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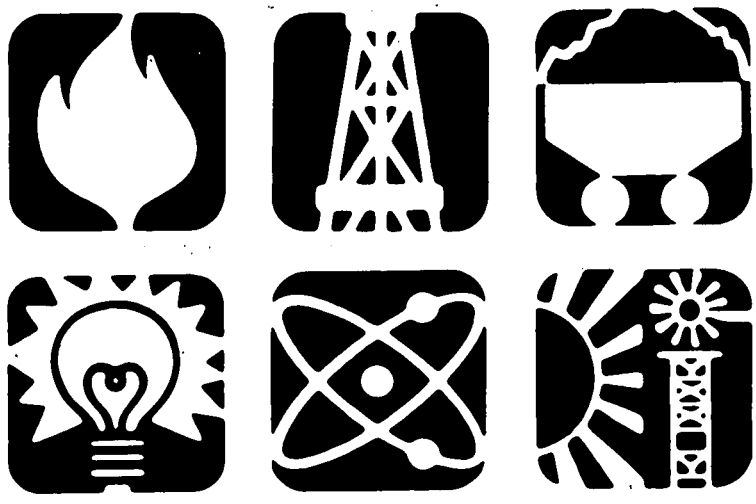
Energy Information Administration

Monthly Energy Review

February 1988



Monthly Energy Review

The *Monthly Energy Review* presents current data on production, consumption, stocks, imports, exports, and prices of the principal energy commodities in the United States. Also included are data on international production of crude oil, consumption of petroleum products, petroleum stocks, and production of electricity from nuclear-powered facilities.

Publication of this report is in keeping with responsibilities given the Energy Information Administration in Public Law 95-91 (Section 205(a)(2)) that states:

> *The Administrator shall be responsible for carrying out a central, comprehensive, and unified energy data and information program which will collect, evaluate, assemble, analyze and disseminate data and information . .*

The *Monthly Energy Review* is intended to provide timely energy information to Members of Congress, to Federal and State agencies, and to the general public.

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Monthly Energy Review

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

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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.

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.

U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, 1981 Annual Report	September 1982
Energy Company Development Patterns in the Postembargo Era, Volume One	November 1982
Residential Energy Consumption Survey: Consumption and Expenditures	January 1983
Residential Energy Consumption Survey: Housing Characteristics	February 1983
Energy Price and Expenditure Data Report, 1970-1980	July 1983
Railroad Deregulation: Impact on Coal	August 1983
Port Deepening and User Fees: Impact on U.S. Coal Exports	August 1983
U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, 1982 Annual Report	September 1983
Annual Energy Review 1983	February 1984
State Energy Data Report, Consumption Estimates, 1960-1982	March 1984
Annual Energy Outlook 1983	March 1984
State Energy Price and Expenditure Report, 1970-1981	May 1984
Solar Collector Manufacturing Activity 1983	June 1984
Estimates of U.S. Wood Energy Consumption, 1980-1983	September 1984
International Energy Annual 1983	September 1984
Energy Conservation Indicators 1983 Annual Report	November 1984
Annual Energy Outlook 1984	December 1984
Annual Energy Review 1984	January 1985
Performance Profiles of Major Energy Producers 1983	February 1985
State Energy Price and Expenditure Report 1970-1982	March 1985
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Performance Profiles of Major Energy Producers 1984	December 1985
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Consumption and Expenditures, April 1984 Through March 1985, Part 1: National Data	April 1987
Consumption and Expenditures, April 1984 Through March 1985, Part 2: Regional Data	May 1987
Uranium Industry Annual 1986	September 1987
Potential Oil Production from the Coastal Plain of the Arctic National Wildlife Refuge (Revised Edition)	October 1987
Profiles of Foreign Direct Investment in U.S. Energy 1986	November 1987

Section 1. Energy Summary

The United States produced 1.3 percent more energy during the first 2 months of 1988 than during the same period in 1987, and U.S. consumption was up 4.4 percent. Net imports of all energy were 23.0 percent higher, with net imports of petroleum up 18.4 percent, compared with levels during the first 2 months of 1987.

Energy production during February 1988 totaled 5.4 quadrillion Btu, a 6.0-percent increase compared with the level of production during February 1987. Coal production was up 9.2 percent, natural gas production increased 4.7 percent, and petroleum production rose 4.0 percent. All other forms of energy production combined were up 6.1 percent from the level of production during February 1987.

Energy consumption during February 1988 totaled 7.0 quadrillion Btu, 8.3 percent above the level of consumption during February 1987. Coal consumption increased 12.5 percent, petroleum consumption rose 8.9 percent, and natural gas consumption was up 6.2 percent. Consumption of all other forms of energy combined increased 3.0 percent compared with the level 1 year earlier.

Net imports of energy during February 1988 totaled 1.1 quadrillion Btu, 33.6 percent above the level of net imports 1 year earlier. Net imports of natural gas increased 46.1 percent, while net imports of petroleum increased 30.7 percent. Net exports of coal decreased 5.1 percent compared with the level in February 1987.

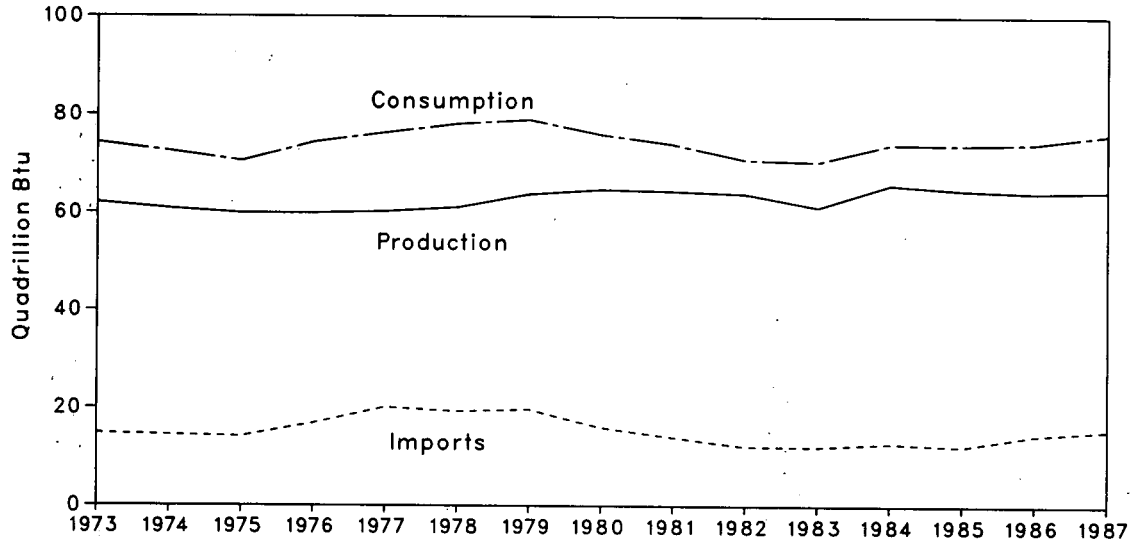
Table 1.1 Energy Summary for February 1988
(Quadrillion (10^{15}) Btu)

	February			Cumulative January Through February				
	1988	1987	Percent Change[a]	1988	1988 Daily Rate	1987	1987 Daily Rate	Percent Change[a]
Total Production[b]	**5.425**	**5.117**	**6.0**	**11.055**	**0.184**	**10.726**	**0.182**	**1.3**
Petroleum[c]	1.585	1.524	4.0	3.252	.054	3.236	.055	-1.2
Natural Gas (Dry)	1.452	1.387	4.7	3.030	.051	2.932	.050	1.6
Coal	1.713	1.569	9.2	3.363	.056	3.205	.054	3.2
Other[d]	.675	.636	6.1	1.410	.024	1.353	.023	2.4
Total Consumption[b]	**6.973**	**6.441**	**8.3**	**14.397**	**.240**	**13.556**	**.230**	**4.4**
Petroleum[e]	2.753	2.528	8.9	5.636	.094	5.270	.089	5.2
Natural Gas[f]	1.989	1.873	6.2	4.076	.068	3.930	.067	2.0
Coal	1.528	1.358	12.5	3.215	.054	2.923	.050	8.2
Other[g]	.703	.682	3.0	1.470	.025	1.434	.024	.8
Net Imports	**1.054**	**.789**	**33.6**	**2.180**	**.036**	**1.742**	**.030**	**23.0**
Petroleum[h]	1.029	.787	30.7	2.108	.035	1.751	.030	18.4
Natural Gas	.111	.076	46.1	.238	.004	.171	.003	36.7
Coal[i]	-.114	-.120	-5.1	-.227	-.004	-.261	-.004	-14.5
Other[j]	.028	.046	-38.8	.060	.001	.080	.001	-26.5

[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 petroleum products.
[f]Includes supplemental gaseous fuels.
[g]Other is hydroelectric and nuclear electric power; electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy; and net imports of electricity and coal coke.
[h]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]Minus sign indicates exports are greater than imports.
[j]Other is net imports of electricity and coal coke.
Note: Totals may not equal sum of components due to independent rounding.
Sources: Energy Information Administration (EIA), *Monthly Energy Review* Section 1 and EIA calculations.

Figure 1.1 Energy Overview

Yearly



Monthly

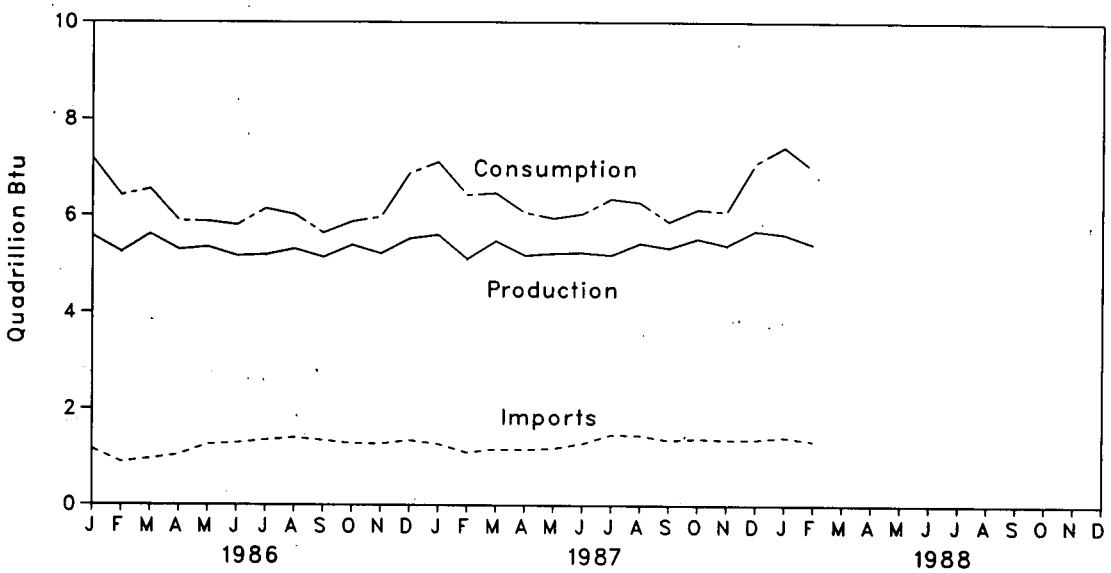


Table 1.2 Energy Overview[a]
(Quadrillion (10^{15}) Btu)

	Production[b]	Consumption[b] [c]	Imports	Exports	Net Imports
1973 Total	**62.059**	**74.282**	**14.731**	**2.051**	**12.680**
1974 Total	**60.836**	**72.543**	**14.413**	**2.223**	**12.190**
1975 Total	**59.860**	**70.545**	**14.111**	**2.359**	**11.752**
1976 Total	**59.891**	**74.362**	**16.837**	**2.188**	**14.648**
1977 Total	**60.218**	**76.289**	**20.090**	**2.071**	**18.019**
1978 Total	**61.103**	**78.089**	**19.254**	**1.931**	**17.323**
1979 Total	**63.801**	**78.897**	**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	**63.889**	**70.837**	**12.091**	**4.632**	**7.459**
1983 Total	**61.190**	**70.497**	**12.025**	**3.716**	**8.309**
1984 Total	**65.810**	**74.060**	**12.758**	**3.804**	**8.954**
1985 Total	**64.764**	**73.944**	**12.098**	**4.232**	**7.866**
1986 January	5.775	7.175	1.145	.320	.825
February	5.247	6.417	.875	.291	.584
March	5.612	6.546	.943	.313	.630
April	5.296	5.888	1.028	.380	.648
May	5.350	5.877	1.242	.365	.877
June	5.167	5.803	1.275	.315	.960
July	5.192	6.146	1.336	.338	.998
August	5.312	6.024	1.389	.374	1.015
September	5.142	5.642	1.333	.347	.986
October	5.396	5.878	1.268	.352	.916
November	5.222	5.978	1.261	.331	.929
December	5.533	6.887	1.336	.329	1.008
Total	**64.246**	**74.260**	**14.432**	**4.055**	**10.378**
1987 January	5.610	7.115	1.258	.305	.953
February	5.117	6.441	1.082	.293	.789
March	5.487	6.480	1.149	.312	.837
April	5.192	6.080	1.139	.324	.815
May	5.234	5.958	1.168	.303	.865
June	5.251	6.053	1.270	.320	.950
July	5.203	6.386	1.458	.309	1.149
August	5.446	6.293	1.449	.335	1.115
September	5.350	5.889	1.344	.326	1.018
October	5.541	6.149	1.380	.302	1.078
November	5.407	6.102	1.354	.331	1.023
December	5.702	7.097	1.363	.419	.945
Total	**64.539**	**76.042**	**15.414**	**3.879**	**11.535**
1988 January	[R] 5.630	7.424	1.413	.288	1.125
February	5.425	6.973	1.330	.275	1.054
2-Month Total	**11.055**	**14.397**	**2.743**	**.563**	**2.180**
1987 2-Month Total	**10.726**	**13.556**	**2.341**	**.599**	**1.742**
1986 2-Month Total	**11.022**	**13.592**	**2.020**	**.611**	**1.409**

[a]For definitions, see Notes at end of section.

[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]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.

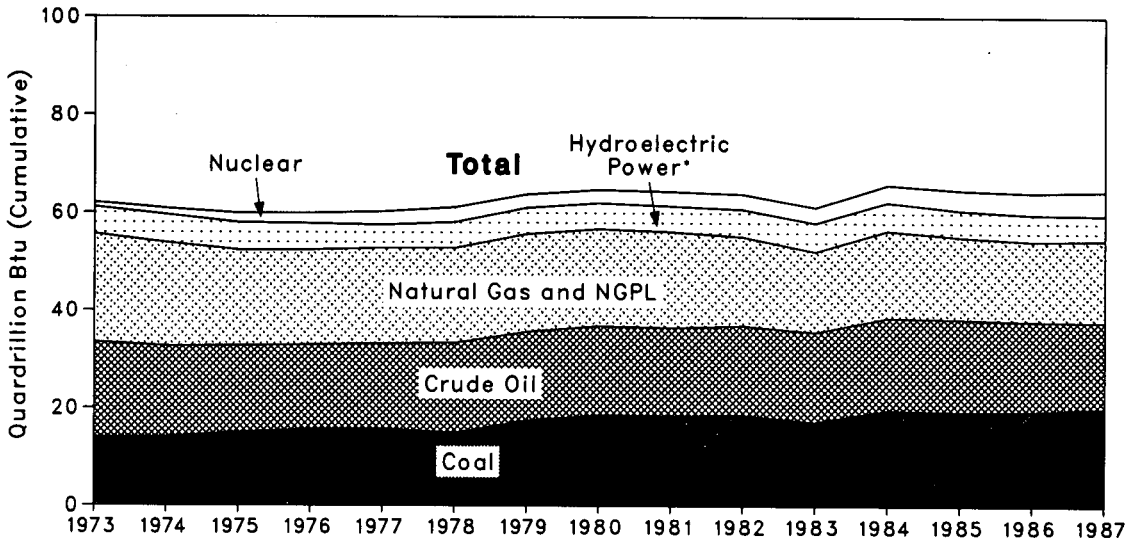
R=Revised data.

Notes: • 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 calculations based on data appearing elsewhere in this publication.

Figure 1.2 Production of Energy by Source

Yearly



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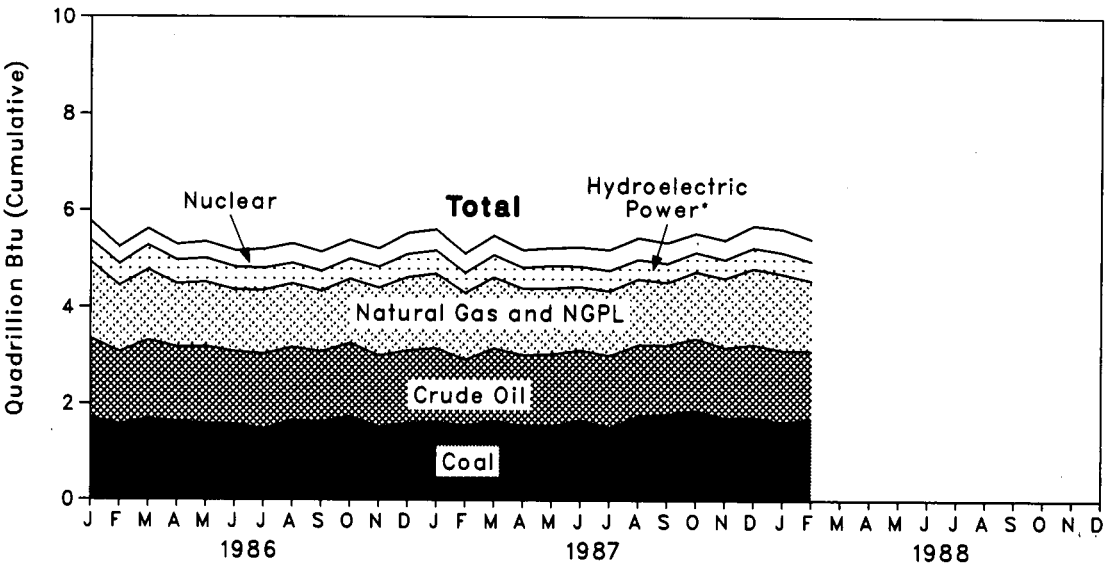


*Includes other.

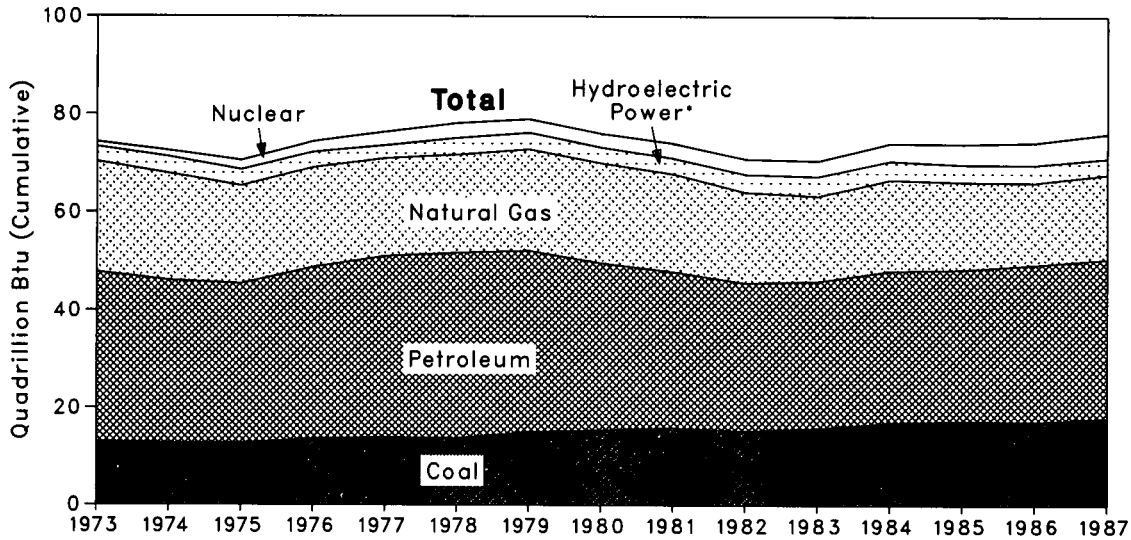
Table 1.3 Production of Energy by Source
(Quadrillion (10^{15}) Btu)

	Coal	Crude Oil[a]	NGPL[b]	Natural Gas (Dry)	Hydro-electric Power[c]	Nuclear Electric Power	Other[d]	Total[e]	Year to Date
1973 Total	**13.993**	**19.493**	**2.569**	**22.187**	**2.861**	**0.910**	**0.046**	**62.059**	
1974 Total	**14.074**	**18.575**	**2.471**	**21.210**	**3.177**	**1.272**	**.056**	**60.836**	
1975 Total	**14.990**	**17.729**	**2.374**	**19.640**	**3.155**	**1.900**	**.072**	**59.860**	
1976 Total	**15.654**	**17.262**	**2.327**	**19.480**	**2.976**	**2.111**	**.081**	**59.891**	
1977 Total	**15.755**	**17.454**	**2.327**	**19.565**	**2.333**	**2.702**	**.082**	**60.218**	
1978 Total	**14.910**	**18.434**	**2.245**	**19.485**	**2.937**	**3.024**	**.068**	**61.103**	
1979 Total	**17.539**	**18.104**	**2.286**	**20.076**	**2.931**	**2.776**	**.089**	**63.801**	
1980 Total	**18.597**	**18.249**	**2.254**	**19.908**	**2.900**	**2.739**	**.114**	**64.761**	
1981 Total	**18.376**	**18.146**	**2.307**	**19.699**	**2.758**	**3.008**	**.127**	**64.421**	
1982 Total	**18.639**	**18.309**	**2.191**	**18.255**	**3.256**	**3.131**	**.108**	**63.889**	
1983 Total	**17.246**	**18.392**	**2.184**	**16.530**	**3.502**	**3.203**	**.133**	**61.190**	
1984 Total	**19.719**	**18.848**	**2.274**	**17.931**	**3.312**	**3.553**	**.174**	**65.810**	
1985 Total	**19.325**	**18.992**	**2.241**	**16.906**	**2.939**	**4.147**	**.213**	**64.764**	
1986 January	1.711	1.643	.201	1.582	.224	.391	.023	5.775	5.775
February	1.588	1.490	.180	1.373	.242	.354	.019	5.247	11.022
March	1.696	1.621	.189	1.457	.297	.333	.020	5.612	16.634
April	1.636	1.542	.173	1.309	.287	.329	.018	5.296	21.930
May	1.598	1.589	.182	1.334	.284	.345	.018	5.350	27.279
June	1.587	1.500	.171	1.276	.274	.339	.020	5.167	32.446
July	1.481	1.557	.177	1.316	.251	.388	.021	5.192	37.639
August	1.672	1.506	.170	1.317	.221	.405	.021	5.312	42.951
September	1.639	1.449	.167	1.254	.220	.395	.018	5.142	48.093
October	1.751	1.514	.174	1.327	.222	.391	.017	5.396	53.489
November	1.538	1.464	.179	1.407	.241	.378	.015	5.222	58.711
December	1.612	1.502	.185	1.517	.270	.426	.020	5.533	64.245
Total	**19.510**	**18.376**	**2.149**	**16.471**	**3.034**	**4.475**	**.232**	**64.246**	
1987 January	1.635	1.524	.188	1.545	.265	.432	.020	5.610	5.610
February	1.569	1.351	.173	1.387	.222	.396	.019	5.117	10.726
March	1.661	1.501	.190	1.469	.243	.403	.021	5.487	16.214
April	1.555	1.466	.183	1.376	.230	.362	.019	5.192	21.406
May	1.549	1.493	.188	1.360	.253	.371	.020	5.234	26.640
June	1.688	1.438	.181	1.309	.219	.395	.021	5.251	31.891
July	1.528	1.482	.187	1.339	.211	.433	.022	5.203	37.094
August	1.767	1.473	.186	1.359	.193	.447	.022	5.446	42.540
September	1.806	1.425	.181	1.299	.190	.429	.020	5.350	47.890
October	1.881	1.491	.190	1.377	.187	.394	.020	5.541	53.431
November	1.734	1.449	.187	1.436	.176	.405	.020	5.407	58.838
December	1.747	1.500	.192	1.570	.220	.454	.020	5.702	64.540
Total	**20.121**	**17.593**	**2.226**	**16.824**	**2.609**	**4.920**	**.245**	**64.539**	
1988 January	1.649	1.482	.185	R 1.578	.232	.483	.021	R 5.630	R 5.630
February	1.713	1.409	.176	1.452	.200	.457	.018	5.425	11.055
2-Month Total	**3.363**	**2.891**	**.361**	**3.030**	**.433**	**.939**	**.038**	**11.055**	
1987 2-Month Total	**3.205**	**2.875**	**.361**	**2.932**	**.487**	**.828**	**.039**	**10.726**	
1986 2-Month Total	**3.300**	**3.133**	**.382**	**2.955**	**.466**	**.745**	**.042**	**11.022**	

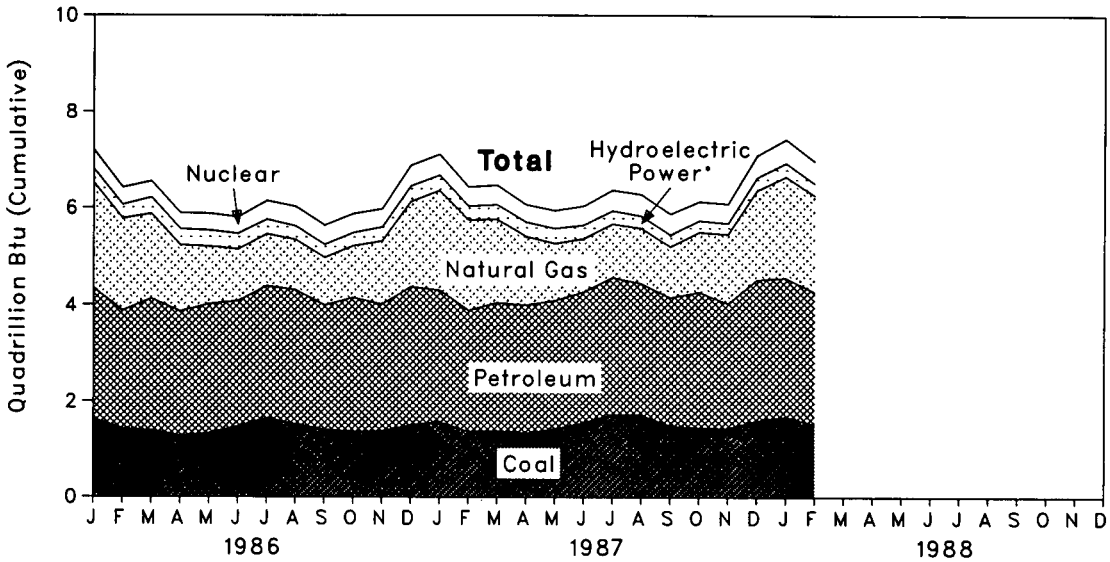
[a]Includes lease condensate.
[b]Natural gas plant liquids.
[c]Includes industrial and utility production of hydroelectric power.
[d]Other is electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy.
[e]Excludes wood, waste, geothermal, wind, photovoltaic, and solar thermal energy except for small amounts used by electric utilities to generate electricity for distribution.
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.
Source: Energy Information Administration calculations based on data appearing elsewhere in this publication.

Figure 1.3 Consumption of Energy by Source

Yearly



Monthly



*Includes other.

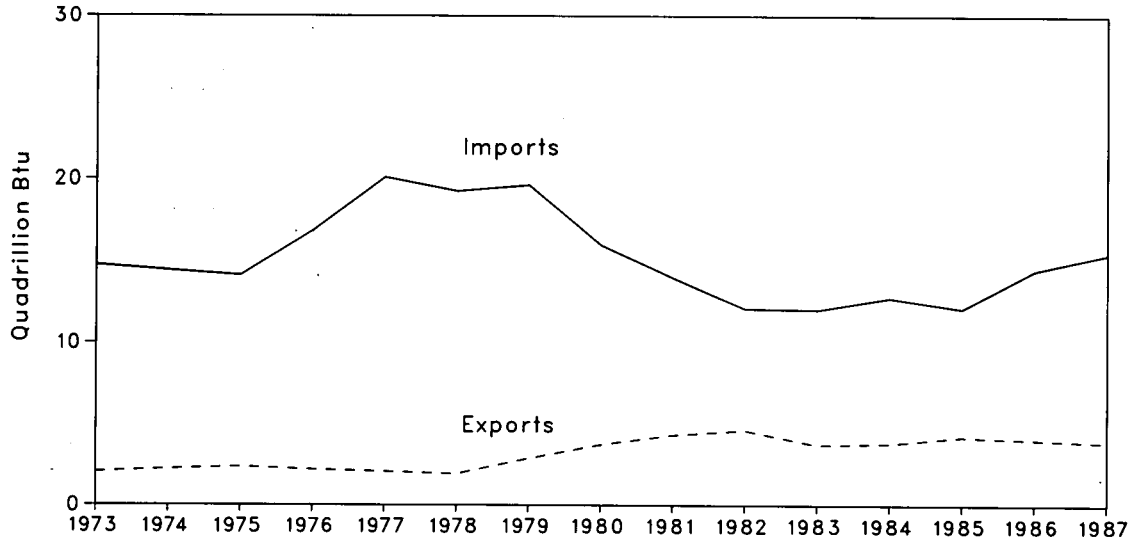
Table 1.4 Consumption of Energy by Source
(Quadrillion (10^{15}) Btu)

	Coal	Natural Gas[a]	Petro-leum	Hydro-electric Power[b]	Nuclear Electric Power	Other[c]	Total[d]	Year to Date
1973 Total	**12.971**	**22.512**	**34.840**	**3.010**	**0.910**	**0.039**	**74.282**	
1974 Total	**12.663**	**21.732**	**33.455**	**3.309**	**1.272**	**.112**	**72.543**	
1975 Total	**12.663**	**19.948**	**32.731**	**3.219**	**1.900**	**.086**	**70.545**	
1976 Total	**13.584**	**20.345**	**35.175**	**3.065**	**2.111**	**.081**	**74.362**	
1977 Total	**13.922**	**19.931**	**37.122**	**2.515**	**2.702**	**.097**	**76.289**	
1978 Total	**13.765**	**20.000**	**37.965**	**3.142**	**3.024**	**.193**	**78.089**	
1979 Total	**15.039**	**20.666**	**37.123**	**3.141**	**2.776**	**.152**	**78.897**	
1980 Total	**15.423**	**20.394**	**34.202**	**3.118**	**2.739**	**.079**	**75.955**	
1981 Total	**15.907**	**19.928**	**31.931**	**3.105**	**3.008**	**.111**	**73.990**	
1982 Total	**15.322**	**18.505**	**30.231**	**3.561**	**3.131**	**.086**	**70.837**	
1983 Total	**15.894**	**17.357**	**30.054**	**3.871**	**3.203**	**.118**	**70.497**	
1984 Total	**17.070**	**18.507**	**31.051**	**3.717**	**3.553**	**.163**	**74.060**	
1985 Total	**17.478**	**17.834**	**30.922**	**3.363**	**4.147**	**.199**	**73.944**	
1986 January	1.628	2.169	2.702	.261	.391	.023	7.175	7.175
February	1.415	1.904	2.455	.270	.354	.019	6.417	13.592
March	1.385	1.754	2.734	.321	.333	.019	6.546	20.138
April	1.265	1.373	2.592	.312	.329	.018	5.888	26.025
May	1.321	1.196	2.686	.313	.345	.016	5.877	31.903
June	1.464	1.070	2.609	.302	.339	.020	5.803	37.705
July	1.648	1.070	2.739	.282	.388	.019	6.146	43.852
August	1.515	1.037	2.791	.260	.405	.016	6.024	49.876
September	1.401	.987	2.586	.255	.395	.017	5.642	55.518
October	1.356	1.072	2.789	.253	.391	.017	5.878	61.396
November	1.367	1.314	2.637	.271	.378	.012	5.978	67.374
December	1.498	1.761	2.877	.304	.426	.020	6.887	74.261
Total	**17.262**	**16.708**	**32.196**	**3.405**	**4.475**	**.215**	**74.260**	
1987 January	1.564	2.058	2.742	.300	.432	.019	7.115	7.115
February	1.358	1.873	2.528	.267	.396	.020	6.441	13.556
March	1.373	1.724	2.672	.289	.403	.019	6.480	20.037
April	1.324	1.428	2.673	.274	.362	.020	6.080	26.117
May	1.420	1.187	2.674	.285	.371	.021	5.958	32.075
June	1.555	1.102	2.723	.255	.395	.023	6.053	38.128
July	1.733	1.102	2.845	.252	.433	.022	6.386	44.514
August	1.721	1.137	2.732	.233	.447	.022	6.293	50.807
September	1.485	1.056	2.678	.217	.429	.024	5.889	56.695
October	1.449	1.235	2.830	.218	.394	.022	6.149	62.844
November	1.435	1.435	2.602	.203	.405	.022	6.102	68.946
December	1.603	1.846	2.928	.247	.454	.019	7.097	76.043
Total	**18.020**	**17.180**	**32.627**	**3.041**	**4.920**	**.253**	**76.042**	
1988 January	1.688	2.087	2.883	.261	.483	.024	7.424	7.424
February	1.528	1.989	2.753	.227	.457	.019	6.973	14.397
2-Month Total	**3.215**	**4.076**	**5.636**	**.488**	**.939**	**.043**	**14.397**	
1987 2-Month Total	**2.923**	**3.930**	**5.270**	**.567**	**.828**	**.039**	**13.556**	
1986 2-Month Total	**3.043**	**4.074**	**5.158**	**.531**	**.745**	**.042**	**13.592**	

[a]Includes supplemental gaseous fuels.
[b]Includes industrial and utility production and net imports of electricity.
[c]Other 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.
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 calculations based on data appearing elsewhere in this publication.

Figure 1.4 Energy Imports and Exports

Yearly



Monthly

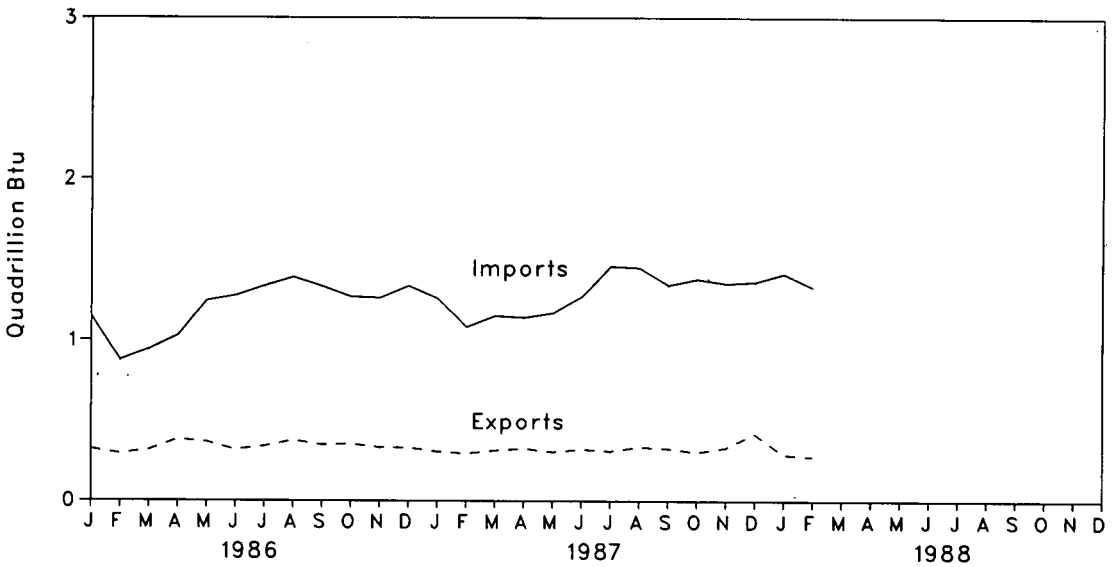


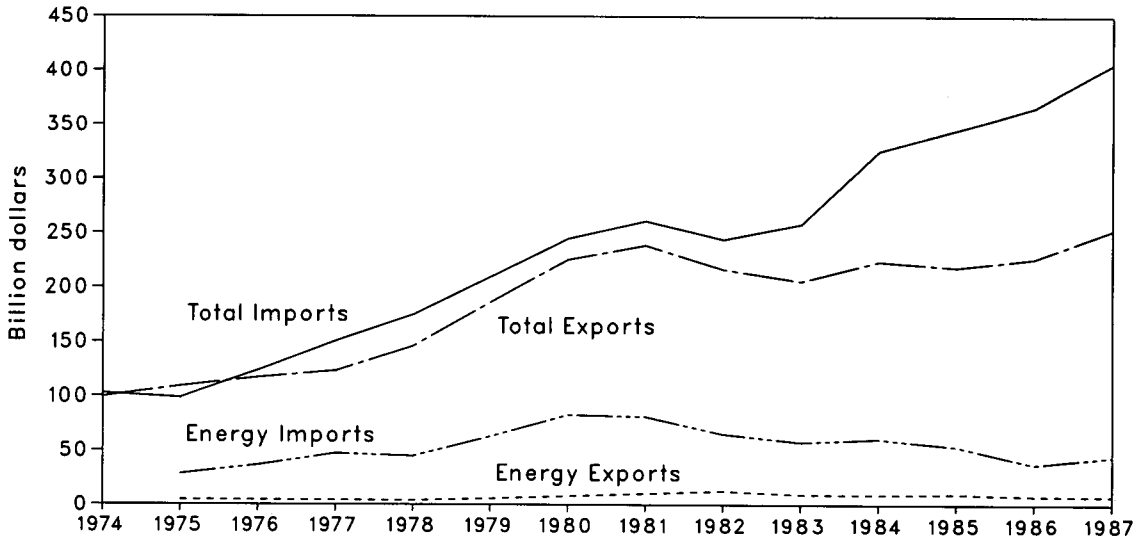
Table 1.5 Net Imports[a] of Energy by Source
(Quadrillion (10^{15}) Btu)

	Coal	Crude Oil[b]	Petroleum Products[c]	Natural Gas	Electricity[d]	Coal Coke	Total	Year to Date
1973 Total	**-1.422**	**6.883**	**6.097**	**0.981**	**0.148**	**-0.007**	**12.680**	
1974 Total	**-1.568**	**7.389**	**5.273**	**.907**	**.133**	**.056**	**12.190**	
1975 Total	**-1.738**	**8.708**	**3.800**	**.904**	**.064**	**.014**	**11.752**	
1976 Total	**-1.567**	**11.221**	**3.982**	**.922**	**.089**	**0**	**14.648**	
1977 Total	**-1.401**	**13.921**	**4.321**	**.981**	**.182**	**.015**	**18.019**	
1978 Total	**-1.004**	**13.125**	**3.932**	**.941**	**.204**	**.125**	**17.323**	
1979 Total	**-1.702**	**13.328**	**3.603**	**1.243**	**.211**	**.063**	**16.746**	
1980 Total	**-2.391**	**10.586**	**2.912**	**.957**	**.217**	**-.035**	**12.247**	
1981 Total	**-2.918**	**8.854**	**2.522**	**.857**	**.347**	**-.016**	**9.646**	
1982 Total	**-2.768**	**6.917**	**2.128**	**.898**	**.306**	**-.022**	**7.459**	
1983 Total	**-2.013**	**6.731**	**2.351**	**.887**	**.369**	**-.016**	**8.309**	
1984 Total	**-2.119**	**6.918**	**2.970**	**.792**	**.405**	**-.011**	**8.954**	
1985 Total	**-2.389**	**6.381**	**2.570**	**.894**	**.423**	**-.013**	**7.866**	
1986 January	-.152	.607	.240	.094	.037	0	.825	0.825
February	-.130	.464	.152	.071	.028	0	.584	1.409
March	-.159	.509	.206	.050	.025	-.001	.630	2.039
April	-.213	.636	.164	.037	.025	0	.648	2.687
May	-.220	.760	.262	.049	.029	-.003	.877	3.564
June	-.188	.779	.303	.038	.028	0	.960	4.524
July	-.200	.853	.274	.042	.031	-.002	.998	5.522
August	-.199	.847	.288	.045	.039	-.006	1.015	6.536
September	-.211	.863	.250	.049	.035	0	.986	7.522
October	-.187	.782	.227	.064	.031	-.001	.916	8.439
November	-.167	.797	.210	.064	.029	-.003	.929	9.368
December	-.167	.779	.279	.084	.034	-.001	1.008	10.376
Total	**-2.193**	**8.676**	**2.855**	**.686**	**.370**	**-.017**	**10.378**	
1987 January	-.141	.785	.179	.096	E .035	-.001	.953	.953
February	-.120	.595	.192	.076	E .045	.001	.789	1.742
March	-.168	.655	.223	.082	E .046	-.002	.837	2.579
April	-.158	.686	.179	.064	E .044	0	.815	3.393
May	-.169	.764	.183	.055	E .032	0	.865	4.258
June	-.190	.828	.222	.052	E .036	.002	.950	5.208
July	-.171	.935	.284	.060	E .041	0	1.149	6.357
August	-.200	.975	.228	.070	E .040	.001	1.115	7.472
September	-.171	.880	.211	.068	E .027	.004	1.018	8.490
October	-.173	.922	.207	.089	E .031	.002	1.078	9.567
November	-.183	.846	.229	.102	E .027	.003	1.023	10.590
December	-.209	.797	.218	.114	E .027	-.001	.945	11.535
Total	**-2.053**	**9.668**	**2.556**	**.925**	**E .432**	**.009**	**11.535**	
1988 January	-.113	.807	.272	.128	E .028	.003	1.125	1.125
February	-.114	.778	.251	.111	E .027	.002	1.054	2.180
2-Month Total	**-.227**	**1.585**	**.523**	**.238**	**E .055**	**.005**	**2.180**	
1987 2-Month Total	**-.261**	**1.380**	**.371**	**.171**	**.080**	**0**	**1.742**	
1986 2-Month Total	**-.283**	**1.071**	**.392**	**.164**	**.065**	**0**	**1.409**	

[a]Net imports equals imports minus exports. Minus sign indicates exports are greater than imports.
[b]Includes crude oil, lease condensate, and imports of crude oil for the Strategic Petroleum Reserve.
[c]Includes petroleum products, unfinished oils, pentanes plus, and gasoline blending components.
[d]Assumed to be hydroelectricity.
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.
Source: Energy Information Administration calculations based on data appearing elsewhere in this publication.

Figure 1.5 Merchandise Trade Value

Yearly



Monthly

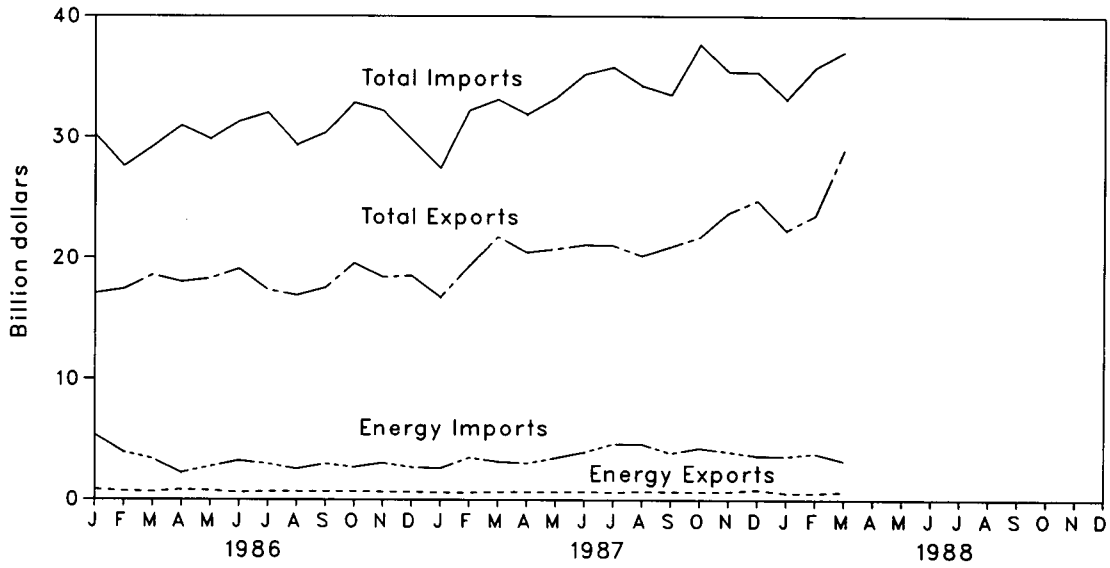


Table 1.6 Merchandise Trade Value
(Million Dollars)

	Exports			Imports			Trade Balance		
	Energy	All Other	Total	Energy	All Other	Total	Energy	All Other	Total
1974 Total	**NA**	**NA**	**99,437**	**NA**	**NA**	**102,559**	**NA**	**NA**	**-3,122**
1975 Total	**4,470**	**104,386**	**108,856**	**28,325**	**70,178**	**98,503**	**-23,855**	**34,208**	**10,353**
1976 Total	**4,226**	**112,568**	**116,794**	**36,384**	**87,093**	**123,477**	**-32,158**	**25,475**	**-6,683**
1977 Total	**4,184**	**118,998**	**123,182**	**47,153**	**103,237**	**150,390**	**-42,969**	**15,761**	**-27,208**
1978 Total	**3,882**	**141,965**	**145,847**	**44,763**	**129,994**	**174,757**	**-40,881**	**11,971**	**-28,910**
1979 Total	**5,675**	**180,688**	**186,363**	**63,077**	**146,381**	**209,458**	**-57,402**	**34,307**	**-23,095**
1980 Total	**7,982**	**217,584**	**225,566**	**82,924**	**161,947**	**244,871**	**-74,942**	**55,637**	**-19,305**
1981 Total	**10,279**	**228,436**	**238,715**	**81,360**	**179,622**	**260,982**	**-71,081**	**48,814**	**-22,267**
1982 Total	**12,729**	**203,713**	**216,442**	**65,409**	**178,543**	**243,952**	**-52,680**	**25,170**	**-27,510**
1983 Total	**9,500**	**196,139**	**205,639**	**57,952**	**200,096**	**258,048**	**-48,452**	**-3,957**	**-52,409**
1984 Total	**9,311**	**214,665**	**223,976**	**60,980**	**264,746**	**325,726**	**-51,669**	**-50,081**	**-101,750**
1985 Total	**9,971**	**208,844**	**218,815**	**53,917**	**291,359**	**345,276**	**-43,946**	**-82,515**	**-126,461**
1986 January	812	16,229	17,041	5,344	24,746	30,090	-4,532	-8,517	-13,049
February	676	16,725	17,401	3,874	23,647	27,521	-3,198	-6,922	-10,120
March	622	17,935	18,557	3,331	26,072	29,403	-2,709	-8,137	-10,846
April	791	17,210	18,001	2,176	28,722	30,898	-1,385	-11,512	-12,897
May	728	17,542	18,270	2,700	27,334	30,034	-1,972	-9,791	-11,763
June	584	18,508	19,092	3,185	27,757	30,942	-2,601	-9,249	-11,850
July	653	16,693	17,346	2,933	28,915	31,848	-2,280	-12,222	-14,502
August	661	16,234	16,895	2,511	26,971	29,482	-1,850	-10,737	-12,587
September	657	16,874	17,531	2,933	27,875	30,808	-2,276	-11,001	-13,277
October	670	18,892	19,562	2,662	30,109	32,771	-1,992	-11,218	-13,210
November	641	17,770	18,411	3,014	29,399	32,413	-2,373	-11,629	-14,002
December	620	17,903	18,523	2,647	27,207	29,854	-2,027	-9,304	-11,331
Total	**8,115**	***218,693**	***226,808**	**37,310**	**328,753**	**366,063**	**-29,195**	***-110,060**	***-139,255**
1987 January	573	16,182	16,755	2,564	24,902	27,466	-1,991	-8,720	-10,711
February	564	18,796	19,360	3,440	28,867	32,307	-2,876	-10,070	-12,946
March	620	21,156	21,776	3,120	30,077	33,197	-2,500	-8,921	-11,421
April	633	19,863	20,496	2,979	29,004	31,983	-2,346	-9,141	-11,487
May	623	20,161	20,784	3,425	29,888	33,313	-2,802	-9,727	-12,529
June	654	20,472	21,126	3,895	31,371	35,266	-3,241	-10,899	-14,140
July	605	20,403	21,008	4,593	31,251	35,844	-3,988	-10,848	-14,836
August	675	19,547	20,222	4,582	29,738	34,320	-3,907	-10,191	-14,098
September	657	20,329	20,986	3,830	29,743	33,573	-3,173	-9,414	-12,587
October	630	21,122	21,752	4,240	33,474	37,714	-3,610	-12,352	-15,962
November	660	23,139	23,799	3,940	31,534	35,474	-3,280	-8,396	-11,676
December	817	23,984	24,801	3,612	31,832	35,444	-2,795	-7,847	-10,642
Total	**7,713**	**245,153**	**252,866**	**44,220**	**361,681**	**405,901**	**-36,507**	**-116,528**	**-153,035**
1988 January	560	21,770	22,330	3,576	29,642	33,218	-3,016	-7,872	-10,888
February	548	23,011	23,559	3,795	32,023	35,818	-3,247	-9,011	-12,258
March	645	28,326	28,971	3,190	33,922	37,112	-2,545	-5,596	-8,141
3-Month Total	**1,753**	**73,107**	**74,860**	**10,561**	**95,586**	**106,147**	**-8,808**	**-22,479**	**-31,287**

*Annual export totals for 1986 incorporate adjustments to account for undocumented U.S. exports to Canada; monthly export data for 1986 do not incorporate similar adjustments and, consequently, do not sum to the annual totals presented here. The adjustments to the annual export data are reflected in four data series: "Exports - All Other," "Exports - Total," "Trade Balance - All Other," and "Trade Balance - Total." Beginning with January 1987, adjustments to reflect the value of undocumented U.S. exports to Canada are incorporated in the monthly data.

NA=Not available.

Notes: • In accordance with current Bureau of the Census procedures, 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.

Additional Notes and Sources: See end of section.

Figure 1.6 Quarterly Energy Consumption per Dollar of Gross National Product (Seasonally Adjusted at Annual Rates)

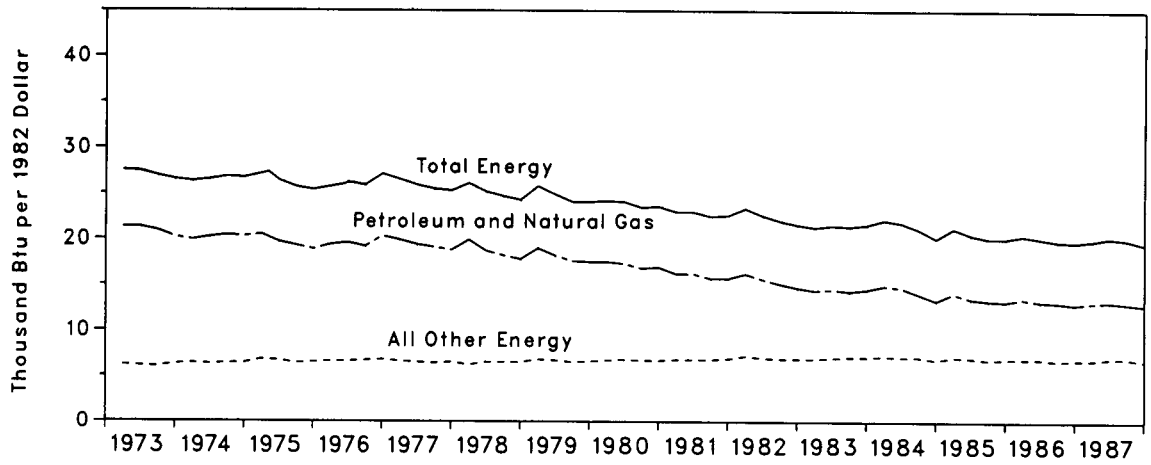


Table 1.7 Energy Consumption per Dollar of Gross National Product (Seasonally Adjusted at Annual Rates)

	Energy Consumption[a]	Gross National Product (GNP)	Energy Consumption per Dollar of GNP		
			Total Energy	Petroleum and Natural Gas	All Other Energy
	Quadrillion Btu	Trillion 1982 Dollars	Thousand Btu per 1982 Dollar		
1973 Year	**74.282**	**2.744**	**27.1**	**20.9**	**6.2**
1974 Year	**72.543**	**2.729**	**26.6**	**20.2**	**6.4**
1975 Year	**70.545**	**2.695**	**26.2**	**19.5**	**6.7**
1976 Year	**74.362**	**2.827**	**26.3**	**19.6**	**6.7**
1977 Year	**76.289**	**2.959**	**25.8**	**19.3**	**6.5**
1978 Year	**78.089**	**3.115**	**25.1**	**18.6**	**6.5**
1979 Year	**78.897**	**3.192**	**24.7**	**18.1**	**6.6**
1980 Year	**75.955**	**3.187**	**23.8**	**17.1**	**6.7**
1981 Year	**73.990**	**3.249**	**22.8**	**16.0**	**6.8**
1982 Year	**70.837**	**3.166**	**22.4**	**15.4**	**7.0**
1983 Year	**70.497**	**3.279**	**21.5**	**14.5**	**7.0**
1984 Year	**74.060**	**3.501**	**21.2**	**14.2**	**7.0**
1985 Year	**73.944**	**3.608**	**20.5**	**13.5**	**7.0**
1986 1st Quarter[b]	75.543	3.699	20.4	13.5	6.9
2nd Quarter[b]	74.400	3.705	20.1	13.2	6.9
3rd Quarter[b]	73.730	3.718	19.8	13.1	6.7
4th Quarter[b]	73.405	3.732	19.7	12.9	6.8
Year	**74.260**	**3.713**	**20.0**	**13.2**	**6.8**
1987 1st Quarter[b]	75.089	3.772	19.9	13.1	6.8
2nd Quarter[b]	76.490	3.795	20.2	13.2	7.0
3rd Quarter[b]	76.801	3.836	20.0	13.0	7.0
4th Quarter[b]	75.777	3.881	19.5	12.8	6.7
Year	**76.042**	**3.821**	**19.9**	**13.0**	**6.9**

[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]Quarterly data are seasonally adjusted and shown at annual rates.

Notes: • 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: See end of section.

Figure 1.7 U.S. Dependence on Petroleum Net Imports

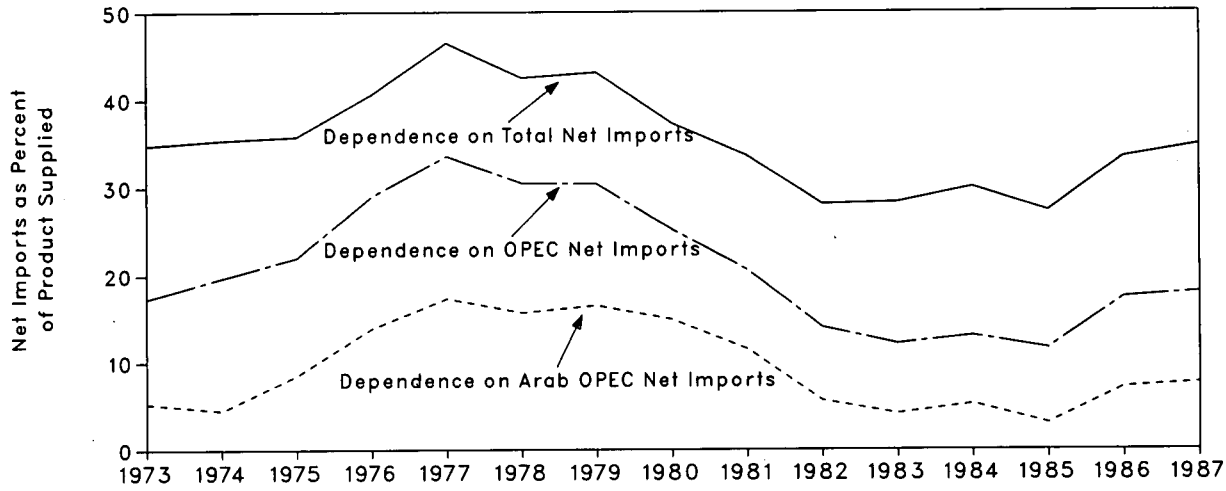


Table 1.8 U.S. Dependence on Petroleum Net Imports[a]

Annual Rate	Net Imports[b]			Petroleum Products Supplied	Net Imports as Percent of U.S. Petroleum Products Supplied		
	From Arab OPEC[c]	From OPEC[d]	From All Countries		From Arab OPEC[c]	From OPEC[d]	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 1st Quarter	845	2,086	4,177	16,183	5.2	12.9	25.8
2nd Quarter	1,131	2,766	5,493	15,996	7.1	17.3	34.3
3rd Quarter	1,359	3,337	6,310	16,282	8.3	20.5	38.8
4th Quarter	1,300	3,105	5,749	16,656	7.8	18.6	34.5
Average	**1,160**	**2,828**	**5,439**	**16,281**	**7.1**	**17.4**	**33.4**
1987 1st Quarter	1,067	2,551	5,042	16,344	6.5	15.6	30.8
2nd Quarter	955	2,669	5,414	16,426	5.8	16.2	33.0
3rd Quarter	1,478	3,540	6,571	16,619	8.9	21.3	39.5
4th Quarter	1,505	3,172	6,023	16,830	8.9	18.8	35.8
Average	**1,253**	**2,986**	**5,767**	**16,556**	**7.6**	**18.0**	**34.8**

[a]Beginning in October 1977, Strategic Petroleum Reserves are included.

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

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

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

Notes: • Geographic coverage is the 50 States and the District of Columbia. • Annual averages may not equal average of quarters due to independent rounding.

Sources: See end of section.

Figure 1.8 Cost of Fuels to End Users in Constant (1972) Dollars

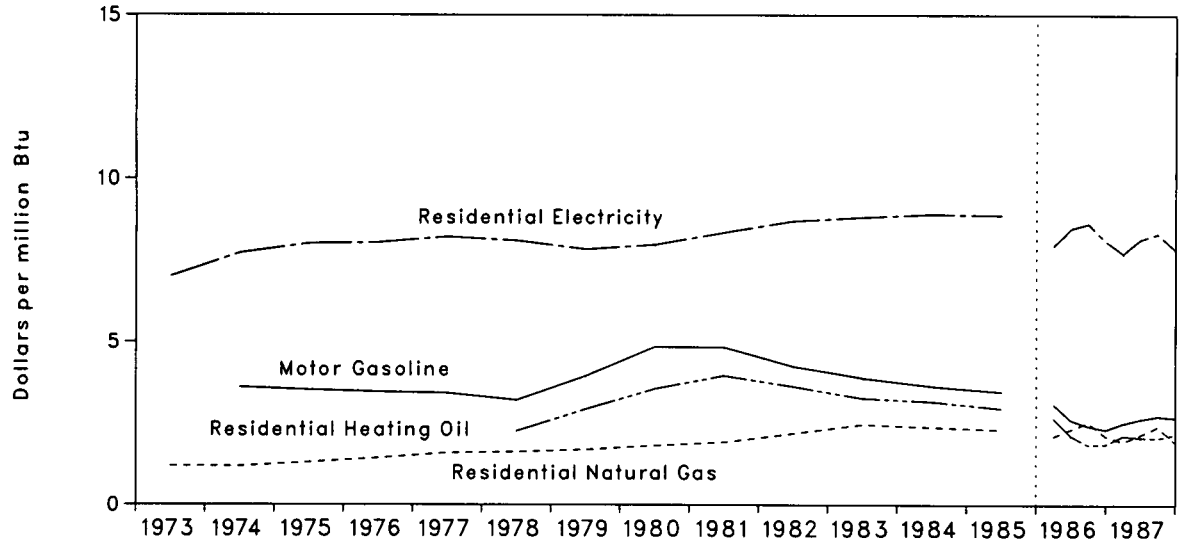


Table 1.9 Cost of Fuels to End Users in Constant (1972) Dollars[a]

	Leaded Regular Motor Gasoline		Residential Heating Oil		Residential Natural Gas		Residential Electricity[b]	
	Cent/Gal	$/MMBtu	Cent/Gal	$/MMBtu	Cent/Mcf	$/MMBtu	Cent/kWh	$/MMBtu
1973 Average	**NA**	**NA**	**NA**	**NA**	**121.4**	**1.19**	**2.39**	**7.00**
1974 Average	**45.1**	**3.61**	**NA**	**NA**	**121.3**	**1.18**	**2.63**	**7.71**
1975 Average	**44.1**	**3.53**	**NA**	**NA**	**132.9**	**1.30**	**2.73**	**8.00**
1976 Average	**43.4**	**3.47**	**NA**	**NA**	**145.5**	**1.43**	**2.74**	**8.03**
1977 Average	**42.9**	**3.43**	**NA**	**NA**	**162.2**	**1.59**	**2.80**	**8.21**
1978 Average	**40.1**	**3.21**	**31.4**	**2.26**	**164.2**	**1.62**	**2.76**	**8.09**
1979 Average	**49.4**	**3.95**	**40.6**	**2.93**	**171.8**	**1.69**	**2.67**	**7.83**
1980 Average	**60.5**	**4.84**	**49.4**	**3.56**	**186.8**	**1.82**	**2.72**	**7.97**
1981 Average	**60.4**	**4.83**	**54.9**	**3.96**	**197.3**	**1.92**	**2.85**	**8.35**
1982 Average	**53.0**	**4.24**	**50.3**	**3.63**	**224.1**	**2.19**	**2.97**	**8.70**
1983 Average	**48.6**	**3.89**	**45.3**	**3.27**	**254.5**	**2.47**	**3.01**	**8.82**
1984 Average	**45.5**	**3.64**	**43.9**	**3.17**	**246.5**	**2.39**	**3.04**	**8.91**
1985 Average	**43.4**	**3.47**	**41.0**	**2.96**	**238.0**	**2.31**	**3.03**	**8.88**
1986 1st Quarter	38.7	3.09	37.1	2.67	217.1	2.11	2.71	7.94
2nd Quarter	32.7	2.61	29.6	2.13	239.5	2.33	2.89	8.47
3rd Quarter	30.4	2.43	25.6	1.85	261.7	2.54	2.94	8.62
4th Quarter	29.0	2.32	26.0	1.87	218.6	2.12	2.76	8.09
Average	**32.7**	**2.61**	**31.9**	**2.30**	**222.4**	**2.16**	**2.83**	**8.29**
1987 1st Quarter	31.4	2.51	29.6	2.13	200.8	1.95	2.63	7.71
2nd Quarter	33.0	2.64	28.8	2.08	222.6	2.16	2.78	8.15
3rd Quarter	34.2	2.73	28.6	2.06	247.6	2.41	2.84	8.32
4th Quarter	33.5	2.68	30.1	2.17	198.7	1.93	2.67	7.83
Average	**33.0**	**2.64**	**29.5**	**2.13**	**204.4**	**1.99**	**2.73**	**8.00**

[a]Fuel costs shown on this page are calculated using the Urban Consumer Price Index developed by the Bureau of Labor Statistics. See Note 6 at end of section.

[b]Calculated from Table 9.9 "Old Series" for 1973 through 1985 and "New Series" for 1986 forward.

NA=Not available.

Notes: • Geographic coverage is the 50 States and the District of Columbia. • Annual averages may not equal average of quarters due to independent rounding.

Sources: See end of section.

Figure 1.9 Passenger Car Efficiency

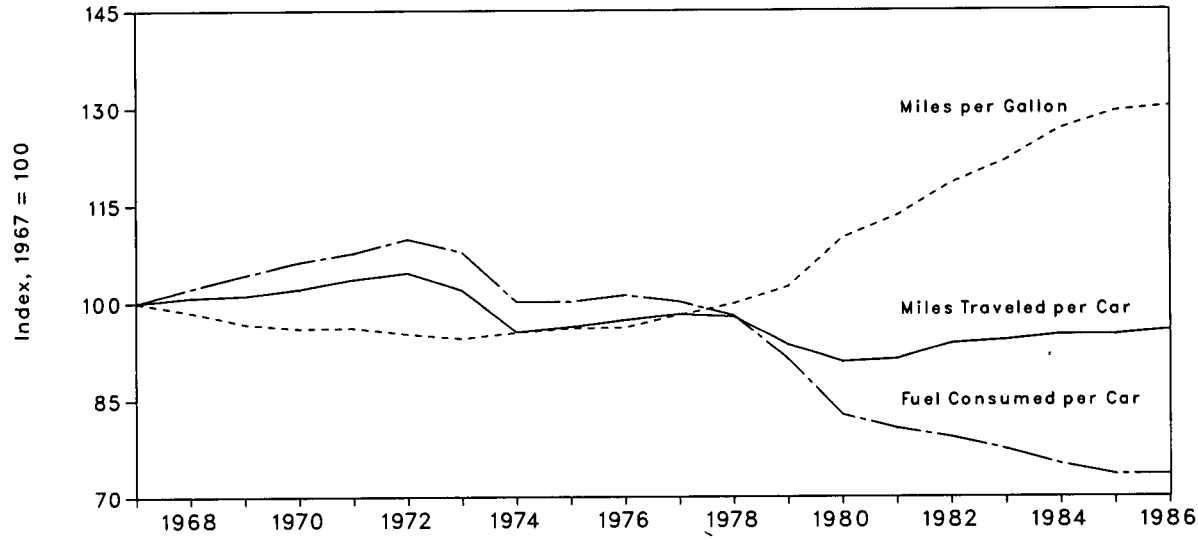


Table 1.10 Passenger Car Efficiency

	Average Fuel Consumed per Car		Average Miles Traveled per Car		Average Miles Traveled per Gallon of Fuel Consumed	
	Gallons	Index	Miles	Index	Miles	Index
1967	715	100.0	10,060	100.0	14.07	100.0
1968	731	102.2	10,144	100.8	13.87	98.6
1969	746	104.3	10,158	101.0	13.62	96.8
1970	760	106.3	10,272	102.1	13.52	96.1
1971	770	107.7	10,422	103.6	13.54	96.2
1972	785	109.8	10,521	104.6	13.40	95.2
1973	771	107.8	10,256	101.9	13.30	94.5
1974	716	100.1	9,606	95.5	13.42	95.4
1975	716	100.1	9,690	96.3	13.52	96.1
1976	723	101.1	9,785	97.3	13.53	96.2
1977	716	100.1	9,879	98.2	13.80	98.1
1978	701	98.0	9,835	97.8	14.04	99.8
1979	653	91.3	9,403	93.5	14.41	102.4
1980	591	82.7	9,141	90.9	15.46	109.9
1981	576	80.6	9,186	91.3	15.94	113.3
1982	566	79.2	9,428	93.7	16.65	118.3
1983	553	77.3	9,475	94.2	17.14	121.8
1984	536	75.0	9,558	95.0	17.83	126.7
1985	525	73.4	9,560	95.0	18.20	129.4
1986	525	73.4	9,625	95.7	18.32	130.2

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

Table 1.11 Population-Weighted Heating Degree-Days[a]

Census Divisions	April 1 through April 30					Cumulative July 1 through April 30				
				Percent Change					Percent Change	
	Normal[b]	1987	1988	Normal to 1988	1987 to 1988	Normal[b]	1987	1988	Normal to 1988	1987 to 1988
New England CT, ME, MA, NH, RI, VT	571	552	591	3.5	7.1	6,228	6,280	6,265	0.6	-0.2
Middle Atlantic NJ, NY, PA	472	440	506	7.2	15.0	5,610	5,435	5,608	0	3.2
East North Central IL, IN, MI, OH, WI	479	424	484	1.0	14.2	6,120	5,695	6,154	.6	8.1
West North Central IA, KS, MN, MO, NE, ND, SD	448	356	444	-.9	24.7	6,433	5,736	6,375	-.9	11.1
South Atlantic DE, FL, GA, MD and DC, NC, SC, VA, WV	175	234	198	13.1	-15.4	2,951	2,882	3,029	2.6	5.1
East South Central AL, KY, MS, TN	188	233	192	2.1	-17.6	3,487	3,321	3,536	1.4	6.5
West South Central AR, LA, OK, TX	78	125	82	5.1	-34.4	2,296	2,347	2,361	2.8	.6
Mountain AZ, CO, ID, MT, NV, NM, UT, WY	455	340	394	-13.4	15.9	5,194	5,044	5,068	-2.4	.5
Pacific CA, OR, WA	321	211	268	-16.5	27.0	3,021	2,805	2,758	-8.7	-1.7
U.S. Average[c]	**347**	**320**	**348**	**.3**	**8.8**	**4,506**	**4,295**	**4,490**	**-.4**	**4.5**

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

Notes and Sources for the Energy Summary Section

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. The volumetric data are converted to approximate heat contents (Btu values) of these energy sources using the conversion factors provided in the Conversion Factors section of this publication.

2. Energy Consumption: Consumption of energy includes consumption of coal, natural gas (including supplemental gaseous fuels), petroleum products supplied, electric utility and industrial production of hydroelectric power, net imports of electricity (assumed to be hydroelectricity), net imports of coal coke, and electricity generated from nuclear power. Consumption also includes electricity generated for distribution from 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 using the conversion factors provided in the Conversion Factors section of this publication.

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 using the conversion factors provided in the Conversion Factors section of this publication. For further information on electricity, see "Note for imports and exports of electricity" under Note 7 of the Notes and Sources for the 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 using the conversion factors provided in the Conversion Factors section of this publication. For more information on electricity, see "Note for imports and exports of electricity" under Note 7 of the Notes and Sources for the 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.

"Trade Balance" is exports minus imports; a positive balance indicates a surplus trade value and a negative balance indicates a deficit trade value. The "Energy" columns include mineral fuels, lubricants, and related material. "All Other" and "Total" columns include foreign exports (i.e., reexports) and nonmonetary gold and Department of Defense Grant-aid shipments. The "All Other" columns are calculated by subtracting "Energy" from "Total."

"Imports" represent general imports (i.e., entries for immediate consumption, entries into customs bonded warehouses, and entries for the Strategic Petroleum Reserve). The statistics reflect both government and nongovernment imports of merchandise from foreign countries into the U.S. customs territory (which includes the 50 United States, the District of Columbia, and Puerto Rico) and the Virgin Islands. The statistics exclude imports into Guam, American Samoa, and other U.S. possessions, as well as shipments between the United States and Puerto Rico and the Virgin Islands, between the United States and other U.S. possessions, and between any two of those outlying areas.

6. The Consumer Price Index: The Consumer Price Index, All Urban Consumers, All Items, for 1967=100.0 is rebased to 1972=100.0 by the Energy Information Administration. The values are:

1972	100.0	1986:	1st Quarter	261.2
1973	106.2		2nd Quarter	260.6
1974	117.9		3rd Quarter	262.5
1975	128.7		4th Quarter	264.0
1976	136.1		Year	262.1
1977	144.9	1987:	1st Quarter	267.0
1978	155.9		2nd Quarter	270.4
1979	173.5		3rd Quarter	273.4
1980	197.0		4th Quarter	275.8
1981	217.4		Year	271.7
1982	230.7			
1983	238.1			
1984	248.3			
1985	257.1			

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 data bases 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.

Sources

Merchandise Trade Value: 1974 through 1980: U.S. Department of Commerce, Bureau of the Census, "Highlights of U.S. Export and Import Trade," FT990 (January 1982), Appendix for total imports and exports. Energy imports and exports from U.S. Department of Commerce, Bureau of the Census, "Summary of U.S. Export and Import Merchandise Trade," December issues, plus Bureau of the Census reports EA691 "Exports from the Virgin Islands to Foreign Countries," and IA245V "U.S. Imports for Consumption and General Imports into the Virgin Islands." 1981 forward: U.S. Department of Commerce, Bureau of the Census, "Summary of U.S. Export and Import Merchandise Trade," most recent monthly issue.

Gross National Product: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business.*

U.S. Dependence on Petroleum Net Imports: Imports and products supplied--Section 3 of this publication. Exports--1973 through 1976: Bureau of Mines, *Mineral Industry Surveys.* 1977 through 1980: Energy Information Administration (EIA), *Energy Data Reports*, "Petroleum Statement, Annual". 1981-1986: EIA, *Petroleum Supply Annual.* 1987 forward: EIA, *Petroleum Supply Monthly.*

Cost of Fuels to End Users in Constant (1972) Dollars:

- Leaded Regular Motor Gasoline--Bureau of Labor Statistics (BLS).
- Residential Heating Oil--EIA, 1983 forward: EIA Form-782A, "Refiners/Gas Plant Operators' Monthly Petroleum Product Sales Report" and EIA Form-782B, "Resellers/Retailers' Monthly Petroleum Product Sales Report." Prices prior to 1983 are EIA estimates using data from FEA Form P112-M1/EIA-9, "No. 2 Heating Oil Supply/Price Monitoring Report" and EIA Form 9-A, "No. 2 Distillate Price Monitoring Report." See Note 6 in the Notes and Sources *Monthly Energy Review* Section 9, Price, for additional information.
- Residential Natural Gas--EIA, Annual data from Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition." Monthly data from Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers."
- Residential Electricity--Federal Energy Regulatory Commission (FERC), 1973 through February 1980: FPC Form 5, "Monthly Statement of Electric Operating Revenue and Income"; March 1980 forward: FERC Form 5, "Electric Utility Company Monthly Statement."
- Deflator (The Urban Consumer Price Index)--BLS.

Passenger Car Efficiency: Indices are prepared from statistics published by the U.S. Department of Transportation, Federal Highway Administration, Federal Highway Statistics Division, "Highway Statistics Summary to 1985," Table VM-201A and preliminary data for 1986.

Section 2. Consumption

Total U.S. energy consumption in February 1988 was 7.0 quadrillion Btu. Petroleum products accounted for 39 percent[1] of the energy consumed in February 1988, while natural gas accounted for 29 percent, and coal accounted for 22 percent.

Residential and commercial sector consumption was 3.0 quadrillion Btu in February 1988, up 7 percent from the February 1987 level. The sector accounted for 42 percent of February 1988 total consumption, down 1 percentage point from its 43-percent share in February 1987.

Industrial sector consumption was 2.3 quadrillion Btu in February 1988, up 10 percent from the February 1987 level. The industrial sector accounted for 34 percent of February 1988 total consumption, up 1 percentage point from its 33-percent share in February 1987.

Transportation sector consumption of energy was 1.7 quadrillion Btu in February 1988, up 8 percent from the February 1987 level. The sector consumed 24 percent of February 1988 total consumption, about the same share as in February 1987.

Electric utility consumption of energy totaled 2.3 quadrillion Btu in February 1988, up 10 percent from the February 1987 level. Coal contributed 56 percent of the energy consumed by electric utilities in February 1988, while nuclear electric power contributed 20 percent; hydroelectric power, 10 percent; natural gas, 8 percent; petroleum, 5 percent; and wood, waste, geothermal, wind, photovoltaic, and solar thermal energy, about 1 percent.

Table 2.1 Energy Consumption Summary for February 1988
(Quadrillion (10^{15}) Btu)

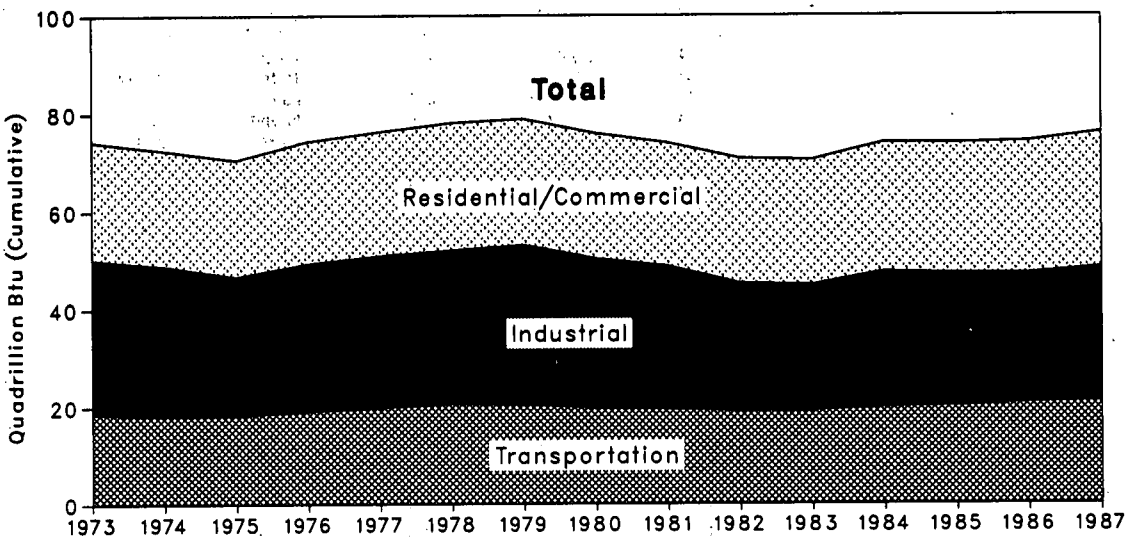
Energy Source	Sector				Total
	Residential and Commercial	Industrial	Transportation	Electric Utilities	
Coal	0.017	0.213	[a]	1.296	1.528
Natural Gas[b]	1.104	.660	0.048	.176	1.989
Petroleum Products	.304	.705	1.619	.125	2.753
Hydroelectric Power	-	.003	-	.224	.227
Nuclear Electric Power	-	-	-	.457	.457
Net Imports of Coal Coke	-	.002	-	-	.002
Other[c]	-	-	-	.018	.018
Primary Consumption	**1.425**	**1.583**	**1.668**	**2.295**	**6.973**
Electricity	.489	.241	.001		
Net Energy Consumption	**1.914**	**1.824**	**1.669**		**5.409**
Electrical System Energy Losses	1.046	.516	.002		1.563
Total Energy Consumption[d]	**2.960**	**2.339**	**1.671**		**6.973**

[a]Small amounts of coal consumed for transportation are reported as industrial sector consumption.
[b]Includes supplemental gaseous fuels. Transportation sector is pipeline fuel only.
[c]Other 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.
Note: Totals may not equal sum of components due to independent rounding and the use of sector-specific conversion factors.
Additional Notes and Sources: See end of section.

[1]Percentage changes are calculated using unrounded data.

Figure 2.1 Consumption of Energy by End-Use Sector

Yearly



Monthly

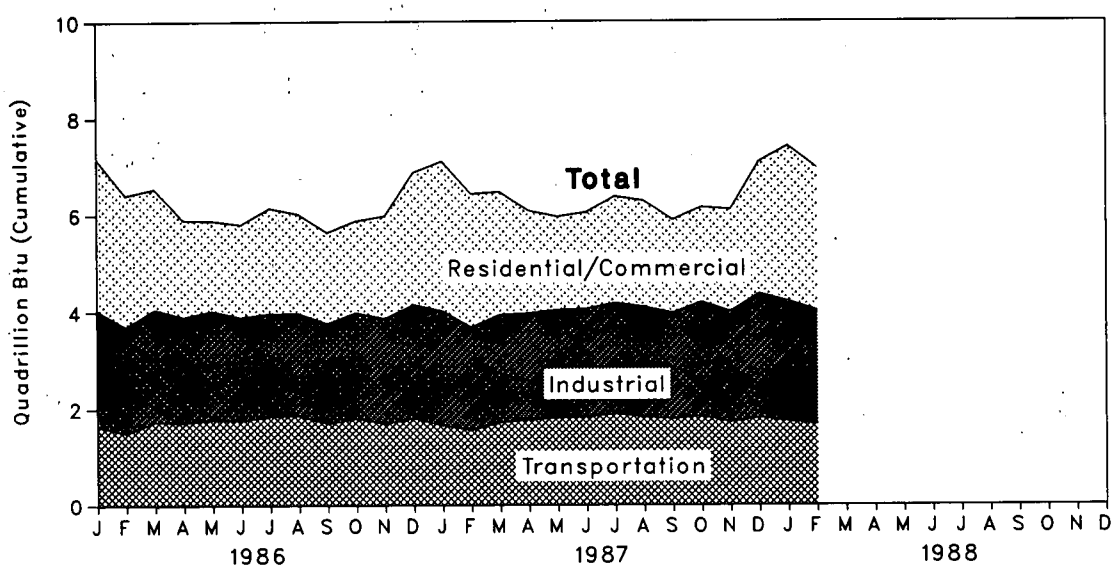


Table 2.2 Consumption of Energy by End-Use Sector
(Quadrillion (10^{15}) Btu)

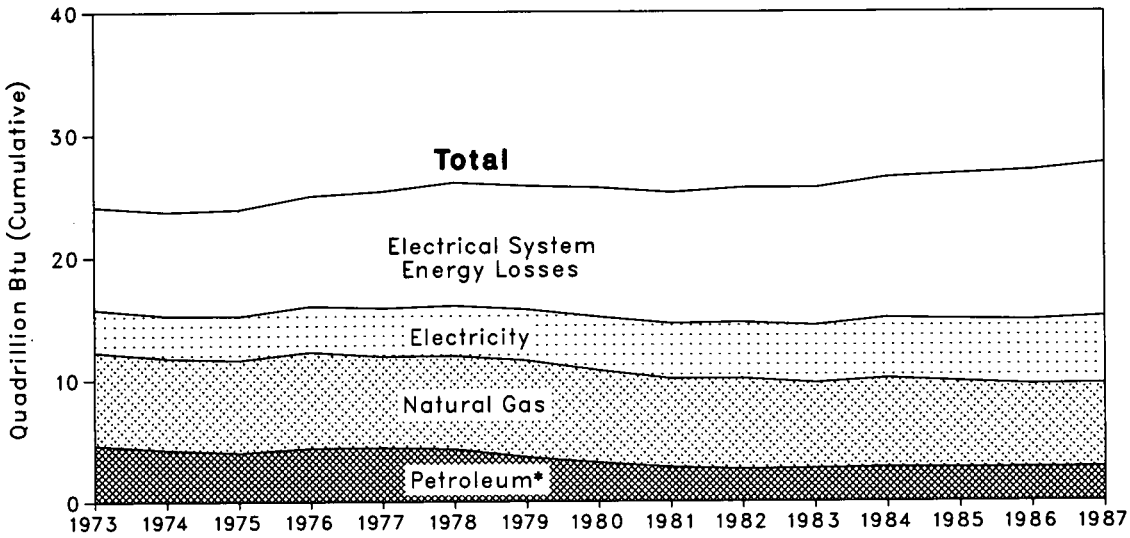
	Residential and Commercial		Industrial		Transportation		Total Net	Total Gross
	Net	Gross	Net	Gross	Net	Gross		
1973 Total	**15.766**	**24.142**	**25.926**	**31.536**	**18.575**	**18.595**	**60.274**	**74.282**
1974 Total	**15.246**	**23.724**	**24.998**	**30.697**	**18.091**	**18.113**	**58.341**	**72.543**
1975 Total	**15.200**	**23.900**	**22.742**	**28.405**	**18.215**	**18.240**	**56.156**	**70.545**
1976 Total	**15.997**	**25.019**	**24.045**	**30.240**	**19.068**	**19.094**	**59.118**	**74.362**
1977 Total	**15.828**	**25.387**	**24.606**	**31.086**	**19.783**	**19.808**	**60.223**	**76.289**
1978 Total	**16.023**	**26.088**	**24.659**	**31.411**	**20.567**	**20.589**	**61.251**	**78.089**
1979 Total	**15.709**	**25.809**	**25.688**	**32.623**	**20.439**	**20.464**	**61.836**	**78.897**
1980 Total	**15.075**	**25.653**	**23.852**	**30.607**	**19.669**	**19.695**	**58.596**	**75.955**
1981 Total	**14.541**	**25.243**	**22.544**	**29.249**	**19.470**	**19.496**	**56.556**	**73.990**
1982 Total	**14.629**	**25.624**	**20.018**	**26.138**	**19.040**	**19.067**	**53.696**	**70.837**
1983 Total	**14.395**	**25.613**	**19.396**	**25.742**	**19.108**	**19.134**	**52.907**	**70.497**
1984 Total	**15.008**	**26.461**	**21.058**	**27.717**	**19.852**	**19.881**	**55.920**	**74.060**
1985 Total	**14.899**	**26.754**	**20.410**	**27.071**	**20.091**	**20.123**	**55.397**	**73.944**
1986 January	2.034	3.143	1.880	2.387	1.642	1.644	5.556	7.175
February	1.795	2.723	1.736	2.209	1.485	1.488	5.013	6.417
March	1.573	2.503	1.802	2.320	1.724	1.726	5.095	6.546
April	1.152	2.002	1.669	2.186	1.705	1.707	4.519	5.888
May	.945	1.869	1.668	2.241	1.769	1.772	4.378	5.877
June	.860	1.917	1.569	2.132	1.751	1.753	4.181	5.803
July	.905	2.177	1.525	2.114	1.846	1.849	4.283	6.146
August	.905	2.059	1.566	2.102	1.856	1.858	4.331	6.024
September	.869	1.877	1.545	2.070	1.690	1.692	4.106	5.642
October	.960	1.899	1.651	2.182	1.793	1.795	4.406	5.878
November	1.170	2.121	1.628	2.168	1.685	1.687	4.485	5.978
December	1.661	2.743	1.806	2.342	1.796	1.799	5.265	6.887
Total	**14.827**	**27.032**	**20.043**	**26.454**	**20.746**	**20.775**	**55.617**	**74.260**
1987 January	1.957	3.103	1.835	2.360	1.647	1.650	5.441	7.115
February	1.816	2.761	1.667	2.134	1.542	1.544	5.027	6.441
March	1.572	2.549	1.687	2.217	1.712	1.714	4.971	6.480
April	1.236	2.123	1.680	2.200	1.759	1.761	4.671	6.080
May	.952	1.931	1.643	2.222	1.804	1.806	4.398	5.958
June	.891	2.000	1.629	2.225	1.822	1.825	4.345	6.053
July	.941	2.215	1.674	2.279	1.886	1.889	4.504	6.386
August	.945	2.204	1.672	2.258	1.826	1.828	4.444	6.293
September	.920	1.926	1.651	2.181	1.781	1.783	4.351	5.889
October	1.034	1.967	1.791	2.342	1.840	1.843	4.662	6.149
November	1.187	2.116	1.720	2.276	1.710	1.713	4.614	6.102
December	1.647	2.738	1.984	2.555	1.804	1.807	5.433	7.097
Total	**15.097**	**27.631**	**20.633**	**27.251**	**21.133**	**21.162**	**56.861**	**76.042**
1988 January	2.003	3.219	1.919	2.469	1.730	1.732	5.656	7.424
February	1.914	2.960	1.824	2.339	1.669	1.671	5.409	6.973
2-Month Total	**3.918**	**6.179**	**3.743**	**4.808**	**3.398**	**3.403**	**11.066**	**14.397**
1987 2-Month Total	**3.773**	**5.864**	**3.502**	**4.494**	**3.189**	**3.194**	**10.468**	**13.556**
1986 2-Month Total	**3.829**	**5.866**	**3.616**	**4.597**	**3.127**	**3.132**	**10.569**	**13.592**

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.

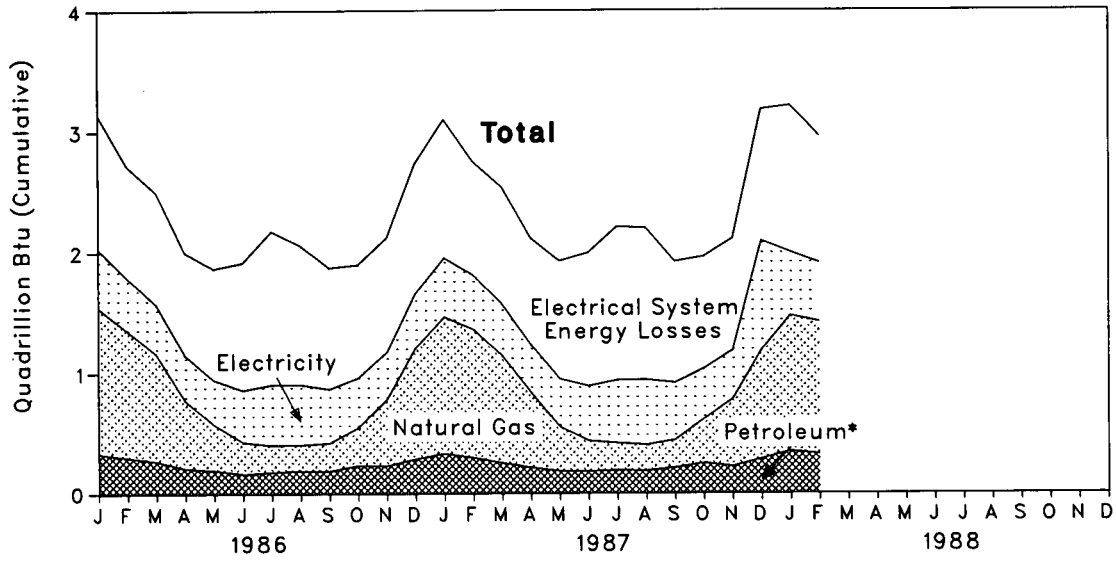
Additional Notes and Sources: See end of section.

Figure 2.2 Consumption of Energy by the Residential and Commercial Sector

Yearly



Monthly



*Includes coal.

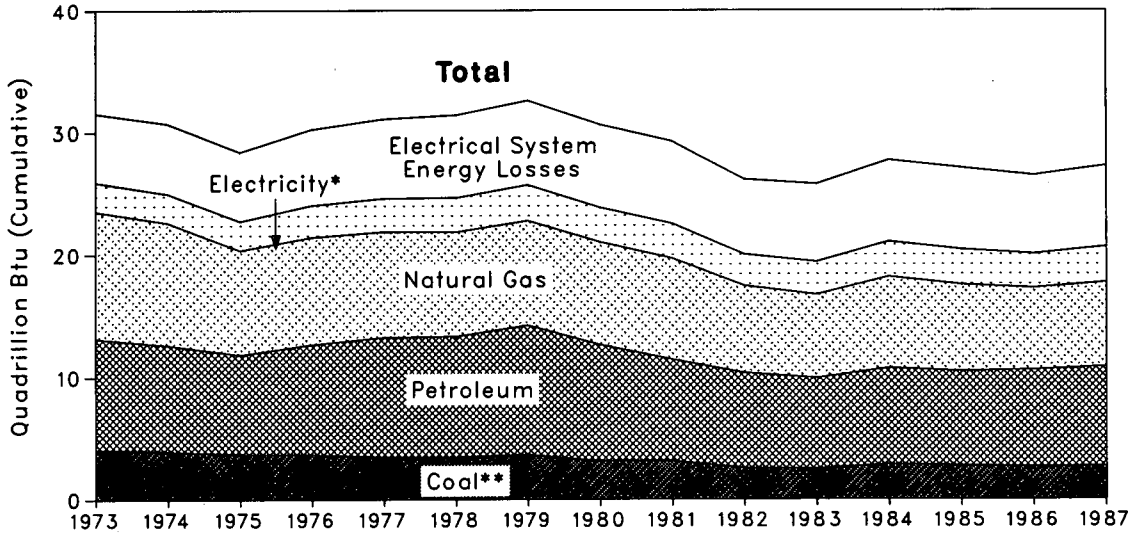
Table 2.3 Consumption of Energy by the Residential and Commercial Sector
(Quadrillion (10^{15}) Btu)

	Coal	Natural Gas[a]	Petroleum	Electricity[b]	Net Energy	Electrical System Energy Losses	Total[c]	Year to Date
1973 Total	**0.254**	**7.626**	**4.391**	**3.495**	**15.766**	**8.377**	**24.142**	
1974 Total	**.257**	**7.518**	**3.996**	**3.475**	**15.246**	**8.478**	**23.724**	
1975 Total	**.209**	**7.581**	**3.805**	**3.604**	**15.200**	**8.701**	**23.900**	
1976 Total	**.203**	**7.866**	**4.181**	**3.747**	**15.997**	**9.023**	**25.019**	
1977 Total	**.205**	**7.461**	**4.206**	**3.955**	**15.828**	**9.559**	**25.387**	
1978 Total	**.214**	**7.624**	**4.070**	**4.116**	**16.023**	**10.065**	**26.088**	
1979 Total	**.187**	**7.891**	**3.448**	**4.184**	**15.709**	**10.100**	**25.809**	
1980 Total	**.145**	**7.540**	**3.035**	**4.355**	**15.075**	**10.578**	**25.653**	
1981 Total	**.167**	**7.243**	**2.634**	**4.497**	**14.541**	**10.703**	**25.243**	
1982 Total	**.187**	**7.427**	**2.449**	**4.566**	**14.629**	**10.995**	**25.624**	
1983 Total	**.192**	**7.024**	**2.498**	**4.680**	**14.395**	**11.218**	**25.613**	
1984 Total	**.209**	**7.292**	**2.585**	**4.922**	**15.008**	**11.453**	**26.461**	
1985 Total	**.176**	**7.079**	**2.573**	**5.072**	**14.899**	**11.854**	**26.754**	
1986 January	.020	1.217	.308	.488	2.034	1.109	3.143	3.143
February	.018	1.060	.280	.437	1.795	.928	2.723	5.866
March	.013	.896	.254	.410	1.573	.930	2.503	8.368
April	.018	.568	.190	.375	1.152	.850	2.002	10.370
May	.011	.378	.182	.374	.945	.924	1.869	12.239
June	.009	.261	.154	.436	.860	1.057	1.917	14.156
July	.011	.221	.166	.507	.905	1.272	2.177	16.333
August	.010	.212	.178	.505	.905	1.154	2.059	18.393
September	.013	.228	.173	.454	.869	1.008	1.877	20.270
October	.015	.310	.216	.419	.960	.939	1.899	22.169
November	.016	.551	.212	.392	1.170	.951	2.121	24.290
December	.021	.924	.262	.454	1.661	1.082	2.743	27.033
Total	**.176**	**6.825**	**2.576**	**5.251**	**14.827**	**12.204**	**27.032**	
1987 January	.017	1.140	.309	.490	1.957	1.147	3.103	3.103
February	.015	1.071	.278	.452	1.816	.945	2.761	5.864
March	.011	.895	.239	.427	1.572	.977	2.549	8.413
April	.014	.628	.198	.396	1.236	.887	2.123	10.535
May	.009	.365	.174	.404	.952	.979	1.931	12.467
June	.007	.252	.172	.460	.891	1.109	2.000	14.466
July	.012	.224	.176	.529	.941	1.274	2.215	16.682
August	.011	.213	.173	.548	.945	1.259	2.204	18.886
September	.015	.227	.194	.483	.920	1.006	1.926	20.812
October	.016	.367	.230	.421	1.034	.933	1.967	22.779
November	.016	.562	.203	.405	1.187	.929	2.116	24.895
December	.021	.908	.260	.458	1.647	1.091	2.738	27.632
Total	**.164**	**6.853**	**2.606**	**5.475**	**15.097**	**12.534**	**27.631**	
1988 January	.019	1.131	.325	.528	2.003	1.216	3.219	3.219
February	.017	1.104	.304	.489	1.914	1.046	2.960	6.179
2-Month Total	**.036**	**2.235**	**.629**	**1.018**	**3.918**	**2.262**	**6.179**	
1987 2-Month Total	**.032**	**2.211**	**.587**	**.942**	**3.773**	**2.092**	**5.864**	
1986 2-Month Total	**.038**	**2.277**	**.588**	**.925**	**3.829**	**2.037**	**5.866**	

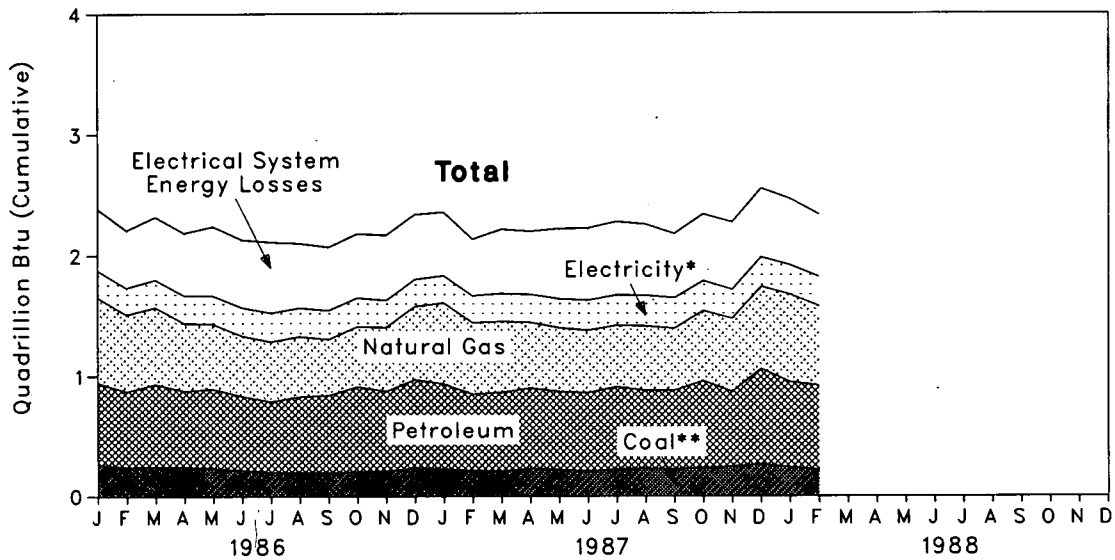
[a]Includes supplemental gaseous fuels.
[b]Includes electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy.
[c]Excludes wood, waste, geothermal wind, photovoltaic, and solar thermal energy except for small amounts used by electric utilities to generate electricity for distribution.
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 Consumption of Energy by the Industrial Sector

Yearly



Monthly



*Includes hydroelectric power.
**Includes net imports of coal coke.

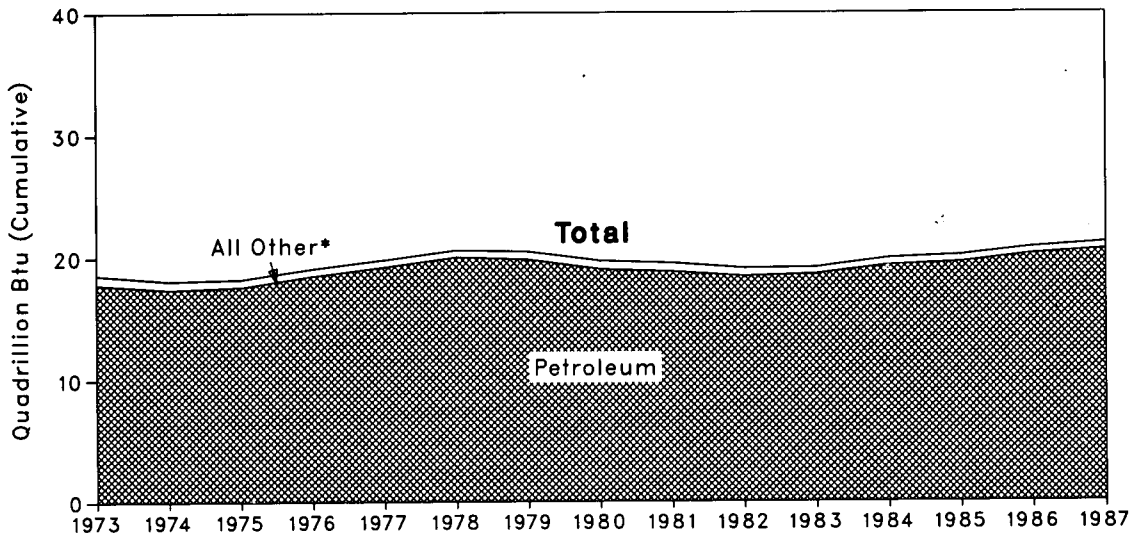
Table 2.4 Consumption of Energy by the Industrial Sector
(Quadrillion (10^{15}) Btu)

	Coal	Natural Gas[a]	Petroleum	Hydroelectric Power	Net Imports of Coal Coke	Electricity[b]	Net Energy	Electrical System Energy Losses	Total[c]	Year to Date
1973 Total	4.057	10.388	9.113	0.035	-0.007	2.341	25.926	5.611	31.536	
1974 Total	3.868	10.003	8.698	.033	.056	2.337	24.998	5.701	30.697	
1975 Total	3.666	8.532	8.151	.032	.014	2.348	22.742	5.664	28.405	
1976 Total	3.660	8.761	9.018	.033	0	2.573	24.045	6.196	30.240	
1977 Total	3.453	8.636	9.786	.033	.015	2.682	24.606	6.481	31.086	
1978 Total	3.314	8.539	9.890	.032	.125	2.761	24.659	6.751	31.411	
1979 Total	3.593	8.549	10.576	.034	.063	2.873	25.688	6.935	32.623	
1980 Total	3.155	8.394	9.524	.033	-.035	2.781	23.852	6.755	30.607	
1981 Total	3.157	8.257	8.295	.033	-.016	2.817	22.544	6.705	29.249	
1982 Total	2.552	7.116	7.797	.033	-.022	2.542	20.018	6.120	26.138	
1983 Total	2.490	6.821	7.420	.033	-.016	2.648	19.396	6.346	25.742	
1984 Total	2.842	7.449	7.885	.032	-.011	2.862	21.058	6.659	27.717	
1985 Total	2.760	7.080	7.702	.033	-.013	2.850	20.410	6.661	27.071	
1986 January	.259	.709	.686	.003	0	.223	1.880	.507	2.387	2.387
February	.239	.637	.634	.003	0	.223	1.736	.474	2.209	4.597
March	.240	.638	.693	.003	-.001	.229	1.802	.519	2.320	6.917
April	.239	.563	.637	.003	0	.228	1.669	.517	2.186	9.103
May	.231	.540	.664	.003	-.003	.232	1.668	.574	2.241	11.344
June	.212	.502	.620	.003	0	.232	1.569	.563	2.132	13.476
July	.196	.499	.593	.003	-.002	.235	1.525	.589	2.114	15.589
August	.199	.501	.635	.002	-.006	.235	1.566	.536	2.102	17.692
September	.193	.466	.647	.002	0	.237	1.545	.526	2.070	19.762
October	.198	.499	.715	.002	-.001	.237	1.651	.531	2.182	21.944
November	.208	.531	.668	.002	-.003	.223	1.628	.540	2.168	24.112
December	.229	.607	.742	.002	-.001	.225	1.806	.536	2.342	26.454
Total	2.643	6.693	7.934	.033	-.017	2.758	20.043	6.410	26.454	
1987 January	.224	.673	.711	.003	-.001	.224	1.835	.525	2.360	2.360
February	.207	.592	.642	.003	.001	.223	1.667	.467	2.134	4.494
March	.206	.588	.660	.003	-.002	.232	1.687	.530	2.217	6.711
April	.226	.545	.674	.003	0	.232	1.680	.520	2.200	8.912
May	.218	.529	.653	.003	0	.239	1.643	.579	2.222	11.133
June	.201	.518	.658	.003	.002	.248	1.629	.596	2.225	13.359
July	.221	.508	.690	.003	0	.252	1.674	.605	2.279	15.638
August	.224	.534	.655	.002	.001	.255	1.672	.587	2.258	17.896
September	.217	.513	.660	.002	.004	.254	1.651	.530	2.181	20.077
October	.228	.581	.729	.002	.002	.249	1.791	.551	2.342	22.419
November	.238	.606	.629	.002	.003	.242	1.720	.556	2.276	24.695
December	.262	.684	.798	.002	-.001	.240	1.984	.570	2.555	27.250
Total	2.671	6.873	8.157	.033	.009	2.891	20.633	6.618	27.251	
1988 January	.232	.728	.715	.003	.003	.239	1.919	.550	2.469	2.469
February	.213	.660	.705	.003	.002	.241	1.824	.516	2.339	4.808
2-Month Total	.445	1.387	1.420	.006	.005	.480	3.743	1.065	4.808	
1987 2-Month Total	.431	1.266	1.353	.006	0	.448	3.502	.992	4.494	
1986 2-Month Total	.498	1.346	1.320	.006	0	.446	3.616	.981	4.597	

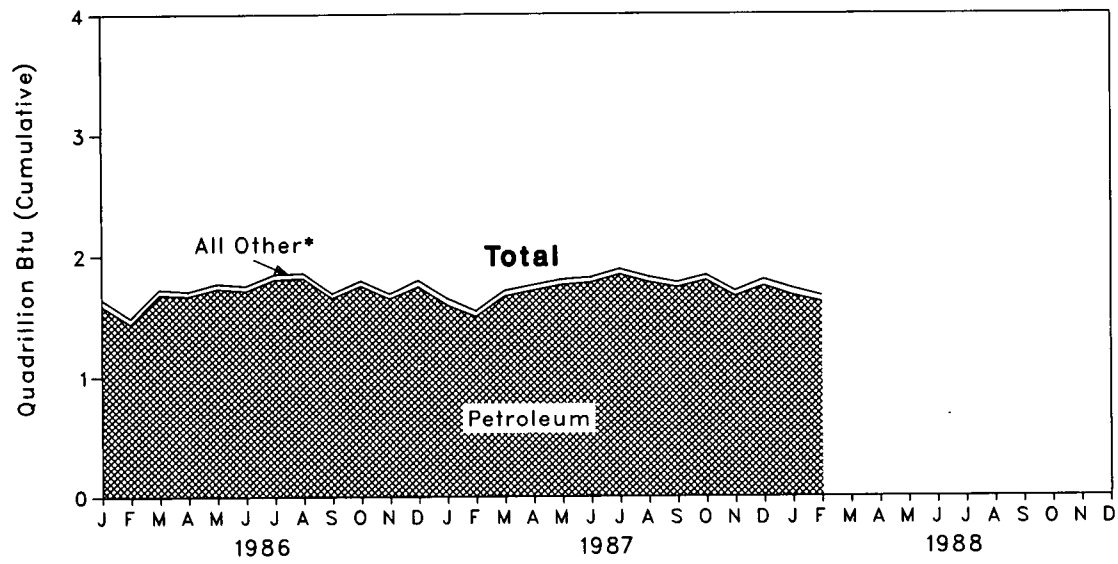
[a]Includes supplemental gaseous fuels.
[b]Includes electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy.
[c]Excludes wood, waste, geothermal, wind, photovoltaic, and solar thermal energy except for small amounts used by electric utilities to generate electricity for distribution.
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 Consumption of Energy by the Transportation Sector

Yearly



Monthly



*Includes coal, natural gas, electricity, and electrical system energy losses.

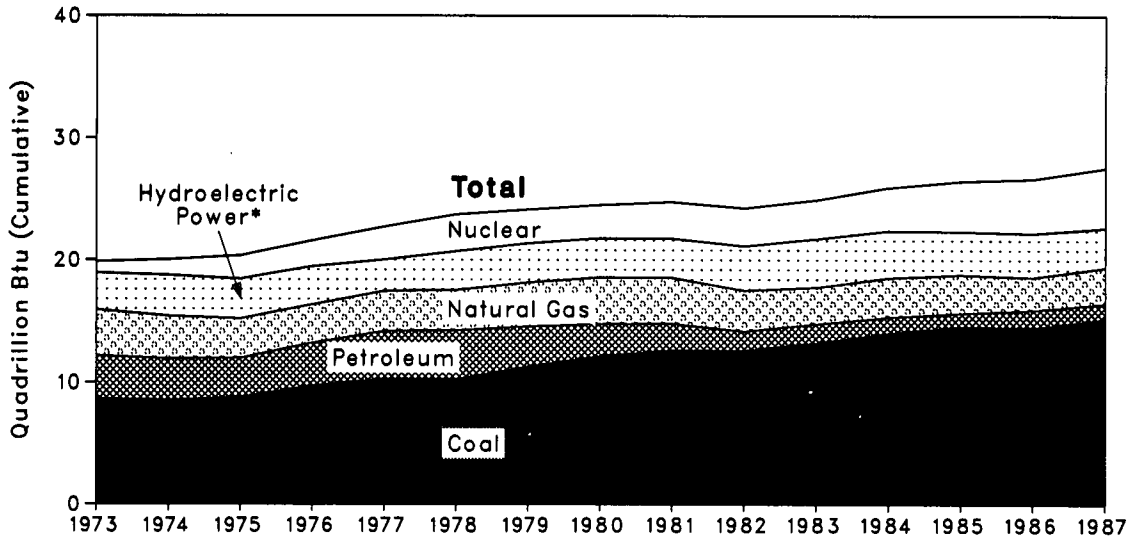
Table 2.5 Consumption of Energy by the Transportation Sector
(Quadrillion (10^{15}) Btu)

	Coal	Natural Gas[a]	Petroleum	Electricity[b]	Net Energy	Electrical System Energy Losses	Total[c]	Year to Date
1973 Total	0.003	0.743	17.821	0.008	18.575	0.020	18.595	
1974 Total	.002	.685	17.396	.009	18.091	.022	18.113	
1975 Total	.001	.595	17.610	.010	18.215	.025	18.240	
1976 Total	[d]	.559	18.499	.010	19.068	.025	19.094	
1977 Total	[d]	.543	19.230	.010	19.783	.025	19.808	
1978 Total	[e]	.539	20.019	.009	20.567	.022	20.589	
1979 Total	[e]	.612	19.817	.010	20.439	.025	20.464	
1980 Total	[e]	.650	19.009	.011	19.669	.026	19.695	
1981 Total	[e]	.658	18.800	.011	19.470	.026	19.496	
1982 Total	[e]	.612	18.418	.011	19.040	.026	19.067	
1983 Total	[e]	.505	18.592	.011	19.108	.026	19.134	
1984 Total	[e]	.545	19.295	.013	19.852	.029	19.881	
1985 Total	[e]	.519	19.558	.014	20.091	.032	20.123	
1986 January	[e]	.051	1.589	.001	1.642	.002	1.644	1.644
February	[e]	.044	1.440	.001	1.485	.002	1.488	3.132
March	[e]	.043	1.679	.001	1.724	.002	1.726	4.858
April	[e]	.037	1.667	.001	1.705	.002	1.707	6.565
May	[e]	.039	1.729	.001	1.769	.003	1.772	8.336
June	[e]	.038	1.712	.001	1.751	.002	1.753	10.090
July	[e]	.039	1.806	.001	1.846	.003	1.849	11.939
August	[e]	.039	1.816	.001	1.856	.002	1.858	13.797
September	[e]	.037	1.651	.001	1.690	.002	1.692	15.489
October	[e]	.039	1.753	.001	1.793	.002	1.795	17.284
November	[e]	.039	1.645	.001	1.685	.002	1.687	18.972
December	[e]	.048	1.747	.001	1.796	.003	1.799	20.771
Total	[e]	.499	20.235	.012	20.746	.029	20.775	
1987 January	[e]	.052	1.593	.001	1.647	.003	1.650	1.650
February	[e]	.044	1.497	.001	1.542	.002	1.544	3.194
March	[e]	.044	1.667	.001	1.712	.002	1.714	4.908
April	[e]	.041	1.717	.001	1.759	.002	1.761	6.670
May	[e]	.041	1.762	.001	1.804	.003	1.806	8.476
June	[e]	.039	1.782	.001	1.822	.003	1.825	10.300
July	[e]	.040	1.845	.001	1.886	.003	1.889	12.189
August	[e]	.040	1.784	.001	1.826	.003	1.828	14.018
September	[e]	.038	1.741	.001	1.781	.002	1.783	15.800
October	[e]	.040	1.799	.001	1.840	.002	1.843	17.643
November	[e]	.042	1.667	.001	1.710	.002	1.713	19.356
December	[e]	.050	1.752	.001	1.804	.003	1.807	21.162
Total	[e]	.513	20.606	.013	21.133	.030	21.162	
1988 January	[e]	.055	1.674	.001	1.730	.002	1.732	1.732
February	[e]	.048	1.619	.001	1.669	.002	1.671	3.403
2-Month Total	[e]	.103	3.293	.002	3.398	.005	3.403	
1987 2-Month Total	[e]	.097	3.090	.002	3.189	.005	3.194	
1986 2-Month Total	[e]	.096	3.029	.002	3.127	.005	3.132	

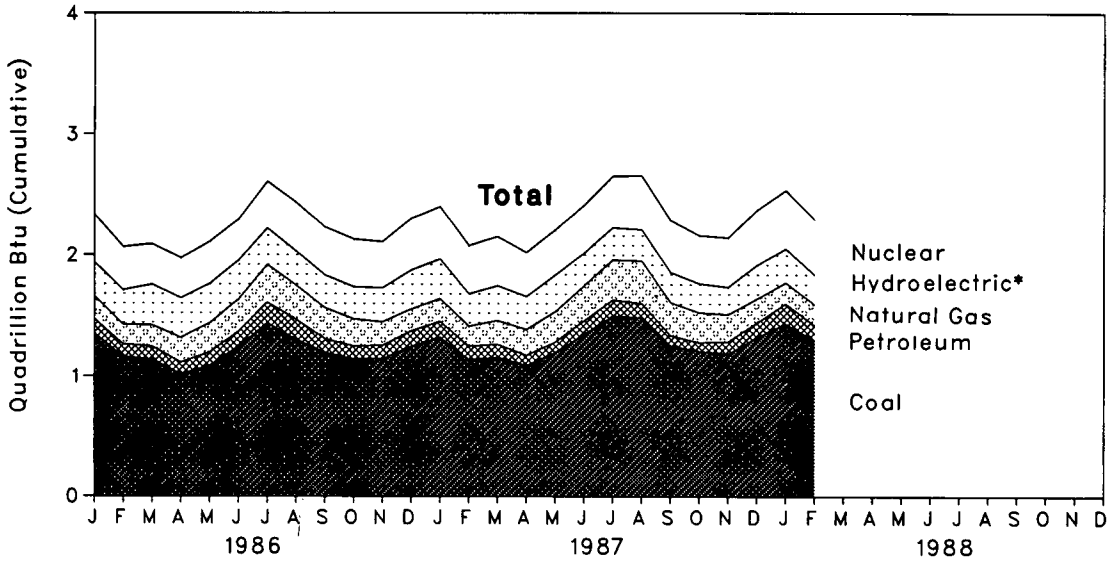
[a]Pipeline fuel only, including supplemental gaseous fuels.
[b]Includes electricity generated for distribution from wood, waste, geothermal, wind photovoltaic, and solar thermal energy.
[c]Excludes wood, waste, geothermal, wind, photovoltaic, and solar thermal energy for small amounts used by electric utilities to generate electricity for distribution.
[d]Less than 0.5 trillion Btu.
[e]Since 1978, the small amounts of coal consumed for transportation have been reported as industrial sector consumption.
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

Yearly



Monthly



*Includes other.

Table 2.6 Energy Input at Electric Utilities
(Quadrillion (10^{15}) Btu)

	Coal	Natural Gas[a]	Petro-leum[b]	Hydro-electric Power[c]	Nuclear Electric Power	Other[d]	Total	Year to Date
1973 Total	**8.658**	**3.748**	**3.515**	**2.975**	**0.910**	**0.046**	**19.853**	
1974 Total	**8.534**	**3.519**	**3.365**	**3.276**	**1.272**	**.056**	**20.022**	
1975 Total	**8.786**	**3.240**	**3.166**	**3.187**	**1.900**	**.072**	**20.350**	
1976 Total	**9.720**	**3.152**	**3.477**	**3.032**	**2.111**	**.081**	**21.573**	
1977 Total	**10.262**	**3.284**	**3.901**	**2.482**	**2.702**	**.082**	**22.713**	
1978 Total	**10.238**	**3.297**	**3.987**	**3.110**	**3.024**	**.068**	**23.724**	
1979 Total	**11.260**	**3.613**	**3.283**	**3.107**	**2.776**	**.089**	**24.128**	
1980 Total	**12.123**	**3.810**	**2.634**	**3.085**	**2.739**	**.114**	**24.505**	
1981 Total	**12.583**	**3.768**	**2.202**	**3.072**	**3.008**	**.127**	**24.760**	
1982 Total	**12.582**	**3.342**	**1.568**	**3.528**	**3.131**	**.108**	**24.260**	
1983 Total	**13.213**	**2.998**	**1.544**	**3.838**	**3.203**	**.133**	**24.929**	
1984 Total	**14.020**	**3.220**	**1.286**	**3.684**	**3.553**	**.174**	**25.937**	
1985 Total	**14.542**	**3.160**	**1.090**	**3.330**	**4.147**	**.213**	**26.482**	
1986 January	1.350	.190	.119	.258	.391	.023	2.331	2.331
February	1.161	.162	.101	.268	.354	.019	2.065	4.396
March	1.136	.175	.107	.318	.333	.020	2.090	6.486
April	1.014	.205	.097	.309	.329	.018	1.972	8.458
May	1.084	.239	.111	.310	.345	.018	2.107	10.565
June	1.242	.269	.123	.299	.339	.020	2.291	12.856
July	1.434	.311	.173	.279	.388	.021	2.607	15.463
August	1.301	.286	.163	.258	.405	.021	2.433	17.896
September	1.192	.255	.115	.253	.395	.018	2.228	20.124
October	1.141	.224	.105	.251	.391	.017	2.130	22.254
November	1.142	.193	.112	.268	.378	.015	2.108	24.363
December	1.246	.181	.126	.302	.426	.020	2.302	26.665
Total	**14.444**	**2.691**	**1.452**	**3.372**	**4.475**	**.232**	**26.665**	
1987 January	1.321	.191	.128	.297	.432	.020	2.390	2.390
February	1.136	.164	.111	.264	.396	.019	2.090	4.480
March	1.156	.197	.107	.286	.403	.021	2.170	6.649
April	1.088	.213	.084	.271	.362	.019	2.039	8.688
May	1.195	.251	.086	.282	.371	.020	2.205	10.893
June	1.343	.293	.112	.252	.395	.021	2.417	13.310
July	1.497	.330	.134	.249	.433	.022	2.664	15.973
August	1.483	.350	.120	.230	.447	.022	2.652	18.626
September	1.254	.277	.082	.215	.429	.020	2.277	20.902
October	1.208	.246	.073	.216	.394	.020	2.158	23.060
November	1.184	.224	.103	.201	.405	.020	2.136	25.196
December	1.323	.203	.117	.245	.454	.020	2.363	27.559
Total	**15.188**	**2.941**	**1.257**	**3.009**	**4.920**	**.245**	**27.559**	
1988 January	1.434	.173	.169	.258	.483	.021	2.536	2.536
February	1.296	.176	.125	.224	.457	.018	2.295	4.831
2-Month Total	**2.730**	**.348**	**.293**	**.482**	**.939**	**.038**	**4.831**	
1987 2-Month Total	**2.457**	**.355**	**.240**	**.562**	**.828**	**.039**	**4.480**	
1986 2-Month Total	**2.511**	**.353**	**.220**	**.525**	**.745**	**.042**	**4.396**	

[a]Includes supplemental gaseous fuels.
[b]Includes 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.
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.

Notes and Sources for the Consumption Section

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 and Commercial Sector-- private household establishments (which consume energy primarily for space heating, water heating, air conditioning, refrigeration, cooking, and clothes drying); nonmanufacturing business establishments, including hotels, motels, restaurants, wholesale businesses, retail stores, laundries, and other service enterprises; health, social, and educational institutions; and Federal, State, and local governments. Street lights, pumps, bridges, and public swimming pools are also included.
- Industrial sector--manufacturing, construction, mining, agriculture, fishing, and forestry establishments.
- 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.
- Electric utility sector--privately- and publicly-owned establishments that generate electricity primarily for use by the public.

3. Conversion Factors: See the Conversion Factors section of this publication.

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

- 1973 through 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), EIA Form 759 (formerly FPC Form 4), "Monthly Power Plant Report."
- Other Industrial--October 1977 through December 1979: EIA, EIA Form 3, "Monthly Fuel Consumption Report - Manufacturing Plants"; January 1980 forward: EIA, EIA Form 3, "Quarterly Fuel Consumption Report - Manufacturing Plants" and EIA Form 6, "Coal Distribution Report."
- Coke Plants--October 1977 through December 1980: EIA, EIA Form 5/5A, "Coke and Coal Chemicals - Monthly/Annual"; January 1981 forward: EIA, EIA Form 5/5A, "Coke and Coal Chemicals - Quarterly/Annual."
- Residential and Commercial--October 1977 through December 1979: EIA, EIA Form 2, "Monthly Coal Report, Retail Dealers and Upper Lake Docks"; January 1980 forward: EIA, EIA Form 6, "Coal Distribution Report."

5. Natural Gas: Natural gas consumption by end-use sector is based on data presented in Table 4.3 of this report. For Section 2 calculations, lease and plant fuel consumption are added to the industrial sector deliveries and pipeline fuel represents the transportation sector's use of natural gas. Values in Btu are derived using the conversion factors provided in the Conversion Factors section of this publication. Sources:

- 1973 through 1975: DOI, BOM, *Minerals Yearbook,* "Natural Gas" chapter.
- 1976 through 1978: EIA, *Energy Data Reports,* "Natural Gas, Annual."
- 1979: EIA, *Natural Gas Production and Consumption 1979.*
- 1980 through 1986: EIA, *Natural Gas Annual.*
- 1987 forward: EIA, EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers," and EIA computations.
- Electric utilities consumption--1973 through 1976: FPC Form 4, "Monthly Power Plant Report." 1977 through 1981: Federal Energy Regulatory Commission (FERC), FPC Form 4, "Monthly Power Plant Report." 1982 forward: EIA, EIA Form 759, "Monthly Power Plant Report."
- American Gas Association, "Monthly Gas Utility Statistical Report."

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 through 1975: DOI, BOM, *Mineral Industry Surveys,* "Petroleum Statement, Annual."
- 1976 through 1980: EIA, *Energy Data Reports,* "Petroleum Statement, Annual."
- 1981 through 1986: EIA, *Petroleum Supply Annual.*
- 1987 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 Utility Sector, All Periods.

Monthly and annual consumption in 1973 through 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 utilities.

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

Non-Electric Utility Sectors, Annual Estimates Through 1986.

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 sector deliveries are directly from the "Deliveries" reports for 1979 through 1986. 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 sector deliveries are directly from the "Deliveries" reports for 1979 through 1986. 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 sector deliveries for 1979 through 1986 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; and

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

Non-Electric Utility Sectors, Monthly Estimates Through 1986.

- Residential and commercial sector monthly consumption is estimated by allocating the annual sector 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 through 1980 and the American Petroleum Institute for 1981 and 1982, and the Energy Information Administration, Form EIA-782-A, "Refiners/Gas Plant Operators' Monthly Petroleum Product Sales Report," No. 2 Fuel Oil Sales to End Users and for Resale, for 1983 through 1986.

- The transportation sector 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 sector 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 Utility Sectors, 1987 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 1986.

- **Jet Fuel**--Through 1982, small amounts of kerosene-type jet fuel were consumed by the electric utility sector. Kerosene-type jet fuel deliveries to electric utilities as reported on the FERC-423 (formerly 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 sector deliveries are directly from the "Deliveries" reports for 1979 through 1986. Deliveries for 1986 are used as estimates for suc-

ceeding 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 sector deliveries are directly from the "Deliveries" reports for 1979 through 1986. Deliveries for 1986 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

- Industrial sector deliveries are directly from the "Deliveries" reports for 1979 through 1986. Deliveries for 1986 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 that is consumed in internal combustion engines is allocated between the transportation and industrial sectors according to a 5-year moving average of the percentage of carburetors sold to each end-use category. The proportions range from 31 percent transportation and 69 percent industrial in 1973 to 63 percent transportation and 37 percent industrial in 1985.

  - 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 synthetic natural gas feedstock and use in secondary recovery projects; all farm use; LPG sold to gas utility companies for distribution through the mains; and a portion of the use of LPG as an internal combustion engine fuel.

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

  - 1973 through 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 through 1986: American Petroleum Institute (API), "Sales of Natural Gas Liquids and Liquefied Refinery Gases" based on an LPG sales survey jointly sponsored by API, the Gas Processors Association, and the National Liquefied Petroleum Gas Association.

  - Succeeding periods: The 1986 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 those 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, miscellaneous use, and unclassified use;

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

  - 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 the electric utility sector is from EIA Form 759, "Monthly Power Plant Report" (formerly FPC Form 4). The remaining petroleum coke is assigned to the industrial sector.

- **Residual Fuel**

  Electric Utility Sector, All Periods.

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

products reported as "heavy oil" consumed at utilities.

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

Non-Electric Utility Sectors, Annual Estimates Through 1986.

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 sector deliveries are directly from the "Deliveries" reports for 1979 through 1986. 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 sector deliveries for 1979 through 1986 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; and

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

Non-Electric Utility Sectors, Monthly Estimates Through 1986.

- 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 through 1980 and the American Petroleum Institute for 1981 and 1982, and the Energy Information Administration, Form EIA-782-A, "Refiners/Gas Plant Operators' Monthly Petroleum Product Sales Report," No. 2 Fuel Oil Sales to End Users and for Resale, 1983 through 1986.

- Transportation sector monthly estimates are made by evenly distributing the annual sector estimate over the months, adjusted for the number of days per month.

- Industrial sector monthly estimates are made by subtracting the commercial, transportation, and electric utility sector estimates from each month's total residual fuel supplied.

Non-Electric Utility Sectors, 1987 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 1986.

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

Sources for industrial sector:

- 1973 through 1978: FPC Form 4, *Monthly Power Plant Report* for plants with generating capacity exceeding 10 megawatts and FPC Form 12-C, *Industrial Electric Generating Capacity*, for all other plants.
- 1979: FPC Form 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 through 1979; monthly generation estimated to be in proportion to each month's hydroelectricity generation in the electric utility industry in 1980.

Note for imports and exports of electricity:

- Monthly electricity imports and exports estimates for 1982 forward were revised in the May 1984 *MER*. The revisions do not cause discontinuity in the annual data series: the data continue to come from the same source. The monthly data series, however, are discontinuous because monthly data from January 1982 forward are now available from the same source as the annual data. Estimates for monthly values prior to 1982, published in previous issues, were developed by con-

verting the annual value to a daily rate and multiplying by the number of days in the month. Accordingly, month-to-month analyses are not comparable when taken across the transition date of January 1982. Monthly analyses on either side of that date will be comparable. There is no known bias in either the annual data or the monthly data since January 1982.

Sources for imports and exports of electricity:

- 1973 through 1980: DOE, Economic Regulatory Administration, "Report on Electric Energy Exchanges with Canada and Mexico."
- 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 through 1986: DOE, Economic Regulatory Administration, *Electricity Transactions Across International Borders* (DOE/RG-0069) from the ERA-781, "Annual Report of International Electric Import/Export Data."
- 1987 forward: EIA estimates.

8. Nuclear Electric Power and Wood, Waste, Geothermal, Wind, Photovoltaic, and Solar Thermal Energy Sources Connected to Electric Utility Distribution Systems:
Sources:

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

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 through 1975: DOI, BOM, *Minerals Yearbook,* "Coke and Coal Chemicals," chapter.
- 1976 through 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: Sales of electricity represent consumption. From the sources cited below the following electricity sales categories are available: residential, commercial, industrial, and other. For the end-use estimates in this section, the "other" category (which is primarily sales for use in government buildings) is added to the commercial sector except for approximately 4 percent used by railroads and railways and accounted for in the transportation sector. Sales of electricity are converted into Btu at the rate of 3,412 Btu per kilowatthour.
Sources of sales data:

- 1973 through 1976: FPC, Form 5, "Monthly Statement of Electric Operating Revenue and Income."
- 1977 through February 1980: EIA, FPC Form 5, "Monthly Statement of Electric Operating Revenue and Income."
- March 1980 through December 1982: EIA, FERC Form 5, "Electric Utility Company Monthly Statement."
- January 1983 forward: EIA, EIA Form 826, "Electric Utility Company Monthly Statement."

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 are 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

Domestic crude oil production during April 1988 was estimated to be 8.3 million barrels per day, 1 percent[2] less than the March 1988 rate and 2 percent less than the rate in April 1987.

Total petroleum imports averaged 6.8 million barrels per day in April 1988, 2 percent more than the March 1988 rate and 17 percent more than the April 1987 rate.

In April 1988, 16.6 million barrels per day of petroleum products were supplied for domestic use, 5 percent less than in the previous month, but 1 percent above the level 1 year earlier. Motor gasoline accounted for 42 percent of the total; distillate fuel oil, 17 percent; and residual fuel oil, 8 percent.

Motor gasoline supplied during April 1988 averaged 7.0 million barrels per day, 3 percent below the rate in March 1988 and 4 percent below the rate of the previous April. Stocks of motor gasoline totaled 229 million barrels at the end of April 1988, 2 million barrels below the stock level at the end of March 1988 and 14 million barrels below the stock level 1 year earlier.

In April 1988, 2.9 million barrels of distillate fuel oil were supplied per day, 20 percent lower than the March 1988 rate and 5 percent lower than the April 1987 rate. Distillate fuel oil ending stocks for April 1988 were 95 million barrels, 6 million barrels above the previous month, but 5 million barrels below the April 1987 ending stock level.

Residual fuel oil supplied in April 1988 averaged 1.4 million barrels per day, 5 percent lower than in March 1988, but 8 percent higher than the April 1987 rate. Residual fuel oil stocks measured 42 million barrels at the end of April 1988, 2 million barrels lower than the previous month, but 6 million barrels higher than the stock level 1 year earlier.

Estimates for the most current month are based on Energy Information Administration (EIA) weekly data (except crude production) 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 January 1988. The total import data above include imports into the Strategic Petroleum Reserve.

[2]Percentage changes are calculated using unrounded data.

Table 3.1a Crude Oil[a] and Petroleum Products Overview

	Field Production			Stock Withdrawal[b]			Ending Stocks[c]
	Total Domestic[d]	Crude Oil	Natural Gas Plant Production	Crude Oil[e]	Petroleum Products	Petroleum Products Supplied	Crude Oil[e] 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**	**[I] 1,074**
1975 Average	**10,045**	**8,375**	**1,633**	**[I] -17**	**[I] -15**	**16,322**	**1,133**
1976 Average	**9,774**	**8,132**	**[h] 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**	**-97**	**-42**	**17,056**	**[I] 1,392**
1981 Average	**10,230**	**8,572**	**1,609**	**[I] -290**	**[I] 130**	**16,058**	**1,484**
1982 Average	**10,252**	**8,649**	**1,550**	**-136**	**283**	**15,296**	**[I] 1,430**
1983 Average	**10,299**	**8,688**	**1,559**	**[I] -214**	**[I] 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 January	10,911	9,137	1,711	-383	-151	16,088	1,535
February	10,916	9,173	1,696	-37	804	16,186	1,514
March	10,664	9,013	1,604	-345	1,160	16,276	1,489
April	10,435	8,864	1,523	41	262	15,945	1,479
May	10,440	8,838	1,543	260	-1,109	15,993	1,506
June	10,187	8,623	1,504	3	-1,238	16,049	1,543
July	10,225	8,660	1,507	-541	-422	16,307	1,573
August	9,875	8,374	1,445	242	-551	16,618	1,582
September	9,852	8,328	1,468	-217	-973	15,909	1,618
October	9,954	8,419	1,477	-233	476	16,602	1,610
November	10,061	8,412	1,569	95	-147	16,221	1,612
December	9,985	8,352	1,571	186	443	17,131	1,593
Average	**10,289**	**8,680**	**1,551**	**-78**	**-124**	**16,281**	
1987 January	[E] 10,145	[E] 8,477	1,592	-189	377	16,382	1,588
February	[E] 10,010	[E] 8,318	1,625	(s)	814	16,721	1,565
March	[E] 10,025	[E] 8,349	1,607	-151	266	15,965	1,561
April	[E] 10,077	[E] 8,426	1,600	11	559	16,501	1,544
May	[E] 9,953	[E] 8,305	1,593	82	-122	15,978	1,546
June	[E] 9,902	[E] 8,263	1,590	-218	3	16,815	1,552
July	[E] 9,892	[E] 8,242	1,588	25	-385	16,996	1,563
August	[E] 9,829	[E] 8,190	1,577	-323	-678	16,325	1,594
September	[E] 9,845	[E] 8,190	1,587	-209	-276	16,533	1,609
October	[E] 9,972	[E] 8,293	1,609	-528	640	16,909	1,605
November	[E] 10,046	[E] 8,330	1,641	-418	-651	16,064	1,637
December	[E] 10,034	[E] 8,340	1,629	370	580	17,493	1,608
Average	**[E] 9,977**	**[E] 8,311**	**1,603**	**-129**	**90**	**16,556**	
1988 January	[E] 9,874	[E] 8,245	1,569	56	285	17,224	1,597
February	[E] 10,016	[E] 8,376	1,594	-130	895	17,584	1,575
March	[RE] 10,044	[RE] 8,347	[R] 1,628	[R] -212	[R] 748	[R] 17,530	[R] 1,559
April	[E] 9,904	[PE] 8,269	[E] 1,582	-329	43	16,609	1,569
4-Month Average	**[E] 9,959**	**[PE] 8,308**	**1,593**	**-153**	**490**	**17,236**	
1987 4-Month Average	**[E] 10,066**	**[E] 8,394**	**1,605**	**-85**	**496**	**16,383**	
1986 4-Month Average	**10,729**	**9,045**	**1,633**	**-186**	**514**	**16,124**	

[a]Includes lease condensate.
[b]A negative number indicates an increase in stocks and a positive number indicates a decrease.
[c]Stocks are totals as of end of period.
[d]Includes crude oil, natural gas plant liquids, other hydrocarbons, and alcohol.
[e]Includes stocks located in the Strategic Petroleum Reserve.
[f]Includes crude oil for storage in the Strategic Petroleum Reserve.
[g]Net imports equals imports minus exports.
[h]Due to a rounding difference, this value is 1,603 in the *Petroleum Supply Annual* and *Petroleum Supply Monthly.*
[I]In January 1975, 1981, and 1983, numerous respondents were added to surveys affecting stocks reported and stocks withdrawal calculations. See Note 4 at end of section.
Footnotes continued on following page.

Table 3.1b Crude Oil[a] and Petroleum Products Overview (continued)

	Imports			Exports			Net Imports[g]
	Total	Crude Oil[f]	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 January	5,573	3,472	2,101	859	159	700	4,714
February	4,676	2,968	1,709	876	162	715	3,800
March	4,712	2,988	1,724	732	212	520	3,980
April	5,439	3,684	1,755	850	94	756	4,589
May	6,400	4,250	2,150	724	98	625	5,676
June	6,848	4,635	2,213	642	240	401	6,206
July	6,942	4,726	2,216	685	65	620	6,256
August	7,168	4,859	2,309	868	233	635	6,300
September	7,090	5,031	2,059	714	161	553	6,375
October	6,427	4,419	2,008	831	151	680	5,597
November	6,592	4,615	1,977	821	115	706	5,771
December	6,700	4,412	2,288	820	159	661	5,881
Average	**6,224**	**4,178**	**2,045**	**785**	**154**	**631**	**5,439**
1987 January	6,186	4,385	1,801	829	96	732	5,358
February	5,849	3,896	1,953	991	299	692	4,858
March	5,618	3,742	1,875	726	165	561	4,892
April	5,830	4,115	1,715	864	247	617	4,966
May	5,918	4,243	1,675	659	69	590	5,259
June	6,688	4,788	1,900	665	116	549	6,023
July	7,448	5,259	2,189	674	149	525	6,773
August	7,334	5,470	1,863	662	141	521	6,672
September	7,051	5,085	1,965	792	116	676	6,258
October	6,899	5,119	1,780	642	84	558	6,257
November	6,905	4,939	1,966	737	164	573	6,168
December	6,705	4,571	2,134	1,057	220	838	5,647
Average	**6,541**	**4,639**	**1,901**	**773**	**154**	**619**	**5,767**
1988 January	6,900	4,619	2,281	891	212	679	6,009
February	6,995	4,692	2,303	867	149	718	6,128
March	R 6,727	R 4,788	R 1,938	R 839	R 218	R 622	R 5,888
April	6,828	5,032	1,796	E 878	E 178	E 700	E 5,950
4-Month Average	**6,860**	**4,782**	**2,078**	**869**	**190**	**679**	**5,992**
1987 4-Month Average	**5,872**	**4,037**	**1,834**	**849**	**199**	**650**	**5,023**
1986 4-Month Average	**5,108**	**3,282**	**1,826**	**828**	**157**	**671**	**4,280**

Footnotes continued.

PE=Preliminary estimate. R=Revised data. NA=Not available. 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.

Sources: See end of section.

Figure 3.1 Crude Oil and Natural Gas Liquids Production

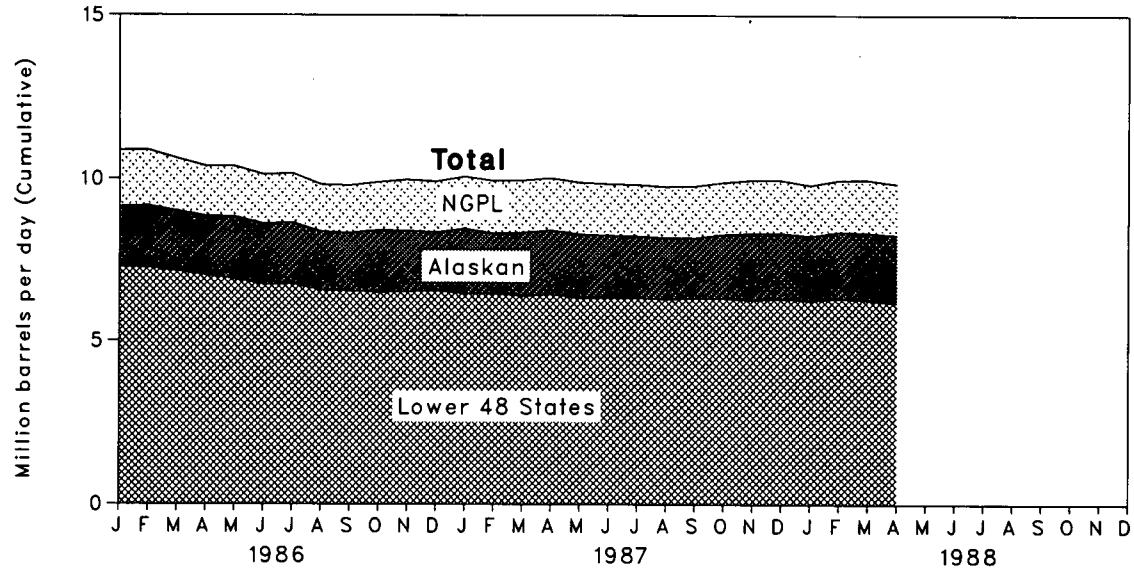


Figure 3.2 Petroleum Stocks

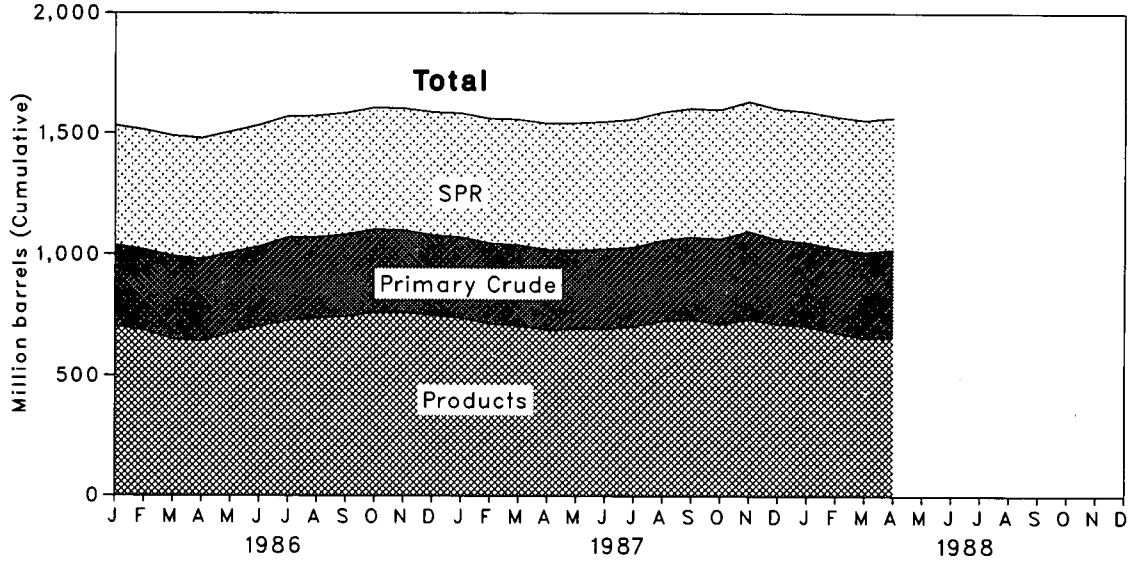


Figure 3.3 Petroleum Products Supplied and Imports

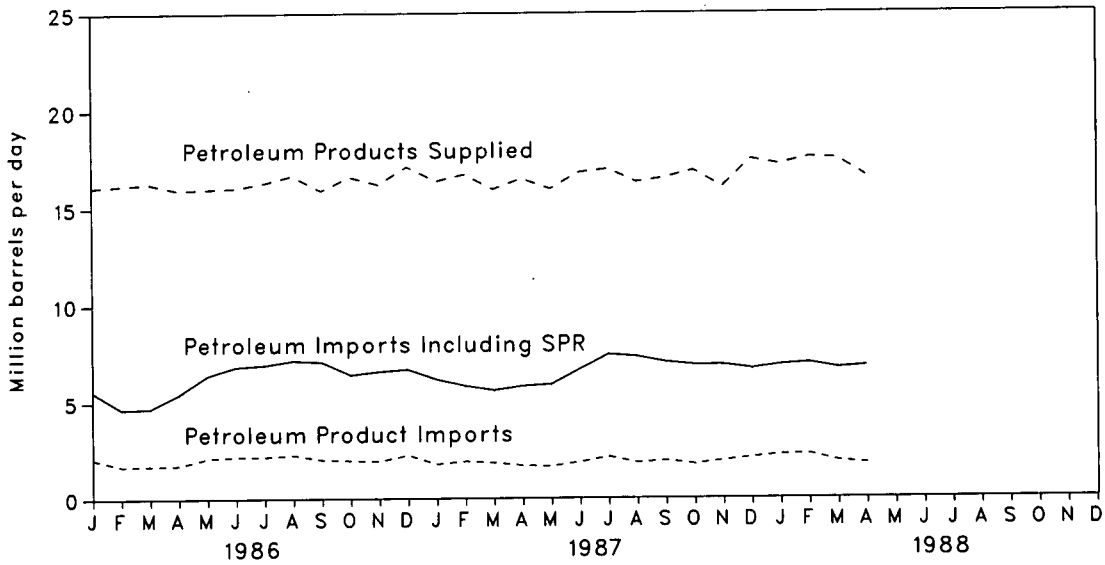


Figure 3.4 Petroleum Imports by Source

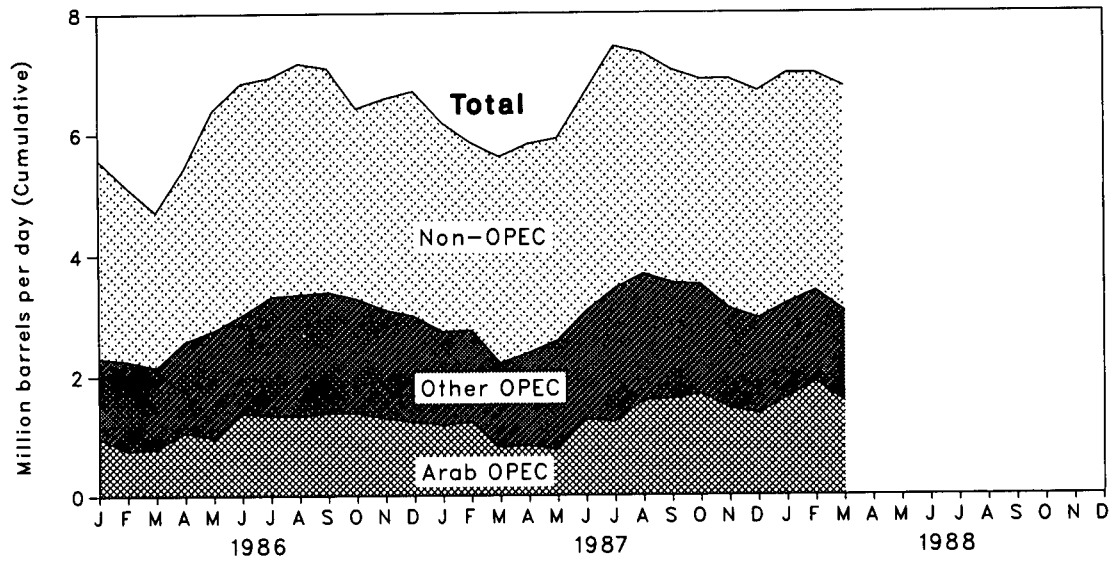


Table 3.2a Crude Oil[a] Supply and Disposition
(Thousand Barrels per Day)

	Supply							
	Field Production		Imports			Stock Withdrawal[c]		Unaccounted for Crude Oil[e]
	Total Domestic	Alaskan	Total	SPR[d]	Other	SPR[d]	Other	
1973 Average	**9,208**	**198**	**3,244**		**3,244**		**11**	**3**
1974 Average	**8,774**	**193**	**3,477**		**3,477**		**-62**	**-25**
1975 Average	**8,375**	**191**	**4,105**		**4,105**		**-17**	**17**
1976 Average	**8,132**	**173**	**5,287**		**5,287**		**-39**	**77**
1977 Average	**8,245**	**464**	**6,615**	**21**	**6,594**	**-20**	**-150**	**-6**
1978 Average	**8,707**	**1,229**	**6,356**	**162**	**6,195**	**-163**	**84**	**-57**
1979 Average	**8,552**	**1,401**	**6,519**	**67**	**6,452**	**-67**	**-81**	**-11**
1980 Average	**8,597**	**1,617**	**5,263**	**44**	**5,219**	**-45**	**-52**	**34**
1981 Average	**8,572**	**1,609**	**4,396**	**256**	**4,141**	**-336**	**[g] 46**	**83**
1982 Average	**8,649**	**1,696**	**3,488**	**165**	**3,323**	**-174**	**38**	**71**
1983 Average	**8,688**	**1,714**	**3,329**	**234**	**3,096**	**-234**	**[g] 20**	**114**
1984 Average	**8,879**	**1,722**	**3,426**	**197**	**3,229**	**-195**	**-4**	**185**
1985 Average	**8,971**	**1,825**	**3,201**	**118**	**3,083**	**-117**	**67**	**145**
1986 January	9,137	1,870	3,472	51	3,420	-35	-348	364
February	9,173	1,907	2,968	24	2,944	-35	-2	32
March	9,013	1,860	2,988	59	2,929	-49	-296	259
April	8,864	1,836	3,684	63	3,621	-63	104	70
May	8,838	1,927	4,250	36	4,215	-35	295	79
June	8,623	1,887	4,635	64	4,571	-64	66	292
July	8,660	1,903	4,726	52	4,674	-52	-489	189
August	8,374	1,811	4,859	51	4,809	-51	293	93
September	8,328	1,782	5,031	47	4,984	-47	-170	161
October	8,419	1,927	4,419	37	4,382	-36	-197	223
November	8,412	1,883	4,615	45	4,570	-65	160	-136
December	8,352	1,807	4,412	48	4,365	-68	254	28
Average	**8,680**	**1,867**	**4,178**	**48**	**4,130**	**-50**	**-28**	**139**
1987 January	[E] 8,477	[E] 2,017	4,385	92	4,293	-108	-81	34
February	[E] 8,318	[E] 1,853	3,896	44	3,851	-64	64	422
March	[E] 8,349	[E] 1,968	3,742	95	3,647	-106	-45	349
April	[E] 8,426	[E] 1,990	4,115	57	4,058	-67	78	249
May	[E] 8,305	[E] 1,979	4,243	92	4,151	-101	183	143
June	[E] 8,263	[E] 1,930	4,788	64	4,724	-69	-149	518
July	[E] 8,242	[E] 1,910	5,259	76	5,183	-91	116	87
August	[E] 8,190	[E] 1,908	5,470	63	5,407	-63	-259	215
September	[E] 8,190	[E] 1,874	5,085	64	5,021	-64	-145	251
October	[E] 8,293	[E] 1,986	5,119	57	5,062	-57	-471	-50
November	[E] 8,330	[E] 2,068	4,939	97	4,842	-97	-321	320
December	[E] 8,340	[E] 2,043	4,571	68	4,503	-68	438	180
Average	**[E] 8,311**	**[E] 1,961**	**4,639**	**73**	**4,567**	**-80**	**-50**	**224**
1988 January	[E] 8,245	[E] 1,999	4,619	67	4,552	-67	123	303
February	[E] 8,376	[E] 2,070	4,692	49	4,643	-49	-81	-21
March	[RE] 8,347	[RE] 2,086	[R] 4,788	[R] 23	[R] 4,766	[R] -26	[R] -187	[R] 419
April	[PE] 8,269	[PE] 2,094	5,032	64	4,968	-64	-265	[E] 406
4-Month Average	**[PE] 8,308**	**[PE] 2,062**	**4,782**	**51**	**4,732**	**-51**	**-102**	**281**
1987 4-Month Average	**[E] 8,394**	**[E] 1,959**	**4,037**	**73**	**3,964**	**-87**	**2**	**260**
1986 4-Month Average	**9,045**	**1,868**	**3,282**	**50**	**3,233**	**-46**	**-141**	**186**

[a]Includes lease condensate.
[b]Stocks are totals as of end of period.
[c]A negative number indicates an increase in stocks and a positive number indicates a decrease.
[d]Strategic Petroleum Reserve.
[e] A balancing item.
[f]Beginning in January 1983, crude oil used directly as fuel is shown as product supplied.
[g]Stocks of Alaskan crude oil in transit were included beginning in January 1981. Stock withdrawals are calculated using new basis stock levels. See Notes 4 and 5 at end of section.
Footnotes continued on following page.

Table 3.2b Crude Oil[a] Supply and Disposition (continued)

	Supply	Disposition				Ending Stocks[b]		
	Crude Used Directly[f]	Crude Losses	Refinery Inputs	Exports	Product Supplied[f]	Total	SPR[d]	Other Primary
	Thousand Barrels per Day					Million Barrels		
1973 Average	**-19**	**13**	**12,431**	**2**		**242**		**242**
1974 Average	**-15**	**13**	**12,133**	**3**		**265**		**265**
1975 Average	**-17**	**13**	**12,442**	**6**		**271**		**271**
1976 Average	**-18**	**15**	**13,416**	**8**		**285**		**285**
1977 Average	**-14**	**16**	**14,602**	**50**		**348**	**7**	**340**
1978 Average	**-14**	**16**	**14,739**	**158**		**376**	**67**	**309**
1979 Average	**-13**	**16**	**14,648**	**235**		**430**	**91**	**339**
1980 Average	**-13**	**15**	**13,481**	**287**		**g 466**	**108**	**g 358**
1981 Average	**-58**	**5**	**12,470**	**228**		**594**	**230**	**363**
1982 Average	**-59**	**3**	**11,774**	**236**		**g 644**	**294**	**350**
1983 Average	**NA**	**2**	**11,685**	**164**	**66**	**723**	**379**	**344**
1984 Average	**NA**	**2**	**12,044**	**181**	**64**	**796**	**451**	**345**
1985 Average	**NA**	**1**	**12,002**	**204**	**60**	**814**	**493**	**321**
1986 January	NA	1	12,374	159	57	826	494	332
February	NA	(s)	11,918	162	56	827	495	332
March	NA	(s)	11,652	212	52	838	497	341
April	NA	(s)	12,512	94	51	837	499	338
May	NA	(s)	13,279	98	49	829	500	329
June	NA	(s)	13,261	240	52	828	502	327
July	NA	(s)	12,917	65	51	845	503	342
August	NA	(s)	13,287	233	48	838	505	333
September	NA	(s)	13,097	161	45	844	506	338
October	NA	(s)	12,636	151	41	851	508	344
November	NA	(s)	12,831	115	41	849	509	339
December	NA	(s)	12,777	159	42	843	512	331
Average	**NA**	**(s)**	**12,716**	**154**	**49**			
1987 January	NA	1	12,570	96	41	849	515	334
February	NA	(s)	12,296	299	41	849	517	332
March	NA	1	12,085	165	39	853	520	333
April	NA	(s)	12,513	247	41	853	522	331
May	NA	(s)	12,662	69	42	850	525	325
June	NA	(s)	13,200	116	36	857	527	330
July	NA	(s)	13,432	149	32	856	530	326
August	NA	(s)	13,381	141	31	866	532	334
September	NA	NA	13,174	116	28	873	534	339
October	NA	(s)	12,725	84	25	889	536	353
November	NA	(s)	12,982	164	25	901	539	363
December	NA	(s)	13,210	220	31	890	541	349
Average	**NA**	**(s)**	**12,856**	**154**	**34**			
1988 January	NA	(s)	12,975	212	36	888	543	345
February	NA	(s)	12,715	149	52	892	544	348
March	NA	(s)	R 13,072	R 218	R 52	R 899	545	R 354
April	NA	E (s)	13,155	E 178	E 45	904	547	358
4-Month Average	**NA**	**(s)**	**12,982**	**190**	**46**			
1987 4-Month Average	**NA**	**(s)**	**12,367**	**199**	**40**			
1986 4-Month Average	**NA**	**1**	**12,115**	**157**	**54**			

Footnotes continued.

PE=Preliminary estimate. R=Revised data. NA=Not available. 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.

Sources: See end of section.

Table 3.3a Crude Oil and Petroleum Product Imports
(Thousand Barrels per Day)

	Imports from OPEC Sources[a]										
	Algeria	Libya	Saudi Arabia[b]	United Arab Emirates	Indonesia	Iran	Nigeria	Venezuela	Other OPEC[b,c]	Total OPEC[d]	Total Arab OPEC[e]
1973 Average	**136**	**164**	**486**	**71**	**213**	**223**	**459**	**1,135**	**106**	**2,993**	**915**
1974 Average	**190**	**4**	**461**	**74**	**300**	**469**	**713**	**979**	**88**	**3,280**	**752**
1975 Average	**282**	**232**	**715**	**117**	**390**	**280**	**762**	**702**	**122**	**3,601**	**1,383**
1976 Average	**432**	**453**	**1,230**	**254**	**539**	**298**	**1,025**	**700**	**134**	**5,066**	**2,424**
1977 Average	**559**	**723**	**1,380**	**335**	**541**	**535**	**1,143**	**690**	**287**	**6,193**	**3,185**
1978 Average	**649**	**654**	**1,144**	**385**	**573**	**555**	**919**	**645**	**226**	**5,751**	**2,963**
1979 Average	**636**	**658**	**1,356**	**281**	**420**	**304**	**1,080**	**690**	**212**	**5,637**	**3,056**
1980 Average	**488**	**554**	**1,261**	**172**	**348**	**9**	**857**	**481**	**130**	**4,300**	**2,551**
1981 Average	**311**	**319**	**1,129**	**81**	**366**	**0**	**620**	**406**	**90**	**3,323**	**1,848**
1982 Average	**170**	**26**	**552**	**92**	**248**	**35**	**514**	**412**	**97**	**2,146**	**854**
1983 Average	**240**	**0**	**337**	**30**	**338**	**48**	**302**	**422**	**144**	**1,862**	**632**
1984 Average	**323**	**1**	**325**	**117**	**343**	**10**	**216**	**548**	**166**	**2,049**	**819**
1985 Average	**187**	**4**	**168**	**45**	**314**	**27**	**293**	**605**	**187**	**1,830**	**472**
1986 January	215	0	664	11	290	0	278	629	210	2,298	976
February	157	0	574	0	290	(s)	204	518	64	1,807	757
March	260	0	482	0	161	0	328	797	117	2,145	798
April	275	0	698	21	292	0	319	831	139	2,576	1,058
May	193	0	574	40	314	40	398	899	290	2,749	966
June	319	0	662	83	353	0	382	772	439	3,010	1,377
July	310	0	738	59	532	66	542	730	330	3,307	1,357
August	363	0	680	37	274	93	606	916	378	3,346	1,339
September	245	0	810	62	341	31	684	856	356	3,383	1,388
October	305	0	697	147	388	0	530	863	346	3,276	1,387
November	311	0	868	34	335	0	483	843	214	3,088	1,295
December	291	0	769	30	251	0	511	841	284	2,976	1,223
Average	**271**	**0**	**685**	**44**	**318**	**19**	**440**	**793**	**265**	**2,837**	**1,162**
1987 January	158	0	873	15	285	0	313	866	215	2,726	1,187
February	315	0	772	54	420	30	240	764	155	2,749	1,226
March	301	0	427	0	308	73	312	658	135	2,215	807
April	302	0	452	62	236	47	529	679	77	2,384	834
May	196	0	519	26	289	75	530	854	95	2,584	771
June	247	0	780	45	261	155	546	766	268	3,067	1,272
July	326	0	753	42	273	237	787	861	157	3,437	1,240
August	235	0	958	103	312	208	732	780	351	3,679	1,593
September	351	0	902	146	236	193	615	798	287	3,528	1,614
October	267	0	1,042	111	297	86	518	775	401	3,497	1,696
November	378	0	633	97	205	41	607	739	402	3,101	1,455
December	339	0	853	7	216	23	613	672	220	2,941	1,367
Average	**284**	**0**	**747**	**59**	**277**	**98**	**530**	**768**	**231**	**2,994**	**1,255**
1988 January	312	0	[R] 849	61	179	[f] 1	406	752	[R] 540	3,100	1,632
February	358	0	[R] 1,265	79	148	0	501	830	[R] 214	3,394	1,883
March	259	0	934	6	123	0	541	790	352	3,006	1,506
3-Month Average	**309**	**0**	**1,010**	**48**	**150**	**(s)**	**482**	**790**	**372**	**3,162**	**1,669**
1987 3-Month Average	**256**	**0**	**688**	**22**	**335**	**34**	**290**	**763**	**169**	**2,557**	**1,068**
1986 3-Month Average	**212**	**0**	**574**	**4**	**246**	**(s)**	**272**	**652**	**133**	**2,092**	**847**

[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]Prior to January 1988, data on crude oil and petroleum product imports from the Neutral Zone are included in the data for Saudi Arabia. From January 1988 forward, those imports are included in the data for "Other OPEC."

[c]The other members of OPEC are Ecuador, Gabon, Iraq, Kuwait, and Qatar.

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

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

[f]A small amount of Iranian crude oil entered the United States (defined in this publication as the 50 States and the District of Columbia) 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.

Footnotes continued on following page.

Table 3.3b Crude Oil and Petroleum Product Imports (continued)
(Thousand Barrels per Day)

	Imports from Non-OPEC Sources[9]										Total Imports
	Bahamas	Canada	Mexico	Netherlands Antilles	Trinidad and Tobago	United Kingdom	Puerto Rico	Virgin Islands	Other Non-OPEC	Total Non-OPEC	
1973 Average	**174**	**1,325**	**16**	**585**	**255**	**15**	**99**	**329**	**465**	**3,263**	**6,256**
1974 Average	**164**	**1,070**	**8**	**511**	**251**	**8**	**90**	**391**	**340**	**2,832**	**6,112**
1975 Average	**152**	**846**	**71**	**332**	**242**	**14**	**90**	**406**	**300**	**2,454**	**6,056**
1976 Average	**118**	**599**	**87**	**275**	**274**	**31**	**88**	**422**	**353**	**2,247**	**7,313**
1977 Average	**171**	**517**	**179**	**211**	**289**	**126**	**105**	**466**	**550**	**2,614**	**8,807**
1978 Average	**160**	**467**	**318**	**229**	**253**	**180**	**94**	**429**	**484**	**2,613**	**8,363**
1979 Average	**147**	**538**	**439**	**231**	**190**	**202**	**92**	**431**	**548**	**2,819**	**8,456**
1980 Average	**78**	**455**	**533**	**225**	**176**	**176**	**88**	**388**	**491**	**2,609**	**6,909**
1981 Average	**74**	**447**	**522**	**197**	**133**	**375**	**62**	**327**	**534**	**2,672**	**5,996**
1982 Average	**65**	**482**	**685**	**175**	**112**	**456**	**50**	**316**	**627**	**2,968**	**5,113**
1983 Average	**125**	**547**	**826**	**189**	**96**	**382**	**40**	**282**	**701**	**3,189**	**5,051**
1984 Average	**88**	**630**	**748**	**188**	**94**	**402**	**42**	**294**	**902**	**3,388**	**5,437**
1985 Average	**40**	**770**	**816**	**40**	**113**	**310**	**28**	**247**	**873**	**3,237**	**5,067**
1986 January	62	823	681	58	108	333	21	326	862	3,275	5,573
February	33	690	557	11	85	218	18	309	949	2,870	4,676
March	18	750	616	27	79	178	25	186	688	2,567	4,712
April	34	798	694	13	111	188	23	209	793	2,863	5,439
May	32	881	743	37	130	365	27	237	1,199	3,651	6,400
June	29	753	884	17	167	569	30	233	1,157	3,838	6,848
July	44	763	850	25	131	353	29	237	1,202	3,634	6,942
August	39	801	738	12	133	584	7	214	1,294	3,822	7,168
September	15	801	615	17	162	437	23	291	1,345	3,706	7,090
October	38	842	680	26	112	173	21	215	1,043	3,151	6,427
November	39	960	565	53	129	448	21	179	1,111	3,504	6,592
December	57	809	746	7	148	351	12	291	1,304	3,724	6,700
Average	**37**	**807**	**699**	**25**	**125**	**350**	**21**	**244**	**1,080**	**3,387**	**6,224**
1987 January	54	777	669	29	99	419	33	327	1,053	3,461	6,186
February	54	762	689	30	111	235	24	296	900	3,100	5,849
March	33	720	699	11	124	311	17	247	1,240	3,402	5,618
April	43	808	667	12	113	485	24	259	1,034	3,446	5,830
May	31	865	569	26	117	408	21	214	1,082	3,334	5,918
June	22	898	654	13	114	377	21	281	1,240	3,621	6,688
July	46	890	664	58	96	334	17	288	1,618	4,011	7,448
August	26	837	564	51	98	289	20	274	1,496	3,655	7,334
September	36	835	699	42	105	254	25	271	1,256	3,523	7,051
October	17	932	658	16	88	320	17	250	1,104	3,402	6,899
November	20	818	627	14	111	425	15	235	1,540	3,804	6,905
December	7	896	588	24	67	324	23	327	1,508	3,764	6,705
Average	**32**	**837**	**645**	**27**	**103**	**349**	**21**	**272**	**1,259**	**3,547**	**6,541**
1988 January	49	953	767	40	104	312	29	341	1,205	3,800	6,900
February	58	995	699	21	93	313	16	200	1,206	3,601	6,995
March	45	989	745	30	89	461	22	180	1,160	3,720	[R] 6,727
3-Month Average	**51**	**979**	**738**	**30**	**96**	**363**	**22**	**241**	**1,190**	**3,709**	**6,871**
1987 3-Month Average	**47**	**753**	**685**	**23**	**112**	**325**	**25**	**290**	**1,070**	**3,328**	**5,885**
1986 3-Month Average	**38**	**756**	**620**	**33**	**91**	**244**	**21**	**273**	**829**	**2,905**	**4,997**

Footnotes continued.

[9]Includes petroleum imported into the United States indirectly from members of OPEC, primarily from Caribbean and West European areas, as petroleum products that were refined from crude oil produced by OPEC.

R=Revised data. (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. • Beginning in October 1977, Strategic Petroleum Reserve imports are included.

Sources: See end of section.

Figure 3.5 Finished Motor Gasoline Products Supplied, Production, and Imports

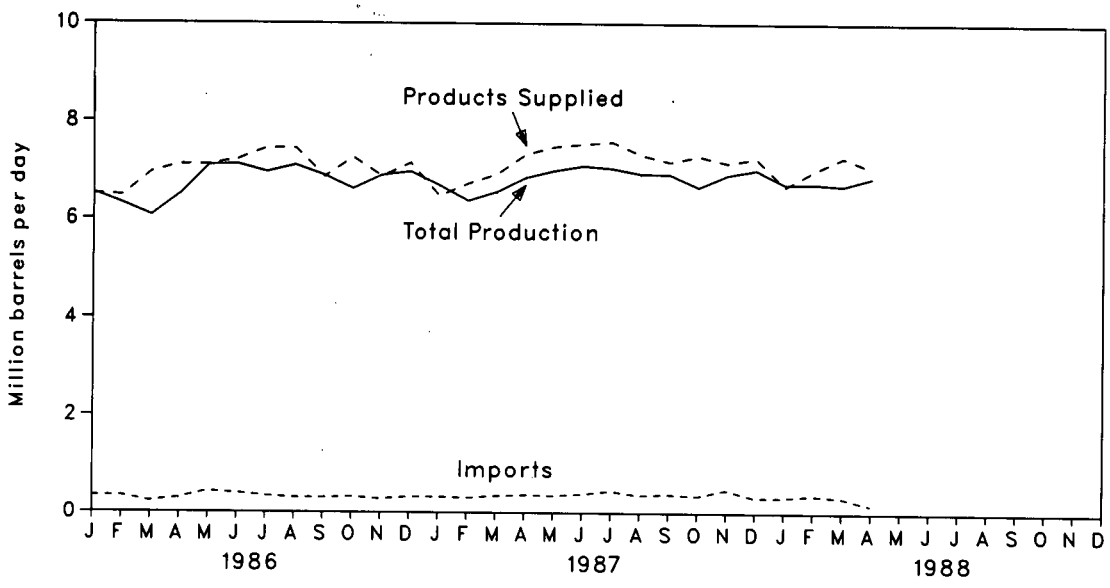


Figure 3.6 Motor Gasoline Ending Stocks

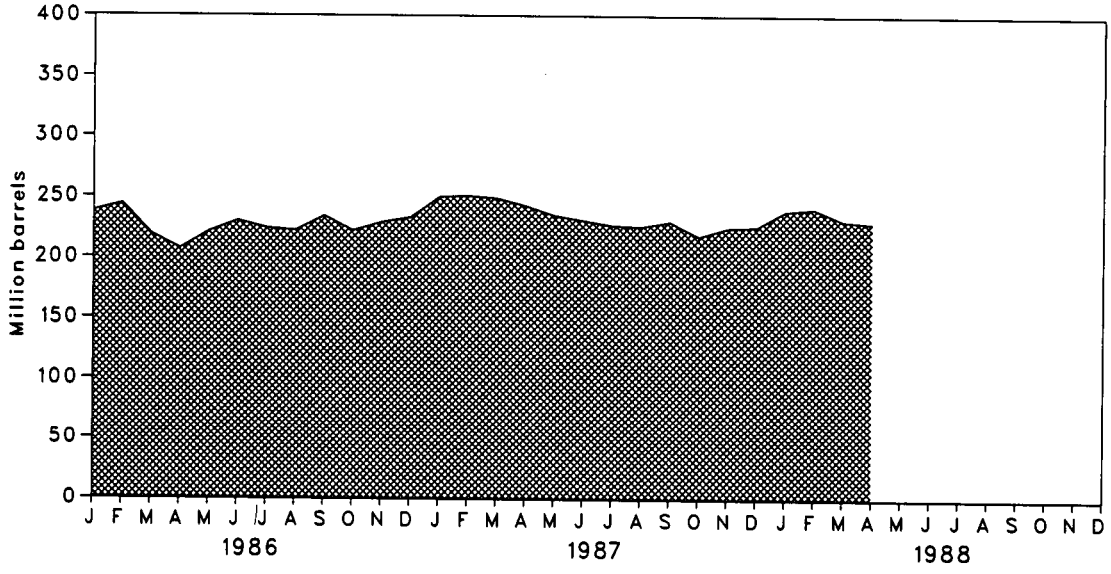


Table 3.4 Finished Motor Gasoline Supply and Disposition

	Supply			Disposition				Ending Stocks[a]	
					Product Supplied				
	Total Production	Imports[b]	Stock Withdrawal[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**	**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**	
1982 Average	**6,338**	**197**	**25**	**20**	**6,539**	**3,409**	**52.1**	**[f] 235**	
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 January	6,522	332	-347	6	6,502	4,404	67.7	238	201
February	6,302	334	-156	11	6,469	4,365	67.5	244	205
March	6,061	224	691	21	6,955	4,678	67.3	219	184
April	6,498	291	338	23	7,105	4,783	67.3	207	174
May	7,095	471	-450	9	7,106	4,729	66.5	221	188
June	7,101	392	-265	18	7,209	4,914	68.2	230	196
July	6,956	337	189	47	7,436	5,182	69.7	224	190
August	7,092	303	83	43	7,435	5,138	69.1	222	187
September	6,891	303	-289	40	6,864	4,813	70.1	234	196
October	6,616	322	372	61	7,250	5,086	70.1	222	184
November	6,895	280	-200	96	6,879	4,918	71.5	229	190
December	6,970	320	-122	24	7,143	5,193	72.7	233	194
Average	**6,752**	**326**	**-11**	**33**	**7,034**	**4,854**	**69.0**		
1987 January	6,688	320	-484	55	6,469	4,775	73.8	250	209
February	6,367	303	78	22	6,726	4,991	74.2	251	207
March	6,555	342	43	20	6,921	5,150	74.4	249	206
April	6,851	362	145	42	7,317	5,401	73.8	243	201
May	6,991	348	181	48	7,472	5,577	74.6	235	196
June	7,089	385	103	46	7,531	5,657	75.1	231	193
July	7,041	448	119	33	7,575	5,734	75.7	227	189
August	6,933	361	38	19	7,313	5,628	77.0	226	188
September	6,925	383	-109	30	7,170	5,500	76.7	230	191
October	6,662	348	300	21	7,289	5,616	77.1	218	182
November	6,914	474	-205	32	7,151	5,587	78.1	225	188
December	7,017	318	-29	59	7,247	5,711	78.8	226	189
Average	**6,839**	**366**	**15**	**36**	**7,184**	**5,447**	**75.8**		
1988 January	6,723	324	-361	8	6,679	5,392	80.7	239	200
February	6,736	365	-78	18	7,004	5,571	79.5	241	202
March	[R] 6,695	[R] 318	[R] 271	[R] 18	[R] 7,265	[R] 5,845	[R] 80.4	231	194
April	6,861	168	34	[E] 13	7,050	5,678	80.5	229	193
4-Mo. Average	**6,753**	**294**	**-33**	**14**	**6,999**	**5,622**			
1987 4-Mo. Average	**6,620**	**332**	**-59**	**35**	**6,858**	**5,079**			
1986 4-Mo. Average	**6,346**	**295**	**137**	**15**	**6,762**	**4,560**			

[a]Stocks are totals as of end of period.
[b]Beginning in 1981, excludes blending components.
[c]A negative number indicates an increase in stocks and a positive number indicates a decrease.
[d]Includes gasohol.
[e]Includes motor gasoline blending components.
[f]In January 1975, 1981, and 1983, numerous respondents were added to surveys affecting stocks reported and stock withdrawal calculations. See Note 4 at end of section.
[g]Beginning in January 1981, survey forms were modified. See Note 1 at end of section.
R=Revised data. NA=Not available. 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.
Sources: See end of section.

Figure 3.7 Distillate Fuel Oil Product Supplied, Production, and Imports

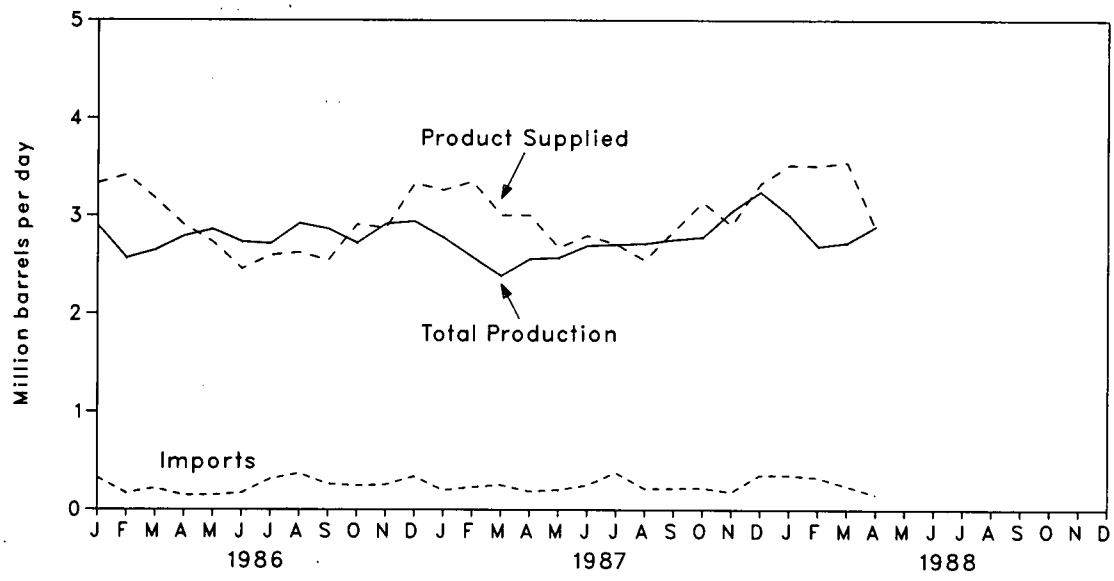


Figure 3.8 Distillate Fuel Oil Ending Stocks

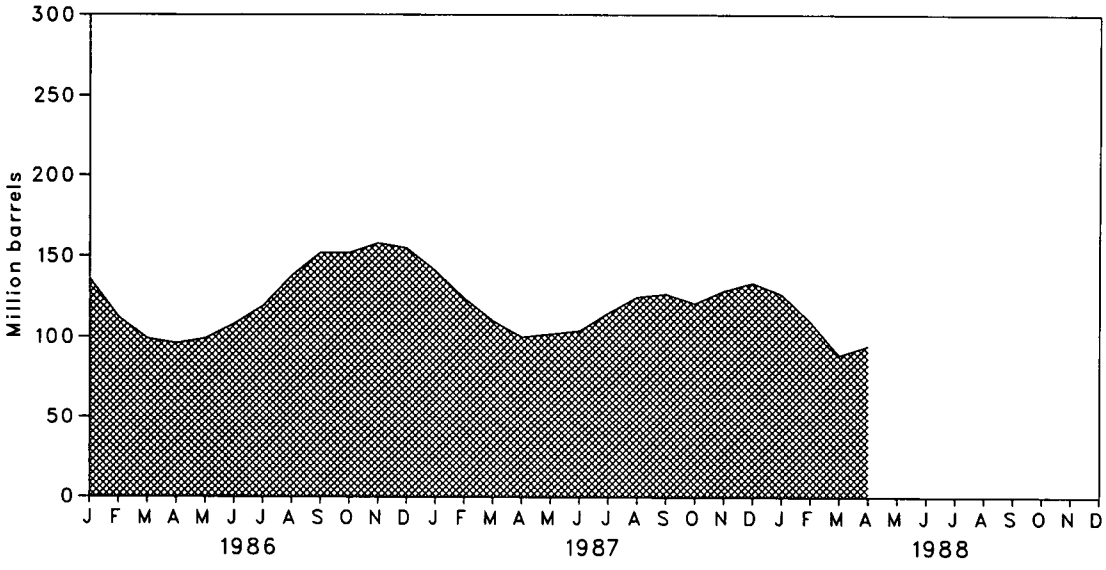


Table 3.5 Distillate Fuel Oil Supply and Disposition

	Supply				Disposition		
	Total Production	Imports	Stock Withdrawal[a]	Crude Used Directly[b]	Exports	Product Supplied[b]	Ending Stocks[c]
	Thousand Barrels per Day						Million Barrels
1973 Average	**2,822**	**392**	**-115**	**2**	**9**	**3,092**	**196**
1974 Average	**2,669**	**289**	**-9**	**2**	**2**	**2,948**	**[d] 200**
1975 Average	**2,654**	**155**	**[d] 40**	**2**	**1**	**2,851**	**209**
1976 Average	**2,924**	**146**	**62**	**1**	**1**	**3,133**	**186**
1977 Average	**3,278**	**250**	**-176**	**1**	**1**	**3,352**	**250**
1978 Average	**3,167**	**173**	**93**	**1**	**3**	**3,432**	**216**
1979 Average	**3,153**	**193**	**-34**	**1**	**3**	**3,311**	**229**
1980 Average	**2,662**	**142**	**64**	**1**	**3**	**2,866**	**[d] 205**
1981 Average[e]	**2,613**	**173**	**[d] 38**	**10**	**5**	**2,829**	**192**
1982 Average	**2,606**	**93**	**35**	**10**	**74**	**2,671**	**[d] 179**
1983 Average	**2,456**	**174**	**[d] 124**	**NA**	**64**	**2,690**	**140**
1984 Average	**2,681**	**272**	**-57**	**NA**	**51**	**2,845**	**161**
1985 Average	**2,687**	**200**	**48**	**NA**	**67**	**2,868**	**144**
1986 January	2,899	325	232	NA	126	3,330	136
February	2,563	169	860	NA	176	3,416	112
March	2,643	217	438	NA	131	3,168	99
April	2,788	147	97	NA	128	2,904	96
May	2,858	149	-95	NA	149	2,762	99
June	2,729	169	-301	NA	53	2,544	108
July	2,710	313	-355	NA	75	2,592	119
August	2,922	370	-607	NA	64	2,621	138
September	2,865	262	-489	NA	98	2,540	152
October	2,717	243	25	NA	74	2,912	152
November	2,917	254	-222	NA	72	2,877	158
December	2,943	339	102	NA	55	3,329	155
Average	**2,798**	**247**	**-31**	**NA**	**100**	**2,914**	
1987 January	2,774	197	440	NA	152	3,259	141
February	2,574	229	637	NA	93	3,347	124
March	2,384	251	437	NA	67	3,005	110
April	2,553	185	319	NA	53	3,004	100
May	2,565	201	-45	NA	51	2,670	102
June	2,689	248	-82	NA	61	2,793	104
July	2,700	378	-336	NA	38	2,704	115
August	2,711	215	-338	NA	47	2,540	125
September	2,750	217	-59	NA	64	2,844	127
October	2,778	222	187	NA	53	3,134	121
November	3,043	180	-263	NA	56	2,904	129
December	3,241	354	-176	NA	92	3,327	134
Average	**2,731**	**240**	**56**	**NA**	**69**	**2,959**	
1988 January	3,008	355	236	NA	82	3,517	127
February	2,683	330	604	NA	107	3,511	110
March	[R] 2,720	[R] 243	[R] 656	NA	[R] 74	[R] 3,544	[R] 89
April	2,894	155	-102	NA	[E] 95	2,852	95
4-Mo. Average	**2,828**	**271**	**348**	**NA**	**89**	**3,358**	
1987 4-Mo. Average	**2,571**	**215**	**455**	**NA**	**92**	**3,150**	
1986 4-Mo. Average	**2,727**	**216**	**398**	**NA**	**139**	**3,202**	

[a]A negative number indicates an increase in stocks and a positive number indicates a decrease.
[b]Beginning in January 1983, product supplied for distillate fuel oil does not include crude oil used directly. See Note 3 at end of section.
[c]Stocks are totals as of end of period.
[d]In January 1975, 1981, and 1983, numerous respondents were added to surveys affecting stocks reported and stock withdrawal 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. 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: See end of section.

Figure 3.9 Residual Fuel Oil Product Supplied, Production, and Imports

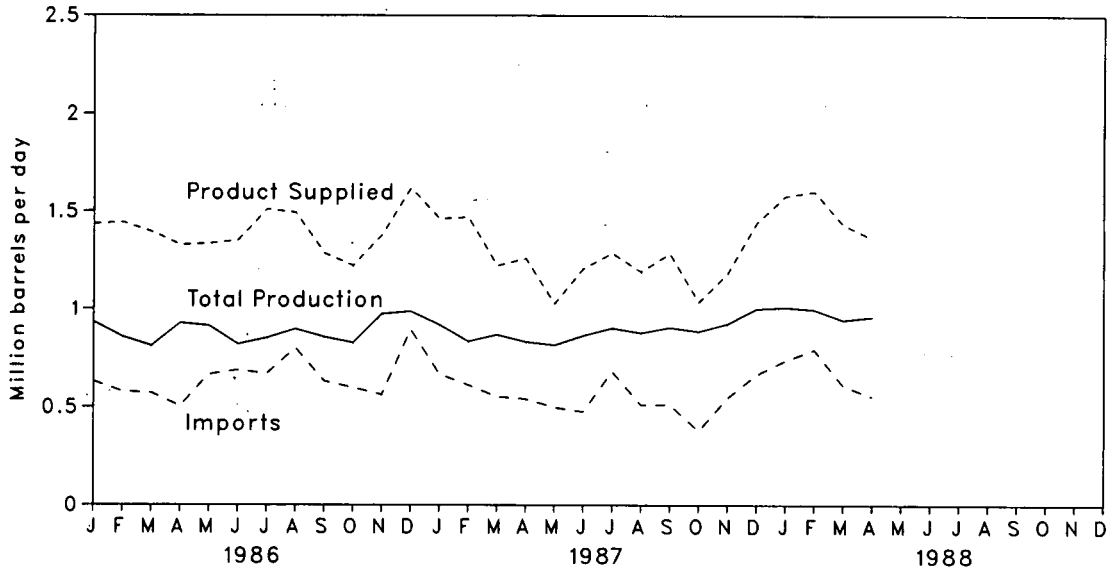


Figure 3.10 Residual Fuel Oil Ending Stocks

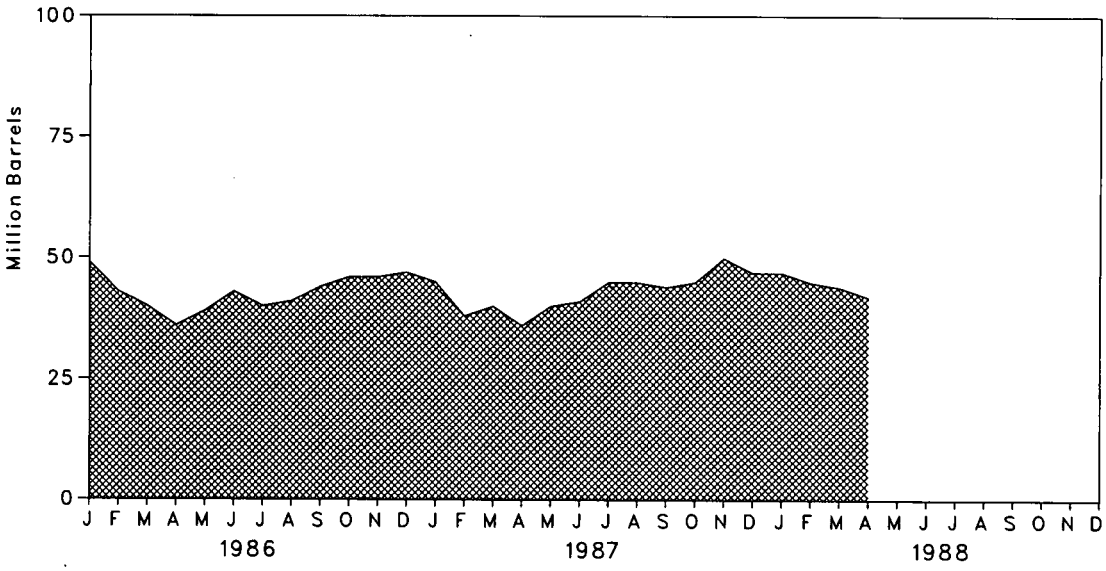


Table 3.6 Residual Fuel Oil Supply and Disposition

	Supply				Disposition		
	Total Production	Imports	Stock Withdrawal[a]	Crude Used Directly[b]	Exports	Product Supplied[b]	Ending Stocks[c]
	Thousand Barrels per Day						Million Barrels
1973 Average	**971**	**1,853**	**5**	**17**	**23**	**2,822**	**53**
1974 Average	**1,070**	**1,587**	**-17**	**13**	**14**	**2,639**	**[d] 60**
1975 Average	**1,235**	**1,223**	**[d] 2**	**15**	**15**	**2,462**	**74**
1976 Average	**1,377**	**1,413**	**5**	**17**	**12**	**2,801**	**72**
1977 Average	**1,754**	**1,359**	**-48**	**13**	**6**	**3,071**	**90**
1978 Average	**1,667**	**1,355**	**-1**	**13**	**13**	**3,023**	**90**
1979 Average	**1,687**	**1,151**	**-15**	**12**	**9**	**2,826**	**96**
1980 Average	**1,580**	**939**	**10**	**12**	**33**	**2,508**	**[d] 92**
1981 Average[e]	**1,321**	**800**	**[d] 37**	**48**	**118**	**2,088**	**78**
1982 Average	**1,070**	**776**	**32**	**48**	**209**	**1,716**	**[d] 66**
1983 Average	**852**	**699**	**[d] 55**	**NA**	**185**	**1,421**	**49**
1984 Average	**891**	**681**	**-12**	**NA**	**190**	**1,369**	**53**
1985 Average	**882**	**510**	**7**	**NA**	**197**	**1,202**	**50**
1986 January	940	622	56	NA	211	1,407	49
February	856	604	200	NA	183	1,478	43
March	813	626	108	NA	113	1,435	40
April	933	545	127	NA	202	1,402	36
May	913	675	-114	NA	129	1,345	39
June	818	712	-111	NA	43	1,377	43
July	850	673	75	NA	90	1,508	40
August	896	793	-29	NA	174	1,485	41
September	854	641	-89	NA	110	1,296	44
October	827	635	-59	NA	144	1,259	46
November	975	574	-15	NA	143	1,391	46
December	987	913	-37	NA	224	1,638	47
Average	**889**	**669**	**8**	**NA**	**147**	**1,418**	
1987 January	919	667	80	NA	204	1,462	45
February	833	612	246	NA	221	1,470	38
March	867	552	-48	NA	150	1,220	40
April	831	541	123	NA	239	1,257	36
May	814	498	-142	NA	144	1,026	40
June	863	477	-33	NA	101	1,206	41
July	902	680	-122	NA	175	1,285	45
August	877	511	-12	NA	185	1,190	45
September	905	513	42	NA	177	1,283	44
October	885	380	-36	NA	194	1,035	45
November	925	546	-145	NA	146	1,181	50
December	1,001	664	76	NA	300	1,441	47
Average	**885**	**553**	**0**	**NA**	**186**	**1,253**	
1988 January	1,009	737	23	NA	190	1,578	47
February	997	792	40	NA	229	1,601	45
March	[R] 944	[R] 610	[R] 45	NA	[R] 165	[R] 1,434	44
April	960	553	61	NA	[E] 211	1,363	42
4-Month Average	**978**	**672**	**42**	**NA**	**198**	**1,493**	
1987 4-Month Average	**863**	**593**	**97**	**NA**	**203**	**1,350**	
1986 4-Month Average	**886**	**600**	**121**	**NA**	**177**	**1,429**	

[a]A negative number indicates an increase in stocks and a positive number indicates a decrease.
[b]Beginning in January 1983, product supplied for residual fuel oil does not include crude oil used directly. See Note 3 at end of section.
[c]Stocks are totals as of end of period.
[d]In January 1975, 1981, and 1983, numerous respondents were added to surveys affecting stocks reported and stock withdrawal 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. 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: See end of section.

Figure 3.11 Liquefied Petroleum Gases Product Supplied, Production, and Imports

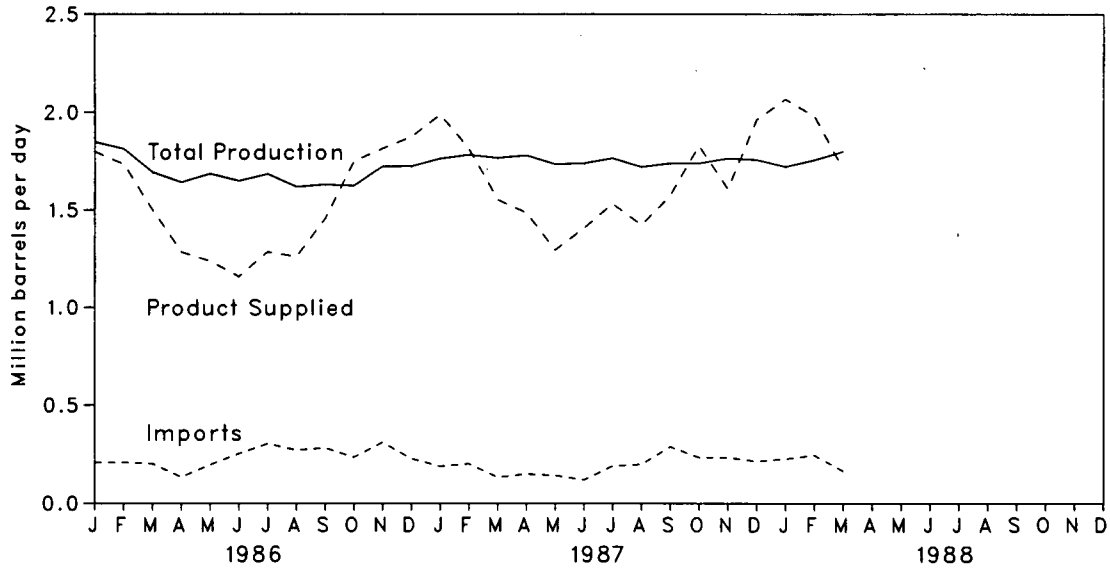


Figure 3.12 Liquefied Petroleum Gases Ending Stocks

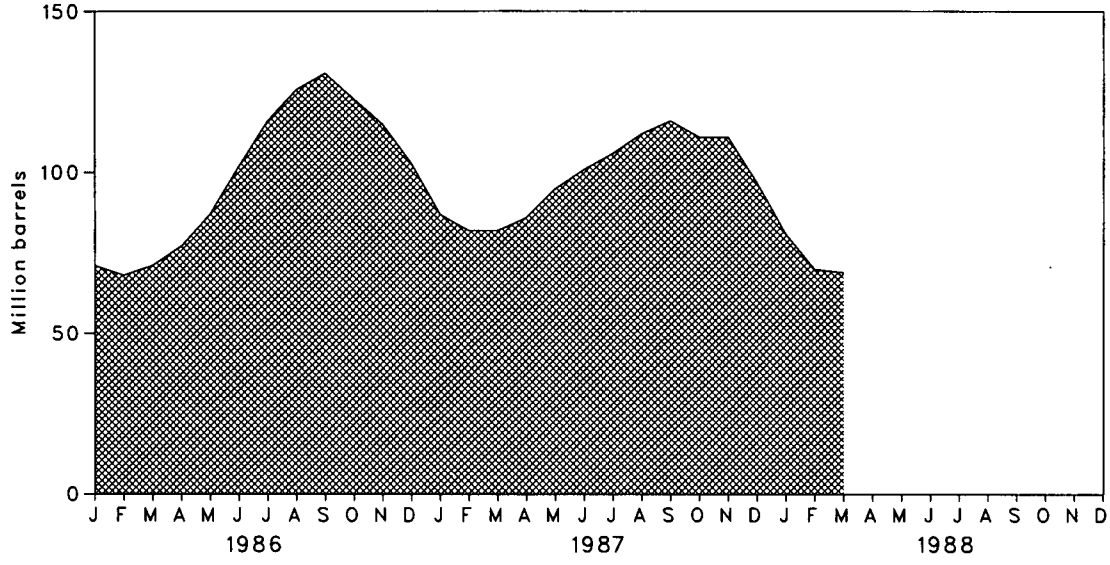


Table 3.7 Liquefied Petroleum Gases[a] Supply and Disposition

	Supply			Disposition			
	Total Production	Imports	Stock Withdrawal[b]	Refinery Inputs	Exports	Product Supplied	Ending Stocks[c]
	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**	**[d] 113**
1975 Average	**1,527**	**112**	**[d] -35**	**246**	**26**	**1,333**	**125**
1976 Average	**1,535**	**130**	**24**	**260**	**25**	**1,404**	**116**
1977 Average	**1,566**	**161**	**-55**	**233**	**18**	**1,422**	**136**
1978 Average	**1,537**	**123**	**12**	**239**	**20**	**1,413**	**132**
1979 Average	**1,556**	**217**	**70**	**236**	**15**	**1,592**	**111**
1980 Average	**1,535**	**216**	**-27**	**233**	**21**	**1,469**	**[d] 120**
1981 Average	**1,571**	**244**	**[d] -18**	**289**	**42**	**1,466**	**135**
1982 Average	**[e] 1,527**	**226**	**111**	**300**	**65**	**1,499**	**[d] 94**
1983 Average	**1,642**	**190**	**4**	**253**	**73**	**1,509**	**[d] 101**
1984 Average	**1,697**	**195**	**19**	**291**	**48**	**1,572**	**101**
1985 Average	**1,704**	**187**	**75**	**304**	**62**	**1,599**	**74**
1986 January	1,850	280	80	364	47	1,800	71
February	1,815	208	108	325	74	1,733	68
March	1,693	202	-98	250	47	1,500	71
April	1,642	134	-200	256	33	1,286	77
May	1,685	196	-336	267	40	1,238	87
June	1,649	253	-490	228	25	1,158	102
July	1,684	303	-450	199	50	1,287	116
August	1,619	271	-332	243	53	1,262	126
September	1,631	282	-142	288	27	1,456	131
October	1,625	234	249	332	26	1,750	123
November	1,724	310	254	417	53	1,817	115
December	1,725	227	411	456	33	1,875	103
Average	**1,695**	**242**	**-80**	**302**	**42**	**1,512**	
1987 January	1,764	188	493	419	38	1,988	87
February	1,784	201	206	341	36	1,815	82
March	1,768	132	-19	282	42	1,556	82
April	1,781	149	-139	276	30	1,486	86
May	1,736	142	-286	270	27	1,296	95
June	1,741	119	-182	255	17	1,407	101
July	1,767	190	-155	244	24	1,534	106
August	1,722	198	-214	251	31	1,424	112
September	1,741	288	-134	266	52	1,576	116
October	1,741	233	171	294	19	1,832	111
November	1,766	233	1	357	35	1,609	111
December	1,759	214	442	395	56	1,963	97
Average	**1,756**	**190**	**15**	**304**	**34**	**1,623**	
1988 January	1,723	226	529	366	44	2,069	81
February	1,757	245	364	336	47	1,982	70
March	1,802	165	45	266	36	1,710	69
3-Month Average	**1,761**	**211**	**311**	**322**	**42**	**1,919**	
1987 3-Month Average	**1,772**	**173**	**227**	**347**	**39**	**1,785**	
1986 3-Month Average	**1,785**	**231**	**28**	**313**	**56**	**1,675**	

[a]Includes ethane, propane, normal butane, and isobutane.
[b]A negative number indicates an increase in stocks and a positive number indicates a decrease.
[c]Stocks are totals as of end of period.
[d]In January 1975, 1981, 1983, and 1984, a new stock basis was established affecting stocks reported and stock withdrawal calculations. See Note 4 at end of section.
[e]Due to a rounding difference, this value is 1,528 in the *Petroleum Supply Annual* and the *Petroleum Supply Monthly*.
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.
Sources: See end of section.

Table 3.8 Other Petroleum Products[a] Supply and Disposition

	Supply			Disposition			Ending Stocks[c]
	Total Production	Imports	Stock Withdrawal[b]	Refinery Inputs	Exports	Product Supplied	
	Thousand Barrels per Day						Million Barrels
1973 Average	**3,693**	**502**	**-9**	**750**	**166**	**3,270**	**208**
1974 Average	**3,558**	**432**	**-28**	**665**	**174**	**3,123**	**[d] 218**
1975 Average	**3,418**	**277**	**[d] 4**	**537**	**160**	**3,002**	**219**
1976 Average	**3,643**	**206**	**-5**	**524**	**175**	**3,145**	**220**
1977 Average	**3,912**	**205**	**-27**	**514**	**165**	**3,410**	**230**
1978 Average	**4,046**	**166**	**14**	**492**	**167**	**3,568**	**225**
1979 Average	**4,153**	**195**	**-37**	**352**	**209**	**3,749**	**238**
1980 Average	**3,956**	**210**	**-23**	**311**	**198**	**3,634**	**[d] 247**
1981 Average	**3,739**	**226**	**[d] 46**	**723**	**199**	**3,088**	**282**
1982 Average	**3,453**	**334**	**80**	**787**	**211**	**[e] 2,870**	**[d] 253**
1983 Average	**3,460**	**411**	**[d] 6**	**712**	**242**	**2,923**	**[d] 256**
1984 Average	**3,632**	**565**	**23**	**791**	**245**	**3,183**	**240**
1985 Average	**3,721**	**588**	**-17**	**886**	**240**	**3,166**	**246**
1986 January	3,902	541	-172	967	311	2,993	252
February	3,868	393	-209	747	270	3,035	258
March	3,754	454	21	854	208	3,167	257
April	3,788	638	-100	760	369	3,196	260
May	4,055	659	-114	810	298	3,492	264
June	4,209	687	-70	853	263	3,710	266
July	4,145	589	119	1,064	357	3,432	262
August	4,223	572	335	1,061	301	3,768	252
September	4,225	571	35	846	278	3,708	251
October	3,969	575	-112	666	375	3,391	254
November	3,904	559	36	940	342	3,217	253
December	3,920	490	90	1,069	325	3,105	250
Average	**3,997**	**561**	**-10**	**888**	**308**	**3,353**	
1987 January	3,835	428	-152	665	283	3,164	256
February	3,773	608	-354	385	320	3,322	266
March	3,772	599	-146	717	281	3,225	270
April	3,948	478	110	885	254	3,397	267
May	4,054	486	171	918	320	3,473	262
June	4,195	671	197	898	323	3,842	256
July	4,354	493	110	835	256	3,866	253
August	4,336	580	-152	697	238	3,828	257
September	4,346	565	-16	909	353	3,632	258
October	4,219	597	19	969	272	3,594	257
November	3,999	533	-40	993	305	3,195	258
December	4,053	584	266	1,090	330	3,484	250
Average	**4,076**	**551**	**3**	**833**	**294**	**3,503**	
1988 January	3,988	639	-143	785	354	3,345	254
February	3,941	570	-35	726	318	3,433	255
March	4,175	603	-269	656	328	3,525	264
3-Month Average	**4,037**	**605**	**-151**	**722**	**333**	**3,435**	
1987 3-Month Average	**3,794**	**543**	**-213**	**596**	**294**	**3,234**	
1986 3-Month Average	**3,840**	**465**	**-117**	**860**	**263**	**3,066**	

[a]Includes 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, and liquefied petroleum gases.

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

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

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

[e]Due to a rounding difference, this value is 2,869 in the *Petroleum Supply Annual* and the *Petroleum Supply Monthly*.

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

Sources: See end of section.

Notes and Sources for the Petroleum Section

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 industry publications such 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 burned on leases and pipelines 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, 1981, and 1983, numerous respondents were added to bulk terminal and pipeline surveys affecting subsequent stocks reported and stock withdrawal 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--1,462.
- Motor Gasoline: 1974--225; 1980--263; 1982--244 (Total) and 203 (Finished).
- Distillate Fuel Oil: 1974--224; 1980--205; and 1982--186.
- Residual Fuel Oil: 1974--75; 1980--91; and 1982--68.
- Liquefied Petroleum Gases: 1974--113; 1980--128; and 1982--103.
- Other Petroleum Products: 1974--220; 1980--249; and 1982--259.
- Stock withdrawal calculations beginning in 1975, 1981, and 1983, were made 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 will now appear in the "Liquefied Petroleum Gases Supply and Disposition" table. This change will affect stocks reported and stock withdrawals 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--248.

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 withdrawal calculations. Using the expanded coverage (new basis), 1980 end-of-year stocks, in million barrels, would have been 488 (Total) and 380 (Other Primary).

Sources

- 1973 through 1976: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys,* "Petroleum Statement, Annual" and "PAD Districts Supply/Demand, Annual."
- 1977 through 1980: Energy Information Administration (EIA), *Energy Data Reports*, "Petroleum Statement, Annual" and "PAD Districts Supply/Demand, Annual" and unleaded gasoline data from *Monthly Petroleum Statistics Report.*
- 1981 through 1986: EIA, *Petroleum Supply Annual.*
- January 1987 through March 1988: Detailed Statistics in appropriate issues of the *Petroleum Supply Monthly.*
- April 1988: Estimates based on EIA weekly data (except domestic crude oil production).
- January 1987 through April 1988: Domestic crude oil production estimate based on historical statistics from State conservation agencies and the U.S. Geological Survey.

Section 4. Natural Gas

Total dry natural gas production in the United States during March 1988 was an estimated 1.4 trillion cubic feet, 1 percent[3] less than in March 1987. Dry natural gas production during the first quarter of 1988 was 4.4 trillion cubic feet, 2 percent higher than during the first quarter of 1987.

Consumption of natural and supplemental gas in March 1988 was an estimated 1.7 trillion cubic feet, the same level as in March 1987. Consumption of natural and supplemental gas during the first quarter of 1988 was an estimated 5.6 trillion cubic feet, 3 percent higher than the first quarter of 1987.

Deliveries to residential consumers in February 1988 (latest data available) were 736 billion cubic feet, 6 percent higher than in February 1987. Total deliveries to industrial consumers during February 1988 were an estimated 560 billion cubic feet, 13 percent higher than in February 1987.

Imports of natural gas in March 1988 were an estimated 120 billion cubic feet, 38 percent higher than in the previous March. Imports of natural gas during the first quarter of 1988 were an estimated 369 billion cubic feet, 37 percent higher than imports during the first quarter of 1987.

Stocks of working gas[4] in underground natural gas storage reservoirs at the end of March 1988 totaled 1.7 trillion cubic feet, 11 percent below the level of stocks available 1 year earlier. Net withdrawals from storage during March 1988 were 146 billion cubic feet, 30 percent more than during the previous March.

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

Table 4.1 Natural Gas Production
(Billion Cubic Feet)

	Gross Wet Gas Withdrawals[a]	Used for Repressuring[b]	Nonhydrocarbon Gases Removed[c]	Vented and Flared	Marketed Production (Wet)[d]	Extraction Loss[c]	Total Dry Gas Production[e]
1973 Total	**24,067**	**1,171**	**NA**	**248**	**[f] 22,648**	**917**	**[f] 21,731**
1974 Total	**22,850**	**1,080**	**NA**	**169**	**[f] 21,601**	**887**	**[f] 20,713**
1975 Total	**21,104**	**861**	**NA**	**134**	**[f] 20,109**	**872**	**[f] 19,236**
1976 Total	**20,944**	**859**	**NA**	**132**	**[f] 19,952**	**854**	**[f] 19,098**
1977 Total	**21,097**	**935**	**NA**	**137**	**[f] 20,025**	**863**	**[f] 19,163**
1978 Total	**21,309**	**1,181**	**NA**	**153**	**[f] 19,974**	**852**	**[f] 19,122**
1979 Total	**21,883**	**1,245**	**NA**	**167**	**[f] 20,471**	**808**	**[f] 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	**20,210**	**1,388**	**208**	**93**	**18,520**	**762**	**17,758**
1983 Total	**18,597**	**1,458**	**222**	**95**	**16,822**	**790**	**16,033**
1984 Total	**20,192**	**1,630**	**224**	**108**	**18,230**	**838**	**17,392**
1985 Total	**19,534**	**1,915**	**326**	**95**	**17,198**	**816**	**16,382**
1986 January	1,815	163	29	9	1,614	77	1,536
February	1,583	150	26	8	1,401	68	1,333
March	1,691	167	29	8	1,487	72	1,415
April	1,526	155	28	8	1,336	65	1,271
May	1,553	158	26	8	1,361	66	1,295
June	1,482	145	28	8	1,302	63	1,239
July	1,524	145	28	8	1,344	65	1,278
August	1,523	142	29	8	1,347	68	1,279
September	1,443	133	25	7	1,280	63	1,217
October	1,543	157	25	8	1,353	65	1,288
November	1,634	162	29	9	1,430	63	1,366
December	1,748	161	32	9	1,536	64	1,473
Total	**19,063**	**1,838**	**337**	**98**	**16,791**	**800**	**15,991**
1987 January	1,788	167	35	12	1,575	75	1,500
February	1,608	154	32	8	1,414	67	1,347
March	1,708	167	35	9	1,497	71	1,426
April	1,619	175	31	9	1,403	67	1,336
May	1,611	185	31	9	1,386	66	1,320
June	1,554	181	30	8	1,334	63	1,271
July	1,581	178	31	8	1,365	65	1,300
August	1,599	173	32	9	1,385	66	1,319
September	1,539	175	31	9	1,324	63	1,261
October	1,646	195	36	11	1,404	67	1,337
November	1,702	197	33	9	1,464	70	1,394
December	1,849	206	33	10	1,600	76	1,524
Total	**19,804**	**2,153**	**390**	**111**	**17,150**	**816**	**16,334**
1988 January	[R] 1,866	[R] 213	[R] 34	11	[R] 1,609	77	[R] 1,532
February	[E] 1,711	[E] 188	[E] 33	[E] 10	[E] 1,480	[E] 70	[E] 1,410
March	[E] 1,715	[E] 188	[E] 33	[E] 10	[E] 1,484	[E] 71	[E] 1,413
3-Month Total	**5,292**	**589**	**100**	**31**	**4,573**	**218**	**4,355**
1987 3-Month Total	**5,104**	**488**	**102**	**29**	**4,486**	**213**	**4,273**
1986 3-Month Total	**5,089**	**480**	**84**	**25**	**4,502**	**217**	**4,284**

[a]Gas withdrawn from gas and oil wells.
[b]Gas returned to formations for repressuring, pressure maintenance, and cycling.
[c]For definitions and further explanations, see Notes at end of section.
[d]Equal to gross withdrawals minus volumes used for repressuring, volumes of nonhydrocarbon gases removed, and volumes vented and flared. See Note 2 at end of section.
[e]Equal to marketed production (wet) minus extraction loss.
[f]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. • Data through 1986 are final. Subsequent data are preliminary.
Sources: See end of section.

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]	Total Supply/ Disposition[c]	Additions to Storage[a]	Exports[b]	Consumption[b]	Unaccounted for[e]
1973 Total	[d] 21,731	1,533	NA	1,033	24,297	1,974	77	22,049	196
1974 Total	[d] 20,713	1,701	NA	959	23,373	1,784	77	21,223	289
1975 Total	[d] 19,236	1,760	NA	953	21,949	2,104	73	19,538	235
1976 Total	[d] 19,098	1,921	NA	964	21,983	1,756	65	19,946	216
1977 Total	[d] 19,163	1,750	NA	1,011	21,924	2,307	56	19,521	41
1978 Total	[d] 19,122	2,158	NA	966	22,245	2,278	53	19,627	287
1979 Total	[d] 19,663	2,047	NA	1,253	22,964	2,295	56	20,241	372
1980 Total	19,403	1,972	155	985	22,515	1,949	49	19,877	640
1981 Total	19,181	1,930	176	904	22,191	2,228	59	19,404	501
1982 Total	17,758	2,164	145	933	21,000	2,472	52	18,001	475
1983 Total	16,033	2,270	132	920	19,354	1,822	55	16,835	• 642
1984 Total	17,392	2,098	110	843	20,443	2,295	55	17,951	• 143
1985 Total	16,382	2,397	126	949	19,855	2,163	57	17,281	354
1986 January	1,536	421	12	99	2,068	48	5	2,106	-91
February	1,333	375	11	74	1,793	54	3	1,849	-113
March	1,415	215	11	55	1,696	109	5	1,703	-121
April	1,271	73	8	43	1,395	142	6	1,333	-86
May	1,295	42	8	52	1,397	260	3	1,161	-27
June	1,239	24	8	44	1,315	260	6	1,039	10
July	1,278	29	8	48	1,363	281	6	1,039	37
August	1,279	26	8	51	1,364	285	6	1,007	66
September	1,217	25	8	54	1,304	244	5	958	97
October	1,288	48	9	69	1,414	192	5	1,041	176
November	1,366	200	10	70	1,646	74	6	1,276	290
December	1,473	358	12	90	1,933	36	6	1,710	181
Total	15,991	1,837	113	750	18,692	1,984	61	16,221	427
1987 January	1,500	512	18	101	2,131	42	5	1,998	86
February	1,347	332	15	81	1,775	37	5	1,818	-85
March	1,426	220	14	87	1,747	109	5	1,674	-41
April	1,336	109	12	68	1,525	166	4	1,386	-31
May	1,320	26	11	60	1,417	289	5	1,152	-29
June	1,271	24	11	57	1,363	260	5	1,070	28
July	1,300	32	12	66	1,410	226	6	1,070	108
August	1,319	49	12	75	1,455	252	5	1,104	94
September	1,261	18	11	73	1,363	231	5	1,025	102
October	1,337	100	12	93	1,542	155	4	1,199	184
November	1,394	203	14	107	1,718	148	5	1,393	172
December	1,524	356	16	120	2,016	47	6	1,792	171
Total	16,334	1,981	158	988	19,461	1,962	60	16,680	759
1988 January	[R] 1,532	546	19	133	[R] 2,230	25	5	[E] 2,026	[R] 174
February	[E] 1,410	452	16	[R] 116	[R] 1,994	49	5	[E] 1,931	[R] 9
March	[E] 1,413	249	14	120	1,796	103	5	[E] 1,675	13
3-Month Total	4,355	1,247	49	369	6,020	177	15	[E] 5,632	196
1987 3-Month Total	4,273	1,064	47	269	5,653	188	15	5,490	-40
1986 3-Month Total	4,284	1,011	34	228	5,557	211	13	5,658	-325

[a]Data for 1980 through 1985 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]For definitions and further explanations, 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. • Data through 1986 are final. Subsequent data are preliminary.
Sources: See end of section.

Table 4.3 Natural Gas[a] Consumption by End-Use Sector
(Billion Cubic Feet)

	Lease and Plant Fuel	Pipeline Fuel	Delivered to Consumers					Total Consumption
			Residential	Commercial[b]	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 January	89	50	791	392	600	184	1,967	2,106
February	77	43	685	345	542	157	1,729	1,849
March	82	42	580	291	538	170	1,579	1,703
April	73	36	363	189	474	198	1,224	1,333
May	75	38	236	131	449	231	1,047	1,161
June	71	37	155	99	416	260	930	1,039
July	74	38	126	89	410	301	926	1,039
August	74	38	117	89	412	276	894	1,007
September	70	36	131	91	384	247	852	958
October	74	38	185	116	411	217	929	1,041
November	79	38	346	189	436	187	1,157	1,276
December	85	47	599	299	507	175	1,580	1,710
Total	**923**	**485**	**4,314**	**2,318**	**5,579**	**2,602**	**14,814**	**16,221**
1987 January	87	51	749	359	568	185	1,860	1,998
February	78	43	697	344	497	158	1,697	1,818
March	82	43	582	288	488	191	1,548	1,674
April	77	40	407	203	452	206	1,269	1,386
May	76	40	226	129	439	243	1,036	1,152
June	73	38	149	96	430	284	959	1,070
July	75	39	127	91	420	319	957	1,070
August	76	39	119	88	443	339	988	1,104
September	73	37	128	93	426	268	915	1,025
October	77	39	226	131	488	238	1,083	1,199
November	81	41	359	187	508	217	1,271	1,393
December	89	49	599	283	576	197	1,654	1,792
Total	**944**	**499**	**4,368**	**2,292**	**5,734**	**2,844**	**15,236**	**16,680**
1988 January	E 89	E 53	E 756	E 343	E 618	167	E 1,884	E 2,026
February	E 81	E 47	E 736	E 337	E 560	170	E 1,803	E 1,931
2-Month Total	**E 170**	**E 100**	**E 1,492**	**E 680**	**E 1,178**	**337**	**E 3,687**	**E 3,957**
1987 2-Month Total	**165**	**94**	**1,446**	**703**	**1,065**	**343**	**3,557**	**3,816**
1986 2-Month Total	**166**	**93**	**1,476**	**737**	**1,142**	**341**	**3,696**	**3,955**

[a]Includes supplemental gaseous fuels.
[b]Includes deliveries to local, State, and Federal agencies engaged in nonmanufacturing activities.
R=Revised data. 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. • Data through 1986 are final. Subsequent data are preliminary.
Sources: See end of section.

Due to revisions in the data collection form and redesign of the respondent sample, sectoral and total consumption data will not be available for the next several months. During this period, estimated values will be published based on the arithmetic average of the 1985, 1986, and 1987 data. Revised values based on the actual data will be published as they become available.

Table 4.4 Underground Storage of Natural Gas
(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	Withdrawals	Net[b]
1973 Total	**2,864**	**2,034**	**4,898**	**305**	**17.6**	**1,974**	**1,533**	**441**
1974 Total	**2,912**	**2,050**	**4,962**	**16**	**.8**	**1,784**	**1,701**	**83**
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 January	3,842	2,213	6,056	-29	-1.3	48	414	-366
February	3,842	1,872	5,714	19	1.0	54	369	-315
March	3,838	1,764	5,602	21	1.2	109	213	-104
April	3,834	1,841	5,675	-18	-1.0	140	73	67
May	3,830	2,076	5,906	-53	-2.5	255	42	213
June	3,829	2,323	6,153	-28	-1.2	255	24	231
July	3,841	2,570	6,412	-35	-1.3	274	29	245
August	3,840	2,842	6,683	10	.4	279	26	253
September	3,840	3,066	6,906	-16	-.5	239	25	215
October	3,840	3,208	7,048	4	.1	189	48	141
November	3,820	3,077	6,897	-9	-.3	74	197	-123
December	3,819	2,749	6,567	142	5.5	36	352	-316
Total						**1,952**	**1,812**	**140**
1987 January	3,821	2,280	6,101	67	3.0	42	512	-470
February	3,818	1,988	5,806	116	6.2	37	332	-295
March	3,816	1,878	5,694	114	6.5	109	220	-112
April	3,814	1,937	5,751	96	5.2	166	109	57
May	3,813	2,201	6,014	125	6.0	289	26	264
June	3,817	2,433	6,250	110	4.7	260	24	235
July	3,812	2,628	6,440	58	2.2	226	32	194
August	3,811	2,832	6,643	-11	-.4	252	49	203
September	3,813	3,043	6,856	-23	-.7	231	18	213
October	3,813	3,097	6,910	-110	-3.4	155	100	54
November	3,771	3,055	6,826	-22	-.7	148	203	-55
December	3,792	2,755	6,547	6	.2	47	356	-309
Total						**1,962**	**1,981**	**-21**
1988 January	3,792	2,223	6,015	-57	-2.5	25	546	-521
February	3,792	1,820	5,612	-168	-8.4	49	452	-402
March	3,791	1,678	5,468	-200	-10.7	103	249	-146

[a]Total underground storage capacity at the end of each calendar year (in billion cubic feet): 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; and 1987--8,124. Current capacity is 8,124.

[b]Positive numbers indicate injections are greater than withdrawals. Negative numbers indicate withdrawals are greated than injections. Net injections or withdrawals may not equal the difference between applicable ending stocks. See Note 8 at end of section.

Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding. • Data through 1986 are final. Subsequent data are preliminary.

Sources: See end of section.

Figure 4.1 Natural Gas Consumption, Production, and Imports

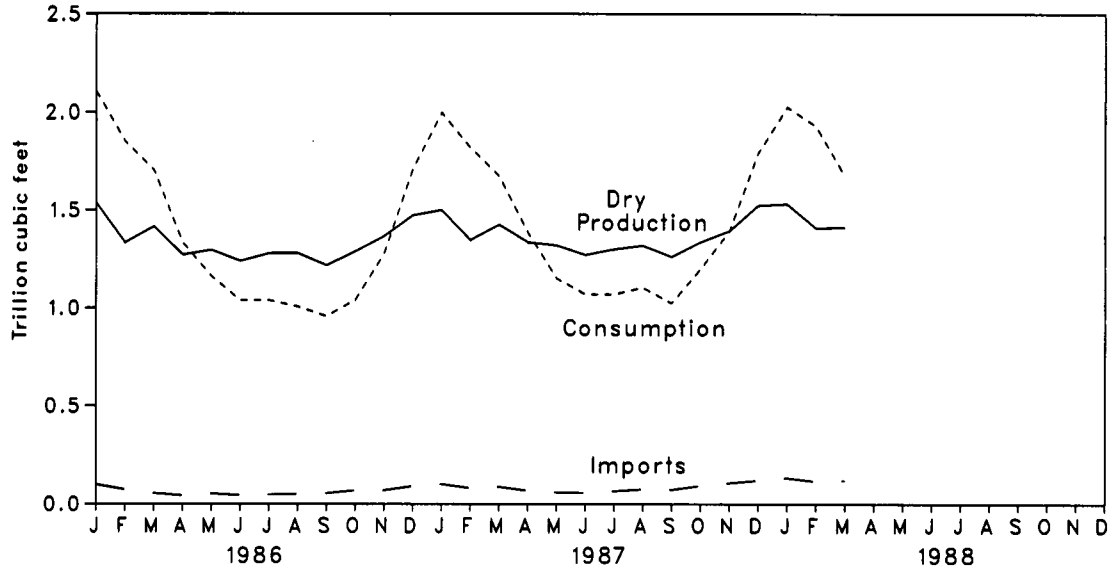
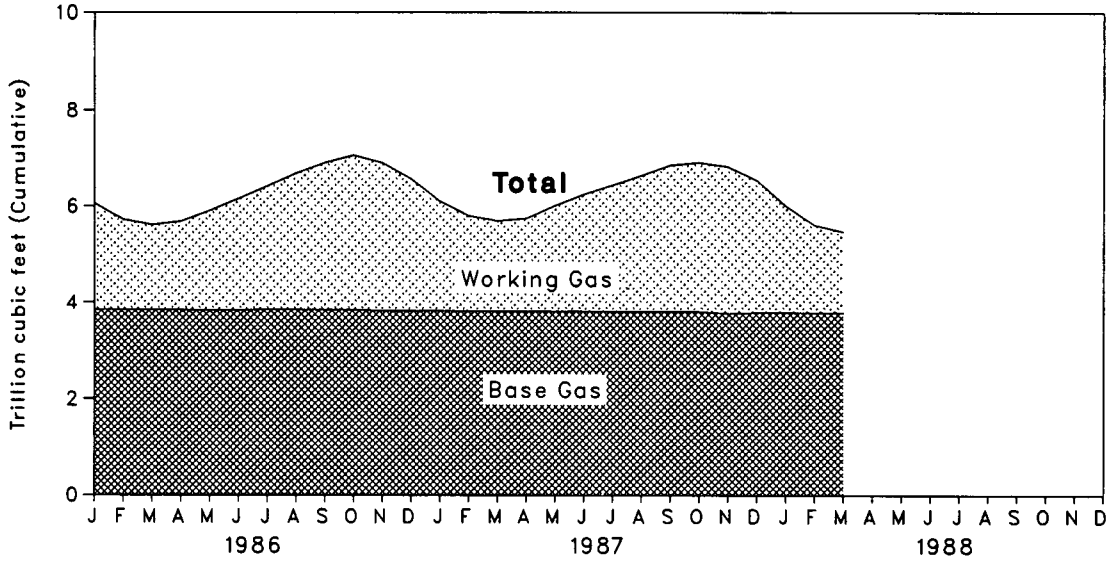


Figure 4.2 Natural Gas in Storage, End of Period



Notes and Sources for the Natural Gas Section

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) 1986.* These data are not available for periods prior to 1980. For 1986, of the 32 producing States, 24 reported data on nonhydrocarbon gases removed. These 24 States accounted for 59 percent of total 1986 gross withdrawals. In addition, gross withdrawals data from two States, which together accounted for 36 percent of the 1986 total production, did not include all or most of the nonhydrocarbon gases removed on leases. No estimates are made for the two States not reporting nonhydrocarbon gases removed. For further information, see the EIA *Natural Gas Monthly (NGM).*

Monthly data are reported by three States and computed for six States. All monthly data are considered preliminary until after publication of the EIA *NGA* for that year. For further information on methods of estimating preliminary monthly data, see the EIA *NGM.*

Monthly data are revised and considered final after publication of the EIA *NGA* by proportionally allocating the differences between annual data published in the EIA *NGA* and the sum of the preliminary monthly data (January-December).

2. Production: Annual data. Final annual data are from the EIA *NGA 1986.*

Estimated Monthly Data. All 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. All monthly data are considered preliminary until after publication of the EIA *NGA* for that year. Preliminary monthly data are gathered from reports from the Interstate Oil Compact Commission and the U.S. Minerals Management Service. Volumetric data are converted, as necessary to a standard 14.73 psia pressure base. Unless there are major changes, data are not revised until after publication of the EIA *NGA.*

Final monthly data. The difference between annual production data published in the EIA *NGA 1986* and the sum of preliminary monthly data (January-December) is allocated proportionally to the preliminary 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* for which they have been estimated based on 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 based on 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 each month based on its total natural gas disposition.

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

Annual data beginning with 1980 are from the EIA *NGA 1986.* Unknown quantities of supplemental gaseous fuels are included in consumption data for 1979 and earlier years.

All monthly data are considered preliminary until after the publication of the EIA *NGA* for that year. 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. This ratio is applied to the monthly sum of these three elements to compute a monthy supplemental gaseous fuels figure.

5. Imports and Exports: The United States imports natural gas via pipeline from Mexico and Canada, and liquefied natural gas (LNG) (until September 1985) 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 liquefied natural gas via tanker to Japan.

Annual and final monthly data are published 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* for that year.

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

All final data are from the EIA, *NGA.* All 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. Unaccounted for: The "Unaccounted for" category represents the following: (1) quantities lost; (2) the net result of flow data metered at varying temperature and pressure conditions and converted to a standard temperature and pressure base; (3) metering inaccuracies; (4) differences between billing cycle and calendar period time frames; (5) the effect of variations in company accounting and billing practices; and (6) imbalances from EIA's 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 "Unaccounted for" 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. This 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.

All monthly data concerning underground storage are collected from the essentially identical Forms FPC-8 and EIA-191. Monthly data are revised after publication of the EIA *Underground Natural Gas Storage in the United States* for that heating year (April through March). In addition, injection and withdrawal data from the FPC-8/EIA-191 survey are adjusted to correspond to data from Form EIA-176 following publication of the EIA *Natural Gas Annual.*

The final monthly and annual storage and withdrawal data for 1980 through 1986 include both underground and liquefied natural gas (LNG) storage. Underground storage data are taken from the FPC-8/EIA-191 surveys in the manner described earlier. Annual data on LNG additions and withdrawals are taken 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 it to annual LNG data.

Sources

Production: 1973 through 1986: Energy Information Administration (EIA), *Natural Gas Annual 1986;* January 1987 forward: State reports to the Interstate Oil Compact Commission, data from the U.S. Minerals Management Service, and EIA estimates for States that do not report monthly data on a regular or timely basis.

Extraction Loss, Consumption, and Unaccounted For: 1973 through 1986: EIA, *Natural Gas Annual 1986;* January 1987 forward: EIA computations.

Withdrawals from and Additions to Storage: 1973 through 1986: EIA, *Natural Gas Annual 1986;* January 1987 forward: Form FPC-8 and Form EIA-191, "Underground Gas Storage Report."

Supplemental Gaseous Fuels: 1980 through 1986: EIA, *Natural Gas Annual 1986;* January 1987 forward: EIA computations.

Imports and Exports: 1973 through 1986: Form FPC-14, "Imports and Exports of Natural Gas"; January 1987 forward: EIA computations.

End-Use Consumption: All data except electric utility--1973 through 1986: EIA, *Natural Gas Annual, 1986;* January 1987 forward: Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers," and EIA computations. Electric utility data--EIA, Form 759, "Monthly Power Plant Report" (formerly Form FPC-4).

Underground Storage: 1973 and 1974: American Gas Association, *Gas Facts;* 1975 through 1979: EIA, Form FPC-8 and Form EIA-191, and the *Natural Gas Annual;* 1980 forward: EIA, Form FPC-8, Form EIA-191, and Form 176, "Annual Report of Natural and Supplemental Gas Supply and Disposition."

Section 5. Oil and Gas Resource Development

In April 1988, the number of crews engaged in seismic exploration increased two from the previous month. The April 1988 total of 196 was 32 higher than in April 1987. Of the total, 167 were land crews and 29 were marine vessels. The number of land crews was up by 22 from April 1987 and the number of marine vessels was up by 10.

The rotary rig count decreased to 917 in April 1988. That total was 4 percent lower than in the previous month, but 22 percent higher than in April 1987. Of the total number of rigs in operation, 800 were onshore and 117 were offshore. The number of onshore rigs was up 17 percent from the number in April 1987, and the number of offshore rigs was up 60 percent.

Exploratory and development well completions during March 1988 totaled an estimated 2,950, up 25 percent from the previous month and 24 percent higher than the March 1987 total. Oil well completions were 1,450, up 39 percent from the level in March 1987, and gas well completions totaled 620, up 7 percent from the March 1987 total. Total footage drilled in March 1988 was 14.0 million feet, up 24 percent[5] from the total in February 1988, and up 27 percent from the total in March 1987.

Figure 5.1 Seismic Crews, Rotary Rigs, and Footage Drilled

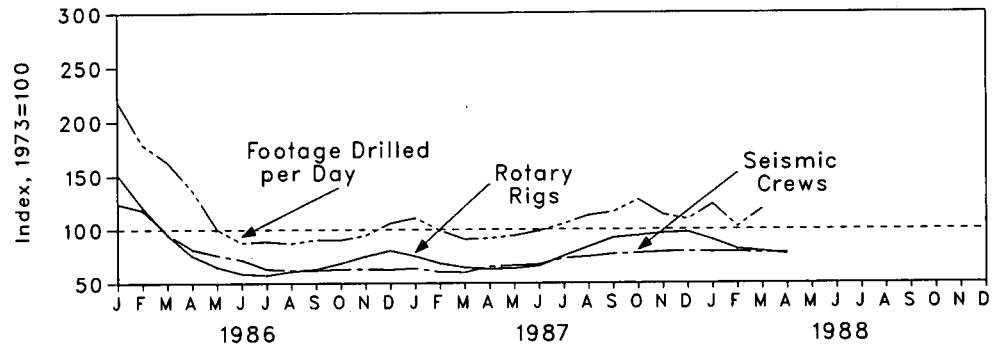
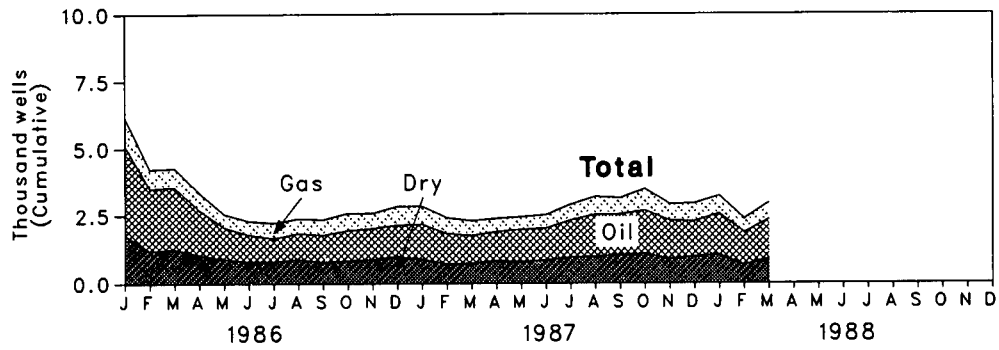


Figure 5.2 Exploratory and Development Wells Completed



[5]Percentage changes are calculated using unrounded data.

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 January	39	271	310	175	1,635	1,810
February	39	256	295	164	1,280	1,444
March	28	212	240	132	1,007	1,139
April	20	185	205	112	794	906
May	19	172	191	94	687	781
June	18	162	180	73	632	705
July	20	138	158	65	621	686
August	19	137	156	65	665	730
September	24	131	155	74	681	755
October	22	136	158	80	739	819
November	19	139	158	79	820	899
December	18	139	157	89	874	963
Average	**24**	**176**	**201**	**99**	**865**	**964**
1987 January	18	142	160	88	812	900
February	19	132	151	75	743	818
March	18	132	150	76	696	772
April	19	145	164	73	681	754
May	20	146	166	76	687	763
June	22	147	169	85	703	788
July	24	159	183	97	804	901
August	28	159	187	109	894	1,003
September	29	164	193	114	987	1,101
October	32	163	195	116	1,008	1,124
November	28	170	198	118	1,034	1,152
December	27	172	199	128	1,034	1,162
Average	**24**	**153**	**176**	**95**	**841**	**936**
1988 January	30	167	197	127	949	1,076
February	30	168	198	123	853	976
March	29	165	194	119	832	951
April	29	167	196	117	800	917
4-Month Average	**30**	**167**	**197**	**122**	**858**	**980**
1987 4-Month Average	**19**	**138**	**157**	**78**	**731**	**809**
1986 4-Month Average	**32**	**231**	**263**	**145**	**1,169**	**1,314**

[a]Monthly data are averages of 4- or 5-week reporting periods, not calendar months.
Note: Geographic coverage is the 50 States and the District of Columbia.
Sources: See end of section.

Table 5.2 Total Oil and Gas Wells Completed and Footage Drilled

	Wells Completed				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	**32.26**	**17.22**	**20.34**	**69.84**	**312.30**
1981 Total	**42.84**	**19.91**	**27.28**	**90.03**	**408.84**
1982 Total	**38.75**	**18.73**	**25.96**	**83.43**	**374.85**
1983 Total	**36.77**	**14.28**	**23.85**	**74.90**	**314.73**
1984 Total	**42.20**	**16.79**	**25.36**	**84.35**	**367.33**
1985 Total	**34.57**	**14.10**	**20.51**	**69.18**	**306.98**
1986 January	3.34	1.04	1.78	6.16	25.94
February	2.33	.72	1.18	4.22	19.86
March	R 2.29	.71	R 1.27	R 4.26	R 19.51
April	1.67	.65	1.03	3.35	15.81
May	1.18	.49	.88	2.55	12.15
June	.99	.51	.79	2.30	10.39
July	.99	.57	R .84	R 2.40	R 10.79
August	R .99	R .57	.88	R 2.43	R 10.54
September	1.00	.57	.77	2.34	10.39
October	1.11	.64	.83	2.57	11.13
November	1.15	.56	.87	2.57	11.21
December	1.17	.70	.97	2.84	13.05
Total	**18.20**	R **7.72**	R **12.07**	R **38.00**	R **170.88**
1987 January	1.29	.67	.88	2.84	13.10
February	1.12	.59	.70	2.41	10.99
March	R 1.04	R .58	R .74	R 2.37	R 11.08
April	1.07	.49	.82	2.38	10.88
May	1.19	.47	.78	2.44	11.16
June	1.18	.49	.84	2.51	11.30
July	1.37	.59	.94	2.90	12.43
August	1.55	.67	.97	3.18	13.37
September	R 1.45	R .62	R 1.02	R 3.09	R 13.71
October	1.60	.81	1.07	3.48	15.09
November	1.41	R .74	.88	R 3.03	R 13.12
December	1.31	R .78	.96	R 3.05	R 14.19
Total	R **15.58**	R **7.50**	**10.59**	R **33.67**	R **150.43**
1988 January	1.52	.67	1.03	3.23	14.58
February	1.19	.51	.66	2.36	11.32
March	1.45	.62	.89	2.95	14.04
3-Month Total	**4.16**	**1.80**	**2.58**	**8.54**	**39.94**
1987 3-Month Total	**3.45**	**1.84**	**2.32**	**7.61**	**35.18**
1986 3-Month Total	**7.96**	**2.46**	**4.22**	**14.64**	**65.43**

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.

Source: See end of section.

Notes and Sources for the Oil and Gas Resource Development Section

Notes

Beginning in the March 1985 *Monthly Energy Review (MER)*, the Energy Information Administration (EIA) revised the exploratory and development wells drilled data series. In order to present a consistent series, historical as well as current statistics were adjusted.

In previous issues, the *MER* published statistics based on data on well completions reported to the American Petroleum Institute during a given month, as opposed to data on wells actually completed during the month. Because of the time lag from date of well completion to date of reporting, data on well completions reported are not as accurate an indicator of drilling activity as are data on well completions. For example, during 1982 well completions reported continued to rise even though the number of wells actually completed fell. Starting in the March 1985 issue of the *MER*, published figures have been EIA estimates of the number of wells actually completed in a given month and are shown in thousands, rounded to two decimal places. The associated footage drilled is shown in millions, also rounded to two decimal places.

The EIA estimates are calculated using an adjustment process that imputes total well counts and footage by type and class based on partial counts of well completions available from the reported data. That is, based on statistical analysis of the incomplete reported data, the process imputes the missing portions to determine values for total well completions and footage. Estimates for a given month are first published in the *MER* for that month, that is estimates for June 1984 are first published in the June 1984 *MER*. Revisions to the estimates are scheduled for the 6th, 12th, and 24th months following initial publication, as newly reported data refine the accuracy of the estimate. Unscheduled revisions to the published data will also be made when the latest estimate differs by more than 10 percent during the first 5 months, more than 10 percent during the next 6 months, more than 5 percent thereafter through 5 years. After 5 years, the actual reported data will be published.

The three well types considered are oil, gas, and dry. By convention, wells with both oil and gas zones are categorized as oil. Well classes are either development or exploratory; wells in any other class have been deleted. Exploratory well categories considered are new field wildcat, new pool wildcat, deeper pool test, or extension (American Association of Petroleum Geologists well classification codes 1 through 5).

Additional information may be obtained from "Estimating Well Completions," the feature article published in the March 1985 *MER*.

Sources

- Crews Engaged: Society of Exploration Geophysicists, "Monthly Seismic Crew Count" and annual reports published in their bulletins, *Geophysics* and *Leading Edge*.
- Rotary Rigs: Hughes Tool Company, "Rotary Rigs Running--by State."
- Wells and Footage Drilled: EIA computations based on well reports submitted to the American Petroleum Institute by Petroleum Information Corporation.

Section 6. Coal

Coal production in March 1988 totaled 85 million short tons, 12 percent[6] higher than the 76 million short tons produced in March 1987. Production for the first 3 months of 1988 totaled 238 million short tons, a 7-percent increase over the 222 million short tons produced during the same period in 1987. For the first quarter of 1988, two States had significantly higher coal production than in the same period of 1987: Wyoming's 16 percent higher level coincided with widespread sagging coal prices, more spot coal purchases in the region, and higher coal consumption at electric power plants to replace lower hydroelectric generation due to drought conditions in the West. In addition, coal contracts had been encouraged by actions of the 1987 Montana State Legislature to permit significant graduated reductions in the coal severance tax if 32 million short tons of coal are produced in fiscal year 1988 (July 1, 1987, through June 30, 1988).

Electric utility coal consumption in February 1988 totaled 61 million short tons, 14 percent above the 54 million short tons consumed in February 1987.

Electric utility coal stocks were 159 million short tons at the end of February 1988 compared to 158 million short tons at the end of February 1987.

Exports of coal in February 1988 totaled 4 million short tons, 3 percent less than exports in February 1987. Coal imports totaled 162 thousand short tons in February 1988, 91 percent more than imports in February 1987.

[6]Percentage changes are calculated using unrounded data.

Figure 6.1 Coal Production, Consumption, Imports, and Exports

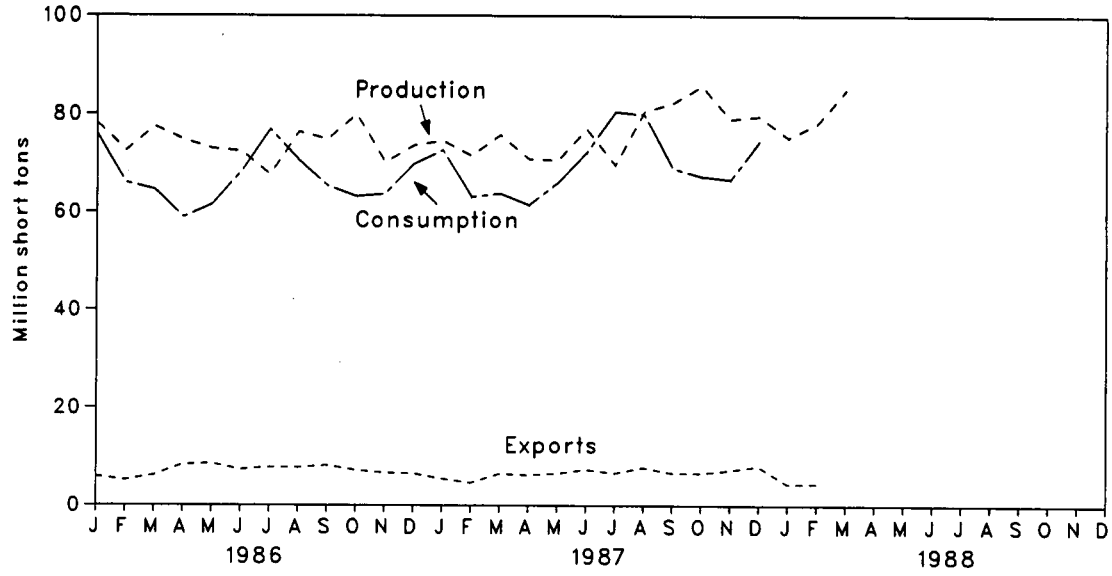


Figure 6.2 Coal Stocks, End of Period

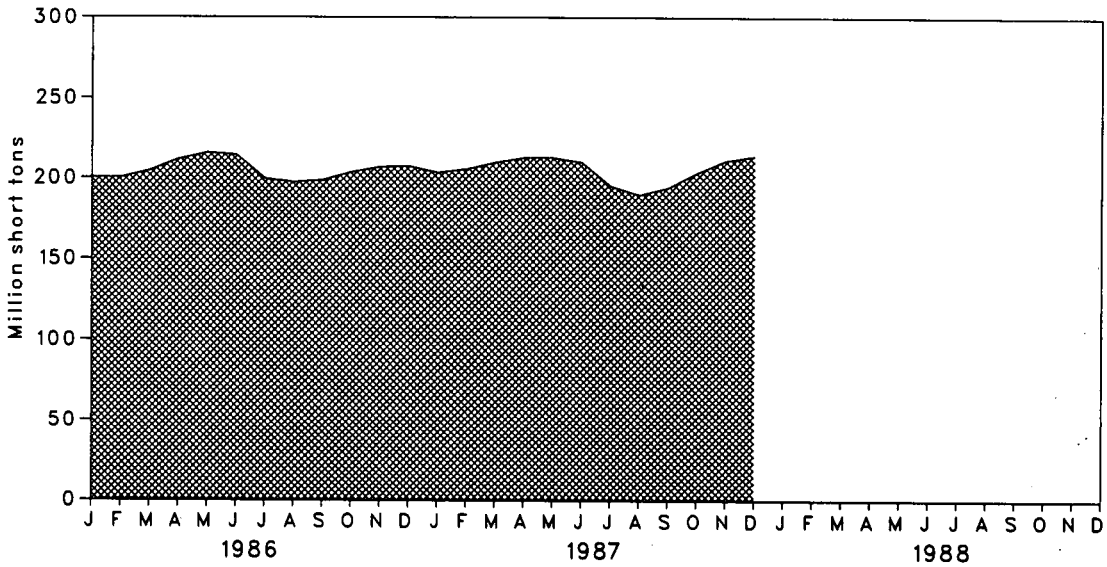


Table 6.1 Coal Overview
(Thousand Short Tons)

	Production	Consumption	Imports[a]	Exports[b]	Stocks[c]
1973 Total	**598,568**	**562,584**	**127**	**53,587**	**NA**
1974 Total	**610,023**	**558,402**	**2,080**	**60,661**	**NA**
1975 Total	**654,641**	**562,640**	**940**	**66,309**	**NA**
1976 Total	**684,913**	**603,790**	**1,203**	**60,021**	**NA**
1977 Total	**697,205**	**625,291**	**1,647**	**54,312**	**NA**
1978 Total	**670,164**	**625,225**	**2,953**	**40,714**	**NA**
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 January	78,106	75,877	154	5,935	200,074
February	72,489	65,917	209	5,158	200,159
March	77,379	64,521	122	6,152	204,422
April	74,680	58,921	214	8,302	211,500
May	72,907	61,559	172	8,545	215,508
June	72,413	68,193	190	7,323	214,166
July	67,597	76,787	178	7,780	199,556
August	76,293	70,590	171	7,718	197,412
September	74,791	65,293	188	8,189	198,689
October	79,891	63,179	110	7,205	203,538
November	70,189	63,682	319	6,676	206,834
December	73,580	69,792	185	6,536	207,319
Total	**890,315**	**804,312**	**2,212**	**85,518**	
1987 January	74,512	72,648	134	5,471	203,432
February	71,517	63,091	85	4,643	205,551
March	75,701	63,784	111	6,462	209,733
April	70,863	61,472	229	6,229	212,699
May	70,589	65,950	135	6,557	212,788
June	76,914	72,204	118	7,328	209,976
July	69,634	80,479	120	6,611	195,431
August	80,528	79,935	191	7,758	189,919
September	82,295	68,984	164	6,665	194,373
October	85,705	67,299	86	6,633	203,544
November	79,008	66,634	263	7,210	211,067
December	79,585	74,462	109	8,042	213,780
Total	**916,851**	**836,941**	**1,747**	**79,607**	
1988 January	75,148	NA	159	4,434	NA
February	78,077	NA	162	4,482	NA
March	84,963	NA	NA	NA	NA
3-Month Total	**238,187**	**NA**	**NA**	**NA**	
1987 3-Month Total	**221,730**	**199,523**	**331**	**16,576**	
1986 3-Month Total	**227,974**	**206,314**	**485**	**17,245**	

[a]Includes Puerto Rico.

[b]Excludes shipments of anthracite to U.S. Armed Forces overseas (218 thousand short tons in 1982, 341 thousand short tons in 1983, 298 thousand short tons in 1984, 240 thousand short tons in 1985, 209 thousand short tons in 1986, and 278 thousand short tons in 1987.)

[c]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.

NA=Not available.

Notes: • Geographic coverage is the 50 States and the District of Columbia. • Data through 1986 are final. Subsequent data are preliminary. • Totals may not equal sum of components due to independent rounding. • See Note at end of section for methodology used to calculate production, consumption, and stocks.

Sources: See end of section.

Table 6.2 Coal Consumption by End-Use Sector[a]
(Thousand Short Tons)

	Electric Utilities	Industrial		Residential and Commercial	Total
		Coke Plants	Other Industrial Including Transportation		
1973 Total	**389,212**	**94,101**	**68,154**	**11,117**	**562,584**
1974 Total	**391,811**	**90,191**	**64,983**	**11,417**	**558,402**
1975 Total	**405,962**	**83,598**	**63,670**	**9,410**	**562,640**
1976 Total	**448,371**	**84,704**	**61,799**	**8,916**	**603,790**
1977 Total	**477,126**	**77,739**	**61,472**	**8,954**	**625,291**
1978 Total	**481,235**	**71,394**	**63,085**	**9,511**	**625,225**
1979 Total	**527,051**	**77,368**	**67,717**	**8,388**	**680,524**
1980 Total	**569,274**	**66,657**	**60,347**	**6,452**	**702,729**
1981 Total	**596,797**	**61,015**	**67,395**	**7,422**	**732,628**
1982 Total	**593,666**	**40,908**	**64,096**	**8,240**	**706,910**
1983 Total	**625,211**	**37,033**	**65,979**	**8,448**	**736,671**
1984 Total	**664,399**	**44,022**	**73,744**	**9,128**	**791,291**
1985 Total	**693,841**	**41,056**	**75,372**	**7,779**	**818,049**
1986 January	64,034	3,508	7,443	893	75,877
February	55,050	3,324	6,761	781	65,917
March	53,898	3,555	6,511	557	64,521
April	48,114	3,602	6,401	805	58,921
May	51,420	3,533	6,120	486	61,559
June	58,892	3,071	5,846	384	68,193
July	68,021	2,591	5,705	470	76,787
August	61,709	2,578	5,860	444	70,590
September	56,536	2,534	5,634	589	65,293
October	54,116	2,523	5,878	662	63,179
November	54,158	2,545	6,279	701	63,682
December	59,108	2,641	7,146	896	69,792
Total	**685,056**	**36,006**	**75,583**	**7,667**	**804,312**
1987 January	62,414	2,645	6,865	724	72,648
February	53,715	2,506	6,236	634	63,091
March	54,647	2,681	6,005	452	63,784
April	51,435	3,298	6,137	603	61,472
May	56,484	3,235	5,868	364	65,950
June	63,500	2,812	5,605	288	72,204
July	70,736	3,265	5,973	504	80,479
August	70,075	3,249	6,135	476	79,935
September	59,259	3,193	5,899	633	68,984
October	57,117	3,297	6,228	656	67,299
November	55,961	3,326	6,653	694	66,634
December	62,551	3,452	7,572	888	74,462
Total	**717,894**	**36,957**	**75,175**	**6,914**	**836,941**
1988 January	67,779	NA	NA	NA	NA
February	61,247	NA	NA	NA	NA
2-Month Total	**129,025**	**NA**	**NA**	**NA**	**NA**
1987 2-Month Total	**116,130**	**5,150**	**13,101**	**1,358**	**135,738**
1986 2-Month Total	**119,084**	**6,831**	**14,204**	**1,674**	**141,793**

[a]See Note 2 at end of section.

NA=Not available .

Notes: • Geographic coverage is the 50 States and the District of Columbia. • Data through 1986 are final. Subsequent data are preliminary. • Totals may not equal sum of components due to independent rounding.

Sources: See end of section.

Table 6.3 Coal Stocks, End of Period
(Thousand Short Tons)

	Consumer				Producers and Distributors	Total[a]
	Electric Utilities	Coke Plants	Other Industrial	Total[a]		
1973 Year	**86,967**	**6,998**	**10,370**	**104,335**	**NA**	**NA**
1974 Year	**83,509**	**6,209**	**6,605**	**96,323**	**NA**	**NA**
1975 Year	**110,724**	**8,797**	**8,529**	**128,050**	**NA**	**NA**
1976 Year	**117,436**	**9,902**	**7,100**	**134,438**	**NA**	**NA**
1977 Year	**133,219**	**12,816**	**11,063**	**157,098**	**NA**	**NA**
1978 Year	**128,225**	**8,278**	**9,048**	**145,551**	**NA**	**NA**
1979 Year	**159,714**	**10,155**	**11,777**	**181,646**	**20,826**	**202,472**
1980 Year	**183,010**	**9,067**	**11,951**	**204,028**	**24,379**	**228,407**
1981 Year	**168,893**	**6,475**	**9,906**	**185,274**	**24,149**	**209,423**
1982 Year	**181,132**	**4,642**	**9,479**	**195,253**	**36,784**	**232,037**
1983 Year	**155,598**	**4,346**	**8,710**	**168,654**	**33,931**	**202,585**
1984 Year	**179,727**	**6,166**	**11,317**	**197,210**	**34,090**	**231,300**
1985 Year	**156,376**	**3,420**	**10,438**	**170,234**	**33,133**	**203,367**
1986 January	152,078	3,302	9,930	165,311	34,763	200,074
February	151,157	3,185	9,423	163,765	36,394	200,159
March	154,415	3,067	8,916	166,398	38,024	204,422
April	161,076	3,224	9,135	173,434	38,065	211,500
May	164,667	3,380	9,353	177,401	38,107	215,508
June	162,909	3,537	9,572	176,018	38,148	214,166
July	149,803	3,313	9,740	162,856	36,700	199,556
August	149,163	3,090	9,908	162,161	35,252	197,412
September	151,945	2,866	10,074	164,885	33,804	198,689
October	157,202	2,908	10,195	170,305	33,233	203,538
November	160,908	2,950	10,314	174,171	32,663	206,834
December	161,806	2,992	10,429	175,226	32,093	207,319
1987 January	157,061	2,886	9,903	169,850	33,582	203,432
February	158,322	2,780	9,377	170,479	35,071	205,551
March	161,648	2,675	8,850	173,173	36,560	209,733
April	165,103	3,028	8,881	177,012	35,686	212,699
May	165,683	3,382	8,911	177,976	34,813	212,788
June	163,361	3,735	8,941	176,037	33,939	209,976
July	150,217	3,603	9,393	163,213	32,217	195,431
August	146,106	3,472	9,845	159,422	30,496	189,919
September	151,961	3,340	10,297	165,598	28,775	194,373
October	160,942	3,521	10,457	174,920	28,624	203,544
November	168,274	3,703	10,617	182,594	28,472	211,067
December	170,797	3,884	10,777	185,459	28,321	213,780
1988 January	162,518	NA	NA	NA	NA	NA
February	159,270	NA	NA	NA	NA	NA

[a]Total excludes stocks held at retail dealers for consumption by the residential and commercial sector.
NA=Not available.
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Data through 1986 are final. Subsequent data are preliminary.
• Totals may not equal sum of components due to independent rounding.
Sources: See end of section.

Notes and Sources for the Coal Section

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 (AAR) 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 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 (ICC). 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 the *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: Both monthly and quarterly consumption for electric utility plants are taken directly from reported data. Prior to 1980, monthly consumption at coke plants was also taken directly from reported data. Since that time, it has been estimated by proportioning reported quarterly data using the ratios of monthly to quarterly consumption in 1979, the last year in which monthly data were reported. Quarterly consumption is taken directly from reported data.

Prior to 1978, monthly consumption for the other industrial sector (i.e., all industrial users minus coke plants) was 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 subsequent years, monthly figures were derived from data reported on Forms EIA-3 and EIA-6. Beginning in 1980, monthly figures have been estimated by proportioning derived quarterly data using the ratios of monthly to quarterly consumption in 1979, the last year in which monthly data were reported on Form EIA-3. Quarterly consumption for the other industrial sector is derived from reported data by adding beginning stocks at manufacturing plants to current receipts and subtracting ending stocks at manufacturing plants. In this calculation, current receipts are taken as 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 are included where appropriate.

Prior to 1980, monthly consumption for the residential and commercial sector was derived by using reported data to modify baseline figures developed by the Bureau of Mines. Since that time, it has been estimated by proportioning reported quarterly data using the ratios of monthly to quarterly consumption 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 is taken directly from reported data and is defined as distribution to the residential and commercial sector as reported by coal producers and distributors on Form EIA-6.

3. Stocks: Both monthly and quarterly stocks at electric utility plants are taken directly from reported data. Prior to 1980, monthly stocks at coke plants were also taken directly from reported data. Since that time, they have been estimated by using one-third of the current quarterly change to indicate the monthly change in stocks. Quarterly stocks are taken directly from data reported on Form EIA-5.

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. During the period 1978 through 1982, they were derived by judgmentally proportioning reported quarterly data based on representative seasonal patterns of supply and demand. Since that time, they have been estimated as indicated above for coke plants. Quarterly stocks are taken directly from data reported on Form EIA-3 and therefore include only manufacturing industries: data for agriculture, forestry, fishing, mining, and construction stocks are not available.

Prior to 1980, monthly and quarterly stock data for the residential and commercial sector were taken directly from reported data. Monthly and quarterly stock data are not available for the residential and commercial sector after December 1979.

Quarterly stocks at producers and distributors are taken directly from reported data. Monthly data are estimated by using one-third of the current quarterly change to indicate the monthly change in stocks.

4. Imports and Exports: All coal import and export figures are taken directly from data reported monthly by the Bureau of the Census.

Additional information concerning coal production, consumption, and stock data and estimation procedures may be obtained in EIA's *Quarterly Coal Report,* DOE/EIA-0121.

Sources

Production: 1973 through September 1977: Bureau of Mines, *Minerals Yearbook* and *Mineral Industry Surveys;* October 1977 forward: Energy Information Administration (EIA), *Weekly Coal Production.*

Consumption and Stocks: 1973 through September 1977: Bureau of Mines, *Minerals Yearbook* and *Mineral Industry Surveys* (except Residential and Commercial Consumption and Stocks and Producers and Distributors Stocks);

- Electric Utilities--October 1977 forward: EIA, Form EIA-759 (formerly FPC Form 4), "Monthly Power Plant Report."
- Coke Plants--October 1977 through December 1980: EIA, Form EIA-5/5A, "Coke and Coal Chemicals-Monthly/Annual"; January 1981 forward: EIA, Form EIA-5/5A, "Coke Plant Report-Quarterly/Annual Supplement."
- Other Industrial--October 1977 through December 1979: EIA, Form EIA-3, "Monthly Fuel Consumption Report-Manufacturing Plants"; January 1980 forward: EIA, Form EIA-3, "Quarterly Fuel Consumption Report-Manufacturing Plants" and Form EIA-6, "Coal Distribution Report."
- Residential and Commercial Consumption and Stocks-1973 through 1976: Bureau of Mines, *Minerals Yearbook;* January 1977 through September 1977: Bureau of Mines, Form 6-1400-M, "Monthly Coal Report, Retail Dealers-Upper Lake Docks"; October 1977 through December 1979: EIA, Form EIA-2, "Monthly Coal Report, Retail Dealers-Upper Lake Docks" January 1980 forward: EIA, Form EIA-6, "Coal Distribution Report," (stock data are not collected).
- Producers and Distributors Stocks--January 1980 forward: EIA, Form EIA-6, "Coal Distribution Report."

Imports and Exports: Bureau of the Census, U.S. Department of Commerce, Monthly Reports IM-145 (Imports) and EM-522 (Exports).

Section 7. Electric Utilities

During February 1988, electric utilities generated 217 billion kilowatthours of electricity, 12 percent[7] above the February 1987 generation level. Coal-fired generation totaled 126 billion kilowatthours, 15 percent above the February 1987 level. Nuclear generation totaled 42 billion kilowatthours, 15 percent above the February 1987 level. Hydroelectric generation was 19 billion kilowatthours in February 1988, 10 percent below the level 1 year earlier. Natural gas-fired generation was 16 billion kilowatthours in February 1988, 9 percent above the February 1987 level. Petroleum-fired generation totaled 12 billion kilowatthours, 14 percent above the February 1987 level.

Sales of electricity to all ultimate consumers in the United States in February 1988 were 214 billion kilowatthours, 8 percent above the February 1987 sales. Sales to residential consumers during February 1988 were 80 billion kilowatthours, 9 percent above the level of sales during the previous year. Industrial sales were 71 billion kilowatthours, 8 percent above the amount sold to industrial consumers 1 year earlier. Sales to commercial consumers totaled 57 billion kilowatthours in February 1988, 9 percent above the previous year's figure. In February 1988, other sales totaled 7 billion kilowatthours, 6 percent below the February 1987 level.

Electric utility petroleum consumption (excluding petroleum coke) during February 1988 was 20 million barrels, 12 percent above the February 1987 level. Coal consumption during February 1988 was 61 million short tons, 14 percent above the February 1987 rate. During February 1988, electric utilities consumed 170 billion cubic feet of natural gas, 7 percent above the February 1987 consumption level.

On February 29, 1988, utility stocks of all types of coal totaled 159 million short tons. Those stockpiles were 1 percent above the level of February 28, 1987. Petroleum stocks (excluding petroleum coke) on February 29, 1988, totaled 65 million barrels, 5 percent below the level on February 28, 1987.

[7]Percentage changes are calculated using unrounded data.

Table 7.1 Net Generation of Electricity by Electric Utilities
(Million Kilowatthours)

	Coal	Petroleum[a]	Natural Gas[b]	Nuclear Electric Power	Hydro-electric Power	Other[c]	Total
1973 Total	**847,651**	**314,343**	**340,858**	**83,479**	**272,083**	**2,294**	**1,860,710**
1974 Total	**828,433**	**300,931**	**320,065**	**113,976**	**301,032**	**2,703**	**1,867,140**
1975 Total	**852,786**	**289,095**	**299,778**	**172,505**	**300,047**	**3,437**	**1,917,649**
1976 Total	**944,391**	**319,988**	**294,624**	**191,104**	**283,707**	**3,883**	**2,037,696**
1977 Total	**985,219**	**358,179**	**305,505**	**250,883**	**220,475**	**4,063**	**2,124,323**
1978 Total	**975,742**	**365,060**	**305,391**	**276,403**	**280,419**	**3,315**	**2,206,331**
1979 Total	**1,075,037**	**303,525**	**329,485**	**255,155**	**279,783**	**4,387**	**2,247,372**
1980 Total	**1,161,562**	**245,994**	**346,240**	**251,116**	**276,021**	**5,506**	**2,286,439**
1981 Total	**1,203,203**	**206,421**	**345,777**	**272,674**	**260,684**	**6,054**	**2,294,812**
1982 Total	**1,192,004**	**146,797**	**305,260**	**282,773**	**309,213**	**5,164**	**2,241,211**
1983 Total	**1,259,424**	**144,499**	**274,098**	**293,677**	**332,130**	**6,456**	**2,310,285**
1984 Total	**1,341,681**	**119,808**	**297,394**	**327,634**	**321,150**	**8,638**	**2,416,304**
1985 Total	**1,402,128**	**100,202**	**291,946**	**383,691**	**281,149**	**10,724**	**2,469,841**
1986 January	130,190	11,088	17,472	36,219	21,377	1,123	217,470
February	110,982	9,529	14,925	32,721	23,222	956	192,336
March	110,390	10,073	16,149	30,773	28,465	984	196,834
April	98,995	9,227	18,961	30,477	27,523	891	186,074
May	104,900	10,435	21,947	31,924	27,205	903	197,315
June	120,154	11,563	24,767	31,334	26,223	973	215,015
July	136,654	16,296	28,712	35,894	24,072	1,045	242,672
August	123,618	15,466	26,352	37,483	21,189	1,058	225,166
September	113,957	10,677	23,457	36,593	21,114	895	206,692
October	108,584	9,873	20,876	36,214	21,335	872	197,754
November	109,045	10,464	18,044	34,944	23,153	781	196,432
December	118,362	11,894	16,845	39,463	25,965	1,022	213,551
Total	**1,385,831**	**136,585**	**248,508**	**414,038**	**290,844**	**11,503**	**2,487,310**
1987 January	126,631	11,927	17,788	39,975	25,412	1,017	222,749
February	109,648	10,502	15,120	36,598	21,226	940	194,034
March	111,920	10,007	18,349	37,290	23,248	1,034	201,849
April	105,474	7,912	19,602	33,518	22,025	965	189,496
May	115,155	8,146	23,239	34,320	24,202	1,012	206,074
June	129,351	10,655	27,090	36,560	20,863	1,071	225,589
July	143,503	12,547	30,512	40,056	20,195	1,103	247,915
August	143,194	11,289	32,262	41,352	18,446	1,101	247,645
September	120,777	7,696	25,678	39,666	18,180	1,011	213,008
October	117,743	6,819	22,985	36,492	17,955	1,015	203,009
November	114,172	9,803	21,005	37,438	16,857	983	200,258
December	126,213	11,189	18,992	42,006	21,087	1,013	220,500
Total	**1,463,781**	**118,493**	**272,621**	**455,270**	**249,695**	**12,267**	**2,572,127**
1988 January	137,439	15,960	16,281	44,658	22,214	1,033	237,586
February	126,085	11,920	16,499	42,246	19,165	898	216,813
2-Month Total	**263,525**	**27,879**	**32,780**	**86,904**	**41,379**	**1,930**	**454,398**
1987 2-Month Total	**236,278**	**22,429**	**32,908**	**76,573**	**46,638**	**1,957**	**416,784**
1986 2-Month Total	**241,172**	**20,618**	**32,397**	**68,940**	**44,599**	**2,079**	**409,805**

[a]Includes fuel oil Nos. 2, 4, 5, and 6, crude oil, kerosene, and petroleum coke.
[b]Includes supplemental gaseous fuels.
[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 through September 1977: Federal Power Commission, Form 4, "Monthly Power Plant Report"; • October 1977 through 1981: Federal Energy Regulatory Commission, FPC Form 4, "Monthly Power Plant Report"; • 1982 forward: Energy Information Administration, Form EIA-759, "Monthly Power Plant Report."

Table 7.2 Electricity Sales[a] by End-Use Sector
(Million Kilowatthours)

	Residential		Commercial		Industrial		Other[b]		Total	
	Old	New	Old	New	Old	New	Old	New	Old	New
1973 Total	**579,231**		**388,266**		**686,085**		**59,326**		**1,712,909**	
1974 Total	**578,184**		**384,826**		**684,875**		**58,039**		**1,705,924**	
1975 Total	**588,140**		**403,049**		**687,680**		**68,222**		**1,747,091**	
1976 Total	**606,452**		**425,094**		**754,069**		**69,631**		**1,855,246**	
1977 Total	**645,239**		**446,514**		**786,037**		**70,571**		**1,948,361**	
1978 Total	**674,466**		**461,163**		**809,078**		**73,215**		**2,017,922**	
1979 Total	**682,819**		**473,307**		**841,903**		**73,070**		**2,071,099**	
1980 Total	**717,495**		**488,155**		**815,067**		**73,732**		**2,094,449**	
1981 Total	**722,265**		**514,338**		**825,743**		**84,756**		**2,147,103**	
1982 Total	**729,520**		**526,397**		**744,949**		**85,575**		**2,086,441**	
1983 Total	**750,948**		**543,788**		**775,999**		**80,219**		**2,150,955**	
1984 Total	**777,654**	**780,092**	**578,281**	**577,275**	**840,588**	**838,718**	**81,849**	**88,887**	**2,278,372**	**2,284,972**
1985 Total	**790,977**	**793,828**	**608,968**	**604,679**	**824,523**	**835,207**	**85,075**	**91,988**	**2,309,543**	**2,325,702**
1986 January[c]		82,755		53,377		65,400		7,246		208,779
February		70,949		50,481		65,373		6,863		193,665
March		65,318		48,256		67,018		6,837		187,430
April		56,647		47,243		66,783		6,275		176,949
May		54,266		48,867		68,076		6,804		178,012
June		63,986		57,121		67,973		6,872		195,953
July		80,365		61,100		68,814		7,533		217,812
August		80,425		60,528		68,737		7,254		216,943
September		68,543		57,711		69,396		7,156		202,807
October		62,875		53,256		69,487		7,025		192,642
November		58,589		50,278		65,239		6,255		180,362
December		72,945		53,250		65,995		7,290		199,480
Total		**817,663**		**641,469**		**808,292**		**83,409**		**2,350,835**
1987 January		82,175		54,359		65,742		7,431		209,708
February		73,486		52,090		65,430		7,162		198,168
March		67,404		51,123		68,009		7,021		193,557
April		60,014		49,554		68,128		6,855		184,551
May		58,498		53,287		70,105		7,050		188,940
June		68,842		59,068		72,568		7,308		207,786
July		83,630		64,215		73,715		7,599		229,159
August		88,180		64,937		74,751		7,690		235,558
September		73,494		61,139		74,525		7,274		216,431
October		60,885		55,767		72,924		7,053		196,630
November		59,980		51,940		71,015		7,105		190,040
December		73,125		54,310		70,282		7,249		204,966
Total		**849,714**		**671,789**		**847,193**		**86,798**		**2,455,494**
1988 January		89,529		58,723		69,984		6,873		225,109
February		80,248		56,682		70,701		6,767		214,398
2-Month Total		**169,777**		**115,405**		**140,685**		**13,641**		**439,508**
1987 2-Month Total		**155,661**		**106,449**		**131,172**		**14,593**		**407,876**
1986 2-Month Total		**153,704**		**103,858**		**130,773**		**14,109**		**402,444**

[a]Electricity sales to all ultimate consumers.
[b]Includes sales of electricity to Government, railways, street lighting authorities, and sales not included elsewhere.
[c]Beginning in January 1986, monthly Form EIA-826 electricity sales estimates, which are preliminary Form EIA-861 values, are based on a new sample and new expansion factors from data reported on Form EIA-861.

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

Sources: **Old Series:** • 1973 through February 1980: Federal Power Commission, FPC Form 5, "Monthly Statement of Electric Operating Revenue and Income"; • March 1980 through 1982: Federal Energy Regulatory Commission, FERC Form 5, "Electric Utility Company Monthly Statement"; • 1983 through 1985, Energy Information Administration, Form EIA-826, "Electric Utility Company Monthly Statement." **New Series:** • 1984 and 1985 annual data: Energy Information Administration, Form EIA-861, "Annual Electric Utility Report." • 1985 monthly data: Energy Information Administration, Form EIA-861 annual data ratioed to months based on Energy Information Administration, Form EIA-826 monthly data. • 1986 monthly and annual data: Energy Information Administration, Form EIA-826, "Electric Utility Company Monthly Statement." • 1987 monthly and annual, and 1988 monthly data: Energy Information Administration, Form-826, "Monthly Electric Utility Sales and Revenue Report with State Distributions."

Figure 7.1 Coal Consumed to Produce Electricity

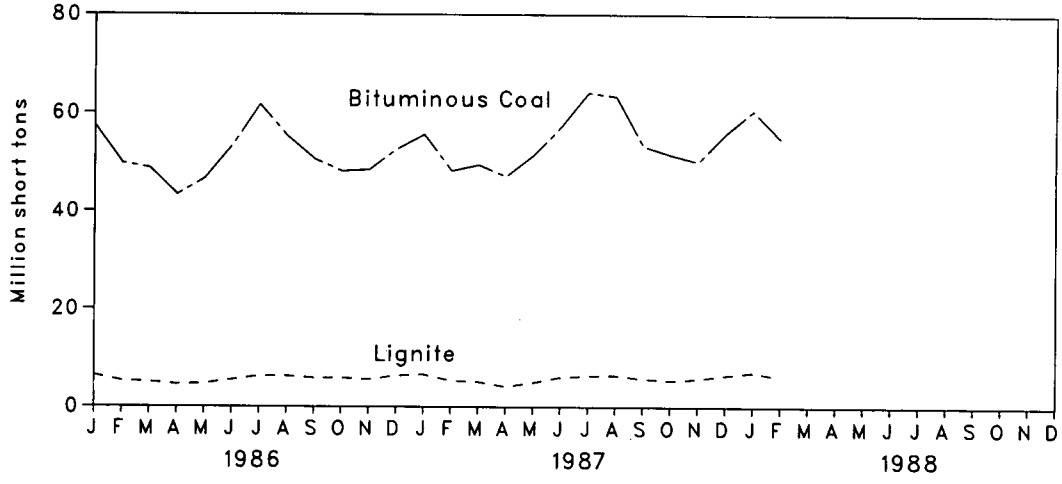


Figure 7.2 Petroleum Consumed to Produce Electricity

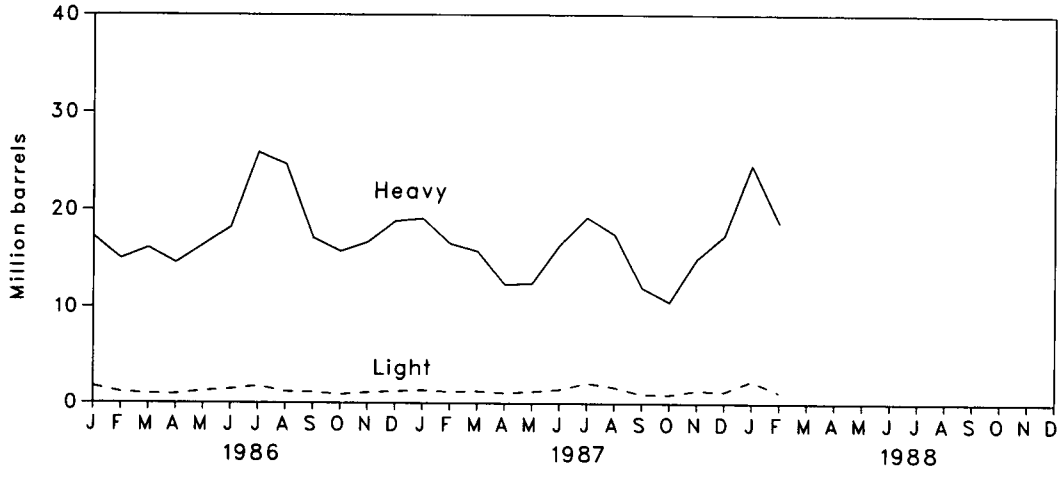


Figure 7.3 Natural Gas Consumed to Produce Electricity

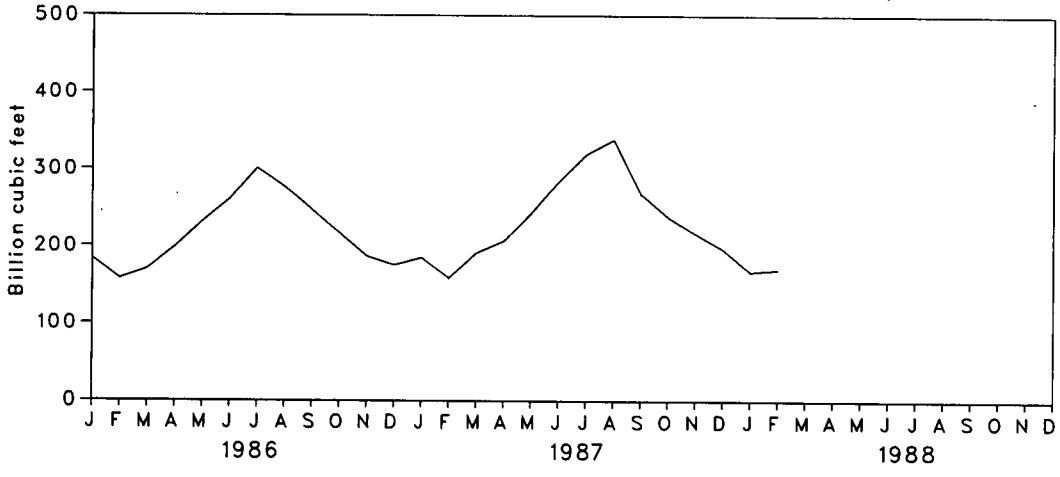


Table 7.3 Fossil Fuels Consumed by Electric Utilities To Generate Electricity

	Coal				Petroleum				
	Anthracite	Bituminous Coal	Lignite	Total	Heavy[a]	Light[b]	Total Liquids	Petroleum Coke	Natural Gas[c]
	Thousand Short Tons				Thousand Barrels			Thousand Short Tons	Million Cubic Feet
1973 Total	**1,443**	**376,975**	**10,794**	**389,212**	**([d])**	**([d])**	**560,248**	**507**	**3,660,172**
1974 Total	**1,498**	**378,643**	**11,670**	**391,811**	**([d])**	**([d])**	**536,274**	**625**	**3,443,428**
1975 Total	**1,480**	**388,523**	**15,960**	**405,962**	**([d])**	**([d])**	**506,128**	**70**	**3,157,669**
1976 Total	**1,350**	**425,205**	**21,817**	**448,371**	**([d])**	**([d])**	**555,920**	**68**	**3,080,868**
1977 Total	**1,425**	**451,051**	**24,650**	**477,126**	**([d])**	**([d])**	**623,705**	**98**	**3,191,200**
1978 Total	**1,064**	**448,763**	**31,407**	**481,235**	**([d])**	**([d])**	**635,839**	**398**	**3,188,363**
1979 Total	**1,046**	**488,129**	**37,876**	**527,051**	**([d])**	**([d])**	**523,297**	**268**	**3,490,523**
1980 Total	**951**	**526,680**	**41,642**	**569,274**	**391,163**	**29,051**	**420,214**	**179**	**3,681,595**
1981 Total	**1,221**	**550,784**	**44,792**	**596,797**	**329,798**	**21,313**	**351,111**	**139**	**3,640,154**
1982 Total	**1,075**	**543,346**	**49,245**	**593,666**	**234,434**	**15,337**	**249,771**	**149**	**3,225,518**
1983 Total	**1,036**	**570,108**	**54,067**	**625,211**	**228,984**	**16,512**	**245,497**	**261**	**2,910,767**
1984 Total	**1,070**	**606,339**	**56,990**	**664,399**	**189,289**	**15,190**	**204,479**	**252**	**3,111,342**
1985 Total	**1,033**	**631,885**	**60,923**	**693,841**	**158,779**	**14,635**	**173,414**	**231**	**3,044,083**
1986 January	67	57,525	6,442	64,034	17,254	1,688	18,942	15	184,024
February	50	49,711	5,289	55,050	14,978	1,100	16,077	15	157,070
March	88	48,737	5,073	53,898	16,090	928	17,018	23	169,697
April	84	43,391	4,639	48,114	14,538	893	15,431	23	198,143
May	68	46,629	4,723	51,420	16,386	1,209	17,595	25	231,041
June	64	53,332	5,496	58,892	18,173	1,390	19,564	24	260,163
July	67	61,669	6,285	68,021	25,839	1,727	27,567	26	300,870
August	64	55,331	6,314	61,709	24,633	1,150	25,782	31	276,163
September	47	50,574	5,916	56,536	17,102	1,107	18,209	31	246,674
October	57	48,151	5,907	54,116	15,714	869	16,584	26	216,738
November	84	48,451	5,623	54,158	16,656	1,076	17,731	34	186,605
December	88	52,634	6,386	59,108	18,794	1,189	19,983	38	175,181
Total	**829**	**616,134**	**68,093**	**685,056**	**216,156**	**14,326**	**230,482**	**313**	**2,602,370**
1987 January	68	55,682	6,664	62,414	19,069	1,317	20,386	28	184,722
February	75	48,243	5,397	53,715	16,510	1,149	17,658	29	158,341
March	79	49,428	5,140	54,647	15,741	1,227	16,968	28	190,893
April	75	47,153	4,207	51,435	12,297	1,033	13,330	23	206,438
May	91	51,415	4,977	56,484	12,420	1,183	13,603	31	242,615
June	100	57,307	6,093	63,500	16,384	1,407	17,790	26	283,554
July	105	64,203	6,428	70,736	19,193	2,075	21,268	28	319,239
August	95	63,456	6,524	70,075	17,470	1,648	19,118	31	338,646
September	72	53,338	5,850	59,259	12,015	924	12,939	31	268,080
October	66	51,572	5,479	57,117	10,538	891	11,429	35	238,185
November	60	50,095	5,805	55,961	14,995	1,307	16,302	27	216,781
December	85	55,930	6,535	62,551	17,380	1,207	18,587	30	196,556
Total	**972**	**647,824**	**69,098**	**717,894**	**184,011**	**15,367**	**199,378**	**348**	**2,844,051**
1988 January	77	60,543	7,159	67,779	24,571	2,307	26,878	24	166,906
February	85	54,899	6,263	61,247	18,677	1,127	19,804	27	169,789
2-Month Total	**161**	**115,442**	**13,422**	**129,025**	**43,247**	**3,434**	**46,681**	**51**	**336,696**
1987 2-Month Total	**143**	**103,925**	**12,061**	**116,130**	**35,578**	**2,465**	**38,044**	**57**	**343,063**
1986 2-Month Total	**117**	**107,237**	**11,730**	**119,084**	**32,231**	**2,788**	**35,019**	**30**	**341,095**

[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]Includes supplemental gaseous fuels.
[d]Prior to 1980, petroleum consumption data were not disaggregated by type of fuel. Disaggregation by prime mover type is provided in Table 7.5.

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 through September 1977: Federal Power Commission, Form 4, "Monthly Power Plant Report"; • October 1977 through 1981: Federal Energy Regulatory Commission, FPC Form 4, "Monthly Power Plant Report"; • 1982 forward: Energy Information Administration, Form EIA-759, "Monthly Power Plant Report."

Figure 7.4 Coal Stocks at Electric Utilities, End of Period

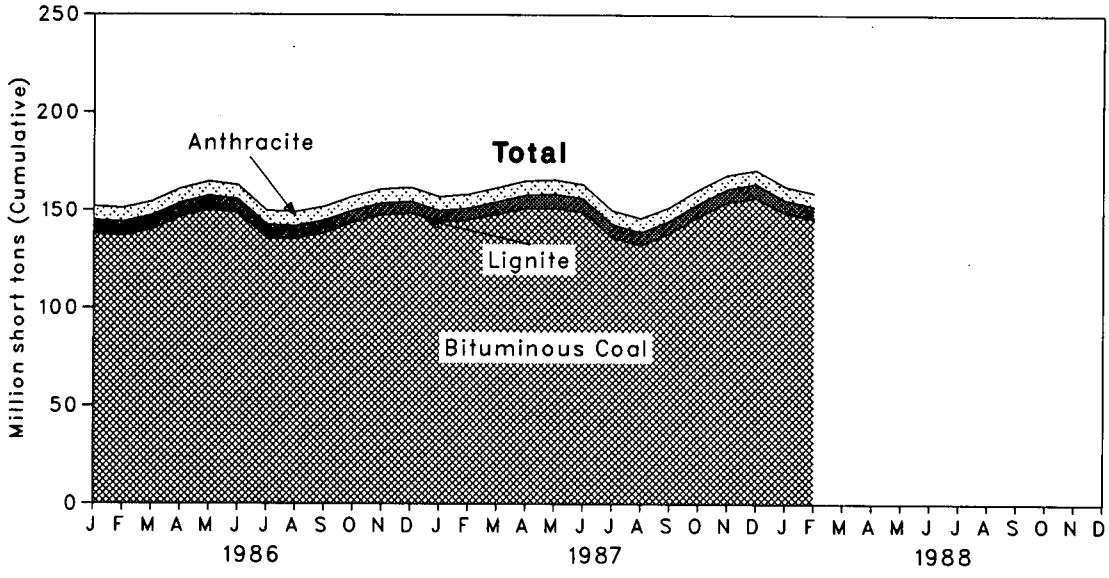


Figure 7.5 Petroleum Stocks at Electric Utilities, End of Period

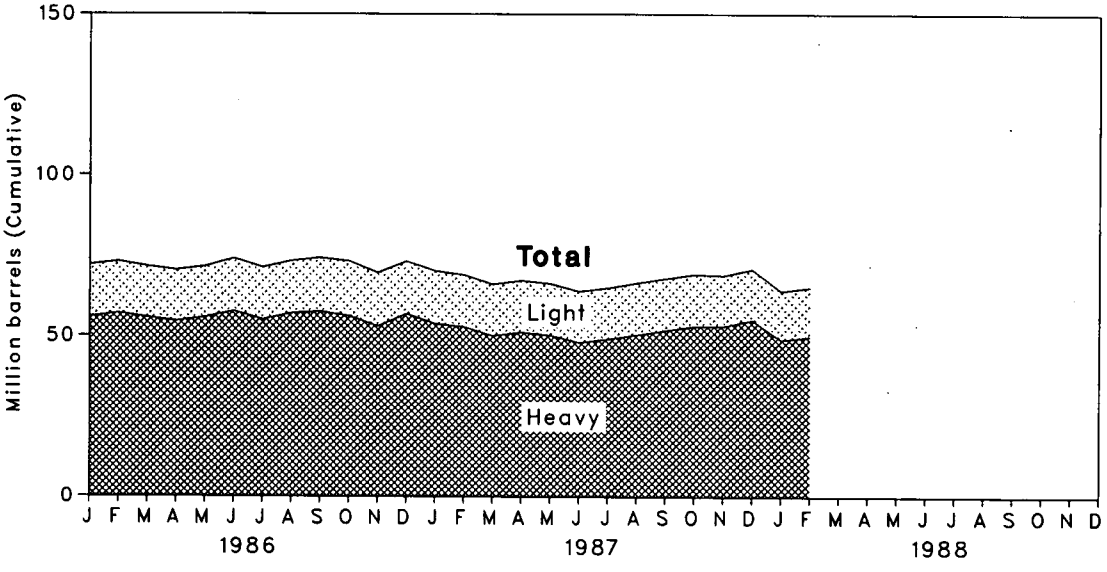


Table 7.4 Coal and Petroleum Stocks at Electric Utilities, End of Period

	Coal				Petroleum			
	Anthracite	Bituminous Coal	Lignite	Total	Heavy[a]	Light[b]	Total Liquids	Petroleum Coke
	Thousand Short Tons				Thousand Barrels			Thousand Short Tons
1973 Year	**1,066**	**84,941**	**961**	**86,967**	**(c)**	**(c)**	**89,216**	**312**
1974 Year	**930**	**81,712**	**867**	**83,509**	**(c)**	**(c)**	**112,917**	**35**
1975 Year	**982**	**107,927**	**1,815**	**110,724**	**(c)**	**(c)**	**125,257**	**31**
1976 Year	**1,000**	**114,130**	**2,306**	**117,436**	**(c)**	**(c)**	**121,696**	**32**
1977 Year	**2,321**	**128,210**	**2,688**	**133,219**	**(c)**	**(c)**	**144,031**	**44**
1978 Year	**2,178**	**123,020**	**3,027**	**128,225**	**(c)**	**(c)**	**118,788**	**198**
1979 Year	**3,274**	**152,981**	**3,459**	**159,714**	**(c)**	**(c)**	**131,422**	**183**
1980 Year	**4,741**	**174,154**	**4,115**	**183,010**	**105,351**	**30,023**	**135,374**	**52**
1981 Year	**5,537**	**158,258**	**5,098**	**168,893**	**102,042**	**26,094**	**128,136**	**42**
1982 Year	**6,080**	**170,480**	**4,573**	**181,132**	**95,515**	**23,369**	**118,884**	**41**
1983 Year	**6,507**	**145,250**	**3,841**	**155,598**	**70,573**	**18,801**	**89,375**	**55**
1984 Year	**6,710**	**167,118**	**5,899**	**179,727**	**68,503**	**19,116**	**87,619**	**50**
1985 Year	**7,189**	**142,144**	**7,043**	**156,376**	**57,304**	**16,386**	**73,689**	**49**
1986 January	7,182	138,077	6,819	152,078	55,797	16,147	71,943	52
February	7,172	136,944	7,042	151,157	56,956	16,020	72,976	50
March	7,146	140,023	7,246	154,415	55,649	15,821	71,470	36
April	7,127	146,639	7,310	161,076	54,556	15,793	70,350	28
May	7,133	150,164	7,370	164,667	55,665	15,764	71,429	34
June	7,148	148,686	7,075	162,909	57,611	16,319	73,930	36
July	7,158	135,630	7,016	149,803	55,023	16,145	71,168	43
August	7,117	135,542	6,504	149,163	56,964	16,221	73,185	42
September	7,146	138,396	6,403	151,945	57,474	16,686	74,160	45
October	7,158	143,855	6,189	157,202	56,148	17,009	73,157	41
November	7,119	147,597	6,191	160,908	53,000	16,575	69,575	42
December	7,099	148,665	6,042	161,806	56,841	16,269	73,111	40
1987 January	7,091	144,044	5,926	157,061	53,789	16,365	70,153	35
February	7,087	145,206	6,030	158,322	52,847	16,085	68,932	34
March	7,098	148,020	6,530	161,648	50,035	15,946	65,981	41
April	7,103	151,205	6,795	165,103	51,201	15,970	67,171	35
May	7,098	151,329	7,255	165,683	50,221	16,006	66,227	43
June	7,098	149,394	6,868	163,361	48,047	15,822	63,869	55
July	7,102	136,385	6,729	150,217	49,123	15,819	64,942	64
August	7,083	132,535	6,488	146,106	50,451	16,038	66,489	57
September	7,068	138,490	6,403	151,961	51,858	16,029	67,887	48
October	7,070	147,034	6,838	160,942	53,175	16,081	69,256	60
November	6,963	154,545	6,767	168,274	53,160	15,704	68,864	63
December	6,940	156,670	7,187	170,797	55,069	15,759	70,827	51
1988 January	6,905	148,956	6,657	162,518	48,948	15,070	64,018	56
February	6,864	145,823	6,583	159,270	49,899	15,246	65,145	55

[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]Prior to 1980, petroleum stock data were not disaggregated by type of fuel. Disaggregation by prime mover type is provided in Table 7.5.
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 through September 1977: Federal Power Commission, Form 4, "Monthly Power Plant Report"; • October 1977 through 1981: Federal Energy Regulatory Commission, FPC Form 4, "Monthly Power Plant Report"; • 1982 forward: Energy Information Administration, Form EIA-759, "Monthly Power Plant Report."

Table 7.5 Petroleum Consumption and Stocks at Electric Utilities by Prime Mover Type
(Thousand Barrels)

	Petroleum Consumption			Petroleum Stocks, End of Period		
	Steam Plants	GT/IC[a]	Total Liquids	Steam Plants	GT/IC[a]	Total Liquids
1973 Total	**513,190**	**47,058**	**560,248**	**79,121**	**10,095**	**89,216**
1974 Total	**483,146**	**53,128**	**536,274**	**97,718**	**15,199**	**112,917**
1975 Total	**467,221**	**38,907**	**506,128**	**108,825**	**16,432**	**125,257**
1976 Total	**514,077**	**41,843**	**555,920**	**106,993**	**14,703**	**121,696**
1977 Total	**574,869**	**48,837**	**623,705**	**124,750**	**19,281**	**144,031**
1978 Total	**588,319**	**47,520**	**635,839**	**102,402**	**16,386**	**118,788**
1979 Total	**492,606**	**30,691**	**523,297**	**111,121**	**20,301**	**131,422**
1980 Total	**401,863**	**18,351**	**420,214**	**117,227**	**18,147**	**135,374**
1981 Total	**339,680**	**11,431**	**351,111**	**112,380**	**15,756**	**128,136**
1982 Total	**243,537**	**6,234**	**249,771**	**105,287**	**13,597**	**118,884**
1983 Total	**237,845**	**7,652**	**245,497**	**78,285**	**11,090**	**89,375**
1984 Total	**197,050**	**7,429**	**204,479**	**76,836**	**10,784**	**87,619**
1985 Total	**166,842**	**6,572**	**173,414**	**64,704**	**8,985**	**73,689**
1986 January	17,915	1,027	18,942	63,043	8,901	71,943
February	15,536	541	16,077	64,134	8,842	72,976
March	16,585	433	17,018	62,671	8,799	71,470
April	14,982	449	15,431	61,758	8,591	70,350
May	16,933	662	17,595	63,010	8,419	71,429
June	18,796	768	19,564	65,115	8,816	73,930
July	26,373	1,193	27,567	62,322	8,845	71,168
August	25,104	678	25,782	64,167	9,018	73,185
September	17,500	709	18,209	65,183	8,976	74,160
October	16,194	390	16,584	63,937	9,220	73,157
November	17,171	561	17,731	60,527	9,048	69,575
December	19,410	572	19,983	64,258	8,853	73,111
Total	**222,500**	**7,983**	**230,482**			
1987 January	19,718	668	20,386	61,042	9,111	70,153
February	17,004	655	17,658	59,907	9,025	68,932
March	16,335	633	16,968	57,052	8,929	65,981
April	12,873	457	13,330	58,250	8,921	67,171
May	13,017	586	13,603	57,521	8,706	66,227
June	16,976	814	17,790	55,063	8,806	63,869
July	19,754	1,513	21,268	56,236	8,706	64,942
August	17,948	1,170	19,118	57,748	8,741	66,489
September	12,441	498	12,939	58,902	8,984	67,887
October	11,108	321	11,429	60,138	9,117	69,256
November	15,651	651	16,302	59,873	8,991	68,864
December	17,994	593	18,587	61,705	9,123	70,827
Total	**190,818**	**8,560**	**199,378**			
1988 January	25,322	1,556	26,878	55,271	8,747	64,018
February	19,237	567	19,804	56,140	9,005	65,145
2-Month Total	**44,559**	**2,123**	**46,681**			
1987 2-Month Total	**36,721**	**1,323**	**38,044**			
1986 2-Month Total	**33,451**	**1,568**	**35,019**			

[a]GT/IC=Gas turbine and internal combustion plants.

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 through September 1977: Federal Power Commission, Form 4, "Monthly Power Plant Report"; • October 1977 through 1981: Federal Energy Regulatory Commission, FPC Form 4, "Monthly Power Plant Report"; • 1982 forward: Energy Information Administration, Form EIA-759, "Monthly Power Plant Report."

Section 8. Nuclear

In February 1988, U.S. nuclear generating units produced a total of 42 net terawatthours (billion kilowatthours) of electricity, 15 percent[8] higher than in February 1987. Nuclear units generated at an average capacity factor of 65.5 percent, 3 percentage points higher than in February 1987. Nuclear power supplied 19.5 percent of the total electricity generated in February 1988, compared to 18.9 percent in February 1987.

The Nuclear Regulatory Commission (NRC) issued no Low or Full Power Operating Licenses during February 1988. Hanford-N, an 840 MWe unit located in Hanford, Washington, was placed in a cold standby status by the Department of Energy in February 1988.

On February 29, 1988, there were 106 operable nuclear generating units in the United States, with a collective net summer generating capability of 93 million kilowatts of electricity. Four additional units (Seabrook 1, Shoreham, South Texas 1, and Braidwood 2) retained low-power operating licenses from the NRC authorizing fuel loading and low-power testing. Of the 106 operable units, 25 units generated at less than 25 percent of capacity. Of the 25 units, 17 units were out of service at least part of the month for maintenance or refueling.

As of February 29, there were 126 domestic nuclear generating units in all stages of planning, construction, or operation, with an aggregate design capacity of 118 million net kilowatts.

[8]Percentage changes are calculated using unrounded data.

Figure 8.1 Nuclear and Total Net Generation of Electricity

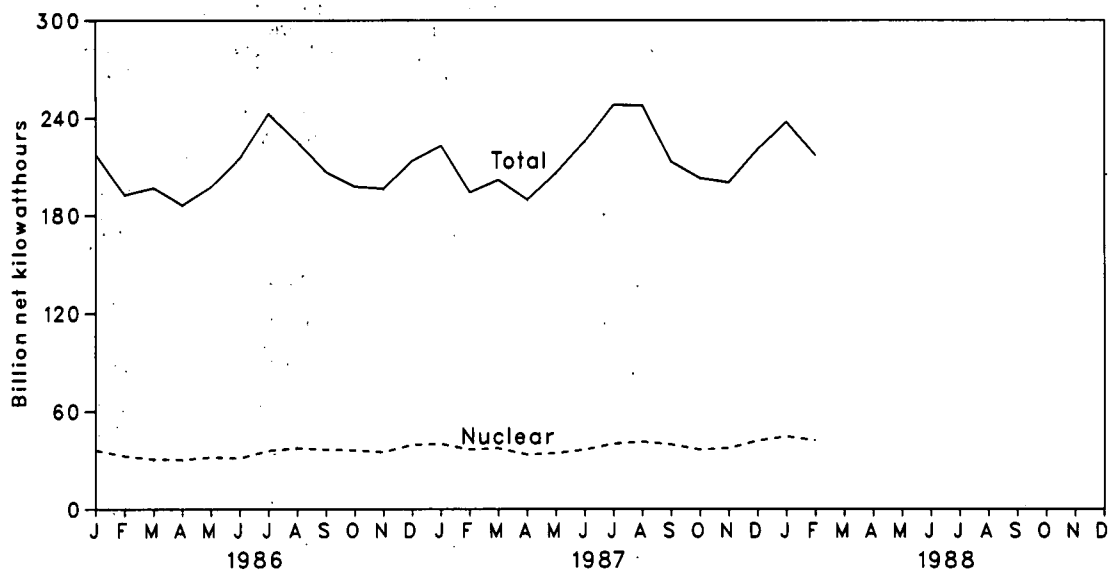


Figure 8.2 Nuclear Power Plants' Capacity Factor and Share of Total Net Generation

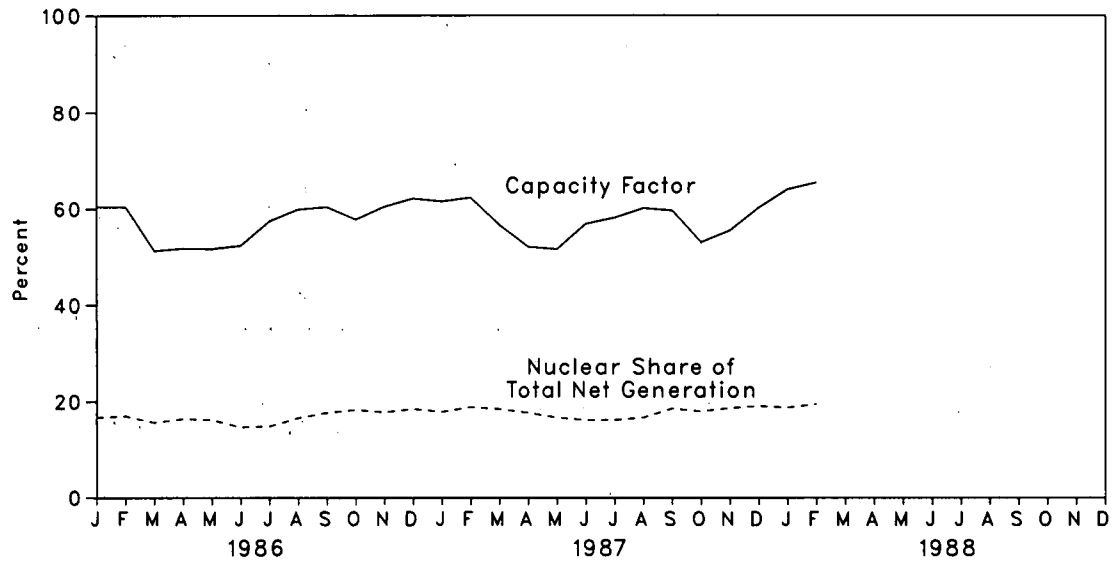


Table 8.1 Nuclear Power Plant Operations

	Operable Units[a] [b]	Nuclear Electricity Generation	Nuclear Portion of Domestic Electricity Generation	Net Summer Capability of Operable Units[a] [c]	Capacity Factor[d]
	Number	Million Net Kilowatthours	Percent	Million Net Kilowatts	Percent
1973 Year	**39**	**83,479**	**4.5**	**22.615**	**53.7**
1974 Year	**48**	**113,976**	**6.1**	**31.803**	**47.9**
1975 Year	**54**	**172,505**	**9.0**	**37.161**	**56.0**
1976 Year	**61**	**191,104**	**9.4**	**43.657**	**54.9**
1977 Year	**65**	**250,883**	**11.8**	**46.202**	**63.4**
1978 Year	**70**	**276,403**	**12.5**	**50.709**	**64.7**
1979 Year	**68**	**255,155**	**11.4**	**49.630**	**58.5**
1980 Year	**70**	**251,116**	**11.0**	**51.668**	**56.4**
1981 Year	**74**	**272,674**	**11.9**	**55.914**	**58.4**
1982 Year	**77**	**282,773**	**12.6**	**59.927**	**56.7**
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 January	96	36,219	16.7	80.604	60.4
February	96	32,721	17.0	80.604	60.4
March	96	30,773	15.6	80.604	51.3
April	97	30,477	16.4	81.863	51.8
May	98	31,924	16.2	82.995	51.7
June	98	31,334	14.6	82.995	52.4
July	99	35,894	14.8	84.048	57.4
August	99	37,483	16.6	84.048	59.9
September	99	36,593	17.7	84.048	60.5
October	99	36,214	18.3	84.048	57.8
November	100	34,944	17.8	85.241	56.9
December	100	39,463	18.5	85.241	62.2
Year		**414,038**	**16.6**		**56.9**
1987 January	102	39,975	17.9	87.248	61.6
February	102	36,598	18.9	87.248	62.4
March	103	37,290	18.5	88.446	56.7
April	103	33,518	17.7	89.330	52.2
May	103	34,320	16.7	89.330	51.7
June	103	36,560	16.2	89.330	56.9
July	105	40,056	16.2	91.581	58.2
August	106	41,352	16.7	92.417	60.2
September	106	39,666	18.6	92.417	59.7
October	106	36,492	18.0	92.417	53.1
November	107	37,438	18.7	93.676	55.5
December	107	42,006	19.1	93.676	60.3
Year		**455,270**	**17.7**		**57.4**
1988 January	107	44,658	18.8	93.676	64.1
February	106	42,246	19.5	92.836	65.5

[a]Monthly data are the status as of the last day of the month. Yearly data are the status as of December 31 of each year.
[b]See Note 1 at end of section.
[c]When possible, net summer capability is used. When a unit has not operated long enough to permit determination of a net summer capability, an estimation is made based on the net design electrical rating. For the definitions of net summer capability and net design electrical rating, 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.
Note: Geographic coverage is the 50 States and the District of Columbia.
Sources: See end of section.

Table 8.2 Status of Nuclear Generating Units[a]

	Licensed for Operation		Construction Permits		On Order	Announced	Total	Total Design Capacity[d]
	Operable[b]	In Startup[c]	Granted	Pending				
	Number of Units							Million Net Kilowatts
1973 Year	**39**	**3**	**51**	**58**	**48**	**20**	**219**	**212**
1974 Year	**48**	**5**	**58**	**80**	**28**	**16**	**235**	**234**
1975 Year	**54**	**2**	**69**	**73**	**19**	**19**	**236**	**236**
1976 Year	**61**	**0**	**72**	**66**	**16**	**19**	**234**	**236**
1977 Year	**65**	**1**	**80**	**52**	**13**	**9**	**220**	**220**
1978 Year	**70**	**0**	**90**	**32**	**9**	**4**	**205**	**204**
1979 Year	**68**	**0**	**91**	**21**	**3**	**0**	**183**	**179**
1980 Year	**70**	**2**	**82**	**12**	**3**	**0**	**169**	**163**
1981 Year	**74**	**0**	**75**	**11**	**3**	**0**	**163**	**157**
1982 Year	**77**	**2**	**60**	**3**	**2**	**0**	**144**	**135**
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 January	96	2	30	0	2	0	130	121
February	96	3	29	0	2	0	130	121
March	96	4	28	0	2	0	130	121
April	97	4	27	0	2	0	130	121
May	98	3	27	0	2	0	130	121
June	98	3	27	0	2	0	130	121
July	99	2	25	0	2	0	128	119
August	99	2	25	0	2	0	128	119
September	99	3	24	0	2	0	128	119
October	99	7	20	0	2	0	128	119
November	100	7	19	0	2	0	128	119
December	100	7	19	0	2	0	128	119
1987 January	102	6	18	0	2	0	128	119
February	102	6	18	0	2	0	128	119
March	103	6	17	0	2	0	128	119
April	103	5	17	0	2	0	127	119
May	103	6	16	0	2	0	127	119
June	103	6	16	0	2	0	127	119
July	105	4	16	0	2	0	127	119
August	106	3	16	0	2	0	127	119
September	106	4	15	0	2	0	127	119
October	106	4	15	0	2	0	127	119
November	107	3	15	0	2	0	127	119
December	107	4	14	0	2	0	127	119
1988 January	107	4	14	0	2	0	127	119
February	106	4	14	0	2	0	126	118

[a]Monthly data are the status as of the last day of the month. Annual data are the status as of December 31 of each year.
[b]See Note 1 at end of section.
[c]See Note 2 at end of section.
[d]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.
Note: Geographic coverage is the 50 States and the District of Columbia.
Sources: See end of section.

Notes and Sources for the Nuclear Section

Notes

1. Operable Units: Nuclear generating units that have been issued a Full Power Operating License by the Nuclear Regulatory Commission (NRC). The Hanford-N unit (net summer capability of 840 MWe), was included prior to cold shutdown by the Department of Energy (DOE) in February 1988. The Shippingport unit (net summer capability of 60 MWe) operated by DOE was included prior to retirement from service on October 1, 1982, except during March 1974 through August 1977, when it was excluded because of a major core modification outage. The DOE-operated Experimental Breeder Reactor 2 unit (EBR-2) is not included because the electricity it generates is not distributed commercially.

Six units were deleted subsequent to their removal from service: Peach Bottom 1 (net summer capability of 40 MWe) and Indian Point 1 (net summer capability of 265 MWe), both out of service since November 1974; Humboldt Bay (net summer capability of 65 MWe), down since August 1976 for major seismic modifications and subsequently officially retired; Dresden 1 (net summer capability of 200 MWe), out of service since January 1979 for major modifications and officially retired in August 1984; Three Mile Island 2 (net summer capability of 880 MWe), whose core was severely damaged by a loss-of-coolant accident in March 1979; and LaCrosse (net summer capability of 51 MWe), out of service as of April 30, 1987.

Nine units with Full Power Operating Licenses have been shut down by the NRC for an extended period. The names of the nine units, their net summer capabilities, and dates of shut down are as follows: Rancho Seco, 873 MWe, December 1985; Browns Ferry 1, 1,065 MWe, March 1985; Browns Ferry 2, 1,065 MWe, September 1984; Browns Ferry 3, 1,065 MWe, March 1985; Sequoyah 1, 1,148 MWe, August 1985; Sequoyah 2, 1,148 MWe, August 1985; Peach Bottom 2, 1,052, March 1987; Peach Bottom 3, 1,033 MWe, March 1987; and Pilgrim 1, 667 MWe, April 1986.

2. In Startup: Units that have been issued a Low Power Operating License by the NRC authorizing fuel loading and low power testing prior to issuance of a Full Power Operating License.

3. Capacity: Nuclear generating units may have more than one type of net capacity rating including:

(a) Net Summer Capability--The steady hourly output which 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 monthly net summer capability. This fraction is then multiplied by 100 to obtain a percentage. Annual capacity factors are averages of the monthly values for that year.

Sources

Nuclear Units Licensed for Operation: Nuclear Regulatory Commission Report NUREG-0020, "Licensed Operating Reactors."

Electricity Generation: 1973 through September 1977--Federal Power Commission, Form 4, "Monthly Power Plant Report." October 1977 through 1981--Federal Energy Regulatory Commission, FPC Form 4, "Monthly Power Plant Report." 1982 forward--Energy Information Administration, Form EIA-759, "Monthly Power Plant Report."

Net Summer Capability: Energy Information Administration, Form EIA-860, "Annual Electric Generator Report."

Capacity Factor: Energy Information Administration, Office of Coal, Nuclear, Electric and Alternate Fuels.

Unit Construction and Planning Data: 1973 through June 1982--Compiled from various sources, primarily the Department of Energy, Office of Nuclear Reactor Programs, "U.S. Central Station Nuclear Electric Generating Units: Significant Milestones," Nuclear Regulatory Commission Report NUREG-0020, "Licensed Operating Reactors," and from the Energy Information Administration, Office of Coal, Nuclear, Electric and Alternate Fuels. July 1982 forward--Nuclear Regulatory Commission Report NUREG-0871, "Summary Information Report," Nuclear Regulatory Commission Report NUREG-0020, "Licensed Operating Reactors," and various trade journals.

Total Design Capacity: Nuclear Regulatory Commission report NUREG-0020, "Licensed Operating Reactors," Nuclear Regulatory Commission Report NUREG-0871, "Summary Information Report," and Energy Information Administration, Form EIA-860, "Annual Electric Generator Report."

Section 9. Price

Crude Oil. The average price of domestic crude oil purchased at the wellhead was $13.41 per barrel in February 1988, 8 percent below the level in February 1987.

The refiner acquisition cost of imported crude oil in February 1988 was $15.91 per barrel, 6 percent below the February 1987 level. The cost of domestic crude oil in February 1988 was $15.61, a decrease of 7 percent from the February 1987 average.

Motor Gasoline. The national city average retail price of leaded regular gasoline at all types of stations was 85 cents per gallon in March 1988, 1 percent below the price in February 1988. The price of unleaded regular gasoline at all types of stations was 90 cents per gallon in March 1988, 1 percent below the price in February 1988. The price of unleaded premium gasoline averaged $1.07 per gallon in March 1988, almost 1 percent lower than the price in February 1988.

Residual Fuel Oil. The average price, excluding taxes, of residual fuel oil sold to end users in February 1988 was 36 cents per gallon, 3 percent below the previous month's price, and 13 percent below the February 1987 average. The average resale price, excluding taxes, of residual fuel oil in February 1988 was 32 cents per gallon, 1 percent below the January 1988 average, and 14 percent below the February 1987 average.

Aviation Fuel. The average price, excluding taxes, of aviation gasoline sold to end users in February 1988 was 88 cents per gallon, slightly lower than the price in the previous month, and 2 percent below the price in February 1987. The average price, excluding taxes, of kerosene-type jet fuel sold to end users in February 1988 was 55 cents per gallon, 2 percent below the previous month's price, but 11 percent above the price 1 year earlier.

No. 2 Distillate Fuel Oil. The national average price of heating oil sold to residential customers in February 1988 was 84 cents per gallon, 1 percent below the January 1987 price, but 6 percent above the February 1987 price. The average price for resale was 49 cents per gallon in February 1988, 6 percent below the price in the previous month, and 1 percent below the price in February 1987.

Natural Gas. In January 1988, the average wellhead price of natural gas was $1.83 per thousand cubic feet, 3 percent above the January 1987 price. The average price of natural gas delivered to electric utility plants was $2.59 per thousand cubic feet in January 1988, 9 percent above the January 1987 price. The average price of natural gas used by residential consumers in December 1987 (latest data available) was $5.14 per thousand cubic feet, 3 percent less than the December 1986 price. The average price of natural gas used by industrial consumers in December 1987 was $2.77 per thousand cubic feet, 8 percent less than the December 1986 price.

Electricity. Beginning with January 1986, there are 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.

The national retail price of electricity to residential consumers in February 1988 was 6.98 cents per kilowatthour, slightly higher than the February 1987 price. The price of electricity to commercial consumers averaged 6.85 cents per kilowatthour in February 1988, unchanged from the February 1987 price. The national retail price of electricity to other consumers during February 1988 was 6.49 cents per kilowatthour, 1 percent below the price 1 year earlier.. The February average electricity price to industrial users was 4.50 cents per kilowatthour, 3 percent below the February 1987 price.

Figure 9.1 Crude Oil Prices

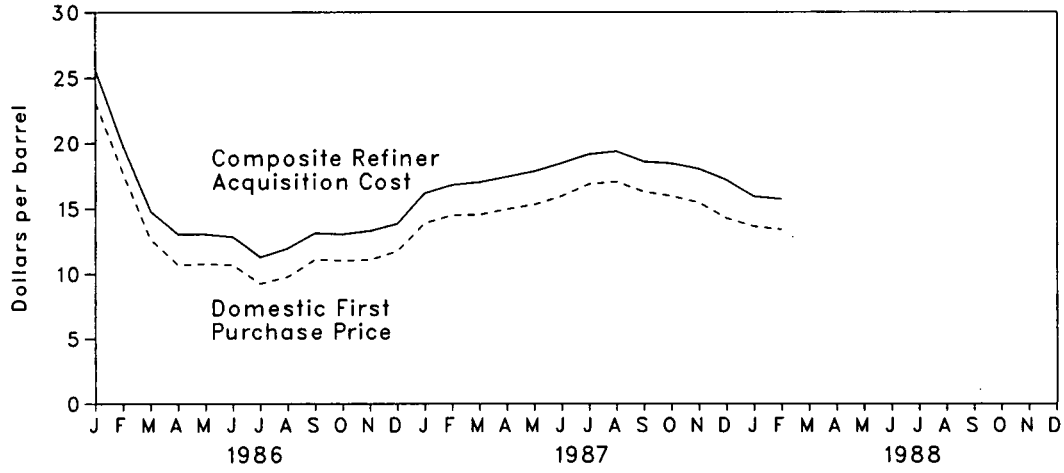


Figure 9.2 Refiner Sales Prices to End Users: Motor Gasoline, Diesel Fuel, and Jet Fuel

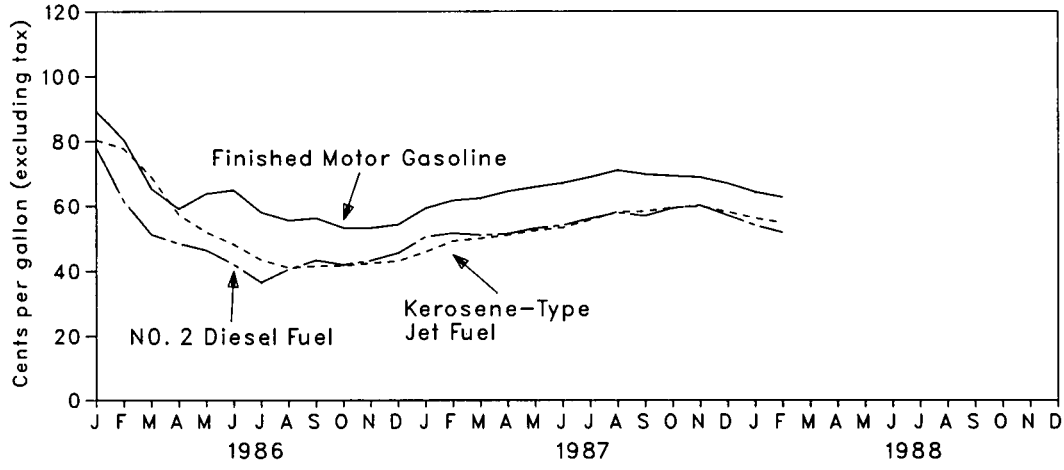


Figure 9.3 Refiner Sales Prices to End Users: No. 2 Fuel Oil, Propane, and Residual Fuel Oil

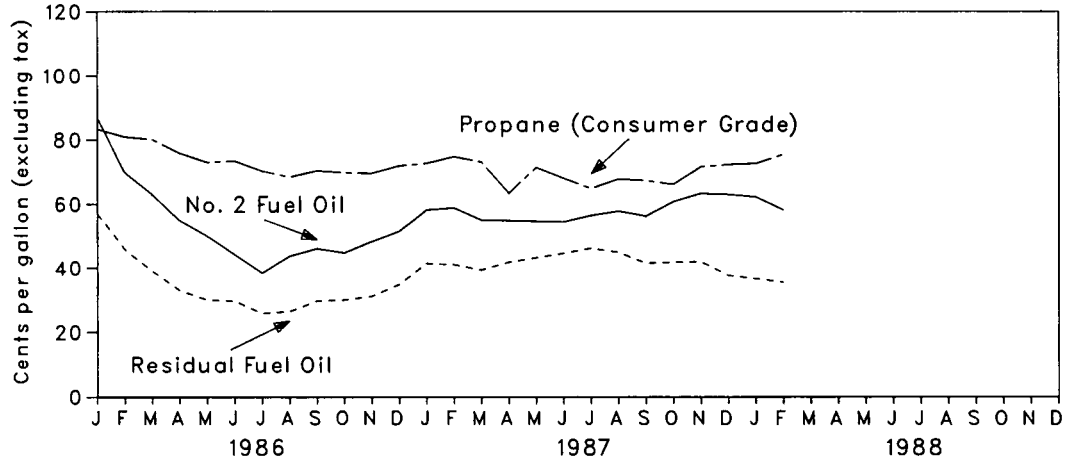


Table 9.1 Crude Oil Price Summary
(Dollars per Barrel)

	Domestic First Purchase Price[a]	FOB Cost of Imports[b]	Landed Cost of Imports[c]	Refiner Acquisition Cost[d]		
				Domestic	Imported	Composite
1976 Average	**8.19**	**12.17**	**13.34**	**8.84**	**13.48**	**10.89**
1977 Average	**8.57**	**13.24**	**14.31**	**9.55**	**14.53**	**11.96**
1978 Average	**9.00**	**13.30**	**14.38**	**10.61**	**14.57**	**12.46**
1979 Average	**12.64**	**20.19**	**21.65**	**14.27**	**21.67**	**17.72**
1980 Average	**21.59**	**32.27**	**33.95**	**24.23**	**33.89**	**28.07**
1981 Average	**31.77**	**35.10**	**36.52**	**34.33**	**37.05**	**35.24**
1982 Average	**28.52**	**32.11**	**33.18**	**31.22**	**33.55**	**31.87**
1983 Average	**26.19**	**27.73**	**28.93**	**28.87**	**29.30**	**28.99**
1984 Average	**25.88**	**27.44**	**28.46**	**28.53**	**28.88**	**28.63**
1985 Average	**24.09**	**25.83**	**26.66**	**26.66**	**26.99**	**26.75**
1986 January	23.12	21.46	22.88	25.91	24.93	25.63
February	17.65	15.11	16.23	20.31	18.11	19.76
March	12.62	12.62	13.55	15.02	14.22	14.80
April	10.68	11.60	12.45	13.01	13.15	13.05
May	10.75	11.05	12.22	12.99	13.17	13.05
June	10.68	10.85	11.90	13.12	12.25	12.83
July	9.25	9.74	10.87	11.44	10.91	11.26
August	9.77	10.59	11.51	11.97	11.87	11.93
September	11.09	11.78	12.70	13.29	12.85	13.13
October	11.00	11.98	13.10	13.20	12.78	13.05
November	11.05	12.63	13.55	13.22	13.46	13.30
December	11.73	13.84	14.50	13.66	14.17	13.84
Average	**12.51**	**12.52**	**13.49**	**14.82**	**14.00**	**14.55**
1987 January	13.89	15.30	16.16	16.02	16.43	16.17
February	14.50	15.98	16.87	16.76	16.96	16.82
March	14.53	16.31	17.05	16.93	17.24	17.03
April	14.95	16.79	17.52	17.21	17.88	17.43
May	15.29	17.20	17.91	17.64	18.24	17.84
June	15.95	17.52	18.34	18.34	18.71	18.47
July	16.88	17.92	18.89	19.05	19.25	19.14
August	17.06	17.74	18.88	19.41	19.30	19.36
September	16.29	17.10	18.05	18.58	18.55	18.57
October	15.95	17.16	18.06	18.37	18.57	18.45
November	15.46	16.68	17.71	17.95	18.16	18.03
December	14.27	R 14.77	R 16.07	17.03	17.45	17.19
Average	**15.41**	**R 16.78**	**R 17.71**	**17.77**	**18.16**	**17.91**
1988 January	R 13.64	R 13.72	R 14.95	15.82	R 16.10	15.92
February	13.41	14.15	14.89	15.61	15.91	15.72

[a]See Note 1 at end of section.
[b]See Note 2 at end of section.
[c]See Note 3 at end of section.
[d]See Note 4 at end of section.
R=Revised data.

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 of Crude Oil for the current month, and for FOB and Landed Cost of Crude Oil Imports for the current 2 months, are preliminary.

Sources: See end of section.

Table 9.2 FOB Cost of Crude Oil Imports from Selected Countries[a]
(Dollars per Barrel)

	Algeria	Indonesia	Iran	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela	Other Countries	Arab OPEC[b]	Total OPEC[c]
1976 Average	**13.05**	**12.76**	**11.61**	**NA**	**13.08**	**11.69**	**NA**	**11.32**	**NA**	**NA**	**NA**
1977 Average	**14.36**	**13.57**	**12.67**	**13.42**	**14.44**	**12.37**	**NA**	**12.68**	**NA**	**NA**	**NA**
1978 Average	**14.10**	**13.64**	**12.65**	**13.24**	**14.04**	**12.70**	**13.82**	**12.45**	**13.35**	**13.28**	**13.30**
1979 Average	**20.65**	**19.35**	**23.71**	**20.29**	**21.80**	**17.63**	**21.20**	**17.37**	**21.43**	**19.25**	**19.91**
1980 Average	**36.57**	**32.37**	**(d)**	**31.11**	**35.82**	**28.53**	**34.58**	**24.78**	**34.24**	**31.61**	**32.25**
1981 Average	**39.09**	**35.93**	**(d)**	**33.13**	**38.53**	**32.48**	**36.08**	**28.86**	**36.69**	**34.73**	**35.11**
1982 Average	**34.23**	**35.27**	**30.93**	**28.07**	**35.13**	**33.50**	**33.46**	**23.77**	**31.96**	**33.84**	**33.45**
1983 Average	**30.06**	**29.93**	**28.25**	**25.19**	**29.78**	**28.03**	**29.84**	**21.48**	**27.96**	**28.38**	**28.45**
1984 Average	**28.04**	**29.10**	**26.93**	**26.37**	**29.39**	**27.60**	**28.90**	**24.16**	**27.65**	**27.68**	**27.59**
1985 Average	**26.84**	**27.12**	**W**	**25.33**	**28.04**	**22.04**	**27.63**	**23.64**	**26.11**	**24.30**	**25.66**
1986 January	25.21	26.68	NA	19.96	26.17	12.75	25.15	21.40	23.21	14.74	21.02
February	W	W	W	14.26	19.83	11.64	17.82	12.56	16.82	11.63	13.99
March	W	13.32	W	11.60	15.78	11.95	15.62	10.45	13.43	12.15	12.53
April	W	10.77	W	10.39	14.54	12.12	12.14	10.48	11.87	12.04	11.82
May	12.17	11.28	W	10.72	13.58	7.91	13.25	10.82	11.91	8.80	10.46
June	W	11.84	W	9.93	12.31	8.54	12.91	9.54	11.88	9.03	10.33
July	W	10.00	W	8.61	10.99	10.15	10.38	7.71	10.55	10.20	9.85
August	W	9.82	W	10.55	11.44	9.35	10.45	9.96	11.52	9.80	10.36
September	W	12.22	NA	11.58	13.43	10.45	13.47	10.16	12.35	10.64	11.31
October	W	12.47	W	11.40	13.86	11.34	13.65	10.26	12.64	11.45	11.81
November	W	12.05	NA	11.78	13.88	13.65	14.05	10.73	12.84	13.37	12.64
December	W	W	W	12.73	15.04	15.15	15.26	12.68	13.80	14.98	14.13
Average	**13.62**	**13.19**	**W**	**11.84**	**14.35**	**11.36**	**13.84**	**10.92**	**13.32**	**11.59**	**12.21**
1987 January	16.30	15.22	W	15.55	17.38	14.51	17.42	13.76	15.71	14.81	14.93
February	16.35	17.75	W	15.34	18.07	W	W	13.93	16.52	16.31	15.89
March	W	16.91	W	16.02	17.72	W	17.36	14.76	16.31	16.37	16.34
April	W	17.24	W	16.40	18.44	W	17.79	15.29	16.83	16.46	16.78
May	W	17.28	W	17.68	18.68	16.75	18.36	15.65	17.14	16.82	16.92
June	W	17.66	W	17.78	18.75	16.64	18.61	16.24	17.58	16.77	17.24
July	W	17.89	W	18.75	18.93	16.57	19.33	16.49	18.13	16.80	17.38
August	W	18.46	NA	17.54	19.60	W	19.55	15.70	18.18	17.05	17.38
September	W	17.74	NA	16.27	18.58	16.73	18.35	15.50	17.51	16.90	17.05
October	W	17.66	NA	16.64	18.69	W	18.40	15.69	17.39	16.81	17.07
November	W	17.56	NA	15.51	18.49	W	17.90	14.47	17.02	16.99	16.80
December	W	[R] 16.28	NA	12.72	17.61	W	W	[R] 13.23	[R] 15.99	[R] 13.39	[R] 14.57
Average	**16.84**	[R] **17.40**	**W**	**16.36**	**18.47**	**W**	**18.28**	[R] **15.08**	[R] **17.12**	[R] **16.26**	[R] **16.59**
1988 January	W	16.62	NA	[R] 12.79	17.04	W	[R] 16.33	[R] 12.37	[R] 15.03	[R] 12.47	[R] 13.37
February	W	16.16	NA	13.09	15.98	W	W	12.16	14.57	W	14.48

[a]The Free on Board (FOB) cost at the country of origin excludes all costs related to insurance and transportation. See Note 2 at end of section.
[b]The Arab members of OPEC are Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and the United Arab Emirates.
[c]"Total OPEC" consists of Ecuador, Gabon, Indonesia, Iran, Nigeria, and Venezuela, as well as the Arab members.
[d]No crude oil was imported.
R=Revised data. NA=Not available. W=Value withheld to avoid disclosure of company data.
Notes: • 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 the weighted average of the 12 monthly prices, including those prices that were not published. • Cargoes that were purchased on a "netback" basis, or under similar contractual arrangements whereby the actual purchase price is not established at the time the crude 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: See end of section.

Table 9.3 Landed Cost of Crude Oil Imports from Selected Countries[a]
(Dollars per Barrel)

	Algeria	Canada	Indonesia	Iran	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela	Other Countries	Arab OPEC[b]	Total OPEC[c]
1975 Average	**12.72**	**12.72**	**13.79**	**12.21**	**NA**	**12.62**	**12.30**	**NA**	**11.65**	**NA**	**NA**	**NA**
1976 Average	**13.81**	**13.57**	**13.82**	**12.82**	**NA**	**13.80**	**13.04**	**NA**	**11.80**	**NA**	**NA**	**NA**
1977 Average	**15.20**	**14.21**	**14.63**	**13.80**	**13.75**	**15.25**	**13.61**	**NA**	**13.13**	**NA**	**NA**	**NA**
1978 Average	**14.91**	**14.50**	**14.64**	**13.88**	**13.54**	**14.86**	**13.92**	**NA**	**12.83**	**14.58**	**14.36**	**14.34**
1979 Average	**21.90**	**20.43**	**20.69**	**25.02**	**20.86**	**22.96**	**19.15**	**22.16**	**18.18**	**23.18**	**20.79**	**21.29**
1980 Average	**37.90**	**30.47**	**33.92**	**[d]**	**31.80**	**37.05**	**30.02**	**35.88**	**25.86**	**36.02**	**32.97**	**33.56**
1981 Average	**40.49**	**32.16**	**37.57**	**[d]**	**33.78**	**39.70**	**34.19**	**37.24**	**29.87**	**38.54**	**36.22**	**36.60**
1982 Average	**35.28**	**26.92**	**36.75**	**32.40**	**28.64**	**36.17**	**35.00**	**34.28**	**24.82**	**34.03**	**35.15**	**34.81**
1983 Average	**31.26**	**25.63**	**31.57**	**29.81**	**25.78**	**30.84**	**29.76**	**30.87**	**22.94**	**29.68**	**30.03**	**29.87**
1984 Average	**29.08**	**26.59**	**30.64**	**28.67**	**26.87**	**30.50**	**29.50**	**29.60**	**25.15**	**29.20**	**29.12**	**28.93**
1985 Average	**27.46**	**25.71**	**28.67**	**25.79**	**25.63**	**28.96**	**24.72**	**28.35**	**24.43**	**27.33**	**25.88**	**26.85**
1986 January	24.69	23.89	28.45	NA	20.33	27.73	14.54	25.36	22.21	24.85	17.57	22.68
February	W	17.42	W	W	14.61	21.18	13.80	18.22	13.27	17.58	13.88	15.40
March	W	12.96	14.94	W	11.94	16.44	13.60	16.02	11.04	14.89	13.52	13.67
April	W	11.69	12.29	W	10.74	15.02	13.66	13.00	11.13	13.20	13.44	12.97
May	13.27	12.11	12.74	W	10.06	14.22	10.68	14.17	11.44	13.21	11.43	11.98
June	W	12.74	13.27	W	10.26	13.95	10.49	13.65	10.24	12.66	11.08	11.70
July	W	11.19	11.72	W	8.93	12.11	11.33	11.83	8.45	11.34	11.45	11.14
August	W	11.71	11.45	11.18	10.87	12.29	11.27	11.56	10.66	11.86	11.63	11.54
September	12.88	12.52	13.67	W	11.95	14.11	12.08	14.15	10.86	13.18	12.53	12.60
October	W	12.47	14.18	W	11.74	14.64	12.84	14.76	10.87	13.91	13.00	13.15
November	13.19	12.51	13.96	NA	12.13	14.64	14.63	14.65	11.24	14.21	14.39	13.72
December	W	12.85	14.32	W	13.04	15.56	16.13	15.42	13.24	14.94	15.82	15.01
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 January	16.96	14.65	16.24	W	15.94	18.02	15.87	17.47	14.46	17.17	16.08	16.03
February	17.03	15.49	18.10	17.76	15.67	18.54	17.80	18.14	14.63	18.11	17.38	16.99
March	W	15.72	18.19	17.78	16.32	18.30	17.61	18.02	15.27	17.75	17.49	17.25
April	18.06	16.31	18.32	17.87	16.71	18.96	17.69	18.14	16.03	18.06	17.55	17.69
May	18.51	17.11	18.38	17.96	18.02	19.29	17.66	19.04	16.24	18.36	17.82	17.82
June	W	17.73	19.04	18.32	18.07	19.54	17.77	19.43	16.85	18.70	17.96	18.28
July	W	18.61	19.10	18.69	19.08	19.95	17.70	20.38	17.09	19.27	18.04	18.56
August	19.05	19.00	19.68	19.00	17.89	20.63	18.02	20.41	16.53	19.38	18.35	18.72
September	18.26	17.81	19.18	18.67	16.61	19.38	17.93	18.96	16.14	18.55	18.11	18.14
October	W	17.68	18.94	18.37	16.98	19.45	W	19.05	16.26	18.35	18.18	18.15
November	18.18	17.38	18.77	W	15.84	19.44	W	18.76	15.19	18.13	18.08	17.94
December	W	16.13	[R] 17.75	NA	13.09	[R] 18.50	W	17.99	[R] 13.90	[R] 17.17	[R] 15.59	[R] 16.12
Average	**17.90**	**17.04**	**[R] 18.49**	**18.26**	**16.70**	**19.32**	**W**	**18.78**	**[R] 15.77**	**[R] 18.31**	**[R] 17.61**	**[R] 17.75**
1988 January	W	14.60	[R] 17.99	W	[R] 13.16	[R] 17.91	W	[R] 17.56	[R] 13.10	[R] 16.37	[R] 14.24	[R] 14.67
February	W	14.35	17.47	NA	13.45	16.75	W	16.89	12.88	16.17	14.09	14.87

[a]See Note 3 at end of section.
[b]The Arab members of OPEC are Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and the United Arab Emirates.
[c]"Total OPEC" consists of Ecuador, Gabon, Indonesia, Iran, Nigeria, and Venezuela, as well as the Arab members.
[d]No crude oil was imported.
R=Revised data. NA=Not available. W=Value withheld to avoid disclosure of company data.
Notes: • 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 the weighted average of the 12 monthly prices, including those prices that were not published. • Cargoes that were purchased on a "netback" basis, or under similar contractual arrangements whereby the actual purchase price is not established at the time the crude 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: See end of section.

Table 9.4 U.S. City Average Retail Prices of Motor Gasoline[a]
(Cents per Gallon, Including Tax)

	Leaded Regular	Unleaded Regular	Unleaded Premium	Average for All Types[b]
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**	**65.2**
1979 Average	**85.7**	**90.3**	**NA**	**88.2**
1980 Average	**119.1**	**124.5**	**NA**	**122.1**
1981 Average[c]	**131.1**	**137.8**	**147.0**	**135.3**
1982 Average	**122.2**	**129.6**	**141.5**	**128.1**
1983 Average	**115.7**	**124.1**	**138.3**	**122.5**
1984 Average	**112.9**	**121.2**	**136.6**	**119.8**
1985 Average	**111.5**	**120.2**	**134.0**	**119.6**
1986 January	110.7	119.4	133.6	119.0
February	103.4	112.0	128.2	111.9
March	89.4	98.1	116.0	98.3
April	81.5	88.8	106.1	89.5
May	85.2	92.3	107.5	92.7
June	88.5	95.5	110.0	95.8
July	82.2	89.0	104.5	89.5
August	77.8	84.3	99.9	84.8
September	79.7	86.0	101.0	86.4
October	77.1	83.1	98.7	83.7
November	76.2	82.1	98.0	82.7
December	76.4	82.3	98.4	83.0
Average	**85.7**	**92.7**	**108.5**	**93.1**
1987 January	80.6	86.2	100.7	86.8
February	84.8	90.5	104.7	91.1
March	85.6	91.2	105.2	91.8
April	87.9	93.4	107.3	94.0
May	88.8	94.1	107.9	94.8
June	90.6	95.8	109.8	96.6
July	92.1	97.1	111.5	98.0
August	94.6	99.5	113.9	100.4
September	94.0	99.0	113.6	100.0
October	93.1	97.6	112.8	98.8
November	92.8	97.6	112.5	98.7
December	91.2	96.1	111.9	97.5
Average	**89.7**	**94.8**	**109.3**	**95.7**
1988 January	88.1	93.3	109.5	94.7
February	85.9	91.3	108.2	92.8
March	85.0	90.4	107.4	92.0

[a]See Note 5 at end of section.
[b]Also includes types of gasoline not shown separately.
[c]In September 1981, the Bureau of Labor Statistics changed the weights used in the calculation of average motor gasoline prices. From September 1981 forward, in the average for all types category, gasohol is included and unleaded premium is weighted more heavily.
NA=Not available.
Note: Geographic coverage for 1974 through 1977 is 56 urban areas. For 1978 forward, it is 85 urban areas.
Sources: See end of section.

Table 9.5 Refiner Sales Prices of Residual Fuel Oil[a]
(Cents per Gallon, Excluding Tax)

	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 January	56.0	62.0	49.7	52.8	51.8	57.1
February	43.0	49.0	36.5	42.7	38.7	45.8
March	37.0	42.7	28.7	35.7	31.8	39.0
April	31.0	36.8	26.0	30.1	28.0	33.0
May	30.1	35.0	23.6	26.8	26.5	30.1
June	29.9	32.3	23.1	26.8	26.2	29.8
July	23.7	27.4	20.4	24.4	21.9	25.9
August	26.5	29.3	21.7	23.2	23.4	26.5
September	29.7	31.5	26.6	28.2	28.1	29.8
October	28.7	31.9	26.4	28.8	27.6	30.1
November	29.3	33.7	25.2	29.0	27.4	31.2
December	34.0	37.7	27.7	31.6	30.4	34.8
Average	**32.8**	**37.2**	**28.9**	**31.7**	**30.5**	**34.3**
1987 January	39.9	44.5	35.7	37.9	37.7	41.5
February	40.2	43.5	34.4	38.3	37.2	41.1
March	39.5	41.8	33.5	37.2	36.3	39.4
April	40.1	43.7	35.5	39.9	37.2	41.9
May	41.8	44.6	38.6	41.7	39.8	43.3
June	43.7	45.3	40.9	43.8	42.2	44.7
July	44.3	47.2	42.1	44.4	43.3	46.2
August	44.4	45.4	41.4	44.5	42.8	45.0
September	41.4	44.0	36.7	39.6	39.0	41.6
October	41.3	44.5	36.2	39.5	38.8	41.9
November	41.3	45.0	34.6	38.7	37.4	42.1
December	39.2	41.4	28.1	32.8	33.8	37.7
Average	**41.3**	**44.3**	**36.2**	**39.5**	**38.6**	**42.1**
1988 January	R 36.6	41.8	R 27.8	31.8	R 32.3	R 36.7
February	35.3	40.4	27.4	31.5	32.0	35.6

[a]Sales for resale, that is, wholesale sales, are those made to purchasers who are other than ultimate consumers. Sales to end users are to the ultimate consumer, including bulk customers such as agriculture, industry, and utilities, as well as commercial customers.

R=Revised data.

Notes: • 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: See end of section.

Table 9.6 Refiner Sales Prices of Petroleum Products for Resale[a]
(Cents per Gallon, Excluding Tax)

	Finished Motor Gasoline[b]	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 January	76.7	111.0	77.9	83.8	73.6	73.3	44.0
February	65.1	108.9	67.7	67.1	56.4	56.1	35.4
March	52.4	105.1	58.6	60.8	51.9	47.4	29.2
April	51.8	97.8	50.0	52.2	45.9	46.3	27.3
May	57.9	95.6	47.5	50.1	45.2	44.2	28.5
June	54.4	91.7	44.5	49.3	40.0	39.6	28.3
July	45.7	86.3	40.1	41.1	34.8	34.0	25.3
August	47.9	83.7	39.8	47.8	40.0	38.8	24.6
September	48.6	81.6	42.5	49.1	41.6	41.8	24.8
October	46.1	82.9	43.4	47.9	41.0	40.9	25.1
November	47.1	81.7	43.7	51.3	42.4	41.9	24.3
December	47.4	81.4	45.2	53.4	44.2	43.4	23.6
Average	**53.1**	**91.2**	**49.5**	**60.6**	**48.6**	**45.2**	**29.0**
1987 January	53.3	82.9	49.0	59.1	50.6	49.5	25.0
February	55.0	84.3	49.5	56.7	49.3	49.5	24.5
March	56.2	83.6	49.2	54.0	49.0	48.7	23.7
April	57.7	83.7	50.0	55.2	49.4	49.6	24.5
May	59.4	85.4	51.1	54.7	51.5	52.0	24.0
June	60.7	86.9	52.6	55.2	52.6	53.0	23.5
July	62.5	86.4	55.0	56.7	54.8	55.0	24.4
August	63.6	86.8	56.6	58.9	55.1	57.0	25.6
September	60.6	86.7	55.8	58.5	53.2	55.9	26.1
October	60.5	86.8	57.9	62.7	56.7	58.1	26.8
November	59.9	87.1	58.4	63.5	57.0	57.9	27.1
December	55.6	86.1	55.5	60.7	54.3	53.9	26.1
Average	**58.9**	**85.7**	**53.6**	**59.2**	**52.7**	**53.4**	**25.2**
1988 January	53.7	86.0	53.0	59.3	52.1	51.2	26.7
February	54.0	84.3	52.0	57.2	48.9	49.1	26.4

[a]Sales for resale, that is, wholesale sales, are those made to purchasers who are other than ultimate consumers. Sales to end users are those made directly to the ultimate consumer, including bulk customers such as agriculture, industry, and utilities, as well as residential and commercial customers.

[b]See Note 5 at end of section.

Notes: • 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: See end of section.

Table 9.7 Refiner Sales Prices of Petroleum Products to End Users[a]
(Cents per Gallon, Excluding Tax)

	Finished Motor Gasoline[b]	Finished Aviation Gasoline	Kerosene-Type Jet Fuel	Kerosene	No. 2 Fuel Oil	No. 2 Diesel Fuel	Propane (Consumer Grade)
1978 Average	**48.4**	**51.6**	**38.7**	**42.1**	**40.0**	**37.7**	**33.5**
1979 Average	**71.3**	**68.9**	**54.7**	**58.5**	**51.6**	**58.5**	**35.7**
1980 Average	**103.5**	**108.4**	**86.8**	**90.2**	**78.8**	**81.8**	**48.2**
1981 Average	**114.7**	**130.3**	**102.4**	**112.3**	**91.4**	**99.5**	**56.5**
1982 Average	**106.0**	**131.2**	**96.3**	**108.9**	**90.5**	**94.2**	**59.2**
1983 Average	**95.4**	**125.5**	**87.8**	**96.1**	**91.6**	**82.6**	**70.9**
1984 Average	**90.7**	**123.4**	**84.2**	**103.6**	**91.6**	**82.3**	**73.7**
1985 Average	**91.2**	**120.1**	**79.6**	**103.0**	**84.9**	**78.9**	**71.7**
1986 January	89.3	116.2	80.4	104.7	86.9	78.1	83.3
February	80.5	117.2	77.8	93.0	69.8	61.5	80.9
March	65.4	111.5	68.9	84.9	62.9	51.2	80.1
April	59.1	104.3	57.3	79.5	54.9	48.5	75.9
May	63.8	102.2	51.9	67.6	50.0	46.4	73.1
June	64.9	101.0	48.2	51.6	44.3	42.0	73.5
July	58.0	98.2	43.4	48.2	38.4	36.5	70.3
August	55.5	94.9	41.0	60.5	43.8	40.5	68.4
September	56.2	93.2	41.5	73.7	46.1	43.3	70.4
October	53.2	91.2	41.6	69.5	44.8	41.9	69.8
November	53.2	87.2	42.4	74.5	48.3	43.2	69.6
December	54.2	88.8	43.0	76.8	51.5	45.5	72.0
Average	**62.4**	**101.1**	**52.9**	**79.0**	**56.0**	**47.8**	**74.5**
1987 January	59.3	87.9	45.9	82.8	58.2	50.5	72.8
February	61.7	89.7	49.2	80.4	58.8	51.6	74.8
March	62.4	90.3	50.0	82.0	55.1	51.0	73.2
April	64.5	89.8	51.0	78.2	54.9	51.4	63.3
May	65.8	90.0	52.4	66.8	54.7	53.1	71.5
June	67.0	90.6	53.3	59.8	54.5	54.0	68.0
July	68.8	91.1	55.6	60.4	56.5	56.1	64.8
August	70.9	92.0	58.2	60.1	57.8	57.9	67.8
September	69.7	91.6	58.3	76.6	56.3	56.9	67.3
October	69.2	91.2	59.5	78.8	60.7	59.3	66.1
November	68.8	90.7	59.9	82.7	63.2	60.2	71.7
December	66.9	90.1	58.2	87.9	62.9	57.1	72.4
Average	**66.2**	**90.5**	**54.3**	**76.9**	**58.1**	**54.9**	**70.0**
1988 January	R 64.3	88.0	56.2	84.1	62.1	54.0	72.7
February	62.7	87.9	54.8	84.7	58.2	51.8	75.5

[a]Sales for resale, that is, wholesale sales, are those made to purchasers who are other than ultimate consumers. Sales to end users are those made directly to the ultimate consumer, including bulk customers such as agriculture, industry, and utilities, as well as residential and commercial customers.

[b]See Note 5 at end of section.

R=Revised data.

Notes: • 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: See end of section.

Table 9.8a Sales Prices of No. 2 Distillate to Residences for Selected States[a]
(Cents per Gallon, Excluding Tax)

	CT	ME	MA	NH	RI	VT	DE	DC
1978 Average	**50.1**	**48.6**	**48.8**	**50.3**	**50.7**	**50.8**	**47.8**	**50.7**
1979 Average	**72.0**	**68.8**	**70.9**	**72.5**	**72.8**	**72.5**	**68.2**	**74.2**
1980 Average	**98.0**	**96.3**	**97.8**	**100.4**	**101.1**	**101.5**	**95.4**	**102.6**
1981 Average	**121.7**	**120.4**	**121.3**	**123.7**	**123.8**	**125.4**	**117.3**	**127.4**
1982 Average	**118.3**	**115.5**	**117.6**	**117.4**	**120.1**	**120.1**	**111.3**	**124.5**
1983 Average	**109.1**	**102.8**	**109.1**	**104.1**	**110.5**	**112.9**	**106.0**	**117.0**
1984 Average	**112.1**	**103.9**	**111.6**	**108.4**	**111.4**	**111.9**	**109.6**	**118.7**
1985 Average	**108.0**	**99.7**	**107.0**	**102.4**	**106.7**	**107.7**	**104.6**	**114.3**
1986 January	111.5	101.1	105.9	103.7	101.8	109.0	102.3	116.5
February	99.5	90.9	90.6	88.6	93.5	100.2	93.9	105.5
March	93.5	86.5	85.8	84.3	84.6	95.6	87.0	97.6
April	86.2	77.9	76.8	75.2	79.7	89.0	77.1	93.2
May	80.7	74.5	74.2	70.7	76.6	84.7	74.3	87.9
June	77.6	68.5	68.7	65.4	69.0	78.9	73.7	81.7
July	68.5	59.4	65.6	63.3	69.2	70.9	65.5	74.7
August	66.9	58.5	65.0	63.3	69.1	68.8	66.6	70.7
September	68.4	58.2	67.8	63.0	69.6	69.4	67.0	72.1
October	68.9	58.7	68.2	64.3	68.7	69.5	66.6	74.2
November	70.2	59.3	69.3	65.3	71.6	70.5	67.9	77.0
December	72.5	66.3	72.6	69.5	74.6	72.4	71.2	80.8
Average	**89.0**	**74.4**	**82.1**	**75.9**	**82.8**	**86.6**	**85.0**	**93.1**
1987 January	80.0	72.8	80.4	76.1	79.9	78.2	78.2	87.1
February	83.4	73.3	80.7	75.3	81.5	79.6	79.5	92.6
March	82.4	74.3	80.2	74.0	81.6	79.2	79.5	91.9
April	82.5	75.0	79.3	73.5	81.4	78.5	78.1	90.6
May	83.0	75.0	80.1	74.1	81.0	79.8	78.6	91.0
June	78.2	74.1	76.3	74.3	79.0	79.9	73.6	92.2
July	82.7	74.5	74.7	74.3	80.4	80.8	76.2	90.2
August	83.0	74.8	73.7	75.9	79.5	80.3	74.8	92.4
September	82.5	74.7	78.7	76.0	80.9	81.0	76.2	91.4
October	84.6	73.2	80.8	78.0	83.1	83.6	79.5	92.2
November	87.5	75.1	83.2	79.3	86.0	84.4	82.5	93.7
December	87.9	78.9	83.9	81.8	87.9	84.9	82.6	95.6
Average	**83.2**	**74.7**	**80.5**	**76.4**	**82.6**	**81.2**	**79.4**	**91.8**
1988 January	89.2	80.1	[R] 85.7	[R] 82.4	88.1	[R] 85.9	83.7	[R] 95.8
February	89.1	79.2	84.0	81.6	87.1	85.5	83.2	96.0

[a]The States are listed by geographic region of the country. State names are abbreviated as follows: CT - Connecticut, ME - Maine, MA - Massachusetts, NH - New Hampshire, RI - Rhode Island, VT - Vermont, DE - Delaware, DC - District of Columbia, MD - Maryland, NJ - New Jersey, NY - New York, PA - Pennsylvania, VA - Virginia, WV - West Virginia, IL - Illinois, IN - Indiana, MI - Michigan, MN - Minnesota, OH - Ohio, WI - Wisconsin, ID - Idaho, AK - Alaska, OR - Oregon, WA - Washington.

Footnotes continued on following page.

Table 9.8b Sales Prices of No. 2 Distillate to Residences for Selected States[a] (continued)
(Cents per Gallon, Excluding Tax)

	MD	NJ	NY	PA	VA	WV	IL	IN
1978 Average	**49.2**	**49.6**	**50.1**	**48.8**	**49.1**	**46.2**	**46.5**	**48.5**
1979 Average	**70.1**	**71.0**	**71.2**	**69.8**	**70.4**	**65.1**	**68.8**	**72.7**
1980 Average	**97.9**	**97.9**	**98.2**	**96.4**	**98.5**	**92.2**	**95.8**	**99.6**
1981 Average	**121.4**	**121.5**	**123.2**	**118.1**	**120.5**	**115.0**	**114.9**	**118.5**
1982 Average	**117.1**	**117.4**	**120.5**	**113.7**	**117.7**	**109.3**	**110.9**	**114.3**
1983 Average	**110.3**	**107.9**	**112.1**	**105.8**	**108.7**	**101.0**	**100.4**	**100.7**
1984 Average	**113.5**	**111.0**	**115.5**	**107.9**	**110.5**	**102.1**	**100.1**	**103.1**
1985 Average	**108.8**	**105.9**	**111.3**	**102.3**	**106.3**	**98.0**	**97.5**	**99.1**
1986 January	112.2	107.7	111.5	104.7	106.9	99.8	97.6	99.9
February	99.9	98.3	102.7	95.3	98.2	87.8	82.9	85.0
March	93.9	91.5	96.3	87.2	90.8	79.6	74.7	75.6
April	88.5	84.8	87.6	78.1	84.5	70.6	69.9	74.0
May	84.9	80.1	85.0	72.6	75.1	67.4	72.9	67.2
June	79.7	75.6	81.4	66.0	74.3	63.4	67.4	66.6
July	71.4	75.8	72.3	63.6	69.5	53.9	NA	60.1
August	70.7	72.4	71.3	62.6	71.5	59.7	64.7	65.6
September	70.2	73.4	73.7	63.6	70.9	61.3	65.5	66.7
October	72.4	74.7	73.9	64.1	69.5	63.0	60.0	65.2
November	73.5	74.6	76.0	66.1	68.9	67.3	NA	65.1
December	77.1	76.7	78.8	68.2	70.6	71.7	NA	68.5
Average	**91.4**	**90.2**	**91.1**	**81.4**	**86.6**	**74.6**	**NA**	**74.8**
1987 January	82.6	83.1	83.2	74.8	77.0	72.9	76.6	72.8
February	85.4	84.3	84.8	75.6	79.5	76.1	73.7	72.1
March	85.8	82.5	84.2	74.1	80.5	71.9	77.9	71.0
April	84.8	82.1	84.1	73.4	81.1	69.0	77.9	72.8
May	84.3	81.4	84.6	72.1	79.4	69.3	79.5	74.8
June	84.5	82.0	83.5	72.7	76.4	66.7	82.8	76.2
July	85.4	82.3	82.7	73.0	76.6	69.3	83.4	76.7
August	87.1	81.7	83.4	73.1	75.8	75.6	84.7	77.3
September	87.3	82.3	81.9	75.0	78.5	74.2	83.0	78.1
October	88.2	83.9	85.5	77.8	78.5	74.9	89.2	80.7
November	90.2	86.2	87.8	81.3	80.8	78.3	89.5	82.2
December	90.6	87.1	88.3	82.1	82.1	81.1	86.3	80.8
Average	**86.8**	**84.0**	**85.0**	**76.8**	**79.2**	**74.4**	**79.6**	**75.5**
1988 January	90.9	88.1	89.2	[R] 83.4	82.2	[R] 78.7	85.4	[R] 79.9
February	90.0	87.7	88.8	82.6	81.4	76.0	86.1	77.3

Footnotes continued on following page.

Table 9.8c Sales Prices of No. 2 Distillate to Residences for Selected States[a] (continued)
(Cents per Gallon, Excluding Tax)

	MI	MN	OH	WI	ID	AK	OR	WA	U.S. Average
1978 Average	**47.9**	**47.8**	**47.4**	**44.7**	**43.6**	**53.2**	**45.8**	**48.6**	**49.0**
1979 Average	**70.9**	**72.4**	**68.6**	**67.3**	**62.1**	**68.2**	**68.0**	**69.7**	**70.4**
1980 Average	**97.8**	**99.9**	**91.9**	**91.5**	**91.6**	**97.8**	**97.3**	**100.8**	**97.4**
1981 Average	**118.3**	**118.4**	**113.2**	**109.1**	**110.4**	**118.0**	**111.4**	**116.5**	**119.4**
1982 Average	**113.9**	**115.1**	**110.2**	**107.8**	**110.4**	**117.4**	**111.6**	**117.6**	**116.0**
1983 Average	**106.4**	**103.1**	**101.3**	**101.2**	**101.8**	**108.8**	**103.6**	**109.0**	**107.8**
1984 Average	**105.0**	**104.1**	**102.1**	**101.0**	**98.5**	**106.9**	**99.3**	**102.6**	**109.1**
1985 Average	**102.1**	**101.9**	**99.7**	**98.3**	**97.2**	**108.3**	**97.1**	**101.1**	**105.3**
1986 January	102.6	100.5	100.7	96.5	97.1	106.5	100.1	104.6	106.4
February	91.9	86.2	91.9	83.9	91.2	103.7	83.5	90.4	95.8
March	80.6	80.2	80.8	75.9	76.2	113.8	65.9	75.3	88.7
April	74.5	76.4	78.1	73.8	69.9	95.6	62.5	74.9	81.2
May	72.4	79.5	75.2	71.8	74.8	94.3	64.1	71.2	77.4
June	65.5	74.6	69.0	69.0	66.9	89.0	60.0	65.3	72.8
July	67.2	69.5	62.3	63.6	62.2	NA	55.7	60.2	67.0
August	69.7	67.6	62.5	63.7	58.6	84.2	55.6	60.6	66.3
September	70.7	70.0	64.2	67.9	59.4	89.2	61.9	66.9	68.1
October	69.8	67.7	61.5	63.3	60.8	79.2	62.3	68.2	67.4
November	70.3	68.0	61.0	66.0	62.1	80.1	62.6	68.8	68.2
December	72.5	68.3	64.8	69.0	61.6	85.4	63.9	66.7	70.6
Average	**81.0**	**79.2**	**77.7**	**75.6**	**73.8**	**94.9**	**70.4**	**77.5**	**83.6**
1987 January	75.9	70.7	69.1	72.0	62.7	86.5	67.6	71.3	78.2
February	75.1	69.9	72.0	73.0	65.1	88.9	71.1	74.1	79.6
March	76.1	70.1	70.5	73.5	65.6	82.8	71.1	74.7	78.9
April	74.4	69.9	68.8	73.6	65.7	83.4	70.4	74.3	78.3
May	75.0	70.6	63.7	70.8	64.9	81.2	69.1	71.9	77.9
June	75.7	76.4	75.3	75.3	NA	82.7	70.9	72.9	77.6
July	76.1	77.2	74.5	73.5	NA	85.6	NA	75.0	77.8
August	77.0	77.5	73.3	74.5	75.3	87.3	77.3	78.4	78.2
September	77.0	76.4	75.9	74.4	76.9	89.6	77.4	80.2	78.8
October	78.0	79.9	77.4	77.6	75.9	92.8	76.6	82.0	81.2
November	80.6	80.7	79.2	79.3	77.1	92.4	75.2	83.7	83.6
December	81.0	79.3	79.0	77.0	76.7	90.5	75.8	84.1	84.1
Average	**77.1**	**75.1**	**73.5**	**74.5**	**68.5**	**87.8**	**72.7**	**77.8**	**80.1**
1988 January	81.6	76.9	76.7	77.2	R 74.5	R 88.4	R 75.9	R 82.8	84.9
February	80.7	75.4	75.0	76.5	72.3	87.4	75.0	81.9	84.0

Footnotes continued.
R=Revised data. NA=Not available.
Notes: • Values for the current month are preliminary. • Prices prior to 1983 are Energy Information Administration estimates. See Note 6 at end of section.
Sources: See end of section.

Table 9.9 Retail Prices[a] of Electricity
(Cents per kilowatthour)

	Residential		Commercial		Industrial		Other		Total[b]	
	Old Series[c]	New Series	Old Series[c]	New Series	Old Series[c]	New Series	Old Series[c]	New Series	Old Series[c]	New Series
1973 Average	**2.54**		**2.41**		**1.25**		**2.10**		**1.96**	
1974 Average	**3.10**		**3.04**		**1.69**		**2.75**		**2.49**	
1975 Average	**3.51**		**3.45**		**2.07**		**3.08**		**2.92**	
1976 Average	**3.73**		**3.69**		**2.21**		**3.27**		**3.09**	
1977 Average	**4.05**		**4.09**		**2.50**		**3.51**		**3.42**	
1978 Average	**4.31**		**4.36**		**2.79**		**3.62**		**3.69**	
1979 Average	**4.64**		**4.68**		**3.05**		**3.96**		**3.99**	
1980 Average	**5.36**		**5.48**		**3.69**		**4.76**		**4.73**	
1981 Average	**6.20**		**6.29**		**4.29**		**5.28**		**5.46**	
1982 Average	**6.86**		**6.86**		**4.95**		**5.92**		**6.13**	
1983 Average	**7.18**		**7.02**		**4.96**		**6.38**		**6.30**	
1984 Average	**7.54**		**7.33**		**5.04**		**6.78**		**6.52**	
1985 Average	**7.79**		**7.47**		**5.16**		**6.96**		**6.71**	
1986 January[d]	7.35	6.92	7.29	7.04	5.16	4.95	7.00	6.70	6.61	6.30
February	7.56	7.14	7.43	7.16	5.12	4.95	7.07	6.71	6.65	6.37
March	7.59	7.22	7.47	7.21	5.12	4.93	7.28	6.76	6.64	6.37
April	7.79	7.42	7.45	7.22	5.04	4.84	7.15	6.90	6.60	6.36
May	7.83	7.49	7.39	7.16	5.06	4.84	7.11	6.63	6.59	6.34
June	8.11	7.71	7.56	7.26	5.07	4.87	7.21	6.67	6.82	6.53
July	8.21	7.75	7.49	7.08	5.32	5.08	7.19	6.68	7.02	6.66
August	8.19	7.70	7.51	7.23	5.34	5.07	7.08	6.56	7.02	6.68
September	8.16	7.71	7.57	7.27	5.20	4.98	7.35	6.93	6.91	6.60
October	7.78	7.46	7.34	7.14	5.05	4.83	6.89	6.43	6.61	6.36
November	7.68	7.40	7.31	6.97	4.93	4.76	7.01	6.52	6.53	6.27
December	7.29	7.01	7.05	6.87	4.83	4.68	6.65	6.24	6.36	6.15
Average	**7.80**	**7.41**	**7.41**	**7.13**	**5.10**	**4.90**	**7.08**	**6.64**	**6.70**	**6.42**
1987 January[d]	7.24	6.93	7.06	6.85	4.85	4.72	6.86	6.47	6.40	6.18
February	7.29	6.95	7.06	6.85	4.79	4.65	6.86	6.53	6.36	6.13
March	7.47	7.14	7.16	6.95	4.80	4.68	6.88	6.53	6.40	6.19
April	7.61	7.26	7.17	6.93	4.76	4.63	7.45	6.87	6.40	6.17
May	7.79	7.47	7.16	6.92	4.80	4.66	6.97	6.56	6.44	6.22
June	8.15	7.83	7.35	7.11	4.98	4.80	7.13	6.77	6.75	6.50
July	8.24	7.82	7.39	7.08	5.11	4.90	7.00	6.65	6.92	6.61
August	8.22	7.80	7.39	7.12	5.07	4.86	7.06	6.67	6.92	6.62
September	8.13	7.66	7.42	7.12	5.01	4.80	7.12	6.90	6.78	6.48
October	7.99	7.63	7.44	7.20	4.85	4.72	7.11	6.87	6.61	6.38
November	7.66	7.38	7.26	7.05	4.69	4.60	6.86	6.46	6.38	6.20
December	7.37	7.09	7.03	6.85	4.70	4.61	6.79	6.43	6.32	6.14
Average	**7.76**	**7.41**	**7.24**	**7.00**	**4.87**	**4.72**	**7.01**	**6.64**	**6.56**	**6.32**
1988 January[d]	7.16	6.92	6.92	6.81	4.67	4.48	6.63	5.90	6.28	6.09
February	7.25	6.98	6.99	6.85	4.65	4.50	6.71	6.49	6.28	6.11

[a]Prices are calculated by dividing revenues by sales. Revenues may not correspond to sales for a particular month because of utility billing and accounting procedures. This could result in uncharacteristic increases or decreases in the monthly prices.

[b]Average price for total sales to ultimate consumers.

[c]Data through 1979 cover privately owned electric utilities in Classes A and B. Data for 1980 forward cover selected privately owned electric utilities in Class A whose electric operating revenues were $100 million or more during the previous year.

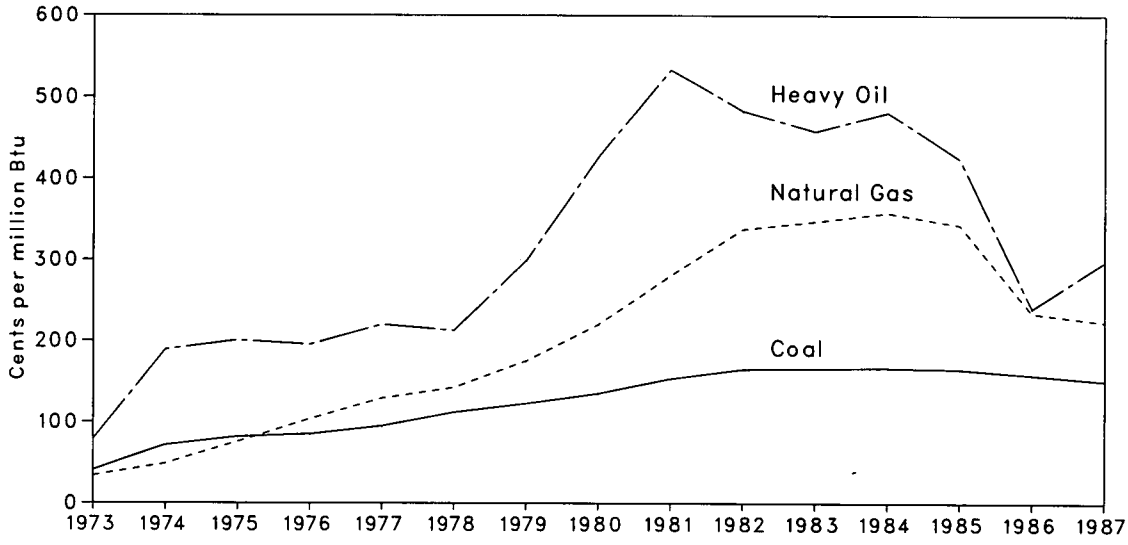
[d]See Note 7 at end of section.

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

Sources: See end of section.

Figure 9.4 Cost of Fossil Fuels Delivered to Steam-Electric Utility Plants

Yearly



Monthly

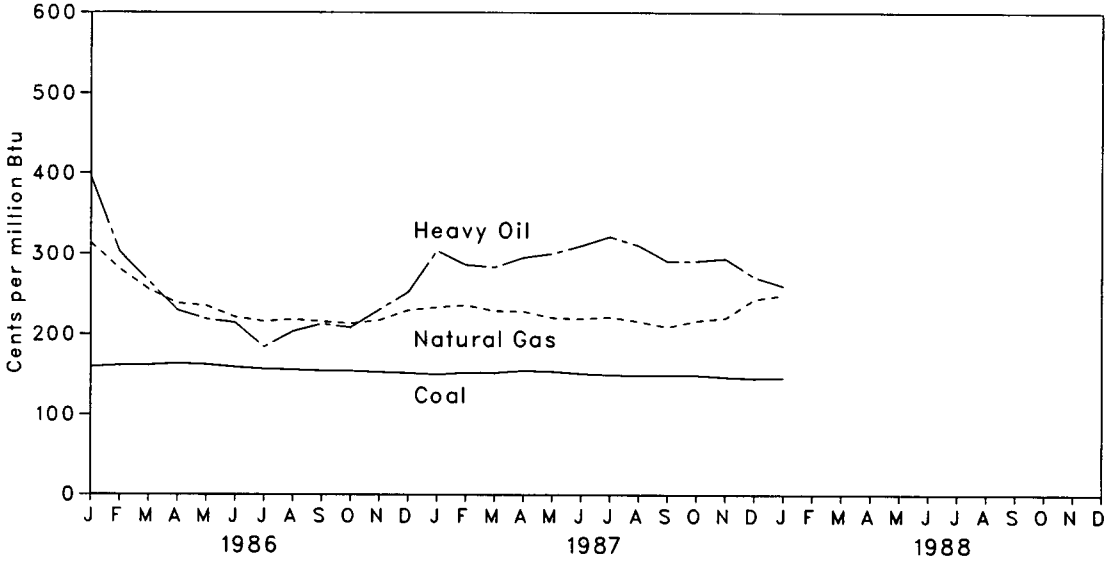


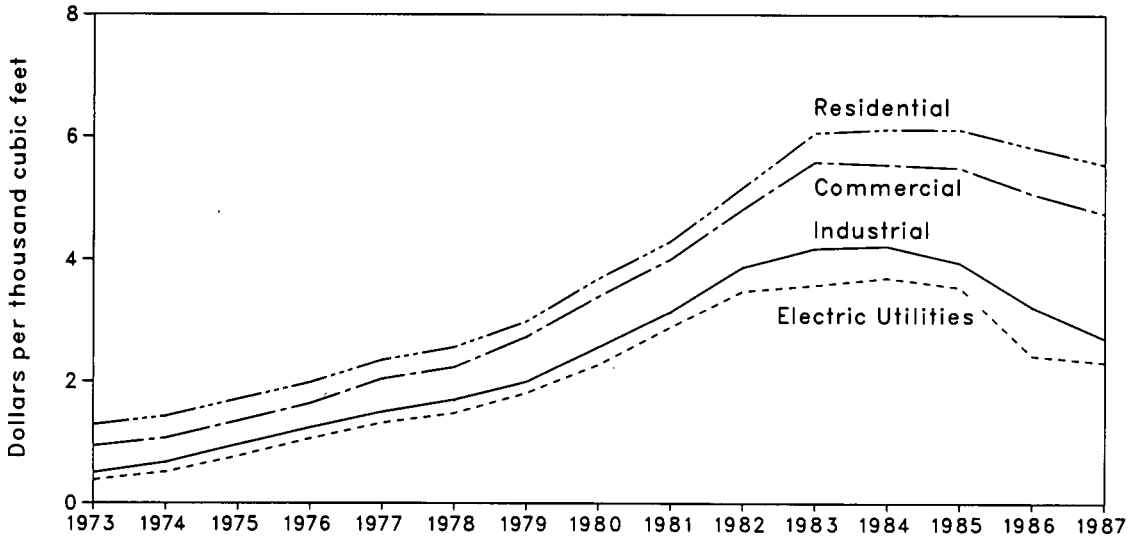
Table 9.10 Cost of Fossil Fuels Delivered to Steam-Electric Utility Plants[a]
(Cents per million Btu)

	Coal	Heavy Oil[b]	Natural Gas[c]	All Fossil Fuels[b]
1973 Average	**40.5**	**78.5**	**33.8**	**47.6**
1974 Average	**70.9**	**189.0**	**48.2**	**91.4**
1975 Average	**81.4**	**200.5**	**75.2**	**104.4**
1976 Average	**84.8**	**195.2**	**103.4**	**111.9**
1977 Average	**94.7**	**219.8**	**129.1**	**129.7**
1978 Average	**111.6**	**212.5**	**142.2**	**141.1**
1979 Average	**122.4**	**298.8**	**174.9**	**163.9**
1980 Average	**135.1**	**426.7**	**219.9**	**192.8**
1981 Average	**153.2**	**533.4**	**280.5**	**225.6**
1982 Average	**164.7**	**483.2**	**337.6**	**224.9**
1983 Average	**165.6**	**457.8**	**347.4**	**220.6**
1984 Average	**166.4**	**481.2**	**358.3**	**219.2**
1985 Average	**164.8**	**424.4**	**343.1**	**209.6**
1986 January	159.6	396.0	313.6	195.7
February	161.4	302.1	281.2	185.6
March	161.7	266.2	256.2	179.9
April	163.5	229.7	238.4	177.7
May	162.3	218.9	235.2	177.7
June	159.2	214.4	221.5	174.1
July	157.1	184.1	216.1	171.1
August	156.1	203.6	218.5	170.7
September	154.9	213.0	216.2	168.5
October	154.7	208.6	213.6	165.8
November	153.3	230.5	217.6	166.1
December	152.2	252.7	230.1	170.3
Average	**157.9**	**240.1**	**234.4**	**175.0**
1987 January	150.4	304.1	233.6	173.3
February	152.7	286.5	236.3	172.0
March	152.6	283.6	229.3	170.0
April	155.2	295.6	228.6	174.1
May	154.3	300.4	220.9	172.6
June	151.6	310.6	219.6	172.3
July	150.1	321.7	221.9	177.3
August	149.3	310.8	216.5	172.6
September	149.5	291.1	209.7	166.0
October	149.7	291.7	217.4	165.6
November	147.4	294.5	220.7	166.2
December	145.9	271.9	244.4	166.9
Average	**150.6**	**297.6**	**223.4**	**170.7**
1988 January	146.6	260.6	249.6	167.4

[a]Data through 1982 cover all steam-electric utility plants with a capacity of 25 megawatts or greater. From 1974 through 1982, data include peaking units. Beginning with 1983, data cover steam-electric utility plants with a capacity of 50 megawatts or greater.
[b]See Note 8 at end of section.
[c]Includes supplemental gaseous fuels.
Note: Geographic coverage is the 50 States and the District of Columbia.
Sources: See end of section.

Figure 9.5 Natural Gas Prices

Yearly



Monthly

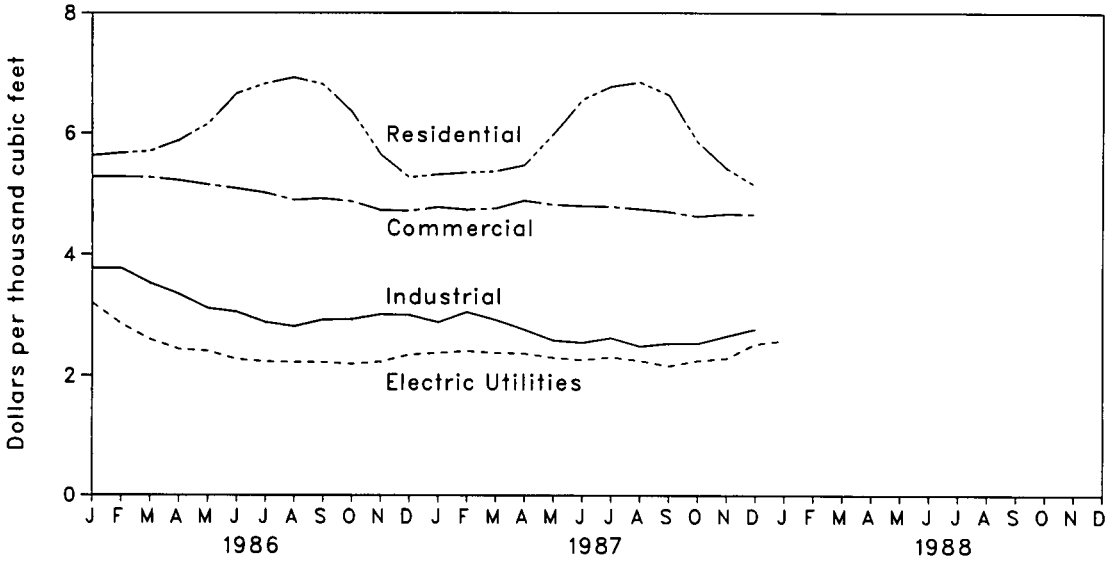


Table 9.11 Natural Gas Prices[a]
(Dollars per Thousand Cubic Feet)

	Wellhead	Major Interstate Pipeline Companies		City Gate	Delivered to Consumers[b]				
		Imports	Purchases from Producers		Residential	Commercial	Industrial	Electric Utilities[c]	Average
1973 Average	**0.22**	**NA**	**NA**	**NA**	**1.29**	**0.94**	**0.50**	**0.38**	**0.73**
1974 Average	**.30**	**NA**	**NA**	**NA**	**1.43**	**1.07**	**.67**	**.51**	**.89**
1975 Average	**.45**	**NA**	**NA**	**NA**	**1.71**	**1.35**	**.96**	**.77**	**1.19**
1976 Average	**.58**	**NA**	**NA**	**NA**	**1.98**	**1.64**	**1.24**	**1.06**	**1.47**
1977 Average	**.79**	**NA**	**NA**	**NA**	**2.35**	**2.04**	**1.50**	**1.32**	**1.78**
1978 Average	**.91**	**2.21**	**0.83**	**NA**	**2.56**	**2.23**	**1.70**	**1.48**	**1.98**
1979 Average	**1.18**	**2.60**	**1.22**	**NA**	**2.98**	**2.73**	**1.99**	**1.81**	**2.34**
1980 Average	**1.59**	**4.42**	**1.63**	**NA**	**3.68**	**3.39**	**2.56**	**2.27**	**2.91**
1981 Average	**1.98**	**4.84**	**2.15**	**NA**	**4.29**	**4.00**	**3.14**	**2.89**	**3.51**
1982 Average	**2.46**	**4.94**	**2.72**	**NA**	**5.17**	**4.82**	**3.87**	**3.48**	**4.32**
1983 Average	**2.59**	**4.51**	**2.93**	**NA**	**6.06**	**5.59**	**4.18**	**3.58**	**4.82**
1984 Average	**2.66**	**4.08**	**2.91**	**3.95**	**6.12**	**5.55**	**4.22**	**3.70**	**4.85**
1985 Average	**2.51**	**3.19**	**2.85**	**3.75**	**6.12**	**5.50**	**3.95**	**3.55**	**4.72**
1986 January	2.28	2.81	2.63	3.52	5.63	5.28	3.77	3.20	4.73
February	2.26	2.79	2.61	3.52	5.67	5.28	3.77	2.85	4.72
March	2.16	3.36	2.66	3.50	5.70	5.27	3.53	2.60	4.53
April	2.10	3.14	2.37	3.33	5.88	5.22	3.35	2.44	4.24
May	1.96	2.75	2.46	3.15	6.16	5.15	3.11	2.41	3.90
June	1.85	2.56	2.56	3.11	6.67	5.09	3.05	2.27	3.65
July	1.80	2.78	2.40	3.08	6.84	5.02	2.88	2.23	3.42
August	1.77	2.59	2.24	3.04	6.94	4.90	2.81	2.22	3.39
September	1.78	2.26	2.05	3.02	6.83	4.93	2.92	2.22	3.54
October	1.73	2.22	2.27	2.94	6.38	4.88	2.93	2.19	3.71
November	1.77	1.84	2.07	2.90	5.66	4.74	3.01	2.23	3.98
December	1.76	1.99	2.11	2.99	5.28	4.73	3.00	2.35	4.15
Average	**1.94**	**2.53**	**2.39**	**3.22**	**5.83**	**5.08**	**3.23**	**2.43**	**4.13**
1987 January	1.77	1.90	2.16	2.98	5.33	4.79	2.88	2.38	4.21
February	1.76	2.21	2.11	3.03	5.36	4.75	3.05	2.41	4.31
March	1.74	2.30	2.08	2.91	5.38	4.77	2.92	2.38	4.16
April	1.74	2.25	2.11	2.86	5.48	4.90	2.76	2.37	3.96
May	1.69	2.22	2.20	2.81	5.99	4.83	2.59	2.30	3.58
June	1.64	2.26	2.19	2.83	6.57	4.81	2.55	2.26	3.35
July	1.68	2.73	2.22	2.91	6.79	4.80	2.63	2.31	3.33
August	1.67	2.17	2.12	2.88	6.86	4.76	2.49	2.25	3.16
September	1.65	2.17	2.29	2.83	6.65	4.72	2.54	2.16	3.27
October	1.68	1.98	1.99	2.69	5.86	4.64	2.54	2.25	3.48
November	1.73	1.94	2.06	2.76	5.43	4.68	2.66	2.29	3.74
December	1.75	2.00	2.17	2.85	5.14	4.67	2.77	2.53	4.13
Average	**1.71**	**2.14**	**2.12**	**2.87**	**5.56**	**4.76**	**2.71**	**2.32**	**3.68**
1988 January	1.83	1.62	2.02	NA	NA	NA	NA	2.59	NA
February	NA	2.02	2.22	NA	NA	NA	NA	NA	NA

[a]Prices shown on this page are intended to include all taxes. See Note 9 at end of section.
[b]Includes supplemental gaseous fuels.
[c]Data through December 1982 cover all steam-electric utility plants with a capacity of 25 megawatts or greater. From 1974 through 1982, data include peaking units. Beginning with January 1983, data cover steam-electric utility plants with a capacity of 50 megawatts or greater.
[d]The decline from the previous month was primarily the result of refunds in the form of reduced charges.
NA=Not available.
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Data through 1986 are final. Subsequent data are preliminary.
Sources: See end of section.

Due to revisions in the data collection form and redesign of the respondent sample, only major interstate pipeline price data will be available for the next several months. Missing values for the other prices will be published as they become available.

Notes and Sources for the Price Section

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; after February 1976, the price represents an average of actual first purchase prices. The data series was previously called "Actual Domestic Wellhead Price."

2. FOB 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 EIA Form 14, the "Refiners' Monthly Cost Report." These prices were previously published from data collected on ERA Form 49, the "Domestic Crude Oil Entitlements Program Refiners Monthly Report." The ERA Form 49 was discontinued with the decontrol of crude oil on January 28, 1981. Crude oil purchases and costs are defined for EIA Form 14 in accordance with conventions used for ERA Form 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 in 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 ERA Form 51, the "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 ERA Form 49 excluded unfinished oils but included the Strategic Petroleum Reserve (SPR). Crude oil costs and volumes reported on the FEA Form P110-M-1 included unfinished oils but excluded SPR. Imported averages derived from ERA Form 49 exclude oil purchased for SPR, whereas the composite averages derived from ERA Form 49 include SPR. None of the prices derived from EIA Form 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 through 1978, 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 and Gas Plant Operator Sales Prices of Finished Motor Gasoline for Resale and to End Users are determined by the Energy Information Administration 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 FEA Form 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 annual data series have been generated for 1978-1980, and monthly series for 1981 and 1982, by estimating the prices that would have been published had the EIA-782 survey and system been in operation at that time. This form of estimation was performed after detailed adjustment 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 the Energy Information Administration.

7. Beginning with January 1986, national average price estimates are based on a statistically derived sample of both publicly and privately owned electric utilities. Prior to that time, national average price estimates were based on a sample of only privately owned electric utilities. Respondents to Form EIA-826, "Monthly Electric Utility Sales and Revenue Report with State Distributions," formerly the "Electric Utility Company Monthly Statement," consist of a sample of 201 electric utilities that were statistically chosen using stratification techniques. The respondents were chosen from more than 3,000 electric utilities reporting on Form EIA-861, "Annual Electric Utility Report." This scheme differs from the cut-off sample used prior to January 1986. Data are shown for both the old and new series. Publication of both series will continue until sufficient information exists to estimate historical data based on the new series.

8. Heavy fuel oil prices include fuel oils No. 4, No. 5, and No. 6, and topped crude fuel oil prices. The weighted average for all fossil fuels includes both residual fuel oil prices and light oil (No. 2 fuel oil, kerosene, and jet fuel) prices.

9. 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.

Sources

Petroleum and Petroleum Products:

- Domestic First Purchase Prices--Economic Regulatory Administration (ERA), January 1976: FEA Form 90, "Crude Petroleum Production Monthly Report"; February 1976 through September 1979: FEA Form P124, "Domestic Crude Oil Purchaser's (Monthly) Report"; October 1979 through December 1982: ERA Form 182, "Domestic Crude Oil First Purchase Report."; January 1983 forward: EIA Form 182, "Domestic Crude Oil First Purchase Report."
- Crude Oil Import Prices--Energy Information Administration (EIA), 1975 through January 1979: FEA Form F701-M-0, "Transfer Pricing Report"; February 1979 through September 1982: ERA Form 51, "Transfer Pricing Report"; October 1982 through June 1984: EP Form 51, "Monthly Foreign Crude Oil Transaction Report"; July 1984 forward: Form EIA-856, "Monthly Foreign Crude Oil Acquisition Report."
- Refiner Acquisition Costs--EIA, January 1976: FEO Form 96, "Monthly Cost Allocation Report"; February 1976 through June 1978: FEA Form P110-M-1, "Refiners' Monthly Cost Allocation Report"; July 1978 through December 1980: ERA Form 49, "Domestic Crude Oil Entitlements Program Refiners Monthly Report"; January 1981 forward: EIA Form 14, "Refiners' Monthly Cost Report."
- U.S. City Average Retail Motor Gasoline Prices--Bureau of Labor Statistics.
- No. 2 Distillate to Residences--January 1983 forward, EIA Form-782A, "Refiners/Gas Plant Operators' Monthly Petroleum Product Sales Report" and EIA-782B, "Resellers/Retailers' Monthly Petroleum Product Sales Report." Prices prior to January 1983 are EIA estimates using data from FEA Form P112-M-1/EIA-9, "No. 2 Heating Oil Supply/Price Monitoring Report" and EIA Form 9A, "No. 2 Distillate Price Monitoring Report." See Note 8 on the previous page for additional information on the estimated data.
- All Other Petroleum Products--January 1983 forward, EIA Form-782A, "Refiners/Gas Plant Operators' Monthly Petroleum Product Sales Report." Prices prior to January 1983 are EIA estimates using data from FEA Form 302-M-1/EIA-460, "Petroleum Industry Monthly Report for Product Prices." See Note 8 on the previous page for additional information on the estimated data.

Natural Gas:

- Average Wellhead--Annual data through 1982 from EIA, *Natural Gas Annual, 1973* through *1982.* Annual data for 1983 through 1986 from Form EIA-627, "Annual Quantity and Value of Natural Gas Report" and the U.S. Minerals Management Service. Monthly data are estimated primarily on the basis of values reported by State agencies in Mississippi, New Mexico, Oklahoma, and Texas. These States together account for almost 50 percent of total U.S. marketed production. Monthly data are adjusted to conform with final reported annual data.
- Imports and Purchases from Producers by Major Interstate Pipeline Companies--FERC Form 11,

"Interstate Pipeline Company Purchases, and Industrial Sales".

- City Gate--EIA, October 1983 forward: Form EIA--857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers."

- Residential, Commercial, Industrial and Consumer Average-Annual data from EIA, Form EIA-176 "Annual Report of Natural and Supplemental Gas Supply and Disposition." Monthly data from EIA, Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers." Monthly data are adjusted to conform to final reported annual data.

- Electric Utilities--EIA, FPC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."

Electricity:

- Cost of Fossil Fuels--EIA, FPC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."

- Retail Prices--EIA, January 1973 through February 1980: FPC Form 5, "Monthly Statement of Electric Operating Revenue and Income"; March 1980 through December 1982: FERC Form 5, "Electric Utility Company Monthly Statement"; January 1983 forward: EIA Form 826, "Electric Utility Company Monthly Statement."

Section 10. International

Crude Oil Production. World crude oil production during February 1988 was 56 million barrels per day, down slightly from the level in the previous month.

Organization of Petroleum Exporting Countries (OPEC) production during February 1988 averaged 18 million barrels per day, down 0.1 million from the level during the previous month. Production by the Arab members of OPEC during February 1988 averaged 11 million barrels per day, down slightly from the January 1988 level. During February 1988, production increased in Saudi Arabia by 120 thousand and in Iraq by 100 thousand barrels per day. Production in the United Arab Emirates decreased by 100 thousand barrels per day, in Kuwait by 30 thousand, and in Qatar by 25 thousand barrels per day. Production remained the same in Algeria and Libya as during the previous month. Among non-Arab members of OPEC, production during February 1988 increased in Nigeria by 50 thousand, but decreased in Iran by 100 thousand barrels per day. Production remained the same in Indonesia and Venezuela as during the previous month.

Among the non-OPEC nations, production during February 1988 increased in the United States by 131 thousand and in Canada by 50 thousand barrels per day. Production decreased slightly in the United Kingdom but remained the same in Mexico as during the previous month.

Petroleum Consumption. In November 1987, consumption in all Organization for Economic Cooperation and Development (OECD) countries was 36 million barrels per day, 2 percent more than the level in November 1986. Compared with levels 1 year earlier, consumption was higher in Canada by 8 percent[9] but lower in Japan and the United States by 3 percent and 1 percent, respectively. Consumption in all European OECD countries combined in November 1987 was 13 million barrels per day, 7 percent above the level in the previous November. Consumption was higher in both France and West Germany by 11 percent, but lower in Italy by 8 percent, and essentially unchanged in the United Kingdom, compared with levels 1 year earlier.

Petroleum Stocks. For all OECD countries, petroleum stocks at the end of November 1987 totaled 3.5 billion barrels, 2 percent above the stock level in November 1986. Stocks were higher in both Canada and Japan by 5 percent and by 2 percent in the United States. Stock levels in all European OECD countries as of the end of November 1987 were 1.1 billion barrels, essentially the same stock level as in November 1986. Stocks were up in Italy by 7 percent and in West Germany by 6 percent but down in France and the United Kingdom by 7 percent and 6 percent, respectively, compared with levels 1 year earlier.

Nuclear Electricity Generation. In February 1988, the 20 non-Communist countries with nuclear capacity generated 127 gross terawatthours (billion kilowatthours) of nuclear-generated electricity, 2 percent more than in February 1987.

Based on *Nucleonics Week* information, as of February 29, 1988, there were 338 operable nuclear generating units in the 20 non-Communist countries. These units had a collective gross generating capacity of 272.0 gigawatts (million kilowatts). Brazil's Angra-1 remains shut down for electric generator repairs and steam generator modifications. The United States' Hanford-N was placed in a cold standby status by the Department of Energy in February 1988. *Nucleonics Week* reported changes for January 1988 generation for Sweden and the United States. Therefore, the generation figures in Table 10.4 have been revised to include their generation.

In February 1988, the 106 U.S. units accounted for 98.8 gross gigawatts, 36.3 percent of the total non-Communist nuclear generating capacity.

[9]Percentage changes are calculated using unrounded data.

Table 10.1a World Crude Oil[a] Production
(Thousand Barrels per Day)

	Algeria	Iraq	Kuwait	Libya	Qatar	Saudi Arabia[b]	United Arab Emirates	Arab OPEC[c]	Indonesia	Iran	Nigeria
1973 Average	**1,097**	**2,018**	**3,020**	**2,175**	**570**	**7,596**	**1,533**	**18,009**	**1,339**	**5,861**	**2,054**
1974 Average	**1,009**	**1,971**	**2,546**	**1,521**	**518**	**8,480**	**1,679**	**17,724**	**1,375**	**6,022**	**2,255**
1975 Average	**983**	**2,262**	**2,084**	**1,480**	**438**	**7,075**	**1,664**	**15,986**	**1,307**	**5,350**	**1,783**
1976 Average	**1,075**	**2,415**	**2,145**	**1,933**	**497**	**8,577**	**1,936**	**18,578**	**1,504**	**5,883**	**2,067**
1977 Average	**1,152**	**2,348**	**1,969**	**2,063**	**445**	**9,245**	**1,999**	**19,221**	**1,686**	**5,663**	**2,085**
1978 Average	**1,161**	**2,563**	**2,131**	**1,983**	**487**	**8,301**	**1,831**	**18,457**	**1,635**	**5,242**	**1,897**
1979 Average	**1,154**	**3,477**	**2,500**	**2,092**	**508**	**9,532**	**1,831**	**21,094**	**1,591**	**3,168**	**2,302**
1980 Average	**1,012**	**2,514**	**1,656**	**1,787**	**472**	**9,900**	**1,709**	**19,050**	**1,577**	**1,662**	**2,055**
1981 Average	**805**	**1,000**	**1,125**	**1,140**	**405**	**9,815**	**1,474**	**15,764**	**1,605**	**1,380**	**1,433**
1982 Average	**710**	**1,012**	**823**	**1,150**	**330**	**6,483**	**1,250**	**11,758**	**1,339**	**2,214**	**1,295**
1983 Average	**660**	**1,005**	**1,064**	**1,105**	**295**	**5,086**	**1,149**	**10,364**	**1,343**	**2,440**	**1,241**
1984 Average	**638**	**1,209**	**1,157**	**1,087**	**394**	**4,663**	**1,146**	**10,294**	**1,412**	**2,174**	**1,388**
1985 Average	**643**	**1,433**	**1,023**	**1,059**	**301**	**3,388**	**1,193**	**9,040**	**1,325**	**2,250**	**1,495**
1986 January	650	1,650	1,115	1,100	360	4,465	1,245	10,585	1,459	2,100	1,200
February	550	1,650	1,315	900	325	4,715	1,445	10,900	1,336	2,000	1,400
March	600	1,650	1,515	900	350	4,115	1,395	10,525	1,336	1,800	1,600
April	600	1,500	1,520	900	180	4,720	1,345	10,765	1,377	2,000	1,700
May	600	1,700	1,510	1,100	360	4,360	1,495	11,125	1,464	2,100	1,600
June	600	1,800	1,650	1,200	430	5,250	1,595	12,525	1,387	2,100	1,540
July	600	1,800	1,805	1,150	400	5,905	1,595	13,255	1,382	2,050	1,555
August	600	1,800	1,733	1,150	400	6,433	1,625	13,741	1,462	1,700	1,765
September	600	1,800	1,118	990	280	4,818	1,345	10,951	1,346	1,500	1,300
October	600	1,800	1,130	1,000	300	5,030	1,355	11,215	1,361	1,500	1,325
November	600	1,600	1,350	1,000	300	5,350	1,195	11,395	1,407	1,700	1,325
December	600	1,500	1,250	1,000	300	5,350	1,215	11,215	1,366	2,000	1,325
Average	**600**	**1,688**	**1,419**	**1,034**	**333**	**5,045**	**1,404**	**11,523**	**1,390**	**1,879**	**1,470**
1987 January	600	1,650	1,250	950	285	3,950	1,195	9,880	1,280	2,600	1,240
February	600	1,670	1,165	950	250	3,815	1,175	9,625	1,250	2,500	1,140
March	600	1,700	1,105	850	200	3,255	1,155	8,865	1,265	2,500	1,230
April	600	1,900	1,125	925	150	3,975	1,195	9,870	1,280	2,300	1,132
May	600	1,900	1,090	930	280	4,140	1,225	10,165	1,300	2,600	1,297
June	600	2,000	1,180	950	350	4,180	1,395	10,655	1,300	2,500	1,362
July	670	1,950	1,772	1,100	450	4,540	1,565	12,047	1,330	2,500	1,362
August	670	2,200	1,772	1,200	420	4,690	1,815	12,767	1,450	2,700	1,350
September	670	2,300	1,740	900	330	4,590	1,955	12,485	1,310	2,100	1,300
October	670	2,500	1,375	1,000	320	4,575	1,855	12,295	1,320	2,400	1,350
November	670	2,550	1,390	950	300	4,190	1,855	11,905	1,320	2,200	1,400
December	670	2,600	1,350	950	300	4,550	1,605	12,025	1,320	2,200	1,300
Average	**635**	**2,079**	**1,361**	**972**	**304**	**4,207**	**1,501**	**11,058**	**1,311**	**2,426**	**1,290**
1988 January	600	2,400	1,130	R 1,000	325	4,230	1,205	R 10,890	1,220	2,000	1,300
February	600	2,500	1,100	1,000	300	4,350	1,105	10,865	1,220	1,900	1,350
2-Mo. Average	**600**	**2,447**	**1,116**	**1,000**	**313**	**4,287**	**1,115**	**10,878**	**1,220**	**1,953**	**1,324**

[a]Includes lease condensate, excludes natural gas plant liquids.
[b]Includes about one-half of the production in the former Kuwait-Saudi Arabia Neutral Zone. In February 1988, total production in that region amounted to approximately 200 thousand barrels per day.
[c]The Arab members of the Organization of Petroleum Exporting Countries (OPEC) are Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and the United Arab Emirates.
[d]"Total OPEC" consists of Ecuador, Gabon, Indonesia, Iran, Nigeria, and Venezuela, as well as the Arab members.
[e]Other is a calculated total derived from the difference between world production and the nations represented above.
R=Revised data.
Footnotes continued on following page.

Table 10.1b World Crude Oil[a] Production (continued)
(Thousand Barrels per Day)

	Venezuela	Total OPEC[d]	Canada	Mexico	United Kingdom	United States	China	USSR	Other[e]	World
1973 Average	**3,366**	**30,988**	**1,798**	**465**	**2**	**9,208**	**1,090**	**8,329**	**3,691**	**55,571**
1974 Average	**2,976**	**30,731**	**1,551**	**571**	**2**	**8,774**	**1,315**	**8,856**	**3,835**	**55,635**
1975 Average	**2,346**	**27,156**	**1,430**	**705**	**12**	**8,375**	**1,490**	**9,472**	**4,116**	**52,756**
1976 Average	**2,294**	**30,737**	**1,314**	**831**	**245**	**8,132**	**1,670**	**9,985**	**4,298**	**57,212**
1977 Average	**2,238**	**31,298**	**1,321**	**981**	**768**	**8,245**	**1,874**	**10,485**	**4,551**	**59,523**
1978 Average	**2,165**	**29,807**	**1,316**	**1,209**	**1,082**	**8,707**	**2,082**	**10,950**	**4,718**	**59,871**
1979 Average	**2,356**	**30,928**	**1,500**	**1,461**	**1,568**	**8,552**	**2,122**	**11,187**	**5,039**	**62,357**
1980 Average	**2,168**	**26,891**	**1,435**	**1,936**	**1,622**	**8,597**	**2,114**	**11,460**	**5,170**	**59,225**
1981 Average	**2,102**	**22,646**	**1,285**	**2,313**	**1,811**	**8,572**	**2,012**	**11,552**	**5,355**	**55,546**
1982 Average	**1,895**	**18,868**	**1,271**	**2,748**	**2,065**	**8,649**	**2,045**	**11,615**	**5,640**	**52,901**
1983 Average	**1,801**	**17,583**	**1,356**	**2,689**	**2,291**	**8,688**	**2,120**	**11,684**	**6,244**	**52,655**
1984 Average	**1,798**	**17,481**	**1,438**	**2,780**	**2,480**	**8,879**	**2,296**	**11,576**	**6,917**	**53,847**
1985 Average	**1,677**	**16,240**	**1,471**	**2,745**	**2,530**	**8,971**	**2,505**	**11,250**	**7,565**	**53,277**
1986 January	1,730	17,539	1,488	2,510	2,668	9,137	2,570	11,325	7,768	55,004
February	1,730	17,831	1,396	2,125	2,727	9,173	2,570	11,385	7,891	55,097
March	1,730	17,466	1,354	2,220	2,712	9,013	2,570	11,480	7,752	54,566
April	1,730	18,052	1,389	2,360	2,582	8,864	2,570	11,530	7,312	54,658
May	1,730	18,499	1,440	2,530	2,547	8,838	2,570	11,615	7,786	55,824
June	1,755	19,797	1,556	2,550	2,200	8,623	2,570	11,625	7,725	56,645
July	1,770	20,502	1,544	2,540	2,610	8,660	2,570	11,650	7,731	57,806
August	2,115	21,233	1,531	2,570	2,600	8,374	2,570	11,700	7,929	58,506
September	1,760	17,242	1,516	2,375	2,560	8,328	2,635	11,720	8,038	54,413
October	1,750	17,551	1,533	2,325	2,575	8,419	2,635	11,745	7,995	54,777
November	1,780	18,052	1,444	2,455	2,478	8,412	2,770	11,795	8,278	55,683
December	1,855	18,206	1,458	2,570	2,348	8,352	2,770	11,790	8,332	55,825
Average	**1,787**	**18,505**	**1,471**	**2,430**	**2,550**	**8,680**	**2,614**	**11,615**	**7,878**	**55,743**
1987 January	1,660	17,080	1,470	2,510	2,637	8,477	2,690	11,735	8,174	54,773
February	1,660	16,585	1,455	2,540	2,566	8,318	2,690	11,710	8,152	54,016
March	1,795	15,850	1,465	2,520	2,513	8,349	2,690	11,830	8,030	53,247
April	1,690	16,422	1,450	2,530	2,534	8,426	2,690	11,760	8,129	53,941
May	1,715	17,267	1,480	2,555	2,533	8,305	2,690	11,760	8,219	54,809
June	1,755	17,762	1,565	2,530	1,933	8,263	2,690	11,760	7,984	54,487
July	1,875	19,324	1,585	2,520	2,483	8,242	2,690	11,815	8,298	56,957
August	1,785	20,392	1,605	2,545	2,448	8,190	2,690	11,805	8,073	57,748
September	1,735	19,340	1,535	2,560	2,453	8,190	2,690	11,975	8,372	57,115
October	1,740	19,575	1,515	2,555	2,498	8,293	2,690	11,805	8,363	57,294
November	1,735	19,030	1,495	2,560	2,528	8,330	2,690	11,735	8,456	56,824
December	1,735	19,065	1,540	2,560	2,543	8,340	2,690	11,805	8,445	56,988
Average	**1,741**	**18,154**	**1,514**	**2,540**	**2,473**	**8,311**	**2,690**	**11,792**	**8,225**	**55,699**
1988 January	1,730	[R] 17,615	1,545	2,560	2,563	8,245	2,710	11,855	[R] 8,736	[R] 55,829
February	1,730	17,550	1,595	2,560	2,558	8,376	2,710	11,865	8,594	55,808
2-Mo. Average	**1,730**	**17,584**	**1,569**	**2,560**	**2,561**	**8,308**	**2,710**	**11,860**	**8,668**	**55,819**

Footnotes continued.

Note: • 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: • 1973-1986 annual data (except the United States): Energy Information Administration (EIA), *International Energy Annual.* • 1973-1988 U.S. annual and monthly data: EIA, *Petroleum Supply Monthly.* • 1986-1988 monthly data (except United States and world): Central Intelligence Agency, "International Energy Statistical Review," and other industry sources. • 1986-1988 monthly data for world: Sum of data for all countries using above sources.

Figure 10.1 Petroleum Consumption in OECD Countries

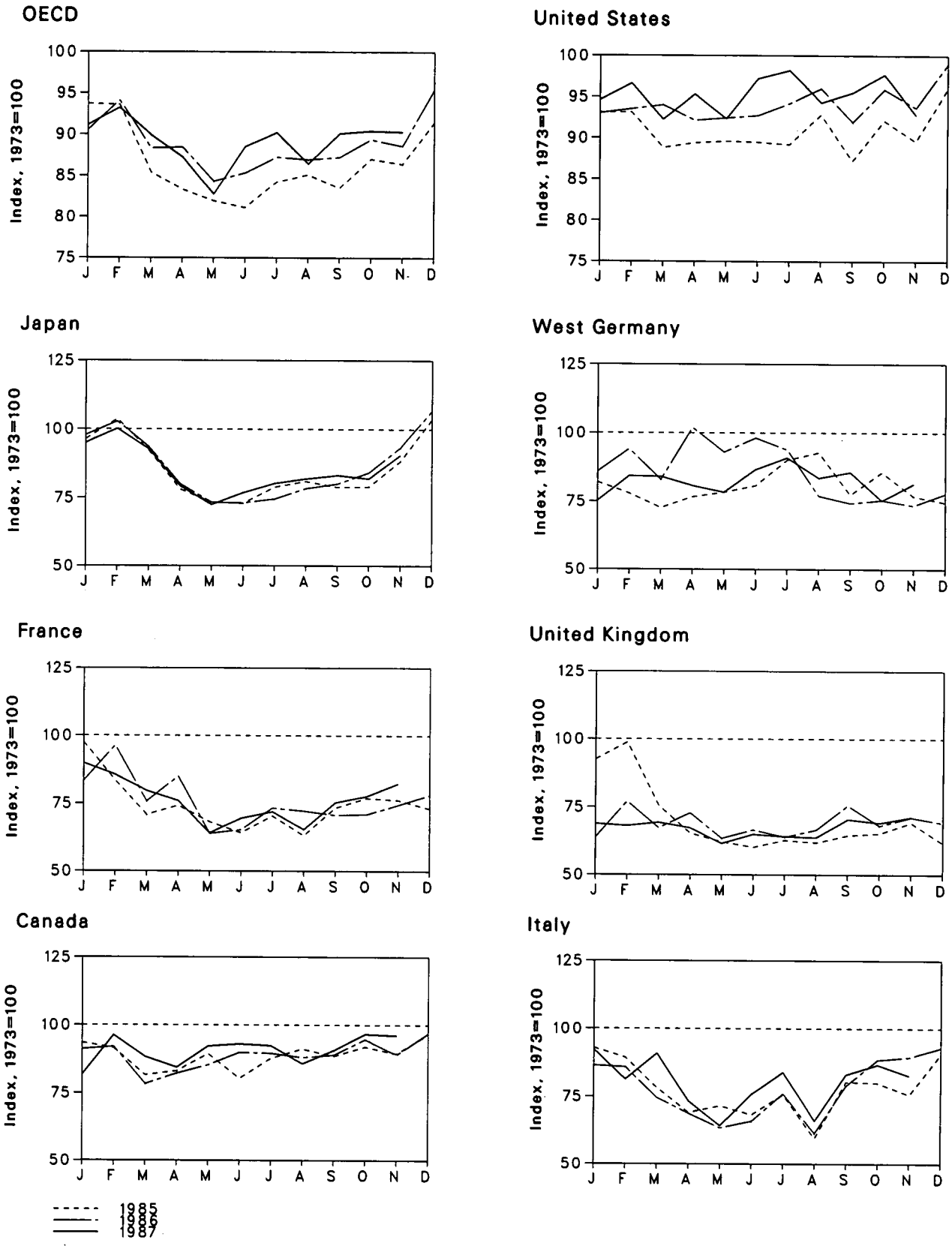


Table 10.2 Petroleum Consumption in OECD Countries[a]
(Thousand Barrels per Day)

	Canada	France	Italy	Japan	United Kingdom	United States	West Germany	OECD Europe[b]	Other OECD[c]	OECD[a]
1973 Average	**1,707**	**2,422**	**2,147**	**5,071**	**2,301**	**17,308**	**2,915**	**14,521**	**1,006**	**39,612**
1974 Average	**1,740**	**2,260**	**2,090**	**4,960**	**2,138**	**16,653**	**2,612**	**13,708**	**1,056**	**38,117**
1975 Average	**1,718**	**2,136**	**1,940**	**4,502**	**1,872**	**16,322**	**2,515**	**13,059**	**999**	**36,600**
1976 Average	**1,751**	**2,280**	**1,991**	**4,771**	**1,856**	**17,461**	**2,708**	**13,813**	**1,068**	**38,864**
1977 Average	**1,779**	**2,235**	**1,907**	**5,231**	**1,880**	**18,431**	**2,837**	**13,795**	**1,123**	**40,359**
1978 Average	**1,823**	**2,169**	**1,948**	**5,142**	**1,850**	**18,847**	**3,048**	**13,963**	**1,117**	**40,892**
1979 Average	**1,893**	**2,385**	**2,013**	**5,480**	**1,930**	**18,513**	**3,073**	**14,670**	**1,090**	**41,646**
1980 Average	**1,873**	**2,256**	**1,934**	**4,960**	**1,725**	**17,056**	**2,707**	**13,634**	**1,072**	**38,595**
1981 Average	**1,768**	**2,023**	**1,874**	**4,848**	**1,590**	**16,058**	**2,449**	**12,515**	**1,080**	**36,269**
1982 Average	**1,576**	**1,927**	**1,779**	**4,549**	**1,584**	**15,296**	**2,323**	**12,069**	**1,000**	**34,489**
1983 Average	**1,486**	**1,891**	**1,727**	**4,365**	**1,518**	**15,231**	**2,287**	**11,772**	**940**	**33,794**
1984 Average	**1,491**	**1,838**	**1,633**	**4,574**	**1,822**	**15,726**	**2,296**	**11,781**	**994**	**34,565**
1985 Average	**1,517**	**1,799**	**1,666**	**4,333**	**1,607**	**15,726**	**2,347**	**11,613**	**995**	**34,183**
1986 January	1,557	2,017	1,858	4,959	1,467	16,088	2,505	12,337	880	35,821
February	1,572	2,335	1,844	5,211	1,771	16,186	2,743	13,339	950	37,258
March	1,338	1,833	1,600	4,744	1,550	16,276	2,416	11,677	924	34,959
April	1,405	2,059	1,476	4,057	1,676	15,945	2,972	12,662	930	35,000
May	1,458	1,547	1,361	3,718	1,461	15,993	2,712	11,190	1,010	33,369
June	1,537	1,581	1,415	3,709	1,531	16,049	2,860	11,555	932	33,782
July	1,531	1,776	1,632	3,778	1,473	16,307	2,735	11,976	935	34,527
August	1,505	1,748	1,318	3,978	1,531	16,618	2,245	11,332	973	34,405
September	1,520	1,711	1,699	4,062	1,741	15,909	2,165	12,007	1,029	34,527
October	1,618	1,720	1,902	4,272	1,570	16,602	2,199	11,880	1,020	35,392
November	1,523	1,803	1,925	4,738	1,639	16,221	2,142	11,733	843	35,058
December	1,654	1,892	1,998	5,416	1,592	17,131	2,267	12,497	1,066	37,763
Average	**1,518**	**1,832**	**1,668**	**4,383**	**1,581**	**16,281**	**2,494**	**12,005**	**958**	**35,145**
1987 January	1,399	2,177	1,981	4,818	1,582	16,382	2,193	12,554	920	36,072
February	1,643	2,073	1,747	5,075	1,568	16,721	2,456	12,633	834	36,906
March	1,509	1,929	1,951	4,700	1,594	15,965	2,448	12,462	947	35,582
April	1,442	1,837	1,573	4,015	1,548	16,501	2,351	11,625	948	34,531
May	1,576	1,553	1,378	3,672	1,416	15,978	2,283	10,626	867	32,719
June	1,589	1,683	1,626	3,896	1,496	16,815	2,526	11,765	983	35,048
July	1,578	1,741	1,804	4,069	1,477	16,996	2,651	12,051	1,014	35,708
August	1,467	1,585	1,417	4,153	1,468	16,325	2,434	11,375	875	34,195
September	1,550	1,824	1,786	4,220	1,623	16,533	2,494	12,341	1,013	35,656
October	1,650	1,881	1,864	4,160	1,592	16,909	2,195	12,168	910	35,797
November	1,641	1,996	1,778	4,594	1,640	16,064	2,374	12,539	915	35,753
11-Mo. Average	**1,548**	**1,842**	**1,719**	**4,301**	**1,545**	**16,469**	**2,399**	**12,006**	**930**	**35,255**

[a]The Organization for Economic Cooperation and Development (OECD) consists of Canada, Japan, and the United States, as well as "OECD Europe" and "Other OECD."

[b]"OECD Europe" consists of Austria, Belgium, Denmark, Finland, France, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and West Germany.

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

Notes: • 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 1984 are final. Subsequent data are preliminary.

Sources: • U.S. data: EIA, *Petroleum Supply Monthly.* • OECD data: OECD, *Quarterly Oil Statistics, Monthly Oil Statistics.*

Figure 10.2 Petroleum Stocks in OECD Countries, End of Period

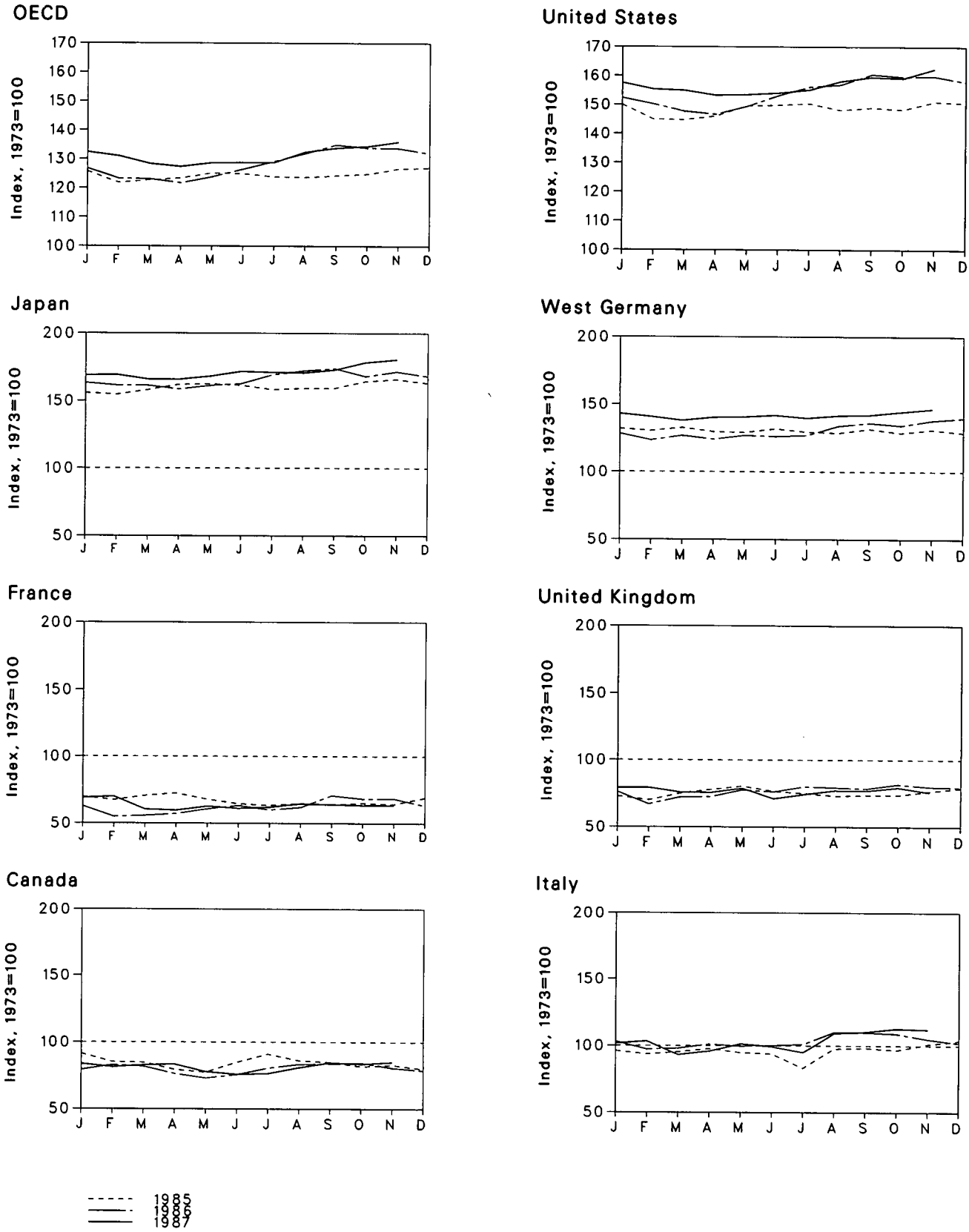


Table 10.3 Petroleum Stocks[a] in OECD Countries,[b] End of Period
(Million Barrels)

	Canada	France	Italy	Japan	United Kingdom	United States	West Germany	OECD Europe[c]	Other OECD[d]	OECD[b]
1973 Year	**140**	**201**	**152**	**303**	**156**	**1,008**	**181**	**1,070**	**67**	**2,588**
1974 Year	**145**	**249**	**167**	**370**	**161**	**1,074**	**213**	**1,227**	**64**	**2,880**
1975 Year	**174**	**225**	**143**	**375**	**165**	**1,133**	**187**	**1,154**	**67**	**2,903**
1976 Year	**153**	**234**	**143**	**380**	**165**	**1,112**	**208**	**1,205**	**68**	**2,918**
1977 Year	**167**	**239**	**161**	**409**	**148**	**1,312**	**225**	**1,268**	**68**	**3,224**
1978 Year	**144**	**201**	**154**	**413**	**157**	**1,278**	**238**	**1,219**	**68**	**3,122**
1979 Year	**150**	**226**	**163**	**460**	**169**	**1,341**	**272**	**1,353**	**75**	**3,379**
1980 Year	**164**	**243**	**170**	**495**	**168**	**1,392**	**319**	**1,464**	**72**	**3,587**
1981 Year	**161**	**214**	**167**	**482**	**143**	**1,484**	**297**	**1,337**	**67**	**3,531**
1982 Year	**136**	**193**	**179**	**484**	**125**	**1,430**	**272**	**1,258**	**68**	**3,376**
1983 Year	**120**	**153**	**149**	**471**	**119**	**1,454**	**250**	**1,145**	**68**	**3,258**
1984 Year	**127**	**153**	**159**	**480**	**113**	**1,556**	**240**	**1,132**	**69**	**3,364**
1985 Year	**112**	**139**	**157**	**495**	**123**	**1,519**	**233**	**1,094**	**67**	**3,286**
1986 January	111	127	157	495	118	1,535	232	1,071	67	3,278
February	116	110	148	489	104	1,514	223	1,004	68	3,191
March	114	112	149	489	113	1,489	229	1,023	70	3,185
April	107	115	154	480	113	1,479	224	1,017	66	3,148
May	102	122	151	488	121	1,506	230	1,048	61	3,205
June	106	127	152	493	119	1,543	228	1,063	68	3,272
July	112	121	154	513	125	1,573	230	1,074	69	3,341
August	116	125	167	522	124	1,582	242	1,123	69	3,412
September	117	142	167	527	123	1,618	247	1,155	73	3,490
October	118	137	165	510	128	1,610	243	1,155	74	3,467
November	113	138	159	520	125	1,612	250	1,146	73	3,464
December	110	127	155	510	124	1,593	253	1,134	72	3,420
1987 January	117	138	154	512	123	1,588	259	1,136	73	3,426
February	114	140	157	513	124	1,565	255	1,126	74	3,391
March	115	122	141	503	118	1,561	250	1,068	73	3,320
April	116	120	146	502	118	1,544	254	1,064	69	3,296
May	109	126	154	509	123	1,546	255	1,094	71	3,329
June	106	123	151	520	111	1,552	257	1,082	70	3,330
July	107	125	144	519	116	1,563	253	1,071	72	3,332
August	113	130	166	517	120	1,594	256	1,130	73	3,427
September	118	129	167	524	120	1,609	257	1,139	72	3,462
October	117	128	171	541	124	1,605	261	1,141	74	3,477
November	119	128	170	547	118	1,637	265	1,145	73	3,521

[a]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.

[b]The Organization for Economic Cooperation and Development (OECD) includes Canada, Japan, and the United States, as well as "OECD Europe" and "Other OECD."

[c]"OECD Europe" consists of Austria, Belgium, Denmark, Finland, France, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and West Germany.

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

Notes: • 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, 1,420 in 1980, and 1,462 in 1982.

Sources: • U.S. data: EIA, *Petroluem Supply Monthly.* • OECD data: OECD, *Quarterly Oil Statistics, Monthly Oil Statistics.*

Table 10.4a Nuclear Electricity Generation by Non-Communist Countries[a]
(Billion Gross Kilowatthours)

	Argentina	Belgium	Brazil	Canada	Finland	France	India	Italy	Japan	Netherlands	Pakistan
1973 Total	**0**	**0**	**0**	**15.3**	**0**	**14.7**	**2.5**	**3.1**	**9.4**	**1.1**	**0.5**
1974 Total	**1.0**	**0.1**	**0**	**15.4**	**0**	**14.7**	**1.9**	**3.4**	**18.9**	**3.3**	**.6**
1975 Total	**2.5**	**6.8**	**0**	**13.2**	**0**	**18.3**	**2.5**	**3.8**	**21.3**	**3.3**	**.5**
1976 Total	**2.6**	**10.0**	**0**	**18.0**	**0**	**15.8**	**3.2**	**3.8**	**36.6**	**3.9**	**.5**
1977 Total	**1.6**	**11.9**	**0**	**26.6**	**2.7**	**17.9**	**2.8**	**3.4**	**28.2**	**3.7**	**.3**
1978 Total	**2.9**	**12.5**	**0**	**33.0**	**3.3**	**30.6**	**2.3**	**4.5**	**53.1**	**4.1**	**.2**
1979 Total	**2.7**	**11.4**	**0**	**38.4**	**6.7**	**39.9**	**3.2**	**2.6**	**62.0**	**3.5**	**(s)**
1980 Total	**2.3**	**12.5**	**0**	**40.4**	**7.0**	**61.2**	**2.9**	**2.2**	**82.8**	**4.2**	**.1**
1981 Total	**2.8**	**12.8**	**0**	**43.3**	**14.5**	**105.2**	**3.1**	**2.7**	**86.0**	**3.7**	**.2**
1982 Total	**1.9**	**15.6**	**0.1**	**42.6**	**16.5**	**108.9**	**2.2**	**6.8**	**104.5**	**3.9**	**.1**
1983 Total	**3.4**	**24.1**	**.2**	**53.0**	**17.4**	**144.2**	**2.9**	**5.8**	**109.1**	**3.6**	**.2**
1984 Total	**4.5**	**27.7**	**2.1**	**53.8**	**18.5**	**191.2**	**4.1**	**6.9**	**127.2**	**3.8**	**.3**
1985 Total	**5.8**	**34.5**	**3.4**	**62.9**	**18.8**	**224.0**	**4.5**	**7.0**	**152.0**	**3.9**	**.3**
1986 January	.6	3.8	(s)	6.5	1.8	25.6	.5	.9	15.0	.4	(s)
February	.6	2.8	0	6.2	1.6	22.8	.4	.5	13.5	.1	(s)
March	.5	3.6	0	7.0	1.8	23.6	.5	.9	14.5	.3	(s)
April	.5	3.7	0	6.0	1.7	21.0	.3	.9	12.4	.4	(s)
May	.7	3.2	0	5.7	1.4	16.3	.4	.7	12.8	.4	(s)
June	.4	2.9	0	5.4	1.1	16.7	.4	.9	15.0	.4	(s)
July	.4	3.0	0	5.3	1.3	18.8	.5	.9	15.2	.4	(s)
August	.6	3.1	0	6.6	1.4	16.5	.5	.9	14.8	.4	.1
September	.6	3.1	0	6.2	1.5	19.0	.4	.9	13.4	.4	.1
October	.2	3.2	0	6.6	1.8	22.4	.3	.8	12.7	.4	(s)
November	.2	3.0	(s)	6.4	1.7	24.1	.5	.3	11.7	.3	(s)
December	.3	3.3	.1	6.7	1.7	27.4	.5	.1	13.8	.4	(s)
Total	**5.7**	**38.6**	**.1**	**74.6**	**18.8**	**254.3**	**5.1**	**8.7**	**164.8**	**4.2**	**.5**
1987 January	.7	4.1	0	7.2	1.8	27.3	.5	.1	14.7	.2	.1
February	.5	3.6	0	6.7	1.6	25.2	.5	.1	13.0	(s)	(s)
March	.6	3.4	(s)	7.0	1.8	25.8	.4	(s)	15.1	.1	(s)
April	.7	3.3	.3	6.7	1.7	20.6	.5	0	14.4	.4	(s)
May	.6	2.9	.4	4.8	1.3	20.2	.4	0	14.2	.4	(s)
June	.4	2.3	.3	6.5	1.3	19.7	.5	0	13.9	.4	(s)
July	.7	3.2	0	6.8	1.4	18.3	.5	0	15.2	.4	(s)
August	.1	3.6	0	6.5	1.6	16.1	.5	0	14.9	.4	0
September	.4	3.6	0	6.3	1.7	20.1	.5	0	16.7	.4	0
October	0	3.6	0	7.4	1.8	20.6	.3	0	17.4	.2	0
November	0	4.0	0	7.1	1.7	24.5	.5	0	16.9	.4	(s)
December	.5	4.3	0	7.5	1.8	27.0	.4	0	16.5	.4	(s)
Total	**5.2**	**41.9**	**1.0**	**80.6**	**19.4**	**265.5**	**5.5**	**.2**	**182.8**	**3.6**	**.3**
1988 January	.5	3.9	0	6.6	1.8	26.1	.3	0	15.0	.3	.1
February	.5	3.2	0	7.1	1.6	24.5	.4	0	13.5	(s)	(s)
2-Month Total	**.9**	**7.1**	**0**	**13.7**	**3.4**	**50.6**	**.7**	**0**	**28.4**	**.3**	**.1**
1987 2-Month Total	**1.2**	**7.8**	**0**	**13.9**	**3.4**	**52.5**	**1.0**	**.1**	**27.7**	**.2**	**.1**
1986 2-Month Total	**1.2**	**6.6**	**(s)**	**12.7**	**3.4**	**48.4**	**.9**	**1.4**	**28.5**	**.5**	**.1**

[a]Figures are for gross electricity generation, as opposed to net electricity generation. Net figures are generally less than gross figures by about 5 percent, the difference being the energy consumed by the generating plants themselves.
[b]Monthly data for the United Kingdom are totals for 4- or 5-week reporting periods, not calendar months.
(s)=Less than 0.05 billion gross kilowatthours.
Footnotes continued on following page.

Table 10.4b Nuclear Electricity Generation by Non-Communist Countries[a] (continued)

(Billion Gross Kilowatthours)

	South Africa	South Korea	Spain	Sweden	Switzerland	Taiwan	United Kingdom[b]	West Germany	Non-Communist World Excluding U.S.	United States	Non-Communist World
1973 Total	**0**	**0**	**6.5**	**2.1**	**6.2**	**0**	**28.2**	**11.9**	**101.4**	**87.8**	**189.3**
1974 Total	**0**	**0**	**7.2**	**2.3**	**7.0**	**0**	**33.8**	**12.0**	**121.7**	**124.3**	**246.0**
1975 Total	**0**	**0**	**7.5**	**12.0**	**7.7**	**0**	**30.5**	**21.7**	**151.8**	**182.3**	**334.1**
1976 Total	**0**	**0**	**7.6**	**16.0**	**7.9**	**0**	**36.8**	**24.5**	**187.1**	**201.8**	**388.9**
1977 Total	**0**	**0.1**	**6.5**	**19.9**	**8.1**	**0.1**	**38.1**	**36.0**	**207.8**	**264.2**	**472.0**
1978 Total	**0**	**2.3**	**7.6**	**23.8**	**8.3**	**2.7**	**36.6**	**35.7**	**263.5**	**292.4**	**555.9**
1979 Total	**0**	**3.2**	**6.7**	**21.0**	**11.8**	**6.3**	**38.5**	**42.2**	**300.1**	**270.6**	**570.7**
1980 Total	**0**	**3.5**	**5.2**	**26.7**	**14.3**	**8.2**	**37.2**	**43.7**	**354.3**	**265.4**	**619.8**
1981 Total	**0**	**2.9**	**9.4**	**37.7**	**15.2**	**10.7**	**38.9**	**53.4**	**442.4**	**288.5**	**730.9**
1982 Total	**0**	**3.8**	**8.8**	**38.8**	**15.0**	**13.1**	**44.1**	**63.4**	**489.9**	**298.6**	**788.5**
1983 Total	**0**	**9.0**	**10.7**	**40.4**	**15.5**	**18.9**	**49.6**	**65.8**	**573.9**	**313.6**	**887.5**
1984 Total	**4.2**	**11.8**	**23.1**	**51.3**	**16.3**	**24.3**	**54.1**	**92.6**	**717.7**	**343.8**	**1,061.5**
1985 Total	**5.7**	**16.5**	**28.0**	**58.6**	**22.4**	**28.7**	**59.6**	**125.8**	**862.4**	**402.6**	**1,265.0**
1986 January	1.0	2.0	3.1	6.8	2.3	2.9	4.8	12.1	90.0	38.1	128.1
February	.6	1.7	2.5	6.4	2.1	2.1	5.3	10.4	79.8	34.1	113.8
March	.7	1.5	2.4	7.2	2.3	2.2	6.4	10.8	86.2	31.2	117.3
April	.7	1.6	3.0	6.7	2.2	2.0	4.2	9.8	77.0	32.2	109.2
May	.7	2.4	3.6	4.8	2.1	2.0	4.4	9.7	71.4	33.7	105.1
June	.2	2.2	3.9	4.1	1.2	1.6	5.1	9.2	70.6	33.2	103.8
July	.6	2.0	3.1	3.8	.9	1.8	4.1	8.1	70.2	38.0	108.3
August	.7	2.4	2.9	4.3	1.0	1.9	4.2	8.2	70.5	39.2	109.7
September	.9	2.1	2.7	5.1	1.9	2.0	4.9	9.2	74.3	37.9	112.1
October	1.0	3.0	3.4	6.5	2.3	2.4	4.1	8.9	80.0	37.9	117.9
November	1.3	2.2	3.4	6.9	2.1	2.8	4.8	10.4	82.3	36.3	118.7
December	.9	3.1	3.2	7.3	2.2	3.1	6.1	12.1	92.5	41.2	133.6
Total	**9.3**	**26.1**	**37.5**	**69.9**	**22.5**	**26.9**	**58.2**	**118.9**	**944.8**	**432.9**	**1,377.8**
1987 January	.7	3.2	3.4	7.2	2.3	3.2	5.0	12.2	93.9	42.0	135.9
February	.7	3.0	3.3	6.6	2.1	3.1	5.2	11.8	86.9	38.2	125.0
March	.8	2.5	4.0	7.1	2.3	3.0	6.7	12.6	93.3	39.2	132.5
April	.5	2.4	3.7	6.1	2.2	2.6	4.6	10.7	81.4	35.0	116.5
May	.7	3.1	2.1	4.8	1.9	3.2	4.4	8.7	74.3	36.3	110.6
June	.6	3.8	2.5	3.5	1.1	3.1	4.1	8.6	72.6	38.4	111.0
July	.4	3.3	3.3	2.7	1.3	3.0	3.4	8.6	72.5	42.9	115.3
August	.8	3.2	3.3	4.1	1.0	2.9	4.0	9.3	72.4	43.2	115.6
September	.3	2.9	3.5	5.1	1.9	2.5	5.1	10.3	81.3	41.9	123.2
October	.4	3.2	3.9	6.0	2.3	2.4	3.9	12.0	85.3	38.3	123.6
November	.7	3.4	3.9	6.8	2.2	2.1	3.7	12.5	90.4	39.4	129.8
December	0	3.8	4.2	7.2	2.3	2.1	6.2	12.9	97.1	43.7	140.8
Total	**6.6**	**37.8**	**41.3**	**67.2**	**23.0**	**33.1**	**56.2**	**130.2**	**1,001.3**	**478.5**	**1,479.8**
1988 January	.3	3.9	4.2	R 7.2	2.3	2.2	4.9	13.1	R 92.5	R 47.4	R 139.9
February	.7	3.1	2.9	4.5	2.2	2.0	4.3	12.4	82.7	44.4	127.1
2-Month Total	**1.0**	**7.0**	**7.1**	**11.7**	**4.5**	**4.2**	**9.2**	**25.5**	**175.2**	**91.8**	**267.0**
1987 2-Month Total	**1.4**	**6.2**	**6.7**	**13.8**	**4.4**	**6.3**	**10.2**	**24.0**	**180.7**	**80.2**	**261.0**
1986 2-Month Total	**1.6**	**3.7**	**5.7**	**13.2**	**4.4**	**4.9**	**10.1**	**22.5**	**169.8**	**72.2**	**242.0**

Footnotes continued.

R=Revised data.

Notes: • 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, revisions in annual data not reflected in the monthly data, or both. Data for countries may not sum to world totals due to independent rounding.

Source: *Nucleonics Week* (New York: McGraw-Hill Publishing Company).

Conversion Factors

Units of Measure

Coal		
1 metric ton	contains	1,000 kilograms or 2,204.62 pounds
1 long ton	contains	2,240 pounds
1 short ton	contains	2,000 pounds
Crude Oil (Average Gravity)		
1 barrel	contains	42 gallons
1 barrel	contains	0.136 metric tons (0.150 short tons)
1 metric ton	contains	7.33 barrels
1 short ton	contains	6.65 barrels
Uranium		
1 short ton (U_3O_8)	contains	0.769 metric tons of uranium
1 short ton (UF_6)	contains	0.613 metric tons of uranium
1 metric ton (UF_6)	contains	0.676 metric tons of uranium

Approximate Heat Content of Petroleum Products

	Million Btu per Barrel
Asphalt	6.636
Aviation gasoline	5.048
Butane	4.326
Butane-propane mixture[a]	4.130
Distillate fuel oil	5.825
Ethane	3.082
Ethane-propane mixture[b]	3.308
Isobutane	3.974
Jet fuel--kerosene type	5.670
Jet fuel--naphtha type	5.355
Kerosene	5.670
Lubricants	6.065
Motor gasoline	5.253
Natural gasoline	4.620
Pentanes plus	4.620
Petrochemical feedstocks	
Naphtha 400 °F or less	5.248
Other oils over 400 ° F	5.825
Still gas	6.000
Petroleum coke	6.024
Plant condensate	5.418
Propane	3.836
Residual fuel oil	6.287
Road oil	6.636
Special naphthas	5.248
Still gas	6.000
Unfinished oils	5.825
Unfractionated stream	5.418
Waxes	5.537
Miscellaneous	5.796

[a]60 percent butane and 40 percent propane.
[b]70 percent ethane and 30 percent propane.

Approximate Heat Content of Fuels, 1973-1980

	Units	1973	1974	1975	1976	1977	1978	1979	1980
Coal									
Production	Million Btu/short ton	23.376	23.072	22.897	22.855	22.597	22.248	22.454	22.415
Consumption	Million Btu/short ton	23.057	22.677	22.506	22.498	22.265	22.017	22.100	21.947
Non-electric utility users	Million Btu/short ton	24.878	24.783	24.745	24.861	24.701	24.496	24.626	24.731
Electric utilities	Million Btu/short ton	22.246	21.781	21.642	21.679	21.508	21.275	21.364	21.295
Imports	Million Btu/short ton	25.000	25.000	25.000	25.000	25.000	25.000	25.000	25.000
Exports	Million Btu/short ton	26.596	26.700	26.562	26.601	26.548	26.478	26.548	26.384
Anthracite									
Production	Million Btu/short ton	22.132	21.711	21.582	22.045	22.661	23.079	23.170	22.869
Consumption	Million Btu/short ton	21.464	20.919	20.762	21.254	22.066	22.398	22.069	21.405
Non-electric utility users	Million Btu/short ton	22.674	22.330	22.272	22.618	24.101	24.388	24.272	22.719
Electric utilities	Million Btu/short ton	17.920	17.200	17.064	17.526	17.244	17.104	17.454	17.652
Imports and exports	Million Btu/short ton	25.400	25.400	25.400	25.400	25.400	25.400	25.400	25.400
Bituminous coal and lignite									
Production	Million Btu/short ton	23.391	23.087	22.910	22.863	22.597	22.242	22.449	22.411
Consumption	Million Btu/short ton	23.073	22.694	22.522	22.509	22.266	22.014	22.100	21.950
Residential and commercial	Million Btu/short ton	22.887	22.523	22.258	22.819	22.594	22.078	21.884	22.488
Coke plants	Million Btu/short ton	26.800	26.800	26.800	26.800	26.800	26.800	26.800	26.800
Other industrial and transportation	Million Btu/short ton	22.585	22.420	22.439	22.528	22.290	22.175	22.436	22.690
Electric utilities	Million Btu/short ton	22.262	21.799	21.659	21.692	21.521	21.284	21.372	21.301
Imports	Million Btu/short ton	25.000	25.000	25.000	25.000	25.000	25.000	25.000	25.000
Exports	Million Btu/short ton	26.612	26.716	26.573	26.613	26.561	26.501	26.570	26.404
Coal coke, imports and exports	Million Btu/short ton	24.800	24.800	24.800	24.800	24.800	24.800	24.800	24.800
Crude oil[a]									
Production	Million Btu/barrel	5.800	5.800	5.800	5.800	5.800	5.800	5.800	5.800
Imports	Million Btu/barrel	5.817	5.827	5.821	5.808	5.810	5.802	5.810	5.812
Exports	Million Btu/barrel	5.800	5.800	5.800	5.800	5.800	5.800	5.800	5.800
Crude oil and petroleum products									
Imports	Million Btu/barrel	5.897	5.884	5.858	5.856	5.834	5.839	5.810	5.796
Exports	Million Btu/barrel	5.752	5.774	5.748	5.745	5.797	5.808	5.832	5.820
Petroleum Products[b]									
Consumption	Million Btu/barrel	5.515	5.504	5.494	5.504	5.518	5.519	5.494	5.479
Residential and commercial	Million Btu/barrel	5.387	5.377	5.358	5.383	5.389	5.382	5.471	5.468
Industrial	Million Btu/barrel	5.565	5.537	5.527	5.535	5.552	5.546	5.416	5.376
Transportation	Million Btu/barrel	5.397	5.394	5.392	5.396	5.402	5.407	5.430	5.440
Electric utilities	Million Btu/barrel	6.245	6.238	6.250	6.251	6.249	6.251	6.258	6.254
Imports	Million Btu/barrel	5.983	5.959	5.935	5.980	5.908	5.955	5.811	5.748
Exports	Million Btu/barrel	5.752	5.773	5.747	5.743	5.796	5.814	5.864	5.841
LPG consumption	Million Btu/barrel	3.746	3.730	3.715	3.711	3.677	3.669	3.680	3.674
Natural gas plant liquids									
Production	Million Btu/barrel	4.049	4.011	3.984	3.964	3.941	3.925	3.955	3.914
Natural gas									
Production, dry	Btu/cubic foot	1,021	1,024	1,021	1,020	1,021	1,019	1,021	1,026
Production, marketed (wet)	Btu/cubic foot	1,093	1,097	1,095	1,093	1,093	1,088	1,092	1,098
Consumption	Btu/cubic foot	1,021	1,024	1,021	1,020	1,021	1,019	1,021	1,026
Non-electric utility users	Btu/cubic foot	1,020	1,024	1,020	1,019	1,019	1,016	1,018	1,024
Electric utilities	Btu/cubic foot	1,024	1,022	1,026	1,023	1,029	1,034	1,035	1,035
Imports	Btu/cubic foot	1,026	1,027	1,026	1,025	1,026	1,030	1,037	1,022
Exports	Btu/cubic foot	1,023	1,016	1,014	1,013	1,013	1,013	1,013	1,013

Approximate Heat Rates for Electricity

Fossil fuel steam-electric power plant generation[c]	Btu/kilowatthour	10,389	10,442	10,406	10,373	10,435	10,361	10,353	10,388
Nuclear power plant generation	Btu/kilowatthour	10,903	11,161	11,013	11,047	10,769	10,941	10,879	10,908
Geothermal energy power plant generation	Btu/kilowatthour	21,674	21,674	21,611	21,611	21,611	21,611	21,545	21,639
Electricity Consumption	Btu/kilowatthour	3,412	3,412	3,412	3,412	3,412	3,412	3,412	3,412

[a]Includes lease condensate.
[b]Weighted averages of the products included in each category are calculated using heat content values shown on the first page of this section.
[c]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.
Sources: See "Thermal Conversion Factor Source Documentation" on the following pages.

Approximate Heat Content of Fuels, 1981-1988

	Units	1981	1982	1983	1984	1985	1986	1987-88[a]
Coal								
Production	Million Btu/short ton	22.308	22.239	22.052	22.010	21.870	21.913	21.946
Consumption	Million Btu/short ton	21.713	21.674	21.576	21.573	21.366	21.462	21.531
Non-electric utility users	Million Btu/short ton	24.470	24.187	24.062	24.041	23.639	23.635	23.811
Electric utilities	Million Btu/short ton	21.085	21.194	21.133	21.101	20.959	21.084	21.157
Imports	Million Btu/short ton	25.000	25.000	25.000	25.000	25.000	25.000	25.000
Exports	Million Btu/short ton	26.160	26.223	26.291	26.402	26.307	26.292	26.344
Anthracite								
Production	Million Btu/short ton	23.291	23.289	22.734	23.107	22.428	23.084	23.085
Consumption	Million Btu/short ton	22.080	22.518	21.583	22.322	20.817	21.512	21.657
Non-electric utility users	Million Btu/short ton	23.749	24.578	24.536	25.128	23.031	24.399	25.014
Electric utilities	Million Btu/short ton	18.168	18.160	16.516	17.018	16.784	15.578	15.970
Imports and exports	Million Btu/short ton	25.400	25.400	25.400	25.400	25.400	25.400	25.400
Bituminous coal and lignite								
Production	Million Btu/short ton	22.301	22.233	22.048	22.005	21.867	21.908	21.941
Consumption	Million Btu/short ton	21.710	21.670	21.576	21.570	21.368	21.462	21.531
Residential and commercial	Million Btu/short ton	22.010	22.226	22.438	22.406	22.568	22.669	23.441
Coke plants	Million Btu/short ton	26.800	26.800	26.800	26.800	26.800	26.800	26.800
Other industrial and transportation	Million Btu/short ton	22.572	22.695	22.680	22.525	22.013	22.185	22.345
Electric utilities	Million Btu/short ton	21.091	21.200	21.141	21.108	20.965	21.091	21.164
Imports	Million Btu/short ton	25.000	25.000	25.000	25.000	25.000	25.000	25.000
Exports	Million Btu/short ton	26.176	26.231	26.300	26.410	26.320	26.308	26.358
Coal coke, imports and exports	Million Btu/short ton	24.800	24.800	24.800	24.800	24.800	24.800	24.800
Crude oil[b]								
Production	Million Btu/barrel	5.800	5.800	5.800	5.800	5.800	5.800	5.800
Imports	Million Btu/barrel	5.818	5.826	5.825	5.823	5.832	5.903	5.902
Exports	Million Btu/barrel	5.800	5.800	5.800	5.800	5.800	5.800	5.800
Crude oil and petroleum products								
Imports	Million Btu/barrel	5.775	5.775	5.774	5.745	5.736	5.808	5.823
Exports	Million Btu/barrel	5.821	5.820	5.800	5.850	5.814	5.832	5.868
Petroleum products[c]								
Consumption	Million Btu/barrel	5.448	5.415	5.406	5.395	5.387	5.418	5.399
Residential and commercial	Million Btu/barrel	5.409	5.392	5.286	5.261	5.203	5.238	5.208
Industrial	Million Btu/barrel	5.310	5.262	5.273	5.256	5.265	5.336	5.298
Transportation	Million Btu/barrel	5.434	5.423	5.416	5.423	5.421	5.423	5.420
Electric utilities	Million Btu/barrel	6.258	6.258	6.255	6.251	6.247	6.257	6.249
Imports	Million Btu/barrel	5.659	5.664	5.677	5.613	5.572	5.624	5.599
Exports	Million Btu/barrel	5.837	5.829	5.800	5.867	5.819	5.839	5.885
LPG consumption	Million Btu/barrel	3.643	3.615	3.614	3.599	3.603	3.640	3.661
Natural gas plant liquids								
Production	Million Btu/barrel	3.930	3.872	3.839	3.812	3.815	3.797	3.805
Natural gas								
Production, dry	Btu/cubic foot	1,027	1,028	1,031	1,031	1,032	1,030	1,030
Production, marketed (wet)	Btu/cubic foot	1,103	1,107	1,115	1,109	1,112	1,110	1,110
Consumption	Btu/cubic foot	1,027	1,028	1,031	1,031	1,032	1,030	1,030
Non-electric utility users	Btu/cubic foot	1,025	1,026	1,031	1,030	1,031	1,029	1,029
Electric utilities	Btu/cubic foot	1,035	1,036	1,030	1,035	1,038	1,034	1,034
Imports	Btu/cubic foot	1,014	1,018	1,024	1,005	1,002	997	997
Exports	Btu/cubic foot	1,011	1,011	1,010	1,010	1,011	1,008	1,008

Approximate Heat Rates for Electricity

Fossil fuel steam-electric power plant generation[d]	Btu/kilowatthour	10,453	10,423	10,445	10,211	10,339	[a] 10,320	10,320
Nuclear power plant generation	Btu/kilowatthour	11,030	11,073	10,905	10,843	10,809	[a] 10,807	10,807
Geothermal energy power plant generation	Btu/kilowatthour	21,639	21,629	21,290	21,303	21,263	21,263	21,263
Electricity Consumption	Btu/kilowatthour	3,412	3,412	3,412	3,412	3,412	3,412	3,412

[a]Preliminary data.
[b]Includes lease condensate.
[c]Weighted averages of the products included in each category are calculated using heat content values shown on the first page of this section.
[d]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.
Sources: See "Thermal Conversion Factor Source Documentation" on the following pages.

Thermal Conversion Factor Source Documentation

Approximate Heat Content of Petroleum Products

Asphalt. 1973 forward: 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. 1973 forward: EIA adopted the thermal conversion factor of 5.048 million Btu per barrel as adopted by the Bureau of Mines from the Texas Eastern Transmission Corporation publication *Competition and Growth in American Energy Markets 1947-1985,* 1968.

Butane. 1973 forward: 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. 1973 forward: 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. 1973 forward: 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. 1973 forward: 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. 1979 forward: 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. 1973 forward: 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. 1973 forward: 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 the report *Competition and Growth in American Energy Markets 1947-1985,* 1968.

Jet Fuel, Naphtha Type. 1973 forward: 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 the report *Competition and Growth in American Energy Markets 1947-1985,* 1968.

Kerosene. 1973 forward: 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. 1973 forward: 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. 1973 forward: 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. 1973 forward: 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 the report *Competition and Growth in American Energy Markets 1947-1985,* 1968.

Natural Gasoline. 1973 forward: 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. 1984 forward: 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 400 Degrees Fahrenheit or Less. 1973 forward: Assumed by EIA to be 5.248 million Btu per barrel, equal to the thermal conversion factor for special naphtha. See "Special Naphtha."

Petrochemical Feedstock, Oils Over 400 Degrees Fahrenheit. 1973 forward: 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 Feedstock, Still Gas. 1973 forward: 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. 1973 forward: 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. 1973 forward: Estimated to be 5.418 million Btu per barrel by EIA from data provided by McClanahan Consultants, Inc., Houston, Texas.

Propane. 1973 forward: 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. 1973 forward: 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. 1973 forward: 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. 1973 forward: 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. 1973 forward: 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. 1973 forward: 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. 1979 forward: 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.*

Wax. 1973 forward: 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. 1973 forward: 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. 1973 forward: 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 using National Bureau of Standards, Miscellaneous Publication No. 97, *Thermal Properties of Petroleum Products,* 1933.

Crude Oil and Lease Condensate, Production. 1973 forward: 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. 1973 forward: 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 "Petroleum Products, Exports" and "Crude Oil, Exports."

Crude Oil and Petroleum Products, Imports. 1973 forward: 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. 1973 forward: 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. 1973 forward: 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. 1973-1986: 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.* 1987 forward: Estimated by EIA.

Petroleum Products, Consumption by Industrial Users. 1973-1986: 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.* 1987 forward: Estimated by EIA.

Petroleum Products, Consumption by Residential and Commercial Users. 1973-1986: 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.* 1987 forward: Estimated by EIA.

Petroleum Products, Consumption by Transportation Users. 1973-1986: 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.* 1987 forward: Estimated by EIA.

Petroleum Products, Exports. 1973 forward: 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. 1973 forward: 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. 1973 forward: 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.
1980 forward: Calculated annually by EIA by dividing the total heat content of natural gas consumed by the total quantity of natural gas consumed. Heat content and quantity consumed are from Form EIA-176.

Natural Gas, Consumption by Electric Utilities. 1973 forward: 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 FERC Form 423 and predecessor forms.

Natural Gas, Consumption by Non-Electric Utility Users. 1973 forward: 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 Form 423, EIA-759, and predecessor forms.

Natural Gas, Exports. 1973 forward: 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. 1973 forward: 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. 1973 forward: 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). 1973 forward: 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. 1973 forward: 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. 1973 forward: Calculated annually by EIA by dividing the heat content of anthracite receipts at electric utilities by the quantity of anthracite received at electric util-

ities. Heat contents and receipts are from FERC Form 423 and predecessor forms.

Anthracite, Consumption by Non-Electric Utility Users. 1973 forward: 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. 1973 forward: 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. 1973 forward: 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. 1973 forward: 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. 1973 forward: Estimated by EIA to be 26.800 million Btu per short ton based on an input/output analysis of coal carbonization.

Bituminous Coal and Lignite, Consumption by Electric Utilities. 1973 forward: 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 FERC Form 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 assuming that the bituminous coal and lignite delivered to other industrial users from each coal-producing district (reported on EIA Form 6 and predecessor Bureau of Mines Form 6-1419-Q) contained a heat value equal to bituminous coal and lignite received at electric utilities from each of the same coal-producing districts (reported on FERC Form 423). The average Btu value of coal by coal-producing district was applied to the volume of deliveries to other industrial users from each coal-producing district, and the sum total of the heat content was divided by the total volume of deliveries.

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 district (reported on EIA Form 6 and predecessor Bureau of Mines Form 6-1419-Q) contained a heat value equal to bituminous coal and lignite received at electric utilities from each of the same coal-producing districts (reported on FERC Form 423). The average Btu value of coal by coal-producing district was applied to the volume of deliveries to residential and commercial users from each coal-producing district, and the total of the heat value was divided by the total volume of deliveries.

Bituminous Coal and Lignite, Exports. 1973 forward: 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. 1973 forward: EIA estimated the average thermal conversion factor to be 25.000 million Btu per short ton.

Bituminous Coal and Lignite, Production. 1973 forward: 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 the consumption sector. Producers' stock changes and unaccounted for were assumed to have the same conversion factor as consumption by all users.

Coal, Consumption. 1973 forward: 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. 1973 forward: 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. 1973 forward: 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. 1973 forward: 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. 1973 forward: 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. 1973 forward: 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. 1973 forward: 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 electric 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. By using this factor, it is possible to evaluate fossil fuel requirements for replacing these sources during periods of interruption such as drought. The heat content of a kilowatthour of electricity produced, regardless of the generation process, is 3,412 Btu per kilowatthour. 1973 forward: The weighted annual average heat rate for fossil-fueled steam-electric power plants in the United States as published by EIA in *Historical Plant Cost and Annual Production Expenses for Selected Electric Plants.*

Geothermal Energy Power Plant Generation. 1973 forward: 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 based on an informal survey of relevant plants.

Nuclear Power Plant Generation. 1973 forward: 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 as reported on Form FERC-1, EIA-412 and predecessor forms.

Glossary

Anthracite: A hard, black, lustrous coal containing a high percentage of fixed carbon and a low percentage of volatile matter. It is often referred to as hard coal. It includes meta-anthracite and semianthracite and conforms to ASTM Specification D388 for anthracite.

ASTM: The acronym for the American Society for Testing and Materials.

Base Gas: The volume of gas needed as a permanent inventory to maintain adequate underground storage reservoir pressures and deliverability rates throughout the withdrawal season. All native gas is included in the base gas volume.

Bituminous Coal: A coal that is high in carbonaceous matter having a volatility greater than anthracite and a calorific value greater than lignite. In the United States, it is often referred to as soft coal. In this report, "bituminous coal" conforms to ASTM Specification D388 for bituminous and subbituminous coal. It is used primarily for electricity generation, coke production, and space heating.

British Thermal Unit (Btu): The amount of energy required to raise the temperature of 1 pound of water 1 °F at or near 39.2 °F. One Btu is equivalent to about 252 International Steam Table calories. An average Btu content of fuel is a heat value per unit quantity of fuel as determined from tests of fuel samples.

Butane: A normally gaseous, paraffinic hydrocarbon (C_4H_{10}) extracted from natural gas or refinery gas streams. It includes isobutane (branch-chain) and normal butane (straight-chain) and is covered by ASTM Specification 1835 and Natural Gas Processors Specifications for commercial butane. It is used primarily for blending into high-octane gasoline, for residential and commercial heating, and for industrial purposes, especially the manufacture of chemicals and synthetic rubber.

Butylene: A normally gaseous, olefinic hydrocarbon (C_4H_8) recovered from refinery processes. Quantities are included with "normal butane" data.

City Gate Price of Natural Gas: Price of natural gas at the point it is transferred from a pipeline company to a local distribution company.

Coal: Includes all ranks of coal--anthracite, bituminous coal, subbituminous coal, and lignite--conforming to ASTM Specification D388.

Coal Coke: The strong, porous residue, consisting of carbon and mineral ash, that is formed when the volatile constituents of bituminous coal are driven off by heat in the absence of or in a limited supply of air. It is used primarily in blast furnaces for smelting ores, especially iron ore.

Commercial Sector: Nonmanufacturing business establishments, including hotels, motels, restaurants, wholesale businesses, retail stores, laundries, and other service enterprises; health, social, and educational institutions; and Federal, State, and local governments. Street lights, pumps, bridges, and public services are also included. (For allocation of individual fuels to end-use sectors, see the Notes and Sources for Section 2.)

Crude Oil Average Domestic First Purchase Price: 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; after February 1976, the price represents an average of actual first purchase prices. This price is frequently called the wellhead price.

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. Liquids produced at natural gas processing plants and mixed with crude oil are excluded where identifiable.

Crude Oil Refinery Input: Total crude oil (including lease condensate) input to crude oil distillation units and other processing units.

Crude Oil Stocks: Stocks of crude oil and lease condensate held at refineries, in pipelines, at pipeline terminals, and on leases.

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). These may

be simple degree-day normals or population-weighted degree-day normals.

Degree-Days, Cooling: The number of degrees per day that the daily average temperature is above 65 °F. The daily average temperature is the mean of the maximum and minimum temperatures for a 24-hour period.

Degree-Days, Heating: The number of degrees per day that the daily average temperature is below 65 °F. The daily average temperature is the mean of the maximum and minimum temperatures for a 24-hour period.

Degree-Days, Population-Weighted: Heating or cooling degree-days weighted by the population of the area in which the degree-days are recorded. To compute State population-weighted degree-days, each State is divided into from one to nine climatically homogeneous divisions which are assigned weights based on the ratio of the population of the division to the total population of the State. Degree-day readings for each division are multiplied by the corresponding population weight for each division and these products are then summed to arrive at the State population-weighted degree-day figure.

To compute national population-weighted degree-days, the Nation is divided into nine Census regions, each composed of from three to eight States. The regions 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 these products are then summed to arrive at the national population-weighted degree-day figure.

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: Light fuel oils distilled during the refining process and 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. Included are products known as No. 1, No. 2, and No. 4 fuel oils, and No. 1, No. 2, and No. 4 diesel fuels, conforming to ASTM Specifications D396 or D975, respectively. No. 1 fuel oil is a light distillate fuel oil used in vaporizing pot-type burners. No. 2 fuel oil is used in atomizing-type burners for domestic heating or for moderate capacity commercial-industrial burner units. No. 4 fuel oil is a blend of distillate fuel oil and residual fuel oil that is used in commercial burner installations not equipped with preheating facilities; it is used extensively in industrial plants. Diesel fuel oils are used in compression-ignition engines.

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.

Electrical System Energy Losses: The amount of energy lost during generation, transmission, and distribution of electricity, including plant use and unaccounted for electrical energy.

Electricity Generation: Net electricity (gross electricity output measured at the generator terminals, minus power plant use) generated at electric utilities. Excludes industrial electricity generation. International data are gross electricity output.

Electricity Sales: The gross electricity output measured at the generator terminals, minus power plant use and transmission and distribution losses. Included in each end-use sector are the following: commercial sales of electricity to businesses that generally require less than 1,000 kilowatts of service; industrial sales of electricity to businesses that generally require more than 1,000 kilowatts of service; residential sales of electricity to residences for household purposes; "other" sales of electricity to government, railways, street lighting authorities, and sales not elsewhere included.

Electric Utility: A corporation, person, agency, authority, or other entity that owns or operates facilities for the generation, transmission, distribution, or sale of electricity, primarily for use by the public.

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

Ethane: A normally gaseous, paraffinic hydrocarbon (C_2H_6) extracted from natural gas or refinery gas streams. It is used primarily as petrochemical feedstock for production of chemicals and plastic materials.

Ethylene: A normally gaseous, olefinic hydrocarbon (C_2H_4) recovered from refinery processes. Quantities are included with "ethane" data.

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, Puerto Rico, the Virgin Islands, and other U.S. possessions and territories.

F.o.b. (free on board) Price of Imported Crude Oil: The f.o.b. price is the price actually charged at the producing country's port of loading. The reported price includes deductions for any rebates and discounts and additions of premiums where applicable; it should be the actual price paid with no adjustments for credit terms.

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.

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 (as used at electric utilities): Hot water or steam, extracted from geothermal reservoirs in the earth's crust, which is supplied to steam turbines at electric utilities that drive generators to produce electricity.

Gross Energy Consumption: Total energy use including electrical system energy losses.

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.

Hydroelectric Power: Electricity generated by an electric power plant whose turbines are driven by falling water.

Imports: Receipts of goods into the 50 States and the District of Columbia from foreign countries, Puerto Rico, the Virgin Islands, and other U.S. possessions and territories. (See **Petroleum Imports.**)

Industrial Sector: Manufacturing, construction, mining, agriculture, fishing, and forestry establishments. (For allocation of individual fuels to end-use sectors, see the Notes and Sources for Section 2.)

Isobutane: See **Butane.**

Landed Cost of Crude Oil Imports: The price of imported crude oil at the port of discharge. It includes the purchase price at the foreign port plus charges for transporting and insuring the crude oil from the purchase point to the port of discharge. It does not include import tariffs or fees, wharfage charges, or demurrage costs. Coverage includes the United States and its territories.

Lease and Plant Fuel: Natural gas used in lease operations, as gas processing plant fuel, and as net used for gas lift.

Lease Condensate: A natural gas liquid recovered from gas-well gas (associated and nonassociated) in lease separators or natural gas field facilities. Lease condensate consists primarily of pentanes and heavier hydrocarbons. Generally, it is blended with crude oil for refining.

Lignite: A brownish-black coal of low rank with high inherent moisture and volatile matter. It is also referred to as brown coal. It conforms to ASTM Specification D388 for lignite and is used almost exclusively for electric power generation.

Liquefied Petroleum Gases (LPG): Ethane, propane, normal butane, ethane-propane mixtures, propane-butane mixtures, and isobutane produced at natural gas processing plants, including plants that fractionate raw natural gas plant liquids. LPG also includes liquefied refinery gases (ethylene, propylene, butylene, and isobutylene produced from crude oil at refineries).

Motor Gasoline, Finished: A complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives, that have been blended to form a fuel suitable for use in spark-ignition engines and conforming to ASTM Specification D439. Included are finished leaded gasoline, finished unleaded gasoline, and gasohol. Excluded are blendstock that has not been blended into finished motor gasoline and alcohol that has not been blended into gasohol.

Motor Gasoline, Leaded Premium: A gasoline having an antiknock index of 93 with the use of lead additives or which contains more than 0.05 grams of lead per gallon or more than 0.005 grams of phosphorus per gallon. Includes gasohol.

Motor Gasoline, Leaded Regular: A gasoline having an antiknock index of 89 with the use of lead additives or which contains more than 0.05 grams of lead per gallon or more than 0.005 grams of phosphorus per gallon.

Motor Gasoline, Total: Includes finished leaded motor gasoline (premium and regular), finished unleaded motor gasoline (premium and regular), motor gasoline blending components, and gasohol.

Motor Gasoline, Unleaded Premium: A gasoline having an antiknock index of 90 containing not more than 0.05 grams of lead per gallon and not more than 0.005 grams of phosphorus per gallon. Includes gasohol.

Motor Gasoline, Unleaded Regular: A gasoline having an antiknock index of 87 containing not more than 0.05 grams of lead per gallon and not more than 0.005 grams of phosphorus per gallon.

Natural Gas: A mixture of hydrocarbons and small quantities of various nonhydrocarbons existing in the gaseous phase or in solution with crude oil in underground reservoirs.

Natural Gas Plant Liquids (NGPL): Those natural gas liquids that are recovered from natural gas processing plants, and in some situations, from natural gas field facilities, as well as those that are extracted by fractionators. Natural gas plant liquids are defined according to the published specifications of the ASTM and

the Gas Processors Association and are classified 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. Geological Survey. 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.

Net Electricity Generation: 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.

Net Energy Consumption: Total energy use excluding electrical system energy losses.

Normal Butane: See **Butane.**

Nuclear Energy: 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.

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.

Organization for Economic Cooperation and Development (OECD): Current members: Australia, Austria, Belgium, Canada, Denmark, Finland, France, West Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United States and its territories (Guam, Puerto Rico, and the Virgin Islands).

Organization of the Petroleum Exporting Countries (OPEC): Current members: Algeria, Ecuador, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela. Data for Saudi Arabia and Kuwait include their shares from the Partitioned Zone (formerly Neutral Zone).

Pentanes Plus: A mixture of hydrocarbons, mostly pentanes and heavier, extracted from natural gas. This product 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 solid residue that is the final product of the condensation process in cracking. It consists of aromatic hydrocarbons very poor in hydrogen. Calcination of petroleum coke can yield almost pure carbon or artificial graphite suitable for production of carbon or graphite electrodes, structural graphite, motor brushes, dry cells, and similar products. This product is reported as marketable or catalyst coke.

Petroleum Imports: Imports of petroleum into the 50 States and the District of Columbia from foreign countries, 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: Petroleum products are 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, naphtha less than 400 °F end-point, other oils over 400 °F end-point, special naphthas, lubricants, waxes, petroleum coke, asphalt, road oil, still gas, and miscellaneous products.

Petroleum Products Supplied: Total petroleum products supplied is the sum of all petroleum products supplied. For each product, the amount supplied is calculated by summing production, crude oil burned directly, imports, and net withdrawals from primary stocks and subtracting exports.

Petroleum Stocks, Primary: Stocks of crude oil or petroleum products held in storage at (or in) leases, refineries, natural gas processing plants, pipelines, tankfarms, and bulk terminals that can store at least 50,000 barrels of petroleum products or that can receive petroleum products by tanker, barge, or pipeline. Crude oil that is in transit from Alaska, or that is stored on Federal leases or in the Strategic Petroleum Reserve, is included. Excluded are stocks of foreign origin that are held in bonded warehouse storage.

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.

Propane: A normally gaseous, paraffinic hydrocarbon (C_3H_8). It is extracted from natural gas or refinery gas

streams, and includes all products covered by Gas Processors Association Specifications for commercial propane and HD-5 propane and ASTM Specification D1835. Propane is used primarily for residential and commercial heating and cooling, and also as a fuel for transportation. Industrial uses of propane include use as a petrochemical feedstock.

Propylene: A normally gaseous, olefinic hydrocarbon (C_3H_6) recovered from refinery processes. Quantities are included with "propane" data.

Refiner Acquisition Cost: 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.

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, geothermal, wind, photovoltaic, and solar thermal energy.

Reservoir Repressuring: The injection of natural gas into oil and gas reservoir formations for pressure maintenance and cycling.

Residential Sector: Private household establishments, which consume energy primarily for space heating, water heating, air conditioning, lighting, refrigeration, cooking, and clothes drying. (For allocation of individual fuels to end-use sectors, see the Notes and Sources for Section 2.)

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 and electricity generation. Imports of residual fuel oil include imported crude oil burned as fuel.

Rotary Rig: A machine, used for drilling wells, that employs a rotating tube attached to a bit for boring holes through rock.

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 for subbituminous coal, and is used almost exclusively for electric power generation. In this report, quantities are included with "bituminous coal" data.

Supplemental Gaseous Fuels: Consist primarily of synthetic natural gas, propane-air, and refinery (still) gas. May also include coke oven gas, biomass gas, manufactured gas, and air injected for Btu stabilization.

Synthetic Natural Gas (SNG): A product resulting from the manufacture, conversion, or reforming of hydrocarbons that may be easily substituted for, or interchanged with, pipeline-quality natural gas.

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.

Unaccounted for Crude Oil: Represents the arithmetic difference between the indicated demand for crude oil and the total disposition of crude oil. Indicated demand is the sum of crude oil production and imports less changes in crude oil stocks. Total 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.

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.

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 (see **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. Included are round wood (cord wood), limb wood, wood chips, bark, sawdust, forest residues, charcoal, pulp waste, and spent pulping liquor.

Working Gas: The volume of gas in an underground storage reservoir above the designed level of the base. It may or may not be completely withdrawn during any particular withdrawal season. Conditions permitting, the total working capacity could be used more than once during any season.

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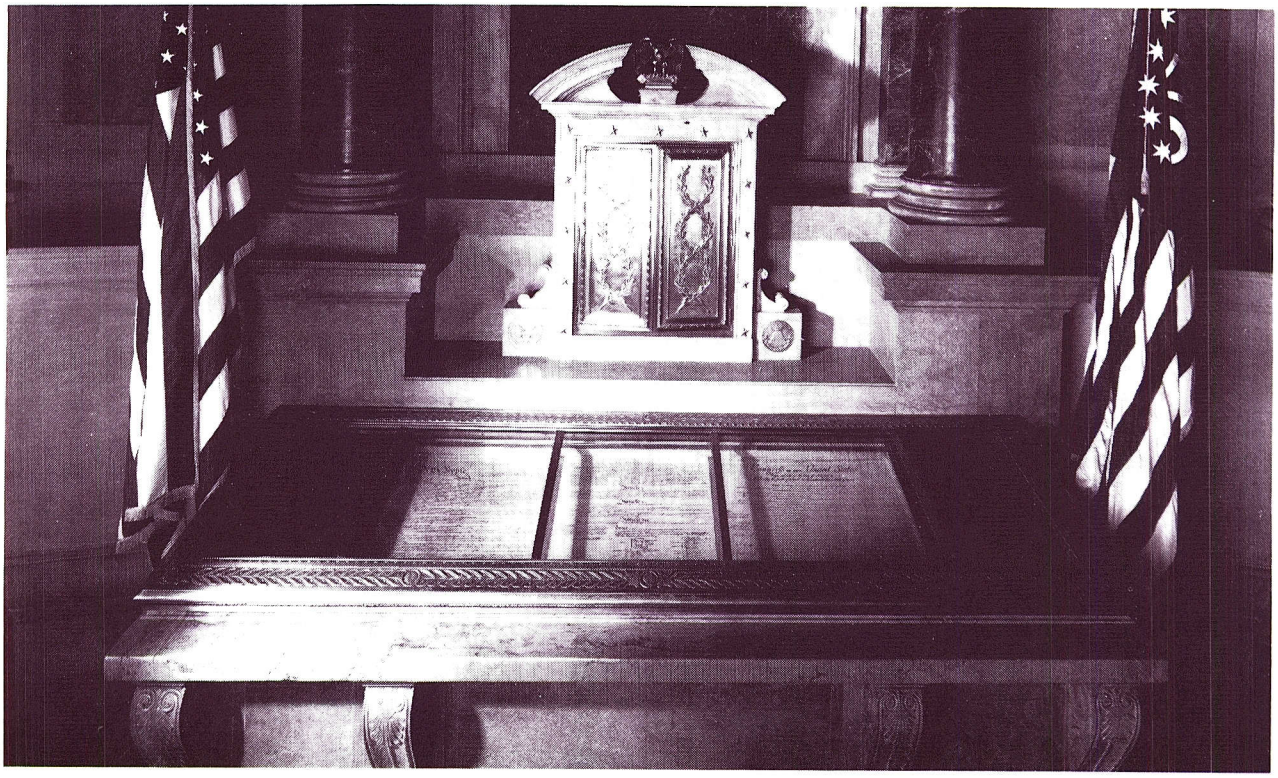

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