	**573.9**	**313.6**	**887.5**
1984 Total	**51.3**	**16.3**	**24.3**	**54.1**	**717.7**	**343.8**	**1,061.5**
1985 Total	**58.6**	**22.4**	**28.7**	**59.6**	**862.4**	**402.6**	**1,265.0**
1986 Total	**69.9**	**22.5**	**26.9**	**58.2**	**944.8**	**432.9**	**1,377.8**
1987 Total	**67.2**	**23.0**	**33.1**	**56.2**	**1,001.2**	**479.5**	**1,480.7**
1988 Total	**69.4**	**22.7**	**29.9**	**59.4**	**1,037.5**	**554.1**	**1,591.6**
1989 January	7.2	2.3	2.4	6.8	102.7	48.7	151.4
February	6.5	2.1	1.8	6.3	92.9	40.8	133.7
March	6.7	2.3	1.7	6.7	99.8	41.8	141.6
April	5.6	2.2	2.2	5.9	90.9	35.3	126.2
May	3.9	2.0	2.1	5.7	82.7	40.8	123.5
June	3.3	1.2	2.0	6.7	81.6	45.1	126.7
July	2.6	1.1	2.7	4.8	84.4	55.2	139.7
August	3.3	1.0	2.9	4.8	86.4	57.6	144.0
September	5.0	1.9	2.5	6.6	88.2	47.0	135.2
October	6.8	2.3	2.7	5.2	93.2	45.7	138.8
November	7.0	2.2	2.6	5.3	93.2	45.6	138.8
December	7.5	2.3	2.8	6.9	101.3	53.3	154.6
Total	**65.6**	**22.8**	**28.3**	**71.6**	**1,097.1**	**557.0**	**1,654.1**
1990 January	7.4	2.3	2.6	6.0	101.7	57.7	159.4
February	6.6	2.1	2.1	5.8	86.6	52.3	138.8
March	6.4	2.3	2.6	6.2	94.2	48.4	142.6
April	5.4	2.2	2.2	5.2	92.1	40.6	132.7
May	4.8	2.1	2.8	5.2	87.2	45.1	132.3
June	4.3	1.3	2.9	5.2	82.9	48.5	131.4
July	2.7	1.7	3.5	4.3	88.9	54.7	143.6
August	4.2	1.0	3.4	4.9	89.7	57.9	147.6
September	5.2	1.9	3.0	5.9	88.9	51.1	140.0
October	6.7	2.3	3.0	4.8	96.4	45.6	142.0
November	7.0	2.2	2.3	6.4	96.3	47.4	143.7
December	7.4	2.3	2.4	6.9	106.8	54.2	161.0
Total	**68.2**	**23.6**	**32.9**	**66.6**	**1,121.5**	**603.4**	**1,724.9**
1991 January	7.6	2.3	2.4	6.4	111.1	56.6	167.7
February	6.9	2.1	2.2	6.7	99.8	50.2	150.0
March	7.6	2.3	2.9	6.7	103.3	51.6	154.9
April	6.9	2.2	2.5	5.0	90.3	43.8	134.1
May	5.7	2.0	2.8	4.5	86.8	49.2	136.0
June	4.7	1.1	3.2	6.1	87.0	56.9	143.9
July	4.6	1.5	3.2	5.1	E95.4	63.7	E159.2
August	5.2	1.0	3.6	5.4	98.6	61.4	160.0
September	5.5	1.8	3.1	6.6	E95.5	54.4	E150.0
9-Month Total	**54.6**	**16.1**	**26.0**	**52.5**	**E867.9**	**487.8**	**E1,355.8**
1990 9-Month Total	**47.0**	**16.8**	**25.1**	**48.5**	**812.2**	**456.2**	**1,268.4**
1989 9-Month Total	**44.2**	**15.9**	**20.2**	**54.2**	**809.5**	**412.5**	**1,221.9**

[a] 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.

[b] Monthly data for the United Kingdom are totals for 4- or 5-week reporting periods, not calendar months.

[c] Total equals nuclear-generated electricity from all countries except Bulgaria, China, Cuba, Czechoslovakia, Hungary, North Korea, Poland, Romania, U.S.S.R., and Yugoslavia.

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. • U.S. geographic coverage is the 50 States and the District of Columbia. • Monthly data may not sum to annual totals due to independent rounding, and precommercial generation is included in the annual totals but not in the monthly data. • Data for countries may not sum to world totals due to independent rounding.

Source: McGraw-Hill Publishing Company, *Nucleonics Week.*

Appendix. Conversion Factors

Using Conversion Factors

Physical conversion factors can be used to compare energy quantities expressed in units of volume and weight. For example, 6.65 barrels of crude oil weighs approximately 1 short ton, as indicated in Table A1.

However, the heat content of a "short ton" of crude oil is greater than the heat content of a short ton of coal. The heat content, measured in British thermal units (Btu), of a given quantity of energy can be calculated by using the thermal conversion factors presented in Tables A2 through A9.

Based on the thermal conversion factor shown for crude oil (production) in Table A3, a short ton of crude oil has a heat content of approximately 39 million Btu (6.65 barrels times 5.8 million Btu per barrel equals 38.57 million Btu). As calculated from the thermal conversion factor for coal (production) in Table A6, a short ton of coal in 1988 had a heat content of 22 million Btu (1 short ton times 21.823 million Btu per short ton equals 21.823 million Btu). In 1988, therefore, a short ton of crude oil had a heat content almost two times greater than a short ton of coal.

Thermal conversion factors for hydrocarbon mixes (Table A2) 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.

The thermal conversion factors in Tables A2 through A9 are computed from final annual data wherever possible. When the current year's final data are not yet available for publication, thermal conversion factors for the current year are computed from the best available data and are noted as "preliminary." Sources are described in the section entitled "Thermal Conversion Factor Source Documentation," which follows Table A9 in this appendix.

Table A1. Physical Conversion Factors for Energy Units

Unit	Equivalent	
Crude Oil (Average Gravity)		
1 U.S. barrel	42	U.S.gallons
1 short ton	6.65	barrels
1 metric ton	7.33	barrels
Coal		
1 short ton	2,000	pounds
1 long ton	2,240	pounds
1 metric ton	2,204.62	pounds
1 metric ton	1,000	kilograms
Uranium		
1 short ton U_3O_8	0.769	metric ton of uranium
1 short ton UF_6	0.613	metric ton of uranium
1 metric ton UF_6	0.676	metric ton of uranium
Wood (Average Dry Hardwood)		
1 cord	1.25	short tons
1 cord	128	cubic feet
1 cubic foot	0.028	cubic meters

Table A2. Approximate Heat Content of Petroleum Products

(Million Btu per Barrel)

Petroleum Product	Heat Content	Petroleum Product	Heat Content
Asphalt	6.636	Petrochemical Feedstocks	
Aviation Gasoline	5.048	Naphtha Less Than 401 °F	5.248
Butane	4.326	Other Oils Equal to or Greater Than 401 °F	5.825
Butane-Propane Mixture[a]	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[b]	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

[a] 60 percent butane and 40 percent propane.
[b] 70 percent ethane and 30 percent propane.
Source: See "Thermal Conversion Factor Source Documentation," which follows Table A9.

Table A3. Approximate Heat Content of Crude Oil, Crude Oil and Products, and Natural Gas Plant Liquids

(Million Btu per Barrel)

	Crude Oil			Crude Oil and Products		Natural Gas Plant Liquids
	Production	Imports	Exports	Imports	Exports	
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[a]	5.800	5.938	5.800	5.852	5.833	3.821
1991[a]	5.800	5.938	5.800	5.852	5.833	3.821

[a] Preliminary.
Note: Crude oil includes lease condensate.
Source: See "Thermal Conversion Factor Source Documentation," which follows Table A9.

Table A4. Approximate Heat Content of Petroleum Product Weighted Averages

(Million Btu per Barrel)

	Consumption							
	Residential and Commercial	Industrial	Transportation	Electric Utilities	Total	Imports	Exports	LPG Consumption
1973	5.387	5.568	5.395	6.245	5.515	5.983	5.752	3.746
1974	5.377	5.538	5.394	6.238	5.504	5.959	5.773	3.730
1975	5.358	5.528	5.392	6.250	5.494	5.935	5.747	3.715
1976	5.383	5.538	5.395	6.251	5.504	5.980	5.743	3.711
1977	5.389	5.555	5.400	6.249	5.518	5.908	5.796	3.677
1978	5.382	5.553	5.404	6.251	5.519	5.955	5.814	3.669
1979	5.471	5.418	5.428	6.258	5.494	5.811	5.864	3.680
1980	5.468	5.376	5.440	6.254	5.479	5.748	5.841	3.674
1981	5.409	5.313	5.432	6.258	5.448	5.659	5.837	3.643
1982	5.392	5.263	5.422	6.258	5.415	5.664	5.829	3.615
1983	5.286	5.273	5.415	6.255	5.406	5.677	5.800	3.614
1984	5.261	5.253	5.424	6.251	5.395	5.613	5.867	3.599
1985	5.203	5.258	5.424	6.247	5.387	5.572	5.819	3.603
1986	5.238	5.330	5.425	6.257	5.418	5.624	5.839	3.640
1987	5.245	5.285	5.427	6.249	5.403	5.599	5.860	3.659
1988	5.216	5.293	5.430	6.250	5.410	5.618	5.842	3.652
1989	5.151	5.287	5.434	6.241	5.410	5.641	5.869	3.683
1990[a]	5.142	5.321	5.437	6.247	5.411	5.614	5.838	3.625
1991[a]	5.142	5.321	5.437	6.247	5.411	5.614	5.838	3.625

[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 A9.

Table A5. Approximate Heat Content of Natural Gas

(Btu per Cubic Foot)

	Production		Consumption				
	Dry	Marketed (Wet)	Non-Electric Utility Users	Electric Utilities	Total	Imports	Exports
1973	1,021	1,093	1,020	1,024	1,021	1,026	1,023
1974	1,024	1,097	1,024	1,022	1,024	1,027	1,016
1975	1,021	1,095	1,020	1,026	1,021	1,026	1,014
1976	1,020	1,093	1,019	1,023	1,020	1,025	1,013
1977	1,021	1,093	1,019	1,029	1,021	1,026	1,013
1978	1,019	1,088	1,016	1,034	1,019	1,030	1,013
1979	1,021	1,092	1,018	1,035	1,021	1,037	1,013
1980	1,026	1,098	1,024	1,035	1,026	1,022	1,013
1981	1,027	1,103	1,025	1,035	1,027	1,014	1,011
1982	1,028	1,107	1,026	1,036	1,028	1,018	1,011
1983	1,031	1,115	1,031	1,030	1,031	1,024	1,010
1984	1,031	1,109	1,030	1,035	1,031	1,005	1,010
1985	1,032	1,112	1,031	1,038	1,032	1,002	1,011
1986	1,030	1,110	1,029	1,034	1,030	997	1,008
1987	1,031	1,112	1,031	1,032	1,031	999	1,011
1988	1,029	1,109	1,029	1,028	1,029	1,002	1,018
1989	1,031	1,107	1,031	1,030	1,031	1,004	1,019
1990	1,031	1,106	1,030	1,034	1,031	1,012	1,018
1991[a]	1,031	1,106	1,030	1,034	1,031	1,012	1,018

[a] Preliminary.
Source: See "Thermal Conversion Factor Source Documentation," which follows Table A9.

Table A6. Approximate Heat Content of Coal
(Million Btu per Short Ton)

	Production	Consumption					Imports	Exports
		Residential and Commercial	Coke Plants	Other Industrial[a]	Electric Utilities[b]	Total		
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	22.261	26.782	22.436	21.642	22.506	25.000	26.562
1976	22.855	22.774	26.781	22.530	21.679	22.498	25.000	26.601
1977	22.597	22.919	26.787	22.322	21.508	22.265	25.000	26.548
1978	22.248	22.466	26.789	22.207	21.275	22.017	25.000	26.478
1979	22.454	22.242	26.788	22.452	21.364	22.100	25.000	26.548
1980	22.415	22.543	26.790	22.690	21.295	21.947	25.000	26.384
1981	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	26.798	22.691	21.133	21.576	25.000	26.291
1984	22.010	22.844	26.799	22.543	21.101	21.573	25.000	26.402
1985	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	21.827	23.137	26.799	22.457	20.929	21.331	25.000	26.202
1991[c]	21.827	23.137	26.799	22.457	20.929	21.331	25.000	26.202

[a] Includes transportation.
[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 represent coal consumption.
[c] Preliminary.
Source: See "Thermal Conversion Factor Source Documentation," which follows Table A9.

Table A7. Approximate Heat Content of Bituminous Coal and Lignite
(Million Btu per Short Ton)

	Production	Consumption					Imports	Exports
		Residential and Commercial	Coke Plants	Other Industrial[a]	Electric Utilities	Total		
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	22.436	21.372	22.100	25.000	26.570
1980	22.411	22.488	26.800	22.690	21.301	21.950	25.000	26.404
1981	22.301	22.010	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	22.005	22.406	26.800	22.525	21.108	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[b]	21.819	22.678	26.800	22.444	20.935	21.330	25.000	26.207

[a] Includes transportation.
[b] Preliminary.
Source: See "Thermal Conversion Factor Source Documentation," which follows Table A9.

Table A8. Approximate Heat Content of Anthracite and Coal Coke

(Million Btu per Short Ton)

	Anthracite					Coal Coke Imports and Exports
		Consumption			Imports and Exports	
	Production	Non-Electric Utility Users	Electric Utilities	Total		
1973	22.132	22.674	17.920	21.464	25.400	24.800
1974	21.711	22.330	17.200	20.919	25.400	24.800
1975	21.582	22.272	17.064	20.762	25.400	24.800
1976	22.045	22.618	17.526	21.254	25.400	24.800
1977	22.661	24.101	17.244	22.066	25.400	24.800
1978	23.079	24.388	17.104	22.398	25.400	24.800
1979	23.170	24.272	17.454	22.069	25.400	24.800
1980	22.869	22.719	17.652	21.405	25.400	24.800
1981	23.291	23.749	18.168	22.080	25.400	24.800
1982	23.289	24.578	18.160	22.518	25.400	24.800
1983	22.734	24.536	16.516	21.583	25.400	24.800
1984	23.107	25.128	17.018	22.322	25.400	24.800
1985	22.428	23.031	16.784	20.817	25.400	24.800
1986	23.084	24.399	15.578	21.512	25.400	24.800
1987	23.108	26.293	15.962	22.435	25.400	24.800
1988	23.266	26.021	17.312	22.423	25.400	24.800
1989	23.385	27.196	16.310	22.623	25.400	24.800
1990	22.574	25.199	16.140	21.668	25.400	24.800
1991[a]	22.574	25.199	16.140	21.668	25.400	24.800

[a] Preliminary.
Source: See "Thermal Conversion Factor Source Documentation," which follows Table A9.

Table A9. Approximate Heat Rates for Electricity

(Btu per Kilowatthour)

	By Type of Generation			Electricity Consumption
	Fossil Fuel Steam-Electric Power Plant Generation[a]	Nuclear Power Plant Generation	Geothermal Energy Power Plant Generation	
1973	10,389	10,903	21,674	3,412
1974	10,442	11,161	21,674	3,412
1975	10,406	11,013	21,611	3,412
1976	10,373	11,047	21,611	3,412
1977	10,435	10,769	21,611	3,412
1978	10,361	10,941	21,611	3,412
1979	10,353	10,879	21,545	3,412
1980	10,388	10,908	21,639	3,412
1981	10,453	11,030	21,639	3,412
1982	10,454	11,073	21,629	3,412
1983	10,520	10,905	21,290	3,412
1984	10,323	10,843	21,303	3,412
1985	10,339	10,813	21,263	3,412
1986	10,261	10,799	21,263	3,412
1987	10,253	10,776	21,263	3,412
1988	10,235	10,743	21,096	3,412
1989	10,331	10,724	21,096	3,412
1990[b]	10,331	10,724	21,096	3,412
1991[b]	10,331	10,724	21,096	3,412

[a] This thermal conversion factor is used for hydroelectric power generation and for wood and waste, wind, photovoltaic, and solar thermal energy consumed at electric utilities.
[b] Preliminary.
Source: See "Thermal Conversion Factor Source Documentation," which follows this table.

Thermal Conversion Factor Source Documentation

Approximate Heat Content of Petroleum Products

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 as published for "Gasoline, Aviation" 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 as published in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

Butane-Propane Mixture. EIA adopted the Bureau of Mines calculation of 4.130 million Btu per barrel based on an assumed mixture of 60 percent butane and 40 percent propane. See "Butane" and "Propane."

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 as published 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 as published in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

Jet Fuel, Kerosene Type. EIA adopted the Bureau of Mines thermal conversion factor of 5.670 million Btu per barrel as published for "Jet Fuel, Commercial" 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 as published for "Jet Fuel, Military" 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.*

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 as published 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 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 naphtha. See "Special Naphtha."

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 the 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.

Plant Condensate. Estimated to be 5.418 million Btu per barrel by EIA from data provided by McClanahan Consultants, Inc., Houston, Texas.

Propane. EIA adopted the Bureau of Mines thermal conversion factor of 3.836 million Btu per barrel as published in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

Residual Fuel Oil. EIA adopted the thermal conversion factor of 6.287 million Btu per barrel as reported in the Bureau of Mines internal memorandum *Bureau of Mines Standard Average Heating Values of Various Fuels, adopted January 3, 1950.*

Road Oil. EIA adopted the Bureau of Mines thermal conversion factor of 6.636 million Btu per barrel, which was assumed to be equal to that of asphalt (see "Asphalt") and was first published by the Bureau of Mines in the *Petroleum Statement, Annual, 1970.*

Special Naphtha. 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 Fuels

Petroleum

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 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."

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.

Petroleum Products, 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. 1973-1989: 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*. 1990 forward: EIA, Integrated Modeling Data System output for the *Monthly Energy Review* (March 1991).

Petroleum Products, Consumption by Industrial Users. 1973-1989: 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*. 1990 forward: EIA, Integrated Modeling Data System output for the *Monthly Energy Review* (March 1991).

Petroleum Products, Consumption by Residential and Commercial Users. 1973-1989: 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*. 1990 forward: EIA, Integrated Modeling Data System output for the *Monthly Energy Review* (March 1991).

Petroleum Products, Consumption by Transportation Users. 1973-1989: 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*. 1990 forward: EIA, Integrated Modeling Data System output for the *Monthly Energy Review* (March 1991).

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.

Petroleum Products, 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.

Natural Gas

Natural Gas, 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: 1980-1984: EIA *Natural Gas Annual 1988, Volume II*, Table 15. 1985-1989: EIA, *Natural Gas Annual 1989*, Table B1. 1990 forward: Estimated to be the same as in 1989.

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 Non-Electric Utility Users. Calculated annually by EIA by dividing the heat content of natural gas consumed by non-electric utility consumers by the quantity of non-electric utility natural gas consumed. 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, 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.

Coal and Coal Coke

Anthracite, Consumption. Calculated annually by EIA by dividing the sum of the heat content of anthracite consumed by electric utilities and

non-electric utilities 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 Non-Electric Utility Users. 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 non-electric utility anthracite consumption 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, 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 Non-Electric Utility Users. Calculated annually by EIA by dividing the sum of the heat content of bituminous coal and lignite and anthracite consumed by non-electric utility users 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 Fuel Steam-Electric Power 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. EIA has selected a rate 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. 1973-1989: 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 1989*, Table 11. 1990 forward: Estimated to be the same as in 1989.

Geothermal Energy Power Plant Generation. 1973-1981: Calculated annually by EIA by weighting the average annual 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 Power Plant Generation. Calculated annually by EIA by dividing the total heat content consumed in reactors at nuclear plants by the total (net) electricity generated by nuclear plants. 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. 1983-1989: *Electric Plant Cost and Power Production Expenses 1989*, Table 15. 1990 forward: Estimated to be the same as in 1989.

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). Excluded are 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.

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_4H_8) recovered from refinery processes.

Capacity Factor: The ratio of the electrical energy produced by a generating unit for the period of time considered 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. SIC codes used to classify an establishment as commercial are 50 through 87, 89, and 91 through 97.

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. 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° F.

Degree-Day Normals: Simple arithmetic averages of monthly or annual degree-days over a long period of time (usually the 30-year period 1951-1980). 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 degrees Fahrenheit. 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 degrees Fahrenheit. 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 comprised of 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 Utilities: All privately owned companies and all publicly owned agencies engaged in the generation, transmission, or distribution of electric power for public use. Publicly owned agencies include municipal electric utilities; Federal power projects, such as the Tennessee Valley Authority (TVA); rural electrification cooperatives; power districts; and State power projects.

Electric Utility: A corporation, person, agency, authority, or other legal entity or instrumentality that owns and/or operates facilities within the United States, its territories, or Puerto Rico for the generation, transmission, distribution, or sale of electric energy, primarily for use by the public. An entity that solely operates qualifying facilities under the Public Utility Regulatory Policies Act of 1978 is not considered an electric utility.

Electric Utility Sector: Privately and publicly owned establishments that generate electricity primarily for use by the public.

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_2H_4) 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.

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.

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 that is supplied to steam turbines at electric utilities that drive generators to produce electricity.

Gross National Product (GNP): The total value of goods and services produced by the Nation's economy, before deduction of depreciation charges and other allowances for capital consumption. It includes the total purchases of goods and services by private consumers and government, gross private domestic capital investment, and net foreign trade.

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 useable 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 the sector range from steel mills, to small farms, to companies assembling electronic components. The SIC codes used to classify establishments as industrial are 1 through 39.

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. Lubricants categories are paraffinic and naphthenic.

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, and reformate). 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. The Reid Vapor Pressure ranges from 9 to 15 pounds per square inch. Motor gasoline includes finished leaded gasoline, finished unleaded gasoline, and 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 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.

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 Associations 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.**

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, 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 West 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, Ecuador, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.

Pentanes Plus: A mixture of hydrocarbons, mostly pentanes and heavier, extracted from natural gas. Includes isopentane, natural gasoline, and plant condensate.

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.

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_3H_6) 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.

Reservoir 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. The SIC code used to classify an establishment as residential is 88 (Household).

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.

Subbituminous Coal: A dull, black coal of rank intermediate between lignite and bituminous coal. It conforms to ASTM Specification D388-84 for subbituminous coal.

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: 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. The SIC codes used to classify establishments as belonging to the transportation sector are 40 through 49.

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 phase 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.

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.

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.

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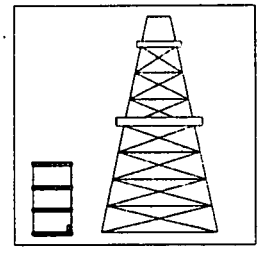

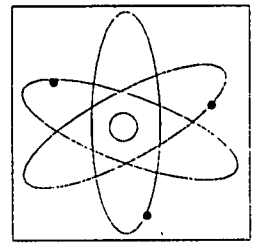

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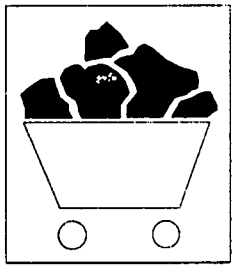

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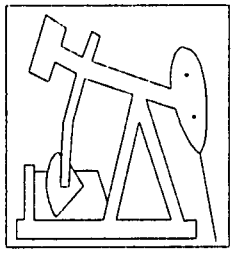

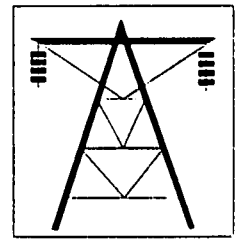

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The ***Historical Monthly Energy Review*** (DOE/EIA-0035(73-88)) presents monthly data from January 1973 through December 1988 for most of the series that are published for current months only in the *Monthly Energy Review.*

The ***Annual Energy Review*** (DOE/EIA-0384) presents long-term historical annual energy data. Most series begin in 1949. U.S. energy consumption, production, trade, and prices are included. Major sections of the report are energy overview, consumption indicators, financial indicators, energy resources, petroleum, natural gas, coal, electricity, nuclear energy, renewable energy, and international energy.

The ***State Energy Data Report*** (DOE/EIA-0214) presents estimates of annual energy consumption at the State and national levels by major sector (i.e., residential, commercial, industrial, transportation, and electric utilities) and by principal energy type for 1960 forward. The report includes documentation of the consumption estimates for each source of energy, the sources of all data, and a summary of changes made to historical data in the report since its previous release.

The ***State Energy Price and Expenditure Report*** (DOE/EIA-0376) presents annual energy price and expenditure estimates at the State and national levels for selected years. The base year is 1970. The estimates are presented by energy source (e.g., petroleum, natural gas, coal, and electricity) and by major sector (i.e., residential, commercial, industrial, transportation, and electric utilities). The report includes documentation of the price estimates for each source of energy, the sources of all data, and a summary of any changes made to historical data in the report since its previous release.

The ***International Energy Annual*** (DOE/EIA-0219) presents annual data for production, consumption, imports, and exports of primary energy commodities in more than 190 countries, dependencies, and areas of special sovereignty. Also included are prices of crude oil and petroleum products in selected countries. The data presented are derived largely from national publications, international organizations, and other authoritative sources. The data are converted to units of measurement and thermal values familiar to the American public.

The ***International Petroleum Statistics Report*** (DOE/EIA-0520) presents current monthly international petroleum data on production, consumption, imports, and stocks. Included are oil consumption and stocks for specific countries in the Organization for Economic Cooperation and Development (OECD). Also provided are the oil supply/consumption balances for the world in quarterly intervals and oil imports by OECD countries.

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