DOE/EIA-0035(92/03)

Monthly Energy Review

1991 Annual Summary

March 1992

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Monthly Energy Review

March 1992

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List of Feature Articles

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

List of Highlights

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

Section 1. Energy Summary

Year-End 1991 Review

Worldwide economic recession restrained petroleum demand during 1991. That lower demand, coupled with producers' ability to replace Iraqi and Kuwaiti oil (and, to a lesser extent, oil from the troubled U.S.S.R.), kept crude oil prices below 1990 levels. In the United States, the effects of the recession and unusually warm weather led to a decline in domestic petroleum consumption (Table 1.1). U.S. petroleum production rose, largely due to production increases early in 1991 in support of the Persian Gulf war. However, oil exploration and development drilling was at its lowest level in decades.

The crisis in the Persian Gulf caused a sharp decline in oil production capacity in Kuwait and resulted in a United Nations embargo against Iraqi exports. As a result, U.S. imports from those countries fell almost to zero. In addition, U.S. exports of refined petroleum products increased. U.S. petroleum net imports fell to 14.1 quadrillion Btu, down 7.6 percent from the 1990 level. The decline in petroleum net imports more than offset increases in coal and natural gas net imports, and U.S. energy net imports fell 6.5 percent to 13.2 quadrillion Btu for the year.

Despite the stagnant U.S. economy, natural gas consumption rose and offset declines in the use of coal and petroleum, leading to a slight increase in total energy consumption. The higher residential consumption of electricity that resulted from increased requirements for energy for space cooling during an unusually warm summer led to a modest increase in overall use of electricity.

Table 1.1 Energy Summary for December 1991

(Quadrillion Btu)

	December			Cumulative January Through December				
	1991	1990	Percent Change[a]	1991	1991 Daily Rate	1990	1990 Daily Rate	Percent Change[a]
Production[b]	**5.679**	**5.585**	**1.7**	**67.488**	**0.185**	**67.853**	**0.186**	**-0.5**
Coal	1.722	1.651	4.3	21.552	.059	22.456	.062	-4.0
Natural Gas (Dry)	1.630	1.606	1.5	18.420	.050	18.362	.050	.3
Petroleum[c]	1.508	1.509	-.1	17.902	.049	17.746	.049	.9
Other[d]	.818	.818	.0	9.614	.026	9.289	.025	3.5
Consumption[b]	**7.451**	**7.294**	**2.2**	**81.508**	**.223**	**81.293**	**.223**	**.3**
Coal	1.654	1.694	-2.4	18.807	.052	19.122	.052	-1.6
Natural Gas[e]	2.103	2.001	5.1	20.156	.055	19.304	.053	4.4
Petroleum	2.855	2.767	3.2	32.720	.090	33.553	.092	-2.5
Other[f]	.838	.832	.8	9.825	.027	9.314	.026	5.5
Net Imports	**1.031**	**.918**	**12.3**	**13.157**	**.036**	**14.077**	**.039**	**-6.5**
Coal[g]	-.240	-.198	21.4	-2.769	-.008	-2.705	-.007	2.4
Natural Gas	.138	.151	-8.8	1.589	.004	1.463	.004	8.6
Petroleum[h]	1.113	.952	17.0	14.126	.039	15.293	.042	-7.6
Other[i]	.020	.014	47.1	.211	.001	.025	.000	736.4

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

Energy Production Edged Down

U.S. energy production in 1991 totaled 67.5 quadrillion Btu, 0.5 percent lower than production in 1990. Of that total, coal accounted for 21.6 quadrillion Btu (32 percent). Production of natural gas totaled 18.4 quadrillion Btu (27 percent), and production of petroleum (crude oil, lease condensate, and natural gas plant liquids) totaled 17.9 quadrillion Btu (27 percent).

In physical units, 1991 crude oil and lease condensate production averaged 7.4 million barrels per day. The 0.2-percent increase from 1990 production was the first since 1985. While production in the Lower-48 States fell slightly to 5.6 million barrels per day, Alaskan production rose 1.4 percent to 1.8 million barrels per day. Coal production in 1991 fell for the first time since 1985, down 3.4 percent to 994 million short tons. Production of natural gas was 17.9 trillion cubic feet in 1991, about the same as in 1990.

Net generation of electricity rose only 0.5 percent, the lowest growth rate recorded since 1982, when net generation actually declined. Net generation from every energy source except nuclear power declined, although by varying amounts. Consumption of coal, which fuels most electricity generation, fell 0.7 percent. Nuclear-based net generation rose 6.2 percent and accounted for 22 percent of total net generation.

Energy Use Was Restrained

U.S. total energy consumption of 81.5 quadrillion Btu in 1991 was 0.3 percent above the 1990 level. Natural gas consumption rose 4.4 percent to 20.2 quadrillion Btu. In contrast, petroleum consumption fell 2.5 percent to 32.7 quadrillion Btu and coal consumption fell 1.6 percent to 18.8 quadrillion Btu.

The modest increase in U.S. total energy consumption was due in large part to unusually warm weather that boosted energy requirements for space cooling. In the residential and commercial sector, use of natural gas rose 4.1 percent and use of electricity rose 2.9 percent. The increased consumption of natural gas and electricity, the primary energy sources on which the sector relies, more than offset declines in consumption of coal and petroleum.

The economic recession led to the first decline in industrial sector consumption of energy since 1986. Although industrial use of natural gas rose, industrial use of petroleum, electricity, and coal declined.

The transportation sector uses small amounts of natural gas and electricity, but it relies overwhelmingly on petroleum. Transportation use of petroleum, and therefore of total energy, declined in 1991.

The slight increase in energy consumption by all sectors combined coupled with lack of growth in the domestic economy yielded an increase in the energy intensity of the economy. In 1991, the ratio of total energy consumption to the 1987-dollar gross domestic product, a key measure of energy intensity, was 16.8 thousand Btu per 1987 dollar. The 1991 ratio was 1.2 percent higher than the 1990 ratio. However, the energy intensity of the economy remained well below the 22.7 level recorded in 1973.

Energy Net Imports Declined

U.S. net imports of all forms of energy combined decreased 6.5 percent in 1991 compared with the level in 1990. Petroleum net imports declined steeply in the first half of the year. Although they rose in the second half of the year, the large early decline in petroleum net imports overwhelmed a sizable increase in natural gas net imports.

High exports and low imports in 1991 brought net imports of petroleum to 14.1 quadrillion Btu, 7.6 percent below the 1990 level. Coal net exports rose 2.4 percent to a total of 2.8 quadrillion Btu and natural gas net imports rose to 1.6 quadrillion Btu, up 8.6 percent from the previous year's level.

The conflict in the Persian Gulf led to a shift in U.S. sources of imported petroleum. Due to the United Nations embargo, imports from Iraq fell to zero in 1991, down from 518 thousand barrels per day in 1990. Kuwait, working to restore lost production capability, exported small amounts of petroleum (6 thousand barrels per day) to the United States. Compared with 1990 levels, the shortfall from Iraq and Kuwait combined totaled 598 thousand barrels per day. Saudi Arabia supplied replacement petroleum; imports from that country were up 503 thousand barrels per day to an average of 1.7 million barrels per day in 1991. Petroleum imports from all members of the Organization of Petroleum Exporting Countries (OPEC) combined fell 5 percent to 4.1 million barrels per day.

Non-OPEC sources supplied the remaining 3.5 million barrels per day. Canada, at 1.0 million barrels per day, and Mexico, at 0.8 million barrels per day, accounted for just over half of the non-OPEC total.

Most Energy Prices Declined

U.S. refiners' composite cost of crude oil in 1991 averaged $19.05 per barrel, down from the $22.22 average for 1990 when Iraq's invasion of Kuwait had driven prices up. The lower average for 1991 occurred despite the loss of oil production from Iraq and Kuwait as a result of the Persian Gulf war early in the year and despite the dissolution of the U.S.S.R., the world's largest producer. The ability of other producers to provide replacement oil played a primary role in calming world energy markets.

The 14-percent decrease in crude oil costs was passed on to consumers differentially. For example, the

average price (excluding taxes) of residual fuel oil to end users fell 23 percent to 34.0 cents per gallon, whereas the comparable prices of finished motor gasoline and No. 2 distillate fuel oil fell 10 percent to 79.7 cents per gallon and 9 percent to 66.7 cents per gallon, respectively.

The city gate price of natural gas declined 4 percent to $2.91 per thousand cubic feet but, of the three consuming sectors for which year-end data are available, only the industrial sector registered a price decrease (9 percent to $2.68 per thousand cubic feet). Residential prices rose slightly to $5.82 per thousand cubic feet, and commercial prices rose somewhat more (2 percent) to $4.91 per thousand cubic feet.

Through November (the last month for which data are available), electric utilities paid less for fuel than they had the previous year. The 11-month average cost in cents per million Btu of petroleum declined markedly, while the comparable cost of natural gas fell 7 percent. The comparable cost of coal, the major fuel at steam-electric utility plants, declined also, but by less than 1 percent. The annual average retail price of electricity to all consumers rose 3 percent to 6.8 cents per kilowatthour.

The Outlook for 1992

Through the beginning of 1992, continuing worldwide economic recession and high levels of crude oil production by members of the Organization of Petroleum Exporting Countries combined to keep oil prices low compared with 1990 oil prices. In the Energy Information Administration's (EIA) mid-price case forecast, U.S. refiner acquisition costs of imported crude oil in 1992 are assumed to average $18.76 per barrel, just slightly below the 1991 average price of $18.81 per barrel. The mid-case price also assumed normal weather. However, the first 2 months of 1992 were considerably warmer than normal. Since warm weather during the winter decreases demand for energy used for space heating, energy demand for the year as a whole may be lower than originally expected.

Demand for petroleum is projected to average 16.85 million barrels per day in 1992, up 1.3 percent from the 1991 level of 16.63 million barrels per day. The expected increase has two components. First-quarter 1991 demand was low due to unusually warm weather. The forecast assumes a return to normal (colder) weather in first-quarter 1992, and therefore projects higher demand in that quarter. (Since early 1992 was in fact unusually warm, however, first-quarter petroleum demand is likely to be lower than expected.) Secondly, the rate of economic growth is assumed to increase during the course of 1992, leading to strong petroleum demand late in the year.

Demand for natural gas in 1992 is projected to continue to grow (although more slowly than in 1991), possibly reaching a total for the year of 19.7 trillion cubic feet. That projection was based on the assumption of normal weather that would have resulted in strong residential energy demand early in 1992. However, the unusually warm weather that in fact occurred may tend to lower 1992 consumption of natural gas.

Coal demand is projected to reverse its 1991 decline and to increase 1.9 percent to 907 million short tons in 1992. Demand at electric utilities, where most coal is consumed, is projected to rise because of increased demand for electricity and less generation from competing energy sources.

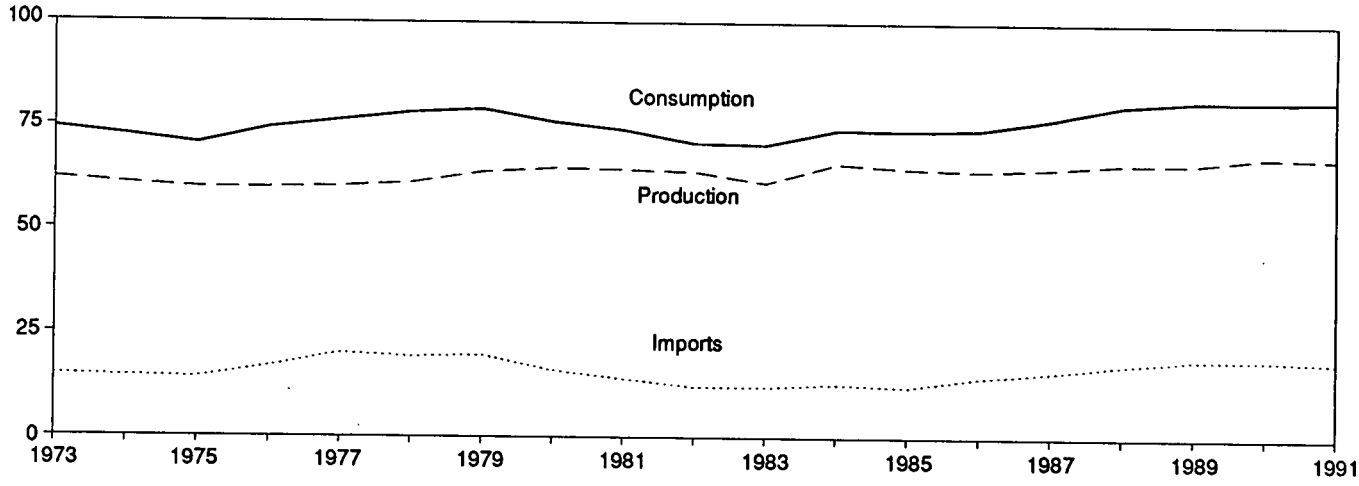
The projected 1.8-percent growth in electricity demand would bring sales of electricity in 1992 to 2.8 trillion kilowatthours. Sales of electricity to the commercial and residential sectors are projected to increase 2.5 percent and 2.2 percent, respectively, while sales to the industrial sector are projected to rise 1.1 percent.

A Note on Sources and Calculations

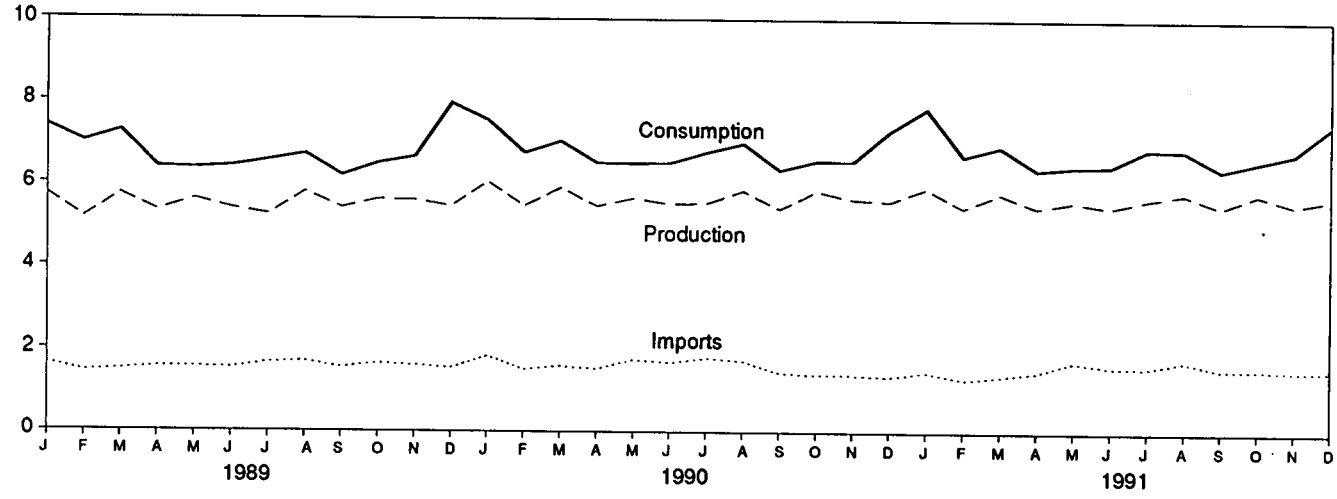
The projections cited in "The Outlook for 1992" are based on the mid-level world oil price case presented in the EIA's *Short-Term Energy Outlook*, DOE/EIA-0202(92/1Q) (Washington, DC, February 1992), pp. 1 through 6, 15, 16, 19, 23, and 28. Weather data for January 1992 come from Table 1.11 in the February 1992 issue of the *Monthly Energy Review* (*MER*) and weather data for February 1992 come from Table 1.11 in this issue of the *MER*. Historical energy data from 1973 forward come from tables elsewhere in this issue of the *MER* and from EIA calculations made on the basis of data in the tables. Calculations of percent changes are made on the basis of daily rates prior to rounding, rather than on rounded numbers cited in the text.

Figure 1.1 Energy Overview
(Quadrillion Btu)

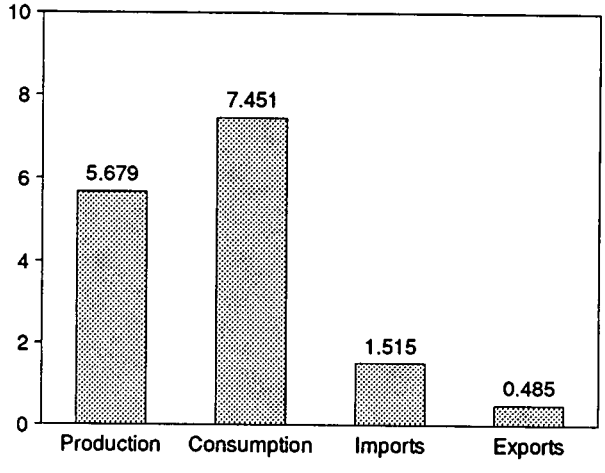
Consumption, Production, and Imports, 1973-1991



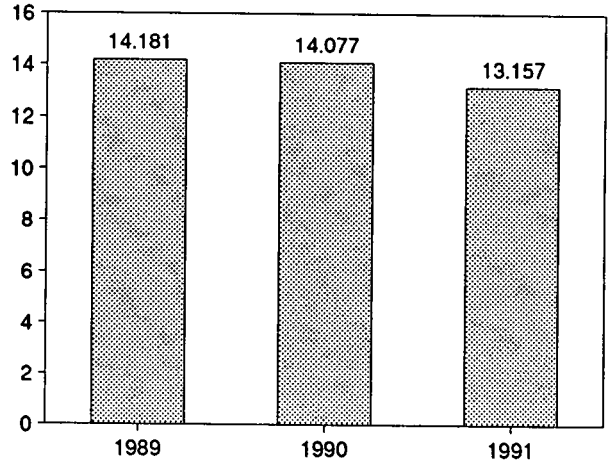
Consumption, Production, and Imports, Monthly



Overview, December 1991



Net Imports, January-December



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

Table 1.2 Energy Overview

(Quadrillion Btu)

	Production[a]	Consumption[a,b]	Imports	Exports	Net Imports
1973 Total	**62.060**	**74.282**	**14.731**	**2.051**	**12.680**
1974 Total	**60.835**	**72.543**	**14.413**	**2.223**	**12.190**
1975 Total	**59.860**	**70.546**	**14.111**	**2.359**	**11.752**
1976 Total	**59.892**	**74.362**	**16.837**	**2.188**	**14.648**
1977 Total	**60.219**	**76.288**	**20.090**	**2.071**	**18.019**
1978 Total	**61.103**	**78.089**	**19.254**	**1.931**	**17.323**
1979 Total	**63.801**	**78.898**	**19.616**	**2.870**	**16.746**
1980 Total	**64.761**	**75.955**	**15.971**	**3.723**	**12.247**
1981 Total	**64.421**	**73.990**	**13.975**	**4.329**	**9.646**
1982 Total	**63.962**	**70.848**	**12.092**	**4.633**	**7.460**
1983 Total	**61.278**	**70.524**	**R12.026**	**3.717**	**8.310**
1984 Total	**65.923**	**74.101**	**12.763**	**3.804**	**R8.958**
1985 Total	**64.840**	**73.945**	**R12.099**	**R4.230**	**7.868**
1986 Total	**64.295**	**74.237**	**14.430**	**R4.054**	**10.376**
1987 Total	**64.911**	**R76.845**	**15.755**	**3.852**	**11.903**
1988 Total	**R66.085**	**80.195**	**17.561**	**4.415**	**13.146**
1989 January	5.736	7.391	1.642	.319	1.323
February	5.170	6.995	1.452	.337	1.116
March	5.737	7.265	1.494	.404	1.090
April	5.337	6.386	1.558	.405	1.152
May	5.620	6.363	1.556	.420	1.136
June	5.401	6.410	1.535	.440	1.095
July	5.252	6.555	1.665	.327	1.338
August	5.795	6.710	1.697	.408	1.288
September	5.415	6.191	1.550	.389	1.161
October	5.618	6.488	1.649	.419	1.230
November	5.597	6.644	1.605	.460	1.145
December	5.455	7.946	1.543	.435	1.108
Total	**66.133**	**R81.348**	**18.947**	**4.766**	**14.181**
1990 January	R6.035	R7.535	1.829	.361	1.468
February	R5.462	R6.742	R1.512	.330	R1.182
March	R5.895	7.024	R1.587	.428	R1.159
April	R5.460	R6.501	1.524	.387	R1.136
May	R5.651	R6.494	R1.747	.412	R1.335
June	R5.519	R6.508	R1.679	.412	R1.267
July	R5.539	R6.763	R1.798	.386	R1.412
August	R5.833	R6.979	1.716	.438	R1.277
September	R5.405	R6.339	R1.448	.441	1.007
October	R5.830	R6.561	R1.397	.418	R.979
November	R5.639	R6.550	R1.396	.460	R.936
December	R5.585	R7.294	R1.355	.437	R.918
Total	**R67.853**	**R81.293**	**R18.987**	**4.910**	**R14.077**
1991 January	R5.898	R7.841	R1.469	R.401	R1.068
February	R5.438	R6.678	R1.285	R.462	R.823
March	R5.775	R6.911	R1.370	R.397	R.974
April	R5.446	R6.357	R1.473	.324	R1.149
May	R5.590	R6.431	R1.715	R.486	R1.229
June	R5.455	R6.450	R1.599	R.424	R1.174
July	R5.649	R6.858	R1.578	R.456	R1.122
August	R5.785	R6.836	R1.744	.444	R1.300
September	R5.471	R6.364	R1.543	R.430	1.113
October	R5.779	R6.569	R1.547	R.427	R1.119
November	R5.523	R6.764	R1.513	R.458	R1.055
December	5.679	7.451	1.515	.485	1.031
Total	**67.488**	**81.508**	**18.351**	**5.194**	**13.157**

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

[b] The sum of domestic energy production and net imports of energy does not equal domestic energy consumption. The difference is attributed to stock changes; losses and gains in conversion, transportation, and distribution; the addition of blending compounds; shipments of anthracite to U.S. Armed Forces in Europe; and adjustments to account for discrepancies between reporting systems.

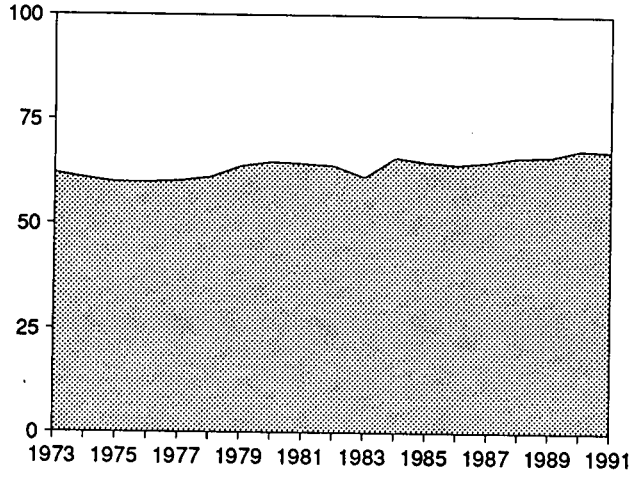
R=Revised data.

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

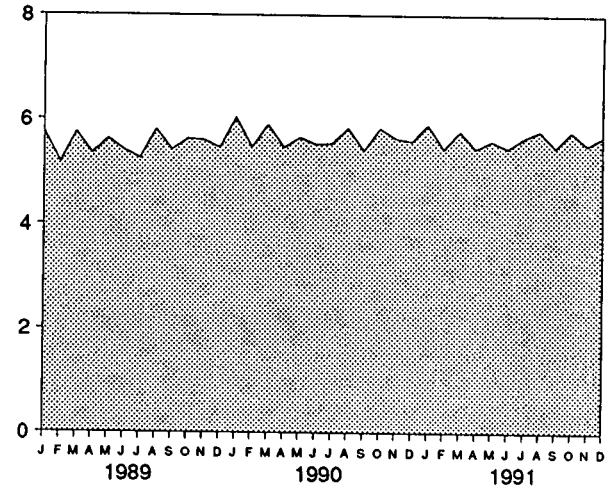
Sources: • **Production:** Table 1.3. • **Consumption:** Table 1.4. • **Imports and Exports:** Tables 3.1b, 4.2, 6.1, A3-A9, and Section 2, "Energy Consumption Notes and Sources," Notes 8 and 9. • **Net Imports:** Table 1.5.

Figure 1.2 Energy Production
(Quadrillion Btu)

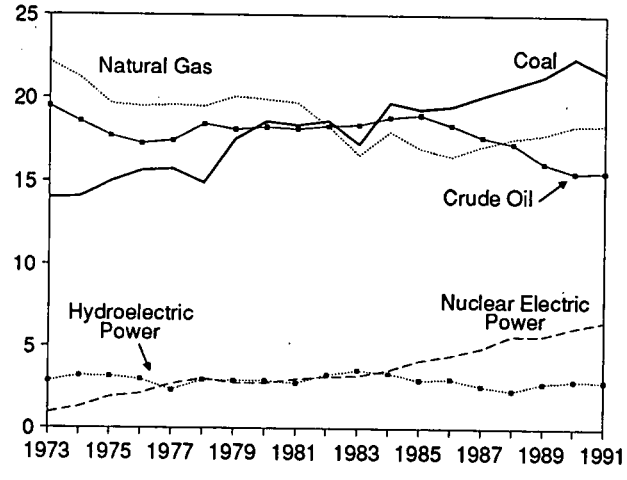
Total Production, 1973-1991



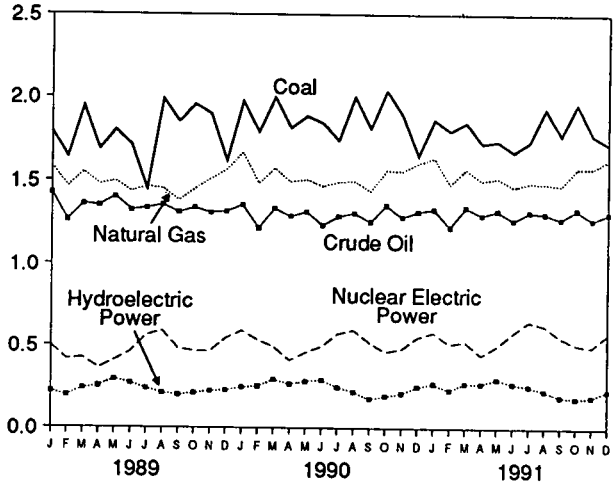
Total Production, Monthly



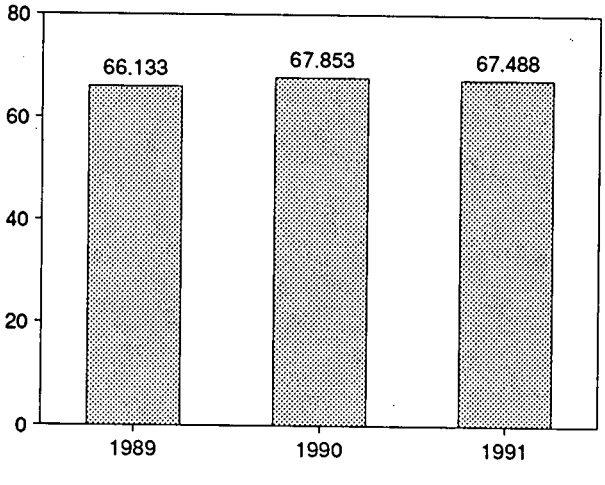
Production by Major Sources, 1973-1991



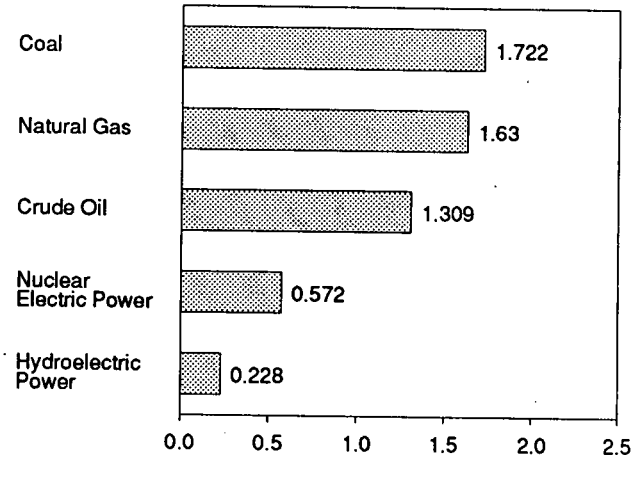
Production by Major Sources, Monthly



Total Production, January-December



Production by Major Sources, December 1991



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

Table 1.3 Energy Production by Source

(Quadrillion Btu)

	Coal	Natural Gas (Dry)	Crude Oil[a]	Natural Gas Plant Liquids	Nuclear Electric Power	Hydro-electric Power[b]	Other[c]	Total[d]
1973 Total	**13.993**	**22.187**	**19.493**	**2.569**	**0.910**	**2.861**	**0.046**	**62.060**
1974 Total	**14.074**	**21.210**	**18.575**	**2.471**	**1.272**	**3.177**	**.056**	**60.835**
1975 Total	**14.990**	**19.640**	**17.729**	**2.374**	**1.900**	**3.155**	**.072**	**59.860**
1976 Total	**15.654**	**19.480**	**17.262**	**2.327**	**2.111**	**2.976**	**.081**	**59.892**
1977 Total	**15.755**	**19.565**	**17.454**	**2.327**	**2.702**	**2.333**	**.082**	**60.219**
1978 Total	**14.910**	**19.485**	**18.434**	**2.245**	**3.024**	**2.937**	**.068**	**61.103**
1979 Total	**17.539**	**20.076**	**18.104**	**2.286**	**2.776**	**2.931**	**.089**	**63.801**
1980 Total	**18.597**	**19.908**	**18.249**	**2.254**	**2.739**	**2.900**	**.114**	**64.761**
1981 Total	**18.376**	**19.699**	**18.146**	**2.307**	**3.008**	**2.758**	**.127**	**64.421**
1982 Total	**18.639**	**18.319**	**18.309**	**2.191**	**3.131**	**3.266**	**.108**	**63.962**
1983 Total	**17.246**	**16.593**	**18.392**	**2.184**	**3.203**	**3.527**	**.133**	**61.278**
1984 Total	**19.719**	**18.007**	**18.848**	**2.274**	**3.553**	**3.348**	**.174**	**65.923**
1985 Total	**19.325**	**16.981**	**18.992**	**2.241**	**4.149**	**2.939**	**.213**	**64.840**
1986 Total	**19.510**	**16.541**	**18.376**	**2.149**	**4.471**	**3.017**	**.231**	**64.295**
1987 Total	**20.142**	**17.136**	**17.675**	**2.215**	**4.906**	**2.593**	**.244**	**64.911**
1988 Total	**20.737**	**R17.599**	**17.279**	**2.260**	**5.661**	**2.314**	**.235**	**R66.085**
1989 January	1.792	1.585	1.427	.197	.497	.219	.019	5.736
February	1.641	1.464	1.265	.172	.415	.195	.017	5.170
March	1.946	1.552	1.362	.196	.425	.237	.020	5.737
April	1.686	1.478	1.352	.192	.359	.252	.017	5.337
May	1.802	1.498	1.405	.192	.411	.293	.018	5.620
June	1.715	1.436	1.327	.173	.461	.271	.018	5.401
July	1.449	1.464	1.338	.183	.561	.237	.019	5.252
August	1.988	1.454	1.356	.178	.589	.211	.018	5.795
September	1.853	1.384	1.313	.170	.481	.198	.017	5.415
October	1.956	1.452	1.340	.175	.467	.210	.018	5.618
November	1.899	1.512	1.311	.170	.465	.221	.017	5.597
December	1.618	1.567	1.319	.159	.545	.228	.018	5.455
Total	**21.345**	**17.848**	**16.117**	**2.158**	**5.677**	**2.771**	**.217**	**66.133**
1990 January	1.976	R1.668	1.357	.183	R.589	.245	.018	R6.035
February	1.790	R1.485	1.218	.168	R.534	.252	.016	R5.462
March	1.999	R1.575	1.337	.181	R.492	.293	.018	R5.895
April	1.815	R1.494	1.289	.171	R.411	.265	.014	R5.460
May	1.888	R1.509	1.318	.178	R.459	.282	.017	R5.651
June	1.846	R1.468	1.236	.167	R.495	R.290	.017	R5.519
July	1.741	R1.494	1.290	.176	R.573	.247	.017	R5.539
August	2.004	R1.499	1.310	.187	R.595	.220	.017	R5.833
September	1.814	R1.439	1.257	.183	R.518	.178	.016	R5.405
October	2.039	R1.563	1.356	.198	R.463	.194	.017	R5.830
November	1.893	R1.560	1.285	.194	R.481	.209	.016	R5.639
December	1.651	R1.606	1.319	.190	R.551	.250	.017	R5.585
Total	**22.456**	**R18.362**	**15.571**	**R2.175**	**R6.161**	**R2.926**	**.202**	**R67.853**
1991 January	R1.867	1.639	1.334	R.193	R.581	.268	.017	R5.898
February	R1.797	1.481	1.226	R.180	R.511	.229	.014	R5.438
March	R1.850	1.572	1.345	R.197	R.525	.270	.016	R5.775
April	R1.725	1.503	1.299	R.189	R.445	R.269	.015	R5.446
May	R1.738	1.521	1.325	R.194	R.499	R.298	.015	R5.590
June	R1.673	1.465	1.267	R.184	R.579	.270	.016	R5.455
July	R1.735	1.490	1.317	.190	R.649	R.254	.016	R5.649
August	R1.933	1.486	1.308	R.191	R.624	.227	.016	R5.785
September	R1.774	1.475	1.276	.184	R.554	.192	.015	R5.471
October	R1.962	R1.578	1.332	R.197	R.509	.183	.016	R5.779
November	R1.775	R1.578	1.271	R.195	R.494	.191	.017	R5.523
December	1.722	1.630	1.309	.199	.572	.228	.017	5.679
Total	**21.552**	**18.420**	**15.609**	**2.293**	**6.543**	**2.880**	**.192**	**67.488**

[a] Includes lease condensate.
[b] Electric utility and industrial production of hydroelectric power.
[c] "Other" production is electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy.
[d] Excludes wood, waste, geothermal, wind, photovoltaic, and solar thermal energy, except for small amounts used by electric utilities to generate electricity for distribution.

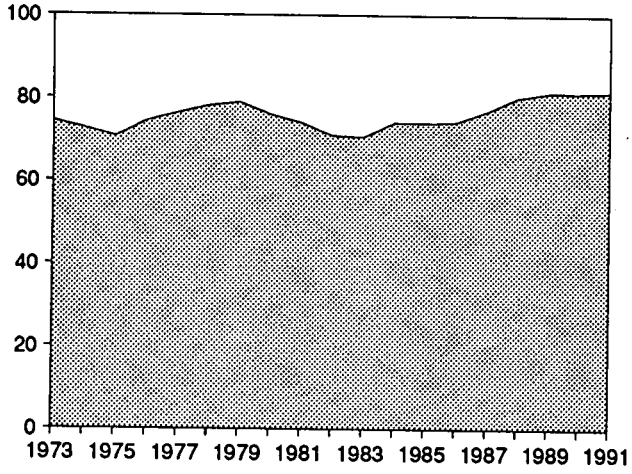
R=Revised data.

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

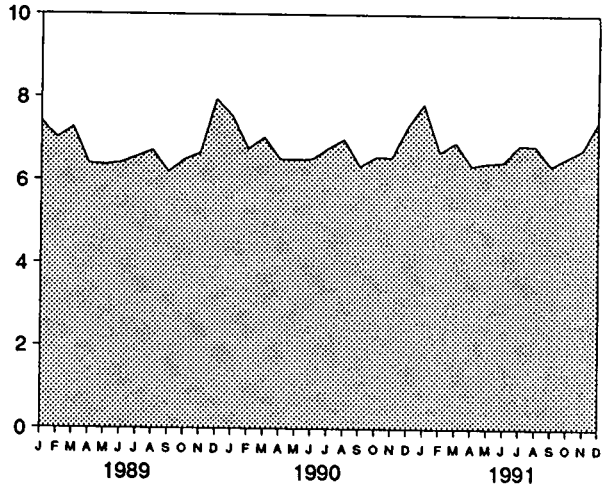
Sources: • **Coal:** Tables 6.1 and A6-A8. • **Natural Gas (Dry):** Tables 4.1 and A5. • **Crude Oil and Natural Gas Plant Liquids:** Tables 3.1a and A3. • **Nuclear Electric Power:** Tables 7.1 and A9. • **Hydroelectric Power:** Table 7.1; Section 2, "Energy Consumption Notes and Sources," Note 7; and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

Figure 1.3 Energy Consumption
(Quadrillion Btu)

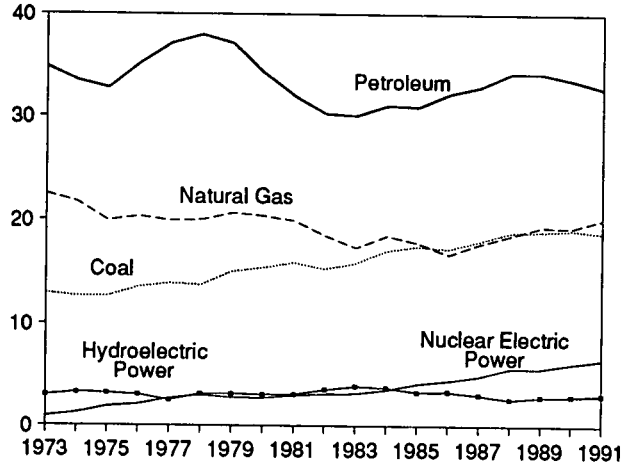
Total Consumption, 1973-1991



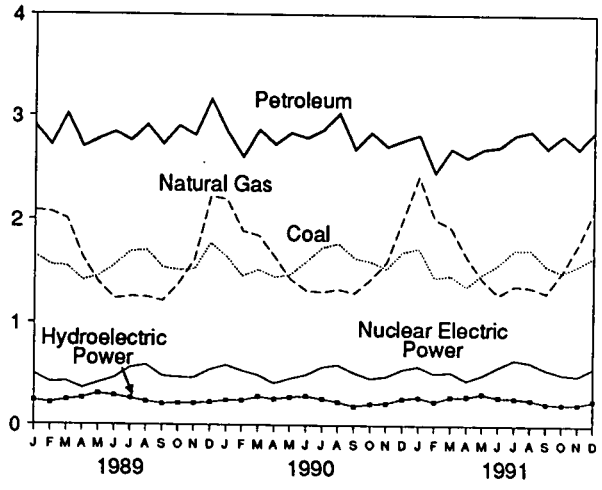
Total Consumption, Monthly



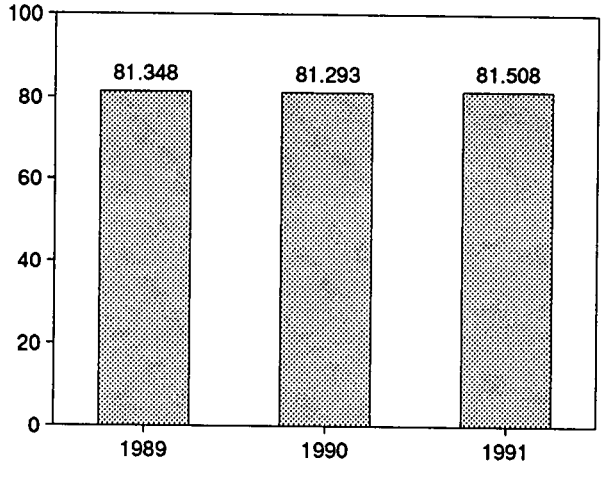
Consumption by Major Sources, 1973-1991



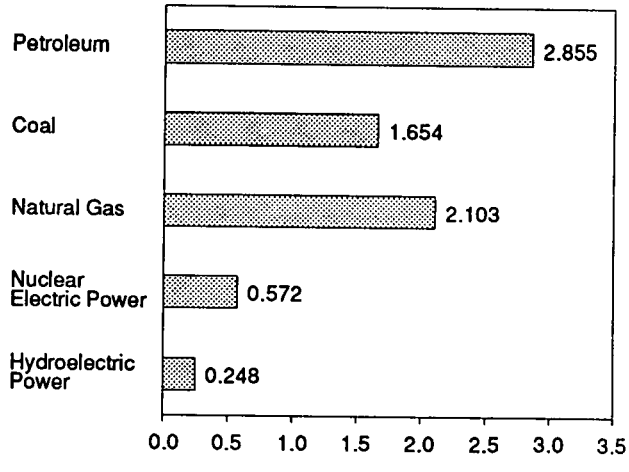
Consumption by Major Sources, Monthly



Total Consumption, January-December



Consumption by Major Sources, December 1991



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

Table 1.4 Energy Consumption by Source

(Quadrillion Btu)

	Coal	Natural Gas[a]	Petroleum	Nuclear Electric Power	Hydro-electric Power[b]	Other[c]	Total[d]
1973 Total	12.971	22.512	34.840	0.910	3.010	0.039	74.282
1974 Total	12.663	21.732	33.455	1.272	3.309	.112	72.543
1975 Total	12.663	19.948	32.731	1.900	3.219	.086	70.546
1976 Total	13.584	20.345	35.175	2.111	3.066	.081	74.362
1977 Total	13.922	19.931	37.122	2.702	2.515	.097	76.288
1978 Total	13.765	20.000	37.965	3.024	3.141	.193	78.089
1979 Total	15.039	20.666	37.123	2.776	3.141	.152	78.898
1980 Total	15.423	20.394	34.202	2.739	3.118	.079	75.955
1981 Total	15.907	19.928	31.931	3.008	3.105	.111	73.990
1982 Total	15.322	18.505	30.231	3.131	3.572	.086	70.848
1983 Total	15.894	17.357	30.054	3.203	3.899	.118	70.524
1984 Total	17.070	18.507	31.051	3.553	3.757	.163	74.101
1985 Total	17.478	17.834	30.922	4.149	3.363	.199	73.945
1986 Total	17.262	16.708	32.196	4.471	3.385	.215	74.237
1987 Total	18.008	R17.745	32.865	4.906	3.068	.253	R76.845
1988 Total	18.846	18.552	34.222	5.661	2.639	.274	80.195
1989 January	1.652	2.087	2.896	.497	.234	.026	7.391
February	1.561	2.071	2.714	.415	.214	.019	6.995
March	1.549	2.007	3.017	.425	.243	.023	7.265
April	1.412	1.631	2.698	.359	.262	.024	6.386
May	1.456	1.392	2.775	.411	.306	.024	6.363
June	1.561	1.239	2.840	.461	.287	.022	6.410
July	1.694	1.259	2.759	.561	.259	.022	6.555
August	1.705	1.255	2.912	.589	.229	.021	6.710
September	1.540	1.219	2.726	.481	.207	.019	6.191
October	1.514	1.381	2.902	.467	.210	.014	6.488
November	1.524	1.617	2.810	.465	.212	.016	6.644
December	1.776	2.224	3.163	.545	.223	.016	7.946
Total	18.944	R19.384	34.211	5.677	2.884	.248	R81.348
1990 January	R1.643	2.198	2.846	R.589	R.242	.018	R7.535
February	R1.458	R1.891	2.602	R.534	.241	.016	R6.742
March	R1.521	1.849	2.866	R.492	.278	.019	7.024
April	R1.447	1.647	2.724	R.411	.258	.014	R6.501
May	R1.475	R1.430	2.837	R.459	.276	.017	R6.494
June	R1.602	R1.323	2.786	R.495	R.285	.018	R6.508
July	R1.737	1.308	2.866	R.573	.259	.021	R6.763
August	R1.773	R1.336	3.028	R.595	.230	.017	R6.979
September	R1.637	1.300	2.680	R.518	.187	.017	R6.339
October	R1.602	R1.428	2.841	R.463	.210	.018	R6.561
November	R1.533	R1.592	2.710	R.481	.219	.015	R6.550
December	R1.694	R2.001	2.767	R.551	.263	.018	R7.294
Total	R19.122	R19.304	33.553	R6.161	R2.946	.207	R81.293
1991 January	R1.730	2.417	R2.819	R.581	R.277	.018	R7.841
February	R1.446	2.015	R2.456	R.511	.235	.015	R6.678
March	R1.467	1.932	R2.689	R.525	.280	.018	R6.911
April	R1.363	1.647	R2.602	R.445	.284	.016	R6.357
May	R1.486	1.430	R2.688	R.499	.311	.016	R6.431
June	R1.582	1.288	R2.709	R.579	.278	.015	R6.450
July	R1.720	1.375	R2.824	R.649	.271	.019	R6.858
August	R1.720	1.360	R2.861	R.624	.256	.014	R6.836
September	R1.565	1.306	R2.699	R.554	.220	.019	R6.364
October	R1.502	R1.510	R2.821	R.509	.211	.015	R6.569
November	R1.571	R1.775	R2.695	R.494	.211	.018	R6.764
December	1.654	2.103	2.855	.572	.248	.017	7.451
Total	18.807	20.156	32.720	6.543	3.082	.201	81.508

[a] Includes supplemental gaseous fuels.

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

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

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

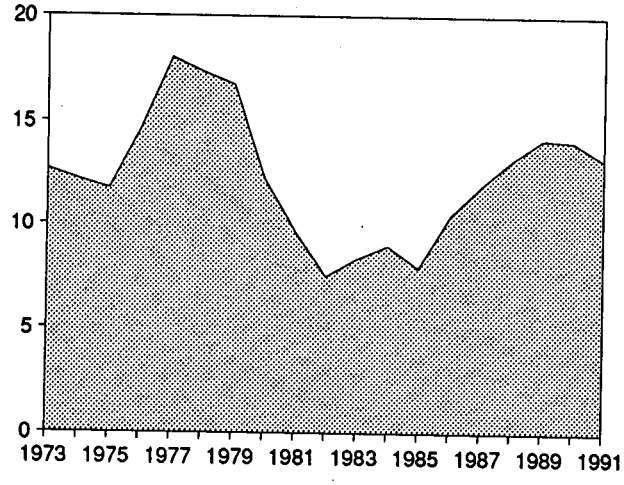
R=Revised data.

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

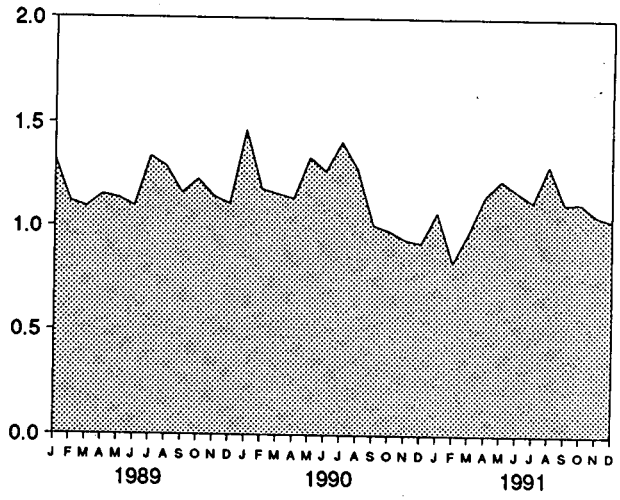
Sources: • **Coal:** Tables 6.1 and A6-A8. • **Natural Gas:** Tables 4.2 and A5. • **Petroleum:** Tables 3.1a and A4. • **Nuclear Electric Power:** Tables 7.1 and A9. • **Hydroelectric Power:** Table 7.1; Section 2, "Energy Consumption Notes and Sources," Note 8; and Table A9. • **Other:** Section 2,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

Figure 1.4 Energy Net Imports
(Quadrillion Btu, Except as Noted)

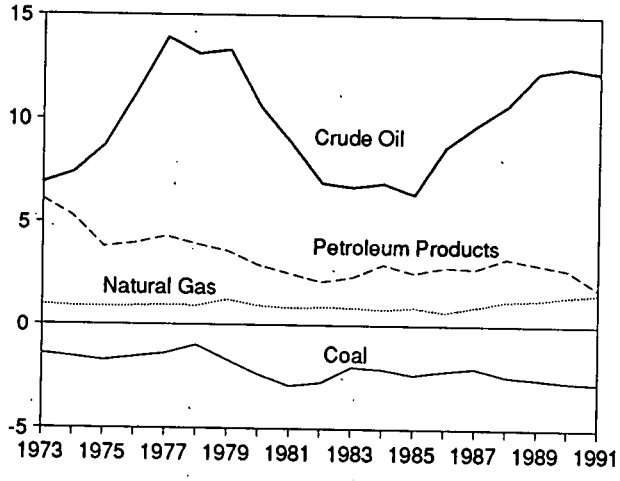
Total Net Imports, 1973-1991



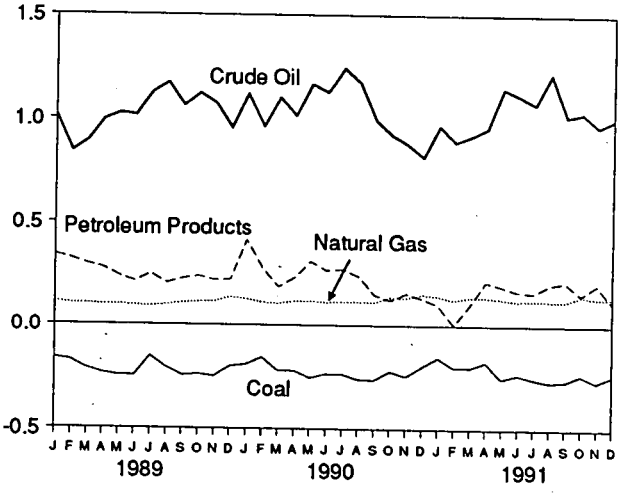
Net Imports, Monthly



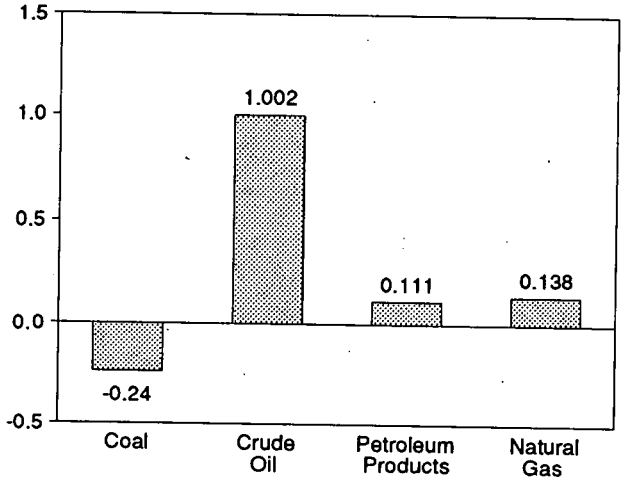
Net Imports by Major Sources, 1973-1991



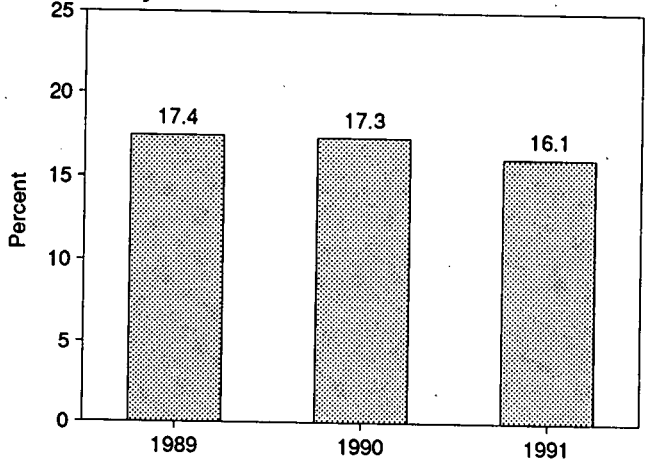
Net Imports by Major Sources, Monthly



Net Imports by Major Sources, December 1991



Net Imports as Share of Consumption, January-December



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

Table 1.5 Energy Net Imports by Source

(Quadrillion Btu)

	Coal	Natural Gas	Crude Oil[a]	Petroleum Products[b]	Electricity[c]	Coal Coke	Total
1973 Total	**-1.422**	**0.981**	**6.883**	**6.097**	**0.148**	**-0.007**	**12.680**
1974 Total	**-1.568**	**.907**	**7.389**	**5.273**	**.133**	**.056**	**12.190**
1975 Total	**-1.738**	**.904**	**8.708**	**3.800**	**.064**	**.014**	**11.752**
1976 Total	**-1.567**	**.922**	**11.221**	**3.982**	**.089**	**(s)**	**14.648**
1977 Total	**-1.401**	**.981**	**13.921**	**4.321**	**.182**	**.015**	**18.019**
1978 Total	**-1.004**	**.941**	**13.125**	**3.932**	**.204**	**.125**	**17.323**
1979 Total	**-1.702**	**1.243**	**13.328**	**3.603**	**.211**	**.063**	**16.746**
1980 Total	**-2.391**	**.957**	**10.586**	**2.912**	**.217**	**-.035**	**12.247**
1981 Total	**-2.918**	**.857**	**8.854**	**2.522**	**.347**	**-.016**	**9.646**
1982 Total	**-2.768**	**.898**	**6.917**	**2.128**	**.306**	**-.022**	**7.460**
1983 Total	**-2.013**	**.885**	**6.731**	**2.351**	**.372**	**-.016**	**8.310**
1984 Total	**-2.119**	**.792**	**6.918**	**2.970**	**.409**	**-.011**	**R8.958**
1985 Total	**-2.389**	**.896**	**6.381**	**2.570**	**.423**	**-.013**	**7.868**
1986 Total	**-2.193**	**.686**	**8.676**	**2.855**	**.368**	**-.017**	**10.376**
1987 Total	**-2.049**	**.937**	**9.748**	**2.784**	**.475**	**.009**	**11.903**
1988 Total	**-2.446**	**1.221**	**10.698**	**3.308**	**.325**	**.040**	**13.146**
1989 January	-.163	.112	1.012	.340	.014	.007	1.323
February	-.173	.103	.843	.321	.019	.002	1.116
March	-.211	.102	.894	.295	.006	.003	1.090
April	-.234	.099	.994	.276	.010	.007	1.152
May	-.246	.100	1.025	.238	.012	.006	1.136
June	-.247	.095	1.016	.210	.016	.004	1.095
July	-.153	.092	1.125	.248	.022	.004	1.338
August	-.206	.099	1.173	.202	.018	.003	1.288
September	-.245	.108	1.062	.224	.009	.002	1.161
October	-.239	.113	1.122	.237	(s)	-.004	1.230
November	-.249	.115	1.073	.217	-.009	-.001	1.145
December	-.199	.137	.956	.221	-.005	-.002	1.108
Total	**-2.566**	**1.278**	**12.296**	**3.029**	**.113**	**.030**	**14.181**
1990 January	-.191	.127	R1.119	.415	-.003	(s)	1.468
February	-.157	.111	R.963	.276	-.011	(s)	R1.182
March	-.220	.106	R1.101	.186	-.015	.001	R1.159
April	-.220	.118	R1.015	.231	-.007	-.001	R1.136
May	-.254	.118	R1.167	.310	-.006	(s)	R1.335
June	-.235	.112	R1.128	.266	-.005	.001	R1.267
July	-.236	.116	R1.245	.272	.011	.003	R1.412
August	-.261	.114	R1.175	.239	.010	-.001	R1.277
September	-.263	.114	R.996	.150	.009	.001	1.007
October	-.222	.138	R.925	.123	.015	.001	R.979
November	-.246	.136	R.881	.157	.010	-.001	R.936
December	-.198	.151	R.819	.133	.013	.001	R.918
Total	**-2.705**	**1.463**	**R12.536**	**2.757**	**.020**	**.005**	**R14.077**
1991 January	-.156	R.145	R.969	R.102	E.008	.001	R1.068
February	-.202	.125	R.891	R.003	E.006	.001	R.823
March	-.203	R.140	R.921	R.103	E.011	.002	R.974
April	-.176	.139	R.957	R.213	E.015	.001	R1.149
May	-.256	R.131	R1.148	R.192	E.014	.001	R1.229
June	-.236	.122	R1.114	R.168	E.008	-.001	R1.174
July	-.256	R.125	R1.072	R.160	E.017	.003	R1.122
August	-.270	R.122	R1.219	R.201	E.029	-.002	R1.300
September	-.267	R.120	R1.015	R.213	E.028	.004	1.113
October	-.237	R.147	R1.031	R.151	E.028	-.001	R1.119
November	-.270	R.136	R.967	R.202	E.019	.001	R1.055
December	-.240	.138	1.002	.111	E.020	(s)	1.031
Total	**-2.769**	**1.589**	**12.307**	**1.819**	**E.202**	**.009**	**13.157**

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

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

[c] Assumed to be hydroelectricity and estimated at the average input heat rate for fossil-fuel steam-electric power plant generation, which has ranged from 10.2 thousand Btu to 10.5 thousand Btu per kilowatthour since 1973. Actual heat rates applied in converting kilowatthours to Btu are listed by year in Table A9.

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

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

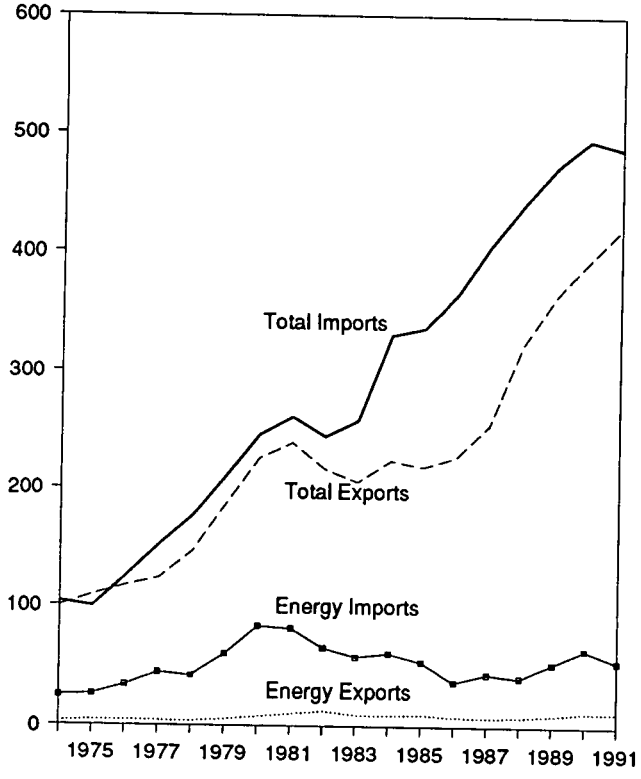
• Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Sources: • **Coal:** Tables 6.1 and A6-A8. • **Natural Gas:** Tables 4.2 and A5. • **Crude Oil and Petroleum Products:** Tables 3.1b and A3.

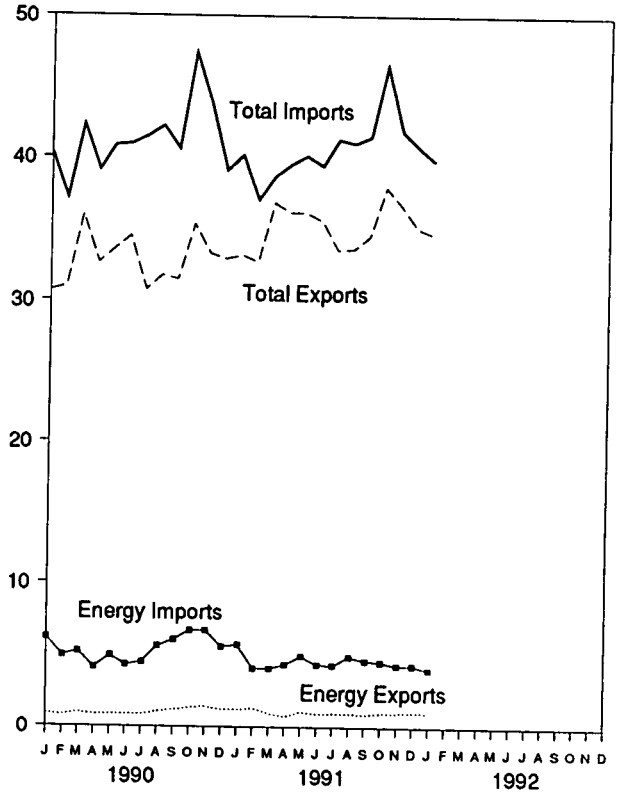
• **Electricity:** Section 2, "Energy Consumption Notes and Sources," Note 8, and Table A9. • **Coal Coke:** Section 2, "Energy Consumption Notes and Sources," Note 9, and Table A8.

Figure 1.5 Merchandise Trade Value
(Billion Dollars)

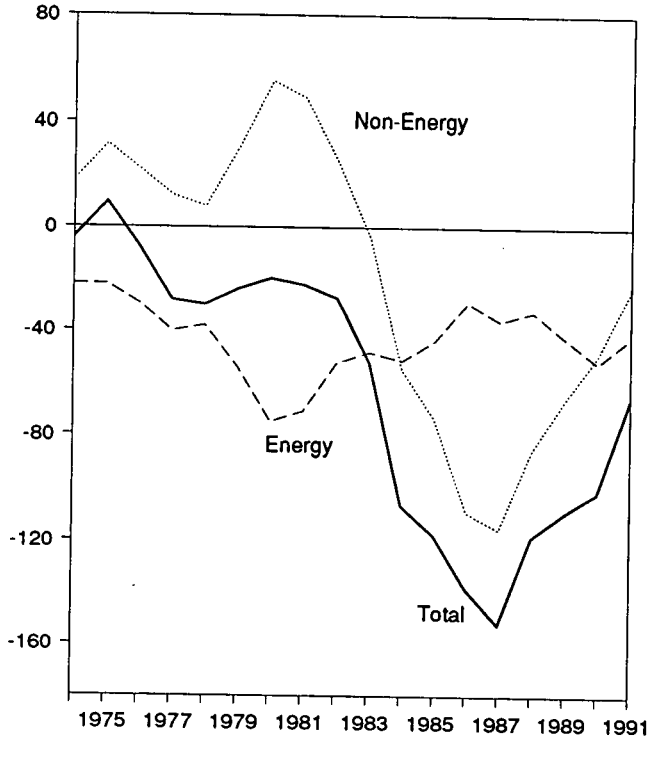
Imports and Exports, 1974-1991



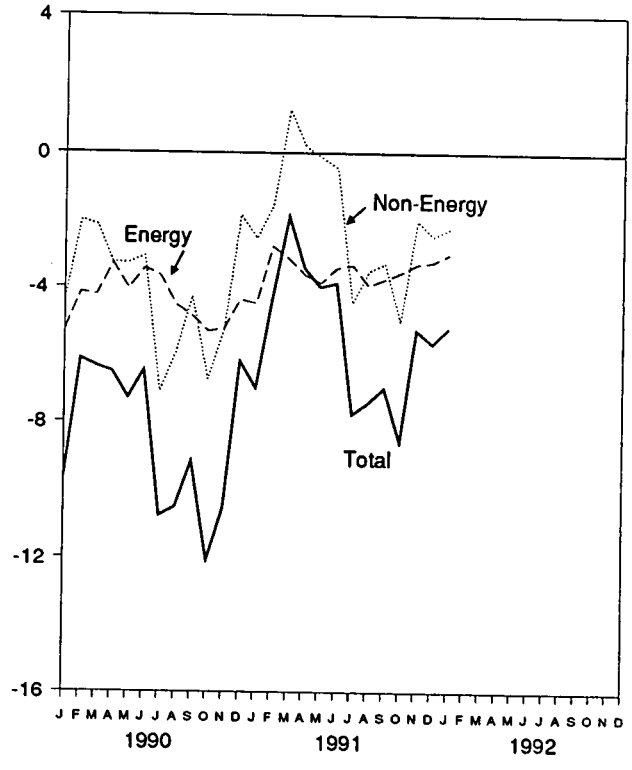
Imports and Exports, Monthly



Trade Balance, 1974-1991



Trade Balance, Monthly



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

Table 1.6 Merchandise Trade Value

(Million Dollars)

	Petroleum			Energy			Non-Energy Balance	Total Merchandise		
	Exports	Imports	Balance	Exports	Imports	Balance		Exports	Imports	Balance
1974 Total	**792**	**24,668**	**-23,876**	**3,444**	**25,454**	**-22,010**	**18,126**	**99,437**	**103,321**	**-3,884**
1975 Total	**907**	**25,197**	**-24,289**	**4,470**	**26,476**	**-22,006**	**31,557**	**108,856**	**99,305**	**9,551**
1976 Total	**998**	**32,226**	**-31,228**	**4,226**	**33,996**	**-29,770**	**21,950**	**116,794**	**124,614**	**-7,820**
1977 Total	**1,276**	**42,368**	**-41,093**	**4,184**	**44,537**	**-40,354**	**12,001**	**123,182**	**151,534**	**-28,353**
1978 Total	**1,561**	**39,526**	**-37,965**	**3,881**	**42,096**	**-38,215**	**8,010**	**145,847**	**176,052**	**-30,205**
1979 Total	**1,914**	**56,715**	**-54,801**	**5,621**	**59,998**	**-54,377**	**30,455**	**186,363**	**210,285**	**-23,922**
1980 Total	**2,833**	**78,637**	**-75,803**	**7,982**	**82,924**	**-74,942**	**55,246**	**225,566**	**245,262**	**-19,696**
1981 Total	**3,696**	**76,659**	**-72,963**	**10,279**	**81,360**	**-71,081**	**48,814**	**238,715**	**260,982**	**-22,267**
1982 Total	**5,947**	**60,458**	**-54,511**	**12,729**	**65,409**	**-52,680**	**25,170**	**216,442**	**243,952**	**-27,510**
1983 Total	**4,557**	**53,217**	**-48,659**	**9,500**	**57,952**	**-48,452**	**-3,957**	**205,639**	**258,048**	**-52,409**
1984 Total	**4,470**	**56,924**	**-52,454**	**9,311**	**60,980**	**-51,669**	**-55,033**	**223,976**	**330,678**	**-106,703**
1985 Total	**4,707**	**50,475**	**-45,768**	**9,971**	**53,917**	**-43,946**	**-73,765**	**218,815**	**336,526**	**-117,712**
1986 Total	**3,640**	**35,142**	**-31,503**	**8,115**	**37,310**	**-29,195**	**-109,084**	**227,159**	**365,438**	**-138,279**
1987 Total	**3,922**	**42,285**	**-38,363**	**7,713**	**44,220**	**-36,506**	**-115,613**	**254,122**	**406,241**	**-152,119**
1988 Total	**3,693**	**38,787**	**-35,094**	**8,235**	**41,042**	**-32,807**	**-85,720**	**322,426**	**440,952**	**-118,526**
1989 January	403	3,505	-3,102	678	3,816	-3,138	-5,501	27,541	36,179	-8,639
February	337	3,276	-2,938	673	3,567	-2,894	-5,728	27,927	36,549	-8,622
March	372	3,751	-3,379	783	4,024	-3,241	-3,712	33,243	40,197	-6,954
April	384	4,170	-3,786	814	4,392	-3,578	-3,613	31,052	38,243	-7,191
May	435	4,789	-4,354	905	5,057	-4,152	-5,311	31,496	40,959	-9,463
June	413	4,275	-3,862	854	4,523	-3,670	-5,054	31,820	40,544	-8,724
July	384	4,397	-4,013	676	4,629	-3,953	-6,629	28,708	39,290	-10,582
August	487	4,665	-4,178	865	4,925	-4,060	-6,975	29,406	40,440	-11,034
September	407	3,846	-3,439	852	4,074	-3,222	-5,749	29,710	38,680	-8,971
October	411	4,519	-4,108	853	4,757	-3,904	-7,876	31,756	43,536	-11,780
November	523	4,387	-3,864	990	4,616	-3,626	-7,128	30,279	41,033	-10,754
December	466	4,125	-3,660	885	4,430	-3,545	-3,142	30,874	37,561	-6,687
Total	**5,021**	**49,704**	**-44,683**	*** 9,869**	*** 52,779**	*** -42,910**	*** -66,490**	**363,812**	**473,211**	**-109,399**
1990 January	486	5,923	-5,437	881	6,171	-5,290	-4,349	30,664	40,304	-9,640
February	436	4,704	-4,269	781	4,938	-4,157	-1,993	30,962	37,112	-6,150
March	514	4,867	-4,352	976	5,205	-4,229	-2,140	35,971	42,339	-6,369
April	392	3,970	-3,578	828	4,101	-3,274	-3,253	32,617	39,144	-6,527
May	390	4,650	-4,259	872	4,913	-4,041	-3,267	33,539	40,846	-7,308
June	388	4,062	-3,674	866	4,286	-3,420	-3,056	34,470	40,946	-6,476
July	385	4,238	-3,853	837	4,482	-3,645	-7,114	30,736	41,495	-10,759
August	568	5,380	-4,812	1,055	5,601	-4,546	-5,963	31,723	42,232	-10,509
September	682	5,797	-5,115	1,175	6,050	-4,875	-4,282	31,444	40,602	-9,157
October	893	6,331	-5,438	1,332	6,659	-5,327	-6,758	35,310	47,395	-12,085
November	961	6,371	-5,410	1,426	6,673	-5,247	-5,282	33,267	43,796	-10,529
December	807	5,292	-4,485	1,204	5,581	-4,377	-1,834	32,889	39,100	-6,211
Total	**6,901**	**61,583**	**-54,682**	**12,233**	**64,661**	**-52,428**	**-49,290**	**393,592**	**495,311**	**-101,718**
1991 January	896	5,394	-4,497	1,206	5,696	-4,490	-2,527	33,150	40,167	-7,017
February	907	3,754	-2,847	1,305	4,072	-2,767	-1,565	32,683	37,016	-4,333
March	556	3,814	-3,257	938	4,057	-3,119	1,246	36,797	38,670	-1,873
April	389	4,055	-3,666	732	4,340	-3,608	189	36,110	39,529	-3,419
May	604	4,656	-4,052	1,067	4,927	-3,860	-126	36,136	40,121	-3,986
June	503	4,111	-3,608	925	4,337	-3,413	-449	35,573	39,435	-3,861
July	505	4,041	-3,536	971	4,290	-3,319	-4,457	33,507	41,283	-7,776
August	465	4,637	-4,173	956	4,890	-3,934	-3,506	33,584	41,024	-7,440
September	427	4,367	-3,941	893	4,632	-3,739	-3,259	34,508	41,506	-6,997
October	559	4,247	-3,688	979	4,524	-3,545	-5,045	37,923	46,513	-8,590
November	540	4,026	-3,486	1,008	4,293	-3,285	-1,992	36,581	41,858	-5,277
December	615	4,019	-3,404	1,054	4,285	-3,231	R -2,457	R 35,063	R 40,750	R -5,687
Total	**6,966**	**51,120**	**-44,154**	**12,033**	**54,343**	**-42,309**	**R -23,947**	**R 421,614**	**R 487,870**	**R -66,256**
1992 January	604	3,654	-3,050	1,001	3,992	-2,991	-2,224	34,600	39,815	-5,216

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

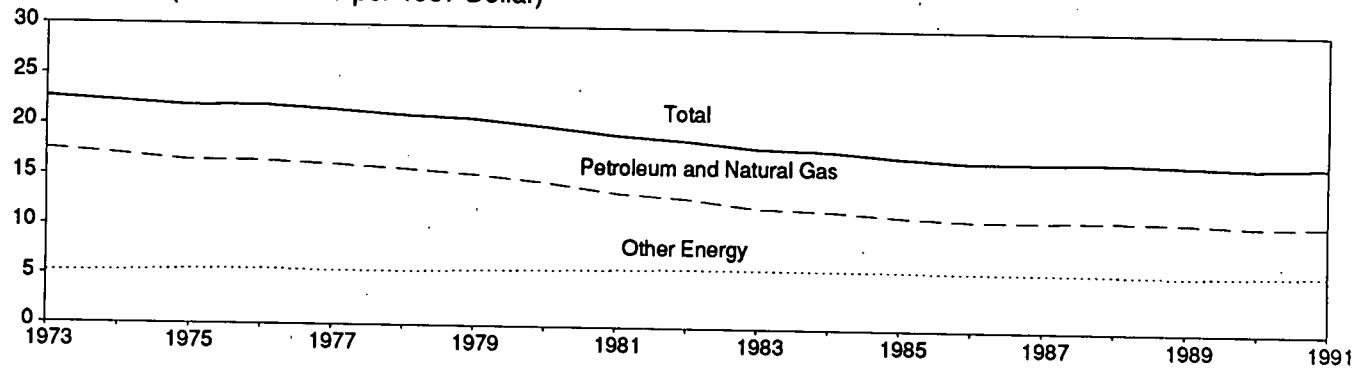
R=Revised data.

Notes: • Monthly data are not adjusted for seasonal variations. • The U.S. import statistics reflect both government and nongovernment imports of merchandise from foreign countries into the U.S. customs territory, which comprises the 50 States, the District of Columbia, Puerto Rico, and the Virgin Islands. • See Note 5 at end of section. • Totals may not equal sum of components due to independent rounding.

Sources: See end of section.

Figure 1.6 Energy Consumption per Dollar of Gross Domestic Product

(Thousand Btu per 1987 Dollar)



Source: Table 1.7.

Table 1.7 Energy Consumption per Dollar of Gross Domestic Product

(Seasonally Adjusted at Annual Rates)

	Energy Consumption			Gross Domestic Product (GDP)	Energy Consumption per Dollar of GDP		
	Petroleum and Natural Gas	Other Energy	Total[a]		Petroleum and Natural Gas	Other Energy	Total
	Quadrillion Btu			Trillion 1987 Dollars	Thousand Btu per 1987 Dollar		
1973 Year	57.352	16.930	74.282	3.269	17.5	5.2	22.7
1974 Year	55.187	17.356	72.543	3.248	17.0	5.3	22.3
1975 Year	52.678	17.868	70.546	3.222	16.4	5.5	21.9
1976 Year	55.520	18.842	74.362	3.381	16.4	5.6	22.0
1977 Year	57.053	19.235	76.288	3.533	16.1	5.4	21.6
1978 Year	57.966	20.123	78.089	3.704	15.7	5.4	21.1
1979 Year	57.789	21.109	78.898	3.797	15.2	5.6	20.8
1980 Year	54.596	21.359	75.955	3.776	14.5	5.7	20.1
1981 Year	51.859	22.131	73.990	3.843	13.5	5.8	19.3
1982 Year	48.736	22.112	70.848	3.760	13.0	5.9	18.8
1983 Year	47.411	23.113	70.524	3.907	12.1	5.9	18.1
1984 Year	49.558	24.543	74.101	4.149	11.9	5.9	17.9
1985 Year	48.756	25.189	73.945	4.280	11.4	5.9	17.3
1986 Year	48.904	25.333	74.237	4.405	11.1	5.8	16.9
1987 Year	R50.610	26.235	R76.845	4.540	11.1	5.8	16.9
1988 Year	52.775	27.420	80.195	4.719	11.2	5.8	17.0
1989 1st Quarter	54.000	27.432	81.432	4.810	11.2	5.7	16.9
2nd Quarter	53.567	27.692	81.259	4.832	11.1	5.7	16.8
3rd Quarter	52.151	27.574	79.725	4.846	10.8	5.7	16.5
4th Quarter	54.655	28.315	82.970	4.860	11.2	5.8	17.1
Year	R53.595	27.753	R81.348	4.837	11.1	5.7	16.8
1990 1st Quarter	R51.891	R28.178	R80.069	4.881	10.6	5.8	16.4
2nd Quarter	R54.136	28.478	R82.614	4.900	11.0	5.8	16.9
3rd Quarter	R53.588	R28.450	R82.038	4.903	10.9	5.8	16.7
4th Quarter	R51.794	R28.637	R80.431	4.855	10.7	5.9	16.6
Year	R52.857	R28.436	R81.293	4.885	10.8	5.8	16.6
1991 1st Quarter	R52.183	R28.332	R80.515	4.824	R10.8	5.9	16.7
2nd Quarter	R52.544	R28.999	R81.543	4.841	10.9	6.0	R16.8
3rd Quarter	R53.290	R28.712	R82.002	4.863	11.0	5.9	16.9
4th Quarter	53.476	28.482	81.958	4.868	11.0	5.9	16.8
Year	52.876	28.632	81.508	4.849	10.9	5.9	16.8

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

R=Revised data.

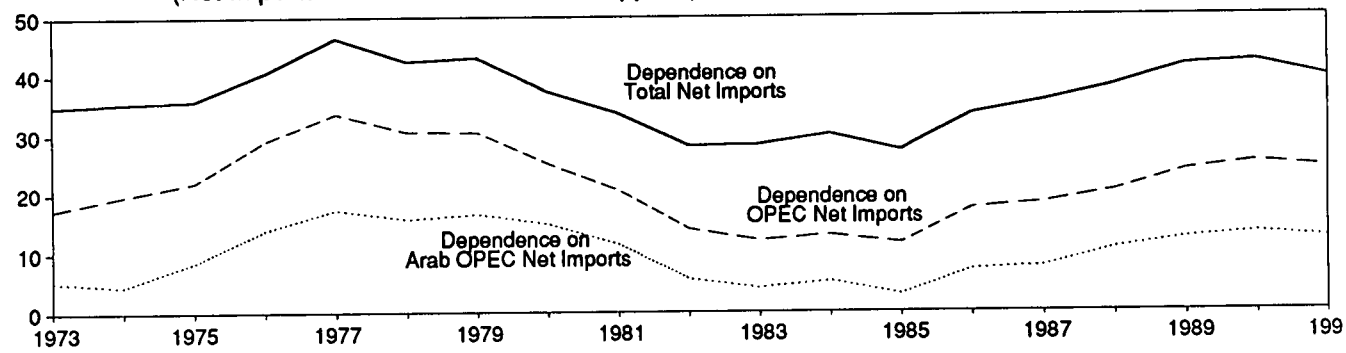
Notes: • Quarterly data are seasonally adjusted and shown at annual rates. • Geographic coverage is the 50 States and the District of Columbia. • Yearly data may not equal average of quarters due to seasonality adjustments and independent rounding.

Sources: • **Energy Consumption:** Table 1.4. • **Gross Domestic Product: 1973-1990**—U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, November 1991, Table 2. **1991 forward:** U.S. Department of Commerce, Bureau of Economic Analysis, *United States Department of Commerce News*, March 26, 1992, Table 2.

The constant-dollar base period has been changed from 1982 to 1987, and gross national product has been replaced by gross domestic product. See box on page 21 for details.

Figure 1.7 U.S. Dependence on Petroleum Net Imports

(Net Imports as Percent of Product Supplied)



Source: Table 1.8.

Table 1.8 U.S. Dependence on Petroleum Net Imports

Annual Rate	Net Imports[a]			Petroleum Products Supplied	Net Imports as Percent of U.S. Petroleum Products Supplied		
	From Arab OPEC[b]	From OPEC[c]	From All Countries		From Arab OPEC[b]	From OPEC[c]	From All Countries
	Thousand Barrels per Day				Percent		
1973 Average	**914**	**2,991**	**6,025**	**17,308**	**5.3**	**17.3**	**34.8**
1974 Average	**752**	**3,277**	**5,892**	**16,653**	**4.5**	**19.7**	**35.4**
1975 Average	**1,382**	**3,599**	**5,846**	**16,322**	**8.5**	**22.0**	**35.8**
1976 Average	**2,423**	**5,063**	**7,090**	**17,461**	**13.9**	**29.0**	**40.6**
1977 Average	**3,184**	**6,190**	**8,565**	**18,431**	**17.3**	**33.6**	**46.5**
1978 Average	**2,962**	**5,747**	**8,002**	**18,847**	**15.7**	**30.5**	**42.5**
1979 Average	**3,054**	**5,633**	**7,985**	**18,513**	**16.5**	**30.4**	**43.1**
1980 Average	**2,549**	**4,293**	**6,365**	**17,056**	**14.9**	**25.2**	**37.3**
1981 Average	**1,844**	**3,315**	**5,401**	**16,058**	**11.5**	**20.6**	**33.6**
1982 Average	**852**	**2,136**	**4,298**	**15,296**	**5.6**	**14.0**	**28.1**
1983 Average	**630**	**1,843**	**4,312**	**15,231**	**4.1**	**12.1**	**28.3**
1984 Average	**817**	**2,037**	**4,715**	**15,726**	**5.2**	**13.0**	**30.0**
1985 Average	**470**	**1,821**	**4,286**	**15,726**	**3.0**	**11.6**	**27.3**
1986 Average	**1,160**	**2,828**	**5,439**	**16,281**	**7.1**	**17.4**	**33.4**
1987 Average	**1,272**	**3,053**	**5,914**	**16,665**	**7.6**	**18.3**	**35.5**
1988 Average	**1,837**	**3,513**	**6,587**	**17,283**	**10.6**	**20.3**	**38.1**
1989 1st Quarter	2,046	3,911	7,080	17,719	11.5	22.1	40.0
2nd Quarter	2,055	4,015	7,084	16,885	12.2	23.8	42.0
3rd Quarter	2,318	4,383	7,512	16,870	13.7	26.0	44.5
4th Quarter	2,091	4,180	7,127	17,830	11.7	23.4	40.0
Average	**2,128**	**4,124**	**7,202**	**17,325**	**12.3**	**23.8**	**41.6**
1990 1st Quarter	2,420	4,617	7,721	17,072	14.2	27.0	45.2
2nd Quarter	2,245	4,397	7,733	16,952	13.2	25.9	45.6
3rd Quarter	2,514	4,621	7,565	17,223	14.6	26.8	43.9
4th Quarter	1,795	3,513	5,643	16,708	10.7	21.0	33.8
Average	**2,243**	**4,285**	**7,161**	**16,988**	**13.2**	**25.2**	**42.2**
1991 1st Quarter	1,957	3,699	5,633	16,427	11.9	22.5	34.3
2nd Quarter	2,253	4,256	7,083	16,319	13.8	26.1	43.4
3rd Quarter	2,026	4,217	7,168	16,918	12.0	24.9	42.4
4th Quarter	1,958	3,954	6,401	16,891	11.6	23.4	37.9
Average	**2,048**	**4,033**	**6,575**	**16,641**	**12.3**	**24.2**	**39.5**

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

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

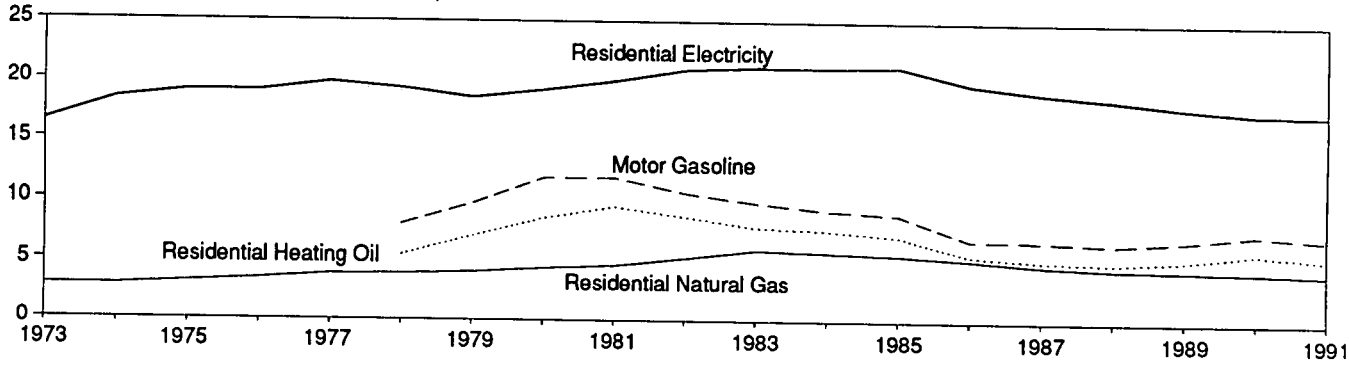
[c] OPEC consists of Ecuador, Gabon, Indonesia, Iran, Nigeria, and Venezuela, as well as the Arab members.

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

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

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

(Dollars per Million Btu)



Source: Table 1.9.

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

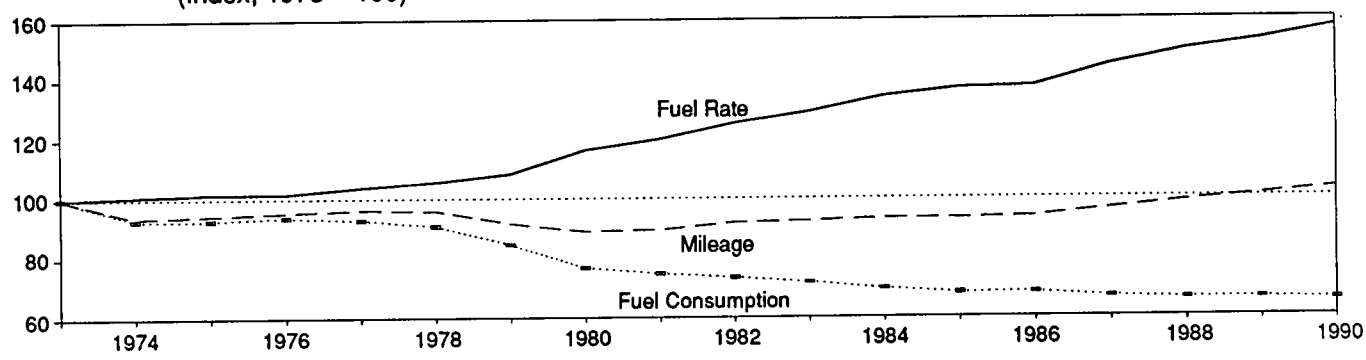
	Motor Gasoline		Residential Heating Oil		Residential Natural Gas		Residential Electricity	
	Cents per Gallon	Dollars per Million Btu	Cents per Gallon	Dollars per Million Btu	Cents per Million Cubic Feet	Dollars per Million Btu	Cents per Kilowatthour	Dollars per Million Btu
1973 Average	**NA**	**NA**	**NA**	**NA**	**290.5**	**2.85**	**5.6**	**16.50**
1974 Average	**NA**	**NA**	**NA**	**NA**	**290.1**	**2.83**	**6.3**	**18.43**
1975 Average	**NA**	**NA**	**NA**	**NA**	**317.8**	**3.12**	**6.5**	**19.07**
1976 Average	**NA**	**NA**	**NA**	**NA**	**348.0**	**3.41**	**6.5**	**19.06**
1977 Average	**NA**	**NA**	**NA**	**NA**	**387.8**	**3.81**	**6.8**	**19.83**
1978 Average	**100.0**	**8.00**	**75.2**	**5.42**	**392.6**	**3.86**	**6.6**	**19.33**
1979 Average	**121.5**	**9.71**	**97.0**	**6.99**	**410.5**	**4.03**	**6.3**	**18.57**
1980 Average	**148.2**	**11.85**	**118.2**	**8.52**	**446.6**	**4.36**	**6.6**	**19.21**
1981 Average	**148.8**	**11.90**	**131.4**	**9.47**	**471.9**	**4.60**	**6.8**	**19.99**
1982 Average	**132.7**	**10.61**	**120.2**	**8.67**	**535.8**	**5.22**	**7.2**	**20.96**
1983 Average	**123.0**	**9.83**	**108.2**	**7.80**	**608.4**	**5.90**	**7.2**	**21.19**
1984 Average	**115.3**	**9.22**	**105.0**	**7.57**	**589.0**	**5.72**	**7.2**	**21.16**
1985 Average	**111.2**	**8.89**	**97.9**	**7.06**	**568.8**	**5.52**	**7.2**	**21.25**
1986 Average	**84.9**	**6.79**	**76.3**	**5.50**	**531.9**	**5.17**	**6.8**	**19.79**
1987 Average	**84.2**	**6.74**	**70.7**	**5.10**	**487.7**	**4.73**	**6.5**	**19.09**
1988 Average	**81.4**	**6.51**	**68.7**	**4.96**	**462.4**	**4.49**	**6.3**	**18.58**
1989 1st Quarter	78.7	6.29	70.5	5.08	444.5	4.31	5.9	17.34
2nd Quarter	91.6	7.32	69.7	5.02	486.7	4.72	6.3	18.32
3rd Quarter	88.2	7.05	65.5	4.72	555.7	5.39	6.5	18.96
4th Quarter	83.3	6.66	74.5	5.37	448.0	4.35	6.0	17.61
Average	**85.5**	**6.83**	**72.6**	**5.23**	**454.8**	**4.41**	**6.1**	**17.96**
1990 1st Quarter	84.7	6.77	79.5	5.73	434.4	4.22	5.8	17.02
2nd Quarter	86.4	6.91	69.7	5.02	469.5	4.56	6.1	17.98
3rd Quarter	94.5	7.56	75.2	5.42	531.9	5.16	6.3	18.34
4th Quarter	106.5	8.52	92.1	6.64	435.3	4.23	5.9	17.17
Average	**93.1**	**7.44**	**81.3**	**5.86**	**443.8**	**4.31**	**6.0**	**17.49**
1991 1st Quarter	90.0	7.19	81.5	5.88	412.5	4.00	5.6	16.52
2nd Quarter	88.1	7.04	68.5	4.94	470.5	4.57	6.0	17.72
3rd Quarter	87.3	6.98	64.2	4.63	524.5	5.09	6.1	18.01
4th Quarter	86.1	6.88	69.6	5.02	416.8	4.05	5.8	17.03
Average	**87.8**	**7.02**	**74.7**	**5.39**	**427.3**	**4.15**	**5.9**	**17.43**

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

Sources: • **Annual Data:** Annual prices in Tables 9.4 (All Types), 9.8c, 9.11, and 9.9 (Monthly Series), adjusted by the CPI. • **Quarterly Data:** Simple averages of monthly prices in Tables 9.4 (All Types), 9.8c, 9.11, and 9.9 (Monthly Series), adjusted by the CPI. • **CPI: 1973-1989**—*Economic Report of the President,* February 1992, Table B-56. **1990 forward**—Council of Economic Advisers, *Economic Indicators,* February 1992, "Consumer Prices - All Urban Consumers." • **Conversion Factors:** Tables A2, A5, and A9.

Figure 1.9 Passenger Car Efficiency

(Index, 1973 = 100)



Source: Table 1.10.

Table 1.10 Passenger Car Efficiency

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

[a] Preliminary data.

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

Sources: Indices are prepared from statistics published by the U.S. Department of Transportation, Federal Highway Administration, Federal Highway Statistics Division. **1973-1985:** *Highway Statistics Summary to 1985*, Table VM-201A; **1986 forward:** *Highway Statistics*, Table VM-1.

Table 1.11 Population-Weighted Heating Degree-Days

Census Divisions	February 1 through February 28					Cumulative July 1 through February 28				
				Percent Change					Percent Change	
	Normal[a]	1991	1992	Normal to 1992	1991 to 1992	Normal[a]	1991	1992	Normal to 1992	1991 to 1992
New England Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	1,108	938	1,035	-6.6	10.3	4,758	4,178	4,469	-6.1	7.0
Middle Atlantic New Jersey, New York, Pennsylvania	1,031	839	931	-9.7	11.0	4,325	3,683	3,926	-9.2	6.6
East North Central Illinois, Indiana, Michigan, Ohio, Wisconsin	1,110	940	911	-17.9	-3.1	4,771	4,446	4,397	-7.8	-1.1
West North Central Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota	1,143	897	866	-24.2	-3.5	5,096	4,846	4,642	-8.9	-4.2
South Atlantic Delaware, Florida, Georgia, Maryland and the District of Columbia, North Carolina, South Carolina, Virginia, West Virginia	568	444	459	-19.2	3.4	2,381	1,911	2,103	-11.7	10.0
East South Central Alabama, Kentucky, Mississippi, Tennessee	659	538	500	-24.1	-7.1	2,846	2,412	2,535	-10.9	5.1
West South Central Arkansas, Louisiana, Oklahoma, Texas	448	322	303	-32.4	-5.9	1,942	1,797	1,749	-9.9	-2.7
Mountain Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming	819	669	682	-16.7	1.9	4,030	3,922	3,826	-5.1	-2.4
Pacific California, Oregon, Washington	469	366	356	-24.1	-2.7	2,255	2,107	1,942	-13.9	-7.8
U.S. Average[b]	**810**	**656**	**666**	**-17.8**	**1.5**	**3,529**	**3,167**	**3,205**	**-9.2**	**1.2**

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

Table 1.12 Population-Weighted Cooling Degree-Days

Census Divisions	February 1 through February 28			Percent Change		Cumulative January 1 through February 28			Percent Change	
	Normal[a]	1991	1992	Normal to 1992	1991 to 1992	Normal[a]	1991	1992	Normal to 1992	1991 to 1992
New England										
Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	0	0	0	(c)	(c)	0	0	0	(c)	(c)
Middle Atlantic										
New Jersey, New York, Pennsylvania	0	0	0	(c)	(c)	0	0	0	(c)	(c)
East North Central										
Illinois, Indiana, Michigan, Ohio, Wisconsin	0	0	0	(c)	(c)	0	0	0	(c)	(c)
West North Central										
Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota	0	0	0	(c)	(c)	0	0	0	(c)	(c)
South Atlantic										
Delaware, Florida, Georgia, Maryland and the District of Columbia, North Carolina, South Carolina, Virginia, West Virginia	17	32	30	(c)	(c)	34	70	47	(c)	(c)
East South Central										
Alabama, Kentucky, Mississippi, Tennessee	3	0	0	(c)	(c)	7	0	0	(c)	(c)
West South Central										
Arkansas, Louisiana, Oklahoma, Texas	0	7	8	(c)	(c)	0	7	8	(c)	(c)
Mountain										
Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming	0	1	0	(c)	(c)	0	1	0	(c)	(c)
Pacific										
California, Oregon, Washington	0	0	0	(c)	(c)	0	0	0	(c)	(c)
U.S. Average[b]	**3**	**6**	**5**	(c)	(c)	**6**	**12**	**8**	(c)	(c)

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

Energy Summary Notes

1. Energy Production: Production of energy includes production of coal, crude oil and lease condensate, natural gas plant liquids, natural gas (dry), electric utility and industrial production of hydroelectric power, and electricity generated from nuclear power. Production also includes electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy but excludes other energy obtained from those sources because consistent historical data are not available. Approximate heat contents (Btu values) are derived by using the conversion factors provided in the Appendix.

2. Energy Consumption: Consumption of energy 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 by using the conversion factors provided in the Appendix.

3. Energy Imports: Energy imports include imports of coal, crude oil (including crude oil imported for the Strategic Petroleum Reserve), petroleum products, natural gas, electricity (assumed to be hydroelectricity), and coal coke. Approximate heat contents (Btu values) are derived by using the conversion factors provided in the Appendix. For further information on electricity, see "Note for imports and exports of electricity" under Note 8 of the Notes and Sources for the Energy Consumption Section.

4. Energy Exports: Energy exports include coal, crude oil, petroleum products, natural gas, electricity produced from hydroelectric power, and coal coke. Approximate heat contents (Btu values) are derived by using the conversion factors provided in the Appendix. For more information on electricity, see "Note for imports and exports of electricity" under Note 8 of the Notes and Sources for the Energy Consumption Section.

5. Merchandise Trade Value: Import data presented are based on the customs value. That value does not include insurance and freight and is consequently lower than the cost, insurance, and freight (CIF) value, which is also reported by the Bureau of the Census. All export data, and import data prior to 1981, are on a free alongside ship (f.a.s.) basis.

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

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

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

1973	44.4	1989:	1st Quarter	121.7
1974	49.3		2nd Quarter	123.7
1975	53.8		3rd Quarter	124.7
1976	56.9		4th Quarter	125.9
1977	60.6		Year	124.0
1978	65.2	1990:	1st Quarter	128.0
1979	72.6		2nd Quarter	129.3
1980	82.4		3rd Quarter	131.6
1981	90.9		4th Quarter	133.7
1982	96.5		Year	130.7
1983	99.6	1991:	1st Quarter	134.8
1984	103.9		2nd Quarter	135.6
1985	107.6		3rd Quarter	136.7
1986	109.6		4th Quarter	137.7
1987	113.6		Year	136.2
1988	118.3			

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

There are several degree-day databases maintained by the National Oceanic and Atmospheric Administration. The information published in the *Monthly Energy Review (MER)* is developed by the National Weather

Service Climate Analysis Center, Camp Springs, MD. The data are available weekly with monthly summaries and are based on mean daily temperatures recorded at about 200 major weather stations around the country. The temperature information recorded at those weather stations is used to calculate statewide degree-day averages based on population. The State figures are then aggregated into Census Divisions and into the national average. The population weights currently used represent resident State population data estimated for 1980 by the U.S. Department of Commerce, Bureau of the Census. The data shown in the *MER* are available sooner than the Historical Climatology Series 5-1 and 5-2 developed by the National Climatic Center, Asheville, NC, which compiles data from some 8,000 weather stations.

Sources for Table 1.6

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

• **Petroleum Exports: 1974-1987**—"U.S. Exports," FT410, December issues. **1988**—"Report on U.S. Merchandise Trade 1988 Final Revisions." **1989**—"Report on U.S. Merchandise Trade 1989 Revisions." **1990**—"U.S. Merchandise Trade: 1990 Final Report." **1991**—"U.S. Merchandise Trade," FT900, monthly.

• **Petroleum Imports: 1974-1987**—"U.S. Merchandise Trade," FT900, December issues, 1975-1988. **1988**—"Report on U.S. Merchandise Trade 1988 Final Revisions." **1989**—"Report on U.S. Merchandise Trade 1989 Revisions." **1990**—"U.S. Merchandise Trade: 1990 Final Report." **1991**—"U.S. Merchandise Trade," FT900, monthly.

• **Energy Exports and Imports: 1974-1987**—U.S. merchandise trade press releases and database printouts for adjustments. **1988**—January-July, monthly FT900 supplement, 1989 issues. August-December, monthly FT900, 1989 issues. **1989**—Monthly FT900, 1990 issues. **1990**—"U.S. Merchandise Trade: 1990 Final Report." **1991**—Monthly FT900 issues.

• **Total Merchandise: 1974-1987**—U.S. merchandise trade press releases and database printouts for adjustments. **1988**—"Report on U.S. Merchandise Trade 1988 Final Revisions," August 18, 1989. **1989**—"Report on U.S. Merchandise Trade 1989 Revisions," July 10, 1990. **1990**—"U.S. Merchandise Trade: 1990 Final Report," May 10, 1991. **1991**—Monthly FT900 issues.

• **Petroleum Balance, Energy Balance, and Non-Energy Balance:** Calculated by the Energy Information Administration.

Change in Constant-Dollar Base Period and Change to Gross Domestic Product

Beginning with the January 1992 issue, the *Monthly Energy Review* incorporated two recent changes from the U.S. Department of Commerce, Economics and Statistics Administration, Bureau of Economics Analysis (BEA): first, a change from 1982 to 1987 as the base period used to express values in constant dollars and, second, a change from gross national product (GNP) to gross domestic product (GDP) as the primary measure of U.S. production of goods and services. While both GNP and GDP are measures of goods and services produced, they use different criteria for coverage. GNP covers the goods and services *produced by labor and property supplied by U.S. residents.* As long as the labor and property are supplied by U.S. residents, they may be located either in the United States or abroad. GDP covers the goods and services *produced by labor and property located in the United States.* As long as the labor and property are located in the United States, the suppliers (that is, the workers and, for property, the owners) may be either U.S. residents or residents of foreign countries. For the United States, the dollar levels of GNP and GDP are not significantly different—that is, the net receipts (receipts from foreigners less payments to foreigners) of factor income have been small. Because GDP refers to production taking place in the United States, it is the appropriate measure for much of the short-term monitoring and analysis of the U.S. economy. In particular, GDP is consistent in coverage with such indicators as employment, productivity, industry output, and investment in equipment and structures. In addition, the use of GDP facilitates comparisons of economic activity in the United States with that in foreign countries, since virtually all other countries have already adopted GDP as their primary measure of production.

Section 2. Energy Consumption

U.S. total energy consumption in 1991 was 81.5 quadrillion Btu. Petroleum products accounted for 40 percent[1] of the energy consumed in 1991, while natural gas accounted for 25 percent and coal accounted for 23 percent.

Residential and commercial sector consumption was 29.6 quadrillion Btu in 1991, up 2 percent from the 1990 level. The sector accounted for 36 percent of 1991 total consumption, up 1 percentage point from its 35 percent share in 1990.

Industrial sector consumption was 29.7 quadrillion Btu in 1991, down 1 percent from the 1990 level. The industrial sector accounted for 36 percent of 1991 total consumption, down 1 percentage point from its 37 percent share in 1990.

Transportation sector consumption of energy was 22.3 quadrillion Btu in 1991, down 1 percent from the 1990 level. The sector accounted for 27 percent of 1991 total consumption, down 1 percentage point from its 28 percent share in 1990.

Electric utility consumption of energy totaled 29.9 quadrillion Btu in 1991, up 1 percent from the 1990 level. Coal contributed 54 percent of the energy consumed by electric utilities in 1991, while nuclear electric power contributed 22 percent; hydroelectric power and natural gas 10 percent each; petroleum, 4 percent; and wood, waste, geothermal, wind, photovoltaic, and solar thermal energy, about 1 percent.

Table 2.1 Energy Consumption Summary for 1991

(Quadrillion Btu)

Energy Source	End-Use Sectors				Electric Utilities	Total
	Residential and Commercial	Industrial	Transportation	Total[a]		
Coal	0.147	2.600	([b])	2.742	16.065	18.807
Natural Gas[c]	7.585	8.860	.826	17.280	2.876	20.156
Petroleum	2.166	7.963	21.414	31.542	1.178	32.720
Nuclear Electric Power	–	–	–	–	6.543	6.543
Hydroelectric Power	–	.033	–	.033	3.049	3.082
Net Imports of Coal Coke	–	.009	–	.009	–	.009
Other[d]	–	–	–	–	.192	.192
Primary Consumption	**9.898**	**19.465**	**22.240**	**51.606**	**29.902**	**81.508**
Electricity	6.190	3.209	.015	9.414	–	–
Net Consumption	**16.089**	**22.674**	**22.254**	**61.021**	–	–
Electrical System Energy Losses	13.472	6.984	.032	20.488	–	–
Total Consumption[e]	**29.560**	**29.658**	**22.286**	**81.508**	–	–

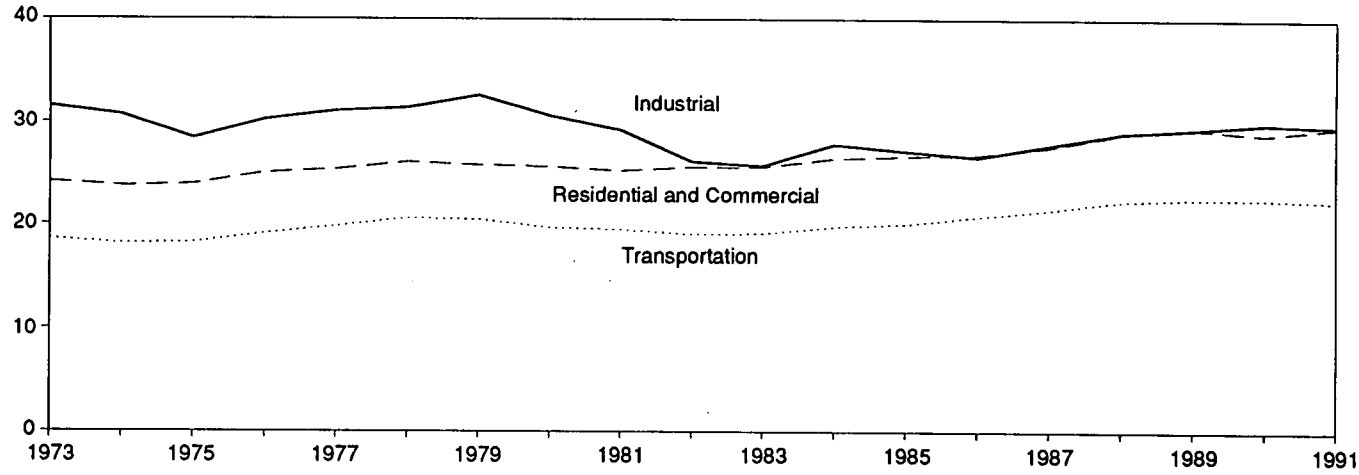
[a] Totals for coal and natural gas may not equal sum of sectors due to the use of sector-specific conversion factors.
[b] Small amounts of coal consumed for transportation are reported as industrial sector consumption.
[c] Includes supplemental gaseous fuels. Transportation sector is pipeline fuel only.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

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

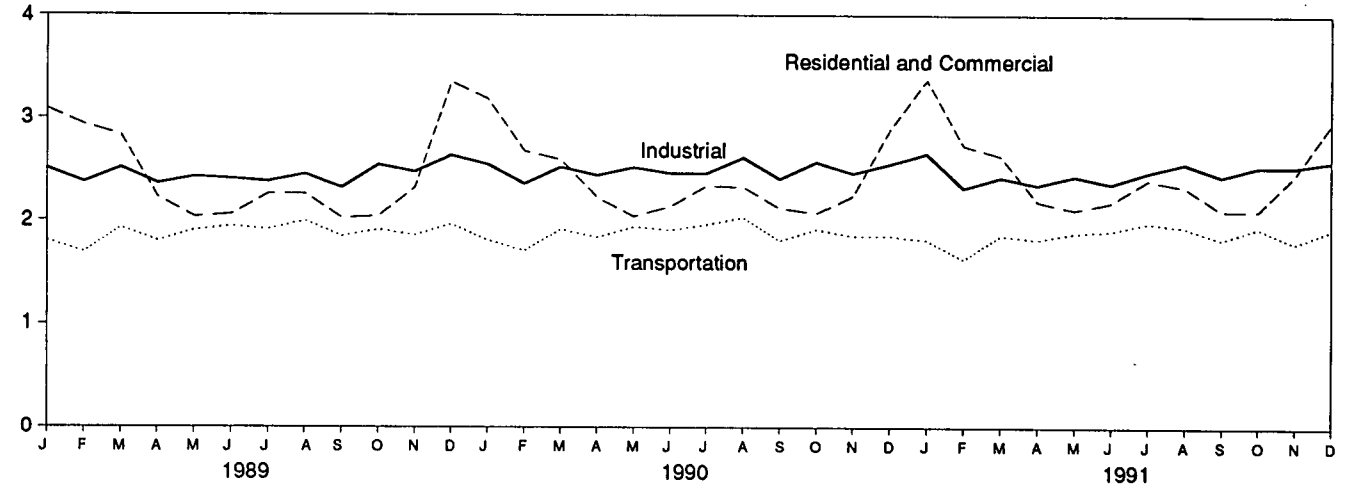
Figure 2.1 Energy Consumption by End-Use Sector

(Quadrillion Btu)

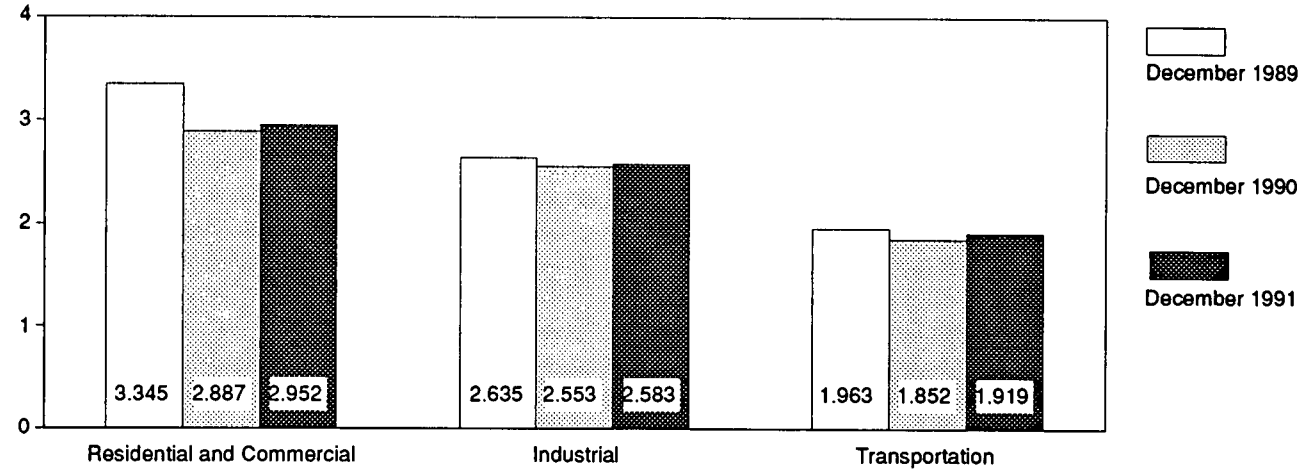
Consumption by End-Use Sector, 1973-1991



Consumption by End-Use Sector, Monthly



Consumption by End-Use Sector, December



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

Table 2.2 Energy Consumption by End-Use Sector

(Quadrillion Btu)

	Residential and Commercial		Industrial		Transportation			
	Net	Total	Net	Total	Net	Total	Net	Total
1973 Total	**15.766**	**24.143**	**25.917**	**31.528**	**18.584**	**18.605**	**60.274**	**74.282**
1974 Total	**15.246**	**23.724**	**24.994**	**30.696**	**18.095**	**18.117**	**58.341**	**72.543**
1975 Total	**15.200**	**23.900**	**22.737**	**28.401**	**18.219**	**18.244**	**56.157**	**70.546**
1976 Total	**15.997**	**25.020**	**24.038**	**30.234**	**19.076**	**19.101**	**59.119**	**74.362**
1977 Total	**15.828**	**25.387**	**24.593**	**31.075**	**19.794**	**19.819**	**60.223**	**76.288**
1978 Total	**16.023**	**26.088**	**24.637**	**31.388**	**20.589**	**20.611**	**61.251**	**78.089**
1979 Total	**15.709**	**25.809**	**25.679**	**32.615**	**20.447**	**20.472**	**61.836**	**78.898**
1980 Total	**15.075**	**25.653**	**23.854**	**30.609**	**19.669**	**19.695**	**58.597**	**75.955**
1981 Total	**14.541**	**25.243**	**22.533**	**29.238**	**19.480**	**19.507**	**56.556**	**73.990**
1982 Total	**14.629**	**25.630**	**20.020**	**26.144**	**19.043**	**19.069**	**53.697**	**70.848**
1983 Total	**14.395**	**25.630**	**19.401**	**25.756**	**19.109**	**19.135**	**52.907**	**70.524**
1984 Total	**14.964**	**26.452**	**21.183**	**27.846**	**19.773**	**19.801**	**55.923**	**74.101**
1985 Total	**14.839**	**26.682**	**20.520**	**27.200**	**20.036**	**20.067**	**55.391**	**73.945**
1986 Total	**14.791**	**26.813**	**20.102**	**26.610**	**20.781**	**20.812**	**55.678**	**74.237**
1987 Total	**15.152**	**27.596**	**21.113**	**27.807**	**21.415**	**21.444**	**57.678**	**R76.845**
1988 Total	**16.012**	**28.915**	**22.082**	**28.978**	**22.269**	**22.300**	**60.366**	**80.195**
1989 January	1.964	3.086	1.948	2.504	1.798	1.801	5.710	7.391
February	1.888	2.930	1.834	2.372	1.692	1.694	5.413	6.995
March	1.761	2.829	1.951	2.511	1.925	1.927	5.634	7.265
April	1.298	2.227	1.811	2.360	1.800	1.802	4.906	6.386
May	1.031	2.035	1.804	2.425	1.902	1.905	4.735	6.363
June	.949	2.061	1.785	2.405	1.940	1.942	4.675	6.410
July	.967	2.261	1.745	2.380	1.909	1.912	4.624	6.555
August	.990	2.261	1.814	2.450	1.992	1.995	4.801	6.710
September	.972	2.025	1.765	2.318	1.845	1.847	4.584	6.191
October	1.053	2.041	1.945	2.540	1.907	1.910	4.904	6.488
November	1.329	2.316	1.883	2.472	1.854	1.856	5.066	6.644
December	2.067	3.345	2.001	2.635	1.961	1.963	6.033	7.946
Total	**16.270**	**29.413**	**R22.292**	**R29.377**	**22.524**	**22.554**	**R61.089**	**R81.348**
1990 January	2.023	R3.181	2.018	R2.545	1.806	1.808	5.848	R7.535
February	1.696	2.677	R1.829	R2.358	1.705	1.707	R5.230	R6.742
March	1.552	R2.593	1.935	R2.519	1.912	1.914	5.397	7.024
April	1.281	R2.226	1.880	R2.440	1.835	1.837	4.994	R6.501
May	1.031	R2.042	R1.900	R2.517	1.934	1.937	R4.863	R6.494
June	.961	R2.140	R1.809	R2.460	1.904	1.907	R4.674	R6.508
July	1.013	R2.338	R1.828	2.460	1.959	1.962	4.803	R6.763
August	1.010	R2.328	R1.955	R2.616	2.029	2.032	R4.997	R6.979
September	1.005	R2.124	1.848	R2.407	1.804	1.806	4.658	R6.339
October	1.055	2.075	R1.974	R2.571	1.913	1.916	4.941	R6.561
November	1.278	2.241	R1.894	R2.461	1.847	1.850	R5.017	R6.550
December	1.731	2.887	R1.944	R2.553	1.849	1.852	R5.526	R7.294
Total	**15.636**	**R28.857**	**R22.813**	**R29.904**	**22.497**	**22.528**	**R60.950**	**R81.293**
1991 January	2.136	R3.372	R2.088	R2.656	1.809	1.811	R6.035	R7.841
February	1.757	R2.731	R1.827	R2.319	1.626	1.628	R5.209	R6.678
March	R1.585	R2.633	R1.864	R2.423	1.854	1.857	R5.301	R6.911
April	1.242	R2.190	R1.802	R2.350	1.815	1.818	R4.859	R6.357
May	1.020	R2.111	R1.799	R2.436	1.880	1.883	R4.700	R6.431
June	.984	R2.182	R1.751	R2.362	1.901	1.904	R4.638	R6.450
July	1.028	R2.399	R1.837	R2.474	1.980	1.983	R4.847	R6.858
August	1.003	R2.334	R1.922	R2.560	1.936	1.939	R4.864	R6.836
September	R1.003	R2.106	R1.880	R2.436	1.819	1.822	R4.703	R6.364
October	1.083	R2.100	R1.943	R2.530	1.934	1.936	R4.962	R6.569
November	R1.433	R2.451	R1.956	R2.530	1.782	1.785	R5.170	R6.764
December	1.814	2.952	2.006	2.583	1.917	1.919	5.734	7.451
Total	**16.089**	**29.560**	**22.674**	**29.658**	**22.254**	**22.286**	**61.021**	**81.508**

R=Revised data.

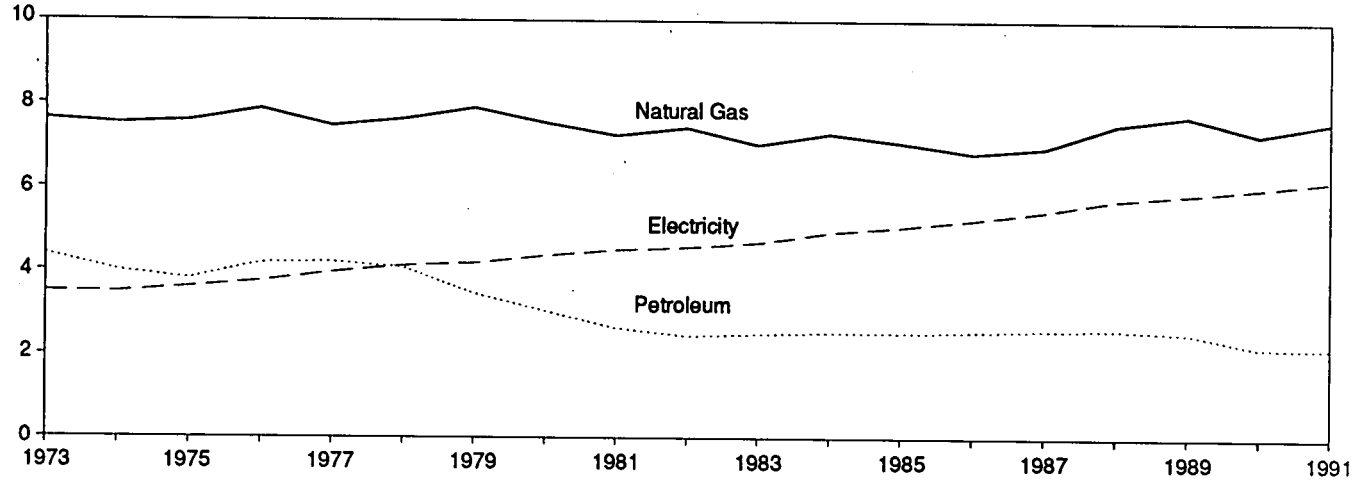
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding and the use of sector-specific conversion factors for natural gas and coal.

Additional Notes and Sources: See end of section.

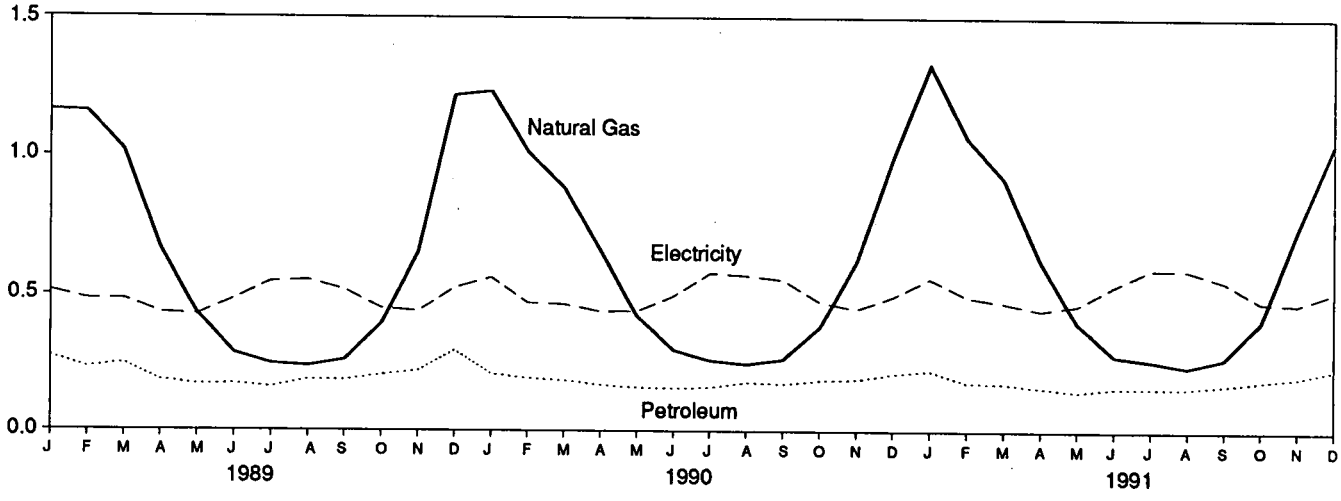
Figure 2.2 Residential and Commercial Energy Consumption

(Quadrillion Btu)

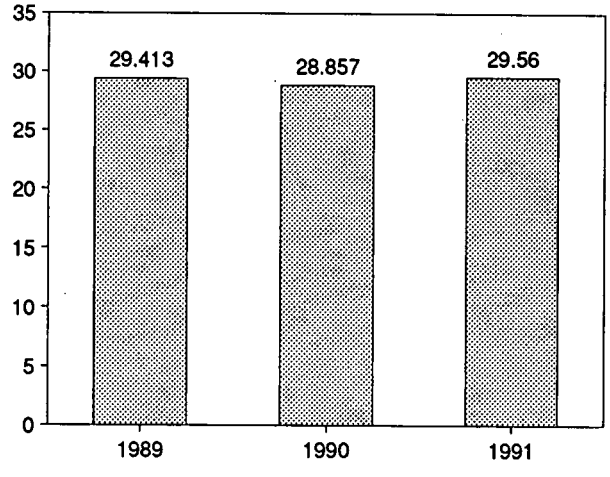
Consumption by Major Sources, 1973-1991



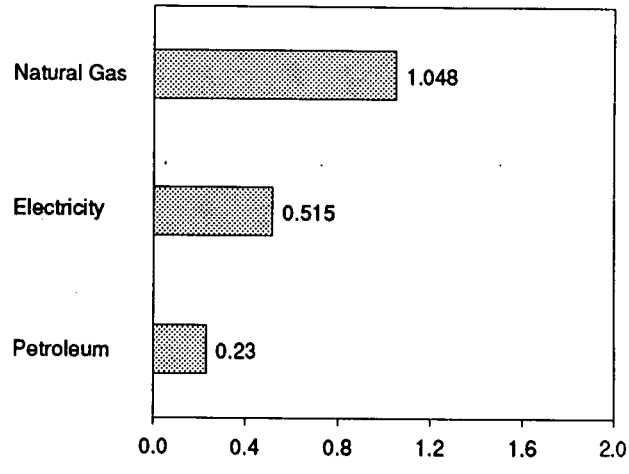
Consumption by Major Sources, Monthly



Total Consumption, January-December



Consumption by Major Sources, December 1991



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

Table 2.3 Residential and Commercial Energy Consumption

(Quadrillion Btu)

	Coal	Natural Gas[a]	Petroleum	Primary Consumption	Electricity	Net Consumption	Electrical System Energy Losses	Total Consumption[b]
1973 Total	**0.254**	**7.626**	**4.391**	**12.270**	**3.495**	**15.766**	**8.377**	**24.143**
1974 Total	**.257**	**7.518**	**3.996**	**11.771**	**3.475**	**15.246**	**8.478**	**23.724**
1975 Total	**.209**	**7.581**	**3.805**	**11.595**	**3.604**	**15.200**	**8.700**	**23.900**
1976 Total	**.203**	**7.866**	**4.181**	**12.250**	**3.747**	**15.997**	**9.023**	**25.020**
1977 Total	**.205**	**7.461**	**4.206**	**11.873**	**3.955**	**15.828**	**9.559**	**25.387**
1978 Total	**.214**	**7.624**	**4.070**	**11.908**	**4.116**	**16.023**	**10.065**	**26.088**
1979 Total	**.187**	**7.891**	**3.448**	**11.525**	**4.184**	**15.709**	**10.101**	**25.809**
1980 Total	**.145**	**7.540**	**3.035**	**10.721**	**4.355**	**15.075**	**10.578**	**25.653**
1981 Total	**.167**	**7.243**	**2.634**	**10.043**	**4.497**	**14.541**	**10.703**	**25.243**
1982 Total	**.187**	**7.427**	**2.449**	**10.063**	**4.566**	**14.629**	**11.001**	**25.630**
1983 Total	**.192**	**7.024**	**2.498**	**9.715**	**4.680**	**14.395**	**11.235**	**25.630**
1984 Total	**.209**	**7.292**	**2.535**	**10.036**	**4.928**	**14.964**	**11.487**	**26.452**
1985 Total	**.176**	**7.079**	**2.522**	**9.777**	**5.061**	**14.839**	**11.843**	**26.682**
1986 Total	**.176**	**6.825**	**2.555**	**9.556**	**5.235**	**14.791**	**12.022**	**26.813**
1987 Total	**.162**	**6.954**	**2.593**	**9.709**	**5.443**	**15.152**	**12.443**	**27.596**
1988 Total	**.168**	**7.513**	**2.608**	**10.288**	**5.724**	**16.012**	**12.903**	**28.915**
1989 January	.015	1.162	.272	1.449	.514	1.964	1.123	3.086
February	.016	1.158	.231	1.405	.483	1.888	1.041	2.930
March	.012	1.018	.247	1.277	.484	1.761	1.068	2.829
April	.012	.668	.185	.866	.432	1.298	.929	2.227
May	.008	.428	.170	.606	.425	1.031	1.004	2.035
June	.007	.285	.172	.464	.485	.949	1.112	2.061
July	.012	.246	.160	.418	.549	.967	1.294	2.261
August	.011	.238	.188	.437	.553	.990	1.270	2.261
September	.007	.260	.187	.454	.518	.972	1.052	2.025
October	.005	.392	.206	.604	.450	1.053	.987	2.041
November	.013	.656	.221	.890	.439	1.329	.987	2.316
December	.028	1.218	.295	1.542	.526	2.067	1.277	3.345
Total	**.146**	**7.731**	**2.535**	**10.411**	**5.859**	**16.270**	**13.143**	**29.413**
1990 January	.016	1.232	.210	1.458	.564	2.023	1.158	R3.181
February	.015	1.014	.194	1.223	.472	1.696	R.982	2.677
March	.013	.886	.186	1.085	.467	1.552	R1.041	R2.593
April	.012	.661	.170	.842	.439	1.281	R.945	R2.226
May	.008	.422	.160	.590	.441	1.031	1.011	R2.042
June	.009	.297	.158	.463	.498	.961	R1.179	R2.140
July	.012	.260	.161	.433	.580	1.013	R1.325	R2.338
August	.012	.247	.180	.438	.572	1.010	R1.318	R2.328
September	.009	.264	.175	.449	.557	1.005	R1.119	R2.124
October	.010	.380	.188	.577	.478	1.055	1.020	2.075
November	.014	.622	.191	.827	.450	1.278	R.964	2.241
December	.024	.997	.212	1.234	.497	1.731	1.156	2.887
Total	**.156**	**7.283**	**2.182**	**9.621**	**6.015**	**15.636**	**R13.221**	**R28.857**
1991 January	.020	1.330	.224	1.574	.562	2.136	R1.236	R3.372
February	.014	1.067	.180	1.261	.496	1.757	R.974	R2.731
March	.013	.921	.177	1.110	.475	R1.585	R1.048	R2.633
April	.010	.624	.162	.796	.446	1.242	R.948	R2.190
May	.008	.399	.147	.554	.466	1.020	R1.091	R2.111
June	.008	.278	R.161	.447	.537	.984	R1.198	R2.182
July	.010	.261	.160	.431	.597	1.028	R1.371	R2.399
August	.009	.239	R.161	.410	.594	1.003	R1.331	R2.334
September	.007	.269	.173	.450	.553	R1.003	R1.103	R2.106
October	.012	.405	.188	.604	.479	1.083	R1.017	R2.100
November	R.015	.744	.202	R.961	.472	R1.433	R1.018	R2.451
December	.021	1.048	.230	1.299	.515	1.814	1.138	2.952
Total	**.147**	**7.585**	**2.166**	**9.898**	**6.190**	**16.089**	**13.472**	**29.560**

[a] Includes supplemental gaseous fuels.

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

R=Revised data.

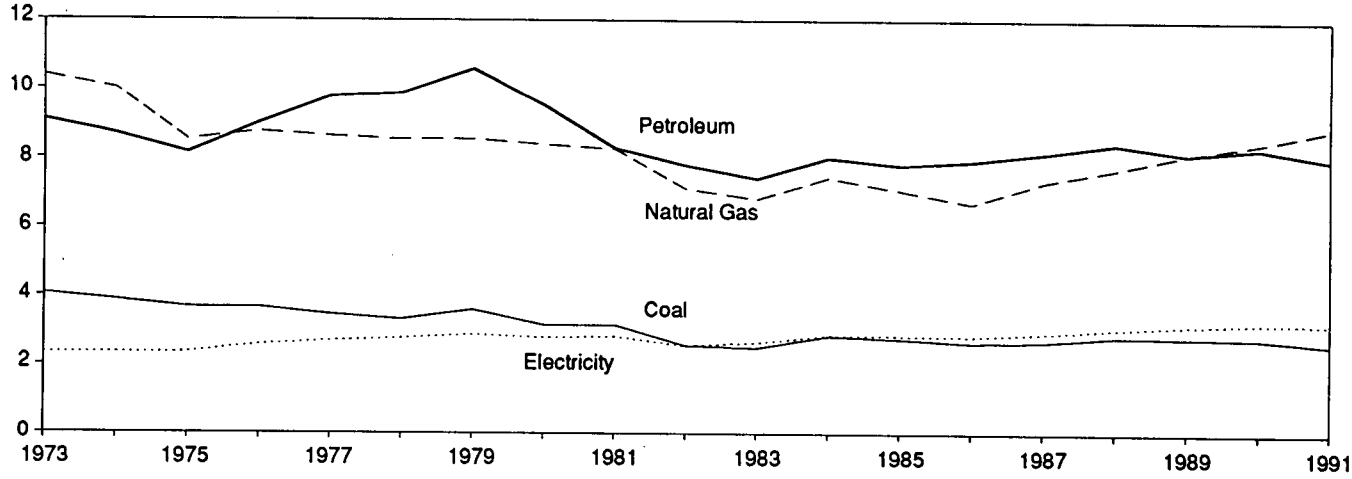
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Additional Notes and Sources: See end of section.

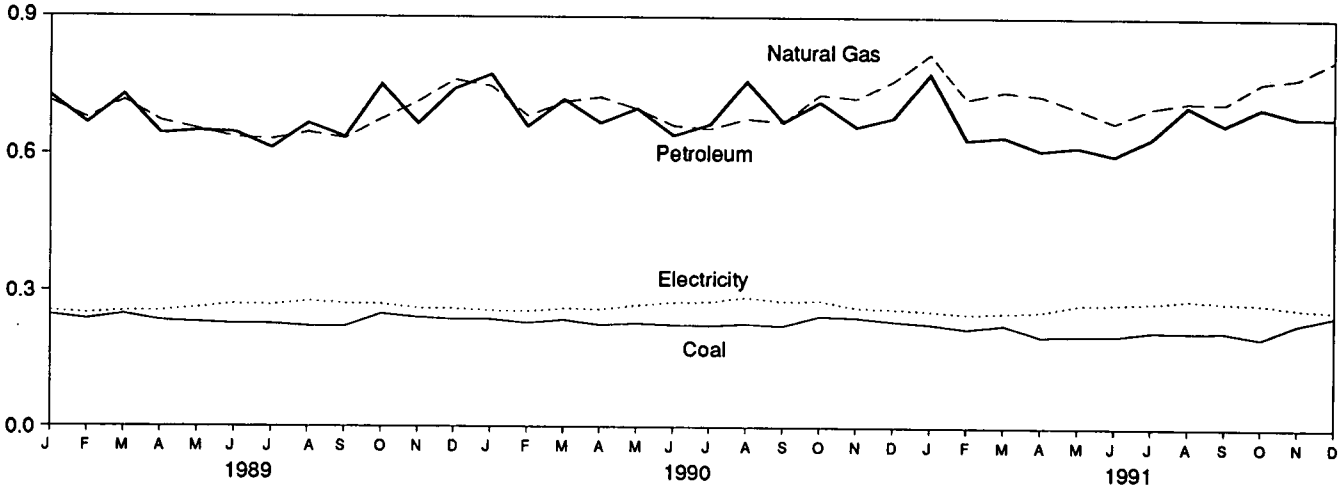
Figure 2.3 Industrial Energy Consumption

(Quadrillion Btu)

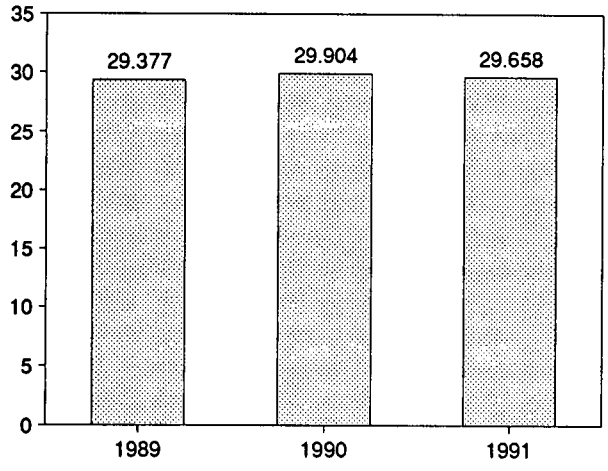
Consumption by Major Sources, 1973-1991



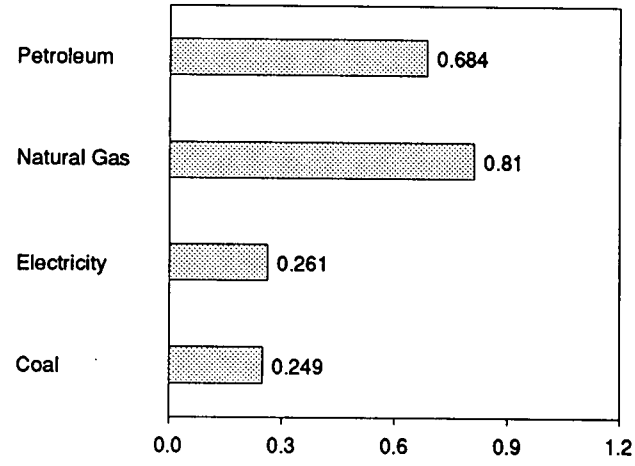
Consumption by Major Sources, Monthly



Total Consumption, January-December



Consumption by Major Sources, December 1991



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

Table 2.4 Industrial Energy Consumption

(Quadrillion Btu)

	Coal	Natural Gas[a]	Petroleum	Hydro-electric Power	Net Imports of Coal Coke	Primary Consumption	Electricity	Net Consumption	Electrical System Energy Losses	Total Consumption[b]
1973 Total	**4.057**	**10.388**	**9.104**	**0.035**	**-0.007**	**23.576**	**2.341**	**25.917**	**5.611**	**31.528**
1974 Total	**3.870**	**10.004**	**8.694**	**.033**	**.056**	**22.657**	**2.337**	**24.994**	**5.701**	**30.696**
1975 Total	**3.667**	**8.532**	**8.146**	**.032**	**.014**	**20.391**	**2.346**	**22.737**	**5.664**	**28.401**
1976 Total	**3.661**	**8.762**	**9.010**	**.033**	**(s)**	**21.465**	**2.573**	**24.038**	**6.196**	**30.234**
1977 Total	**3.454**	**8.635**	**9.774**	**.033**	**.015**	**21.911**	**2.682**	**24.593**	**6.481**	**31.075**
1978 Total	**3.314**	**8.539**	**9.867**	**.032**	**.125**	**21.876**	**2.761**	**24.637**	**6.751**	**31.388**
1979 Total	**3.593**	**8.549**	**10.568**	**.034**	**.063**	**22.807**	**2.873**	**25.679**	**6.935**	**32.615**
1980 Total	**3.155**	**8.395**	**9.525**	**.033**	**-.035**	**21.073**	**2.781**	**23.854**	**6.755**	**30.609**
1981 Total	**3.157**	**8.257**	**8.285**	**.033**	**-.016**	**19.715**	**2.817**	**22.533**	**6.705**	**29.238**
1982 Total	**2.552**	**7.121**	**7.794**	**.033**	**-.022**	**17.479**	**2.542**	**20.020**	**6.124**	**26.144**
1983 Total	**2.490**	**6.826**	**7.420**	**.033**	**-.016**	**16.753**	**2.648**	**19.401**	**6.356**	**25.756**
1984 Total	**2.842**	**7.448**	**8.014**	**.033**	**-.011**	**18.325**	**2.859**	**21.183**	**6.663**	**27.846**
1985 Total	**2.760**	**7.080**	**7.805**	**.033**	**-.013**	**17.665**	**2.855**	**20.520**	**6.681**	**27.200**
1986 Total	**2.643**	**6.690**	**7.920**	**.032**	**-.017**	**17.269**	**2.834**	**20.102**	**6.507**	**26.610**
1987 Total	**2.673**	**7.323**	**8.148**	**.032**	**.009**	**18.185**	**2.928**	**21.113**	**6.694**	**27.807**
1988 Total	**2.828**	**7.696**	**8.427**	**.032**	**.040**	**19.023**	**3.059**	**22.082**	**6.895**	**28.978**
1989 January	.245	.714	.725	.003	.007	1.694	.254	1.948	.555	2.504
February	.236	.677	.666	.003	.002	1.585	.249	1.834	.538	2.372
March	.247	.716	.728	.003	.003	1.697	.254	1.951	.560	2.511
April	.233	.671	.643	.003	.007	1.556	.255	1.811	.549	2.360
May	.230	.653	.649	.003	.006	1.541	.263	1.804	.621	2.425
June	.226	.635	.646	.003	.004	1.514	.271	1.785	.620	2.405
July	.226	.631	.612	.003	.004	1.476	.269	1.745	.634	2.380
August	.221	.646	.666	.002	.003	1.537	.277	1.814	.636	2.450
September	.220	.633	.636	.002	.002	1.493	.272	1.765	.553	2.318
October	.249	.676	.751	.002	-.004	1.675	.271	1.945	.594	2.540
November	.241	.714	.666	.002	-.001	1.621	.262	1.883	.589	2.472
December	.237	.762	.742	.002	-.002	1.741	.261	2.001	.633	2.635
Total	**2.810**	**R8.131**	**8.130**	**.033**	**.030**	**R19.134**	**3.158**	**R22.292**	**7.085**	**R29.377**
1990 January	.237	.748	.774	.003	(s)	1.761	.257	2.018	.527	R2.545
February	.229	R.683	.660	.003	(s)	R1.575	.255	R1.829	.529	R2.358
March	.236	.714	.719	.003	.001	1.672	.262	1.935	.584	R2.519
April	.225	.724	.668	.003	-.001	1.620	.260	1.880	.560	R2.440
May	.229	R.699	.700	.003	(s)	R1.631	.269	R1.900	.617	R2.517
June	.225	R.663	.641	.003	.001	R1.533	.275	R1.809	R.652	R2.460
July	.224	.656	.666	.003	.003	R1.551	.277	R1.828	.632	2.460
August	.228	R.678	R.760	.002	-.001	R1.668	.287	R1.955	R.661	R2.616
September	.224	.671	.671	.002	.001	1.569	.278	1.848	R.560	R2.407
October	.246	R.731	.715	.002	.001	1.694	.280	R1.974	.597	R2.571
November	.243	R.723	.661	.002	-.001	R1.629	.265	R1.894	.567	R2.461
December	.235	R.762	.681	.002	.001	R1.682	.262	R1.944	.609	R2.553
Total	**2.781**	**R8.452**	**R8.316**	**.033**	**.005**	**R19.587**	**3.226**	**R22.813**	**R7.091**	**R29.904**
1991 January	R.229	.820	R.777	.003	.001	R1.830	.258	R2.088	R.568	R2.656
February	R.218	.722	R.633	.003	.001	R1.576	.251	R1.827	R.492	R2.319
March	R.227	.739	R.640	.003	.002	R1.610	.254	R1.864	R.559	R2.423
April	R.201	.730	R.610	.003	.001	R1.545	.257	R1.802	R.547	R2.350
May	R.203	.702	R.618	.003	.001	R1.527	.272	R1.799	R.637	R2.436
June	R.203	.672	R.600	.003	-.001	R1.477	.274	R1.751	R.611	R2.362
July	R.213	.704	R.637	.003	.003	R1.560	.277	R1.837	R.637	R2.474
August	R.212	.717	R.708	.002	-.002	R1.638	.284	R1.922	R.637	R2.560
September	R.213	.714	R.668	.002	.004	R1.601	.279	R1.880	R.556	R2.436
October	R.199	R.761	R.705	.002	-.001	R1.667	.276	R1.943	R.587	R2.530
November	R.232	.771	R.684	.002	.001	R1.690	.266	R1.956	R.574	R2.530
December	.249	.810	.684	.002	(s)	1.746	.261	2.006	.576	2.583
Total	**2.600**	**8.860**	**7.963**	**.033**	**.009**	**19.465**	**3.209**	**22.674**	**6.984**	**29.658**

[a] Includes supplemental gaseous fuels.

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

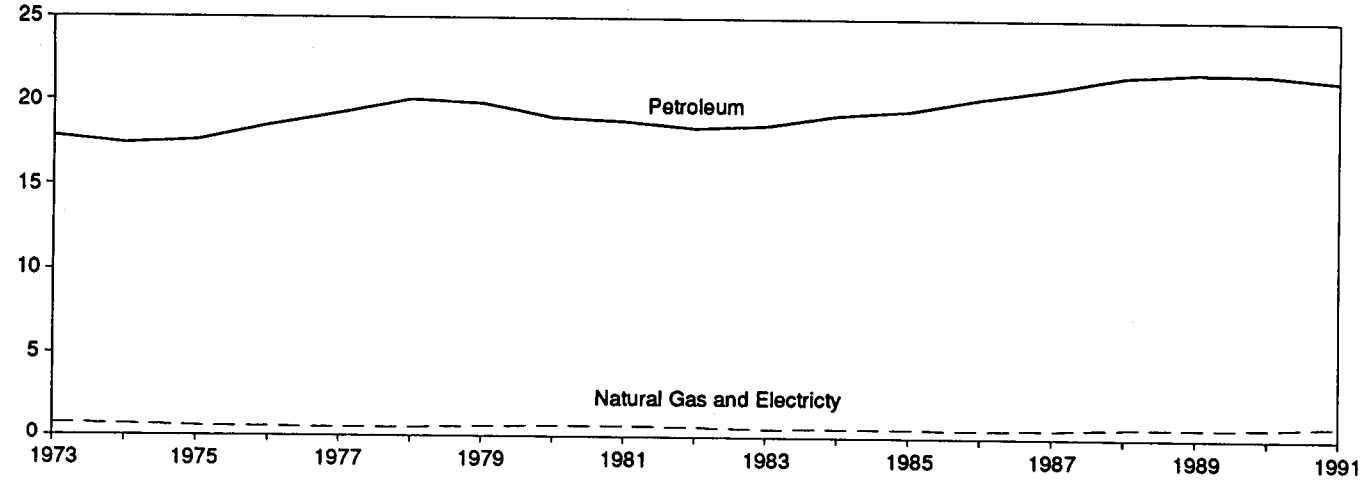
R=Revised data. (s)=Less than +0.5 trillion Btu and greater than -0.5 trillion Btu.

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

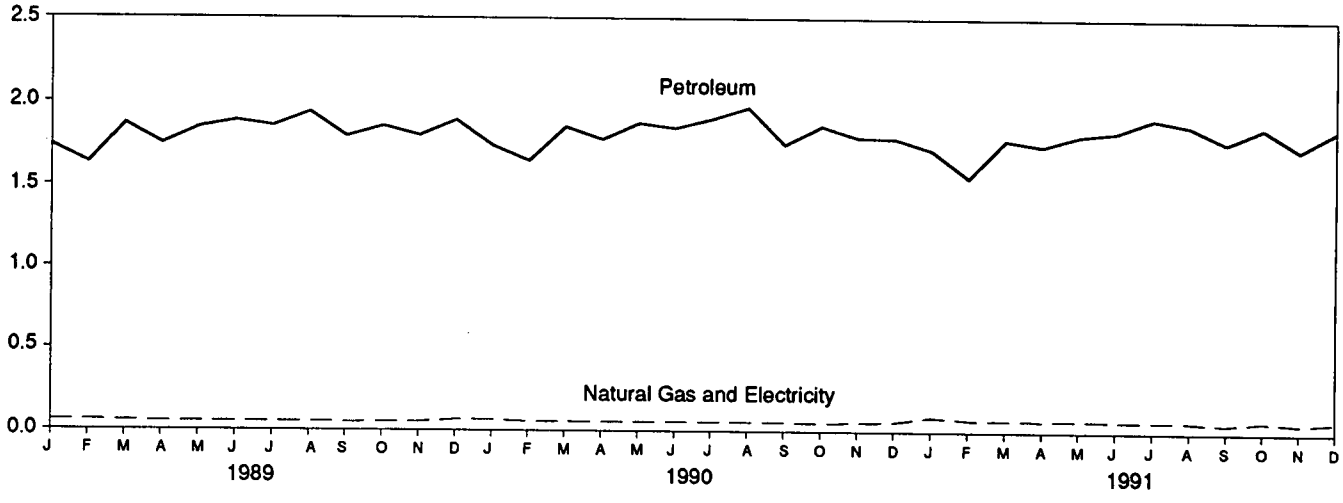
Additional Notes and Sources: See end of section.

Figure 2.4 Transportation Energy Consumption
(Quadrillion Btu)

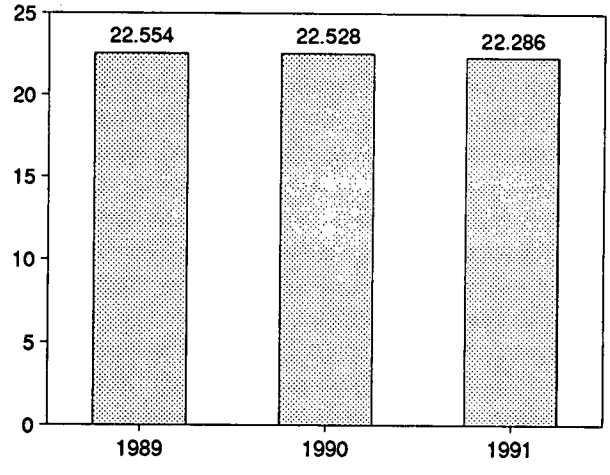
Consumption by Major Sources, 1973-1991



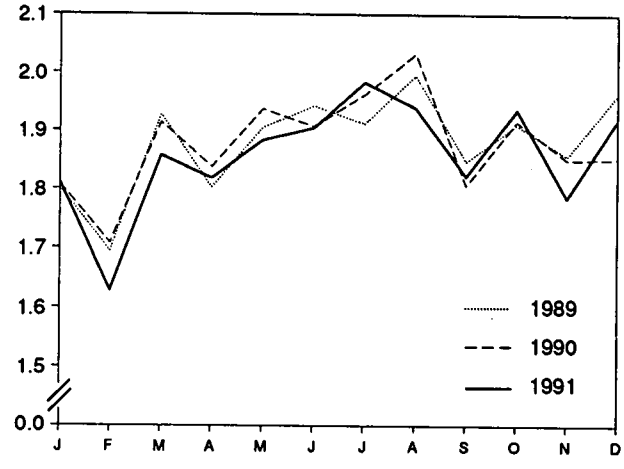
Consumption by Major Sources, Monthly



Total Consumption, January-December



Total Consumption, Monthly



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

Table 2.5 Transportation Energy Consumption

(Quadrillion Btu)

	Coal	Natural Gas[a]	Petroleum	Primary Consumption	Electricity	Net Consumption	Electrical System Energy Losses	Total Consumption[b]
1973 Total	**0.003**	**0.743**	**17.831**	**18.576**	**0.008**	**18.584**	**0.020**	**18.605**
1974 Total	**.002**	**.685**	**17.399**	**18.086**	**.009**	**18.095**	**.022**	**18.117**
1975 Total	**.001**	**.595**	**17.614**	**18.209**	**.010**	**18.219**	**.025**	**18.244**
1976 Total	**(s)**	**.559**	**18.506**	**19.065**	**.010**	**19.076**	**.025**	**19.101**
1977 Total	**(s)**	**.543**	**19.241**	**19.784**	**.010**	**19.794**	**.025**	**19.819**
1978 Total	**(c)**	**.539**	**20.041**	**20.580**	**.009**	**20.589**	**.022**	**20.611**
1979 Total	**(c)**	**.612**	**19.825**	**20.436**	**.010**	**20.447**	**.025**	**20.472**
1980 Total	**(c)**	**.650**	**19.008**	**19.658**	**.011**	**19.669**	**.026**	**19.695**
1981 Total	**(c)**	**.658**	**18.811**	**19.469**	**.011**	**19.480**	**.026**	**19.507**
1982 Total	**(c)**	**.612**	**18.420**	**19.032**	**.011**	**19.043**	**.026**	**19.069**
1983 Total	**(c)**	**.505**	**18.593**	**19.098**	**.011**	**19.109**	**.026**	**19.135**
1984 Total	**(c)**	**.545**	**19.216**	**19.761**	**.012**	**19.773**	**.028**	**19.801**
1985 Total	**(c)**	**.519**	**19.504**	**20.024**	**.013**	**20.036**	**.030**	**20.067**
1986 Total	**(c)**	**.499**	**20.269**	**20.768**	**.013**	**20.781**	**.030**	**20.812**
1987 Total	**(c)**	**.535**	**20.867**	**21.402**	**.013**	**21.415**	**.029**	**21.444**
1988 Total	**(c)**	**.632**	**21.624**	**22.255**	**.014**	**22.269**	**.031**	**22.300**
1989 January	(c)	.059	1.738	1.797	.001	1.798	.002	1.801
February	(c)	.059	1.632	1.691	.001	1.692	.002	1.694
March	(c)	.056	1.868	1.923	.001	1.925	.002	1.927
April	(c)	.051	1.749	1.799	.001	1.800	.002	1.802
May	(c)	.053	1.848	1.901	.001	1.902	.003	1.905
June	(c)	.052	1.887	1.939	.001	1.940	.003	1.942
July	(c)	.052	1.856	1.908	.001	1.909	.003	1.912
August	(c)	.052	1.940	1.991	.001	1.992	.003	1.995
September	(c)	.049	1.794	1.844	.001	1.845	.002	1.847
October	(c)	.051	1.856	1.906	.001	1.907	.002	1.910
November	(c)	.052	1.801	1.853	.001	1.854	.002	1.856
December	(c)	.067	1.892	1.959	.001	1.961	.003	1.963
Total	**(c)**	**.648**	**21.861**	**22.510**	**.014**	**22.524**	**.031**	**22.554**
1990 January	(c)	.066	1.739	1.805	.001	1.806	.002	1.808
February	(c)	.056	1.648	1.704	.001	1.705	.002	1.707
March	(c)	.058	1.853	1.911	.001	1.912	.002	1.914
April	(c)	.056	1.778	1.834	.001	1.835	.002	1.837
May	(c)	.057	1.876	1.933	.001	1.934	.003	1.937
June	(c)	.056	1.847	1.903	.001	1.904	.003	1.907
July	(c)	.056	1.902	1.957	.001	1.959	.003	1.962
August	(c)	.057	1.971	2.028	.001	2.029	.003	2.032
September	(c)	.054	1.749	1.802	.001	1.804	.002	1.806
October	(c)	.052	1.861	1.912	.001	1.913	R.003	1.916
November	(c)	.055	1.792	1.846	.001	1.847	.002	1.850
December	(c)	.060	1.788	1.848	.001	1.849	.003	1.852
Total	**(c)**	**.680**	**21.804**	**22.483**	**.014**	**22.497**	**.031**	**22.528**
1991 January	(c)	.089	1.719	1.808	.001	1.809	.003	1.811
February	(c)	.073	1.552	1.625	.001	1.626	.002	1.628
March	(c)	.073	1.780	1.853	.001	1.854	.003	1.857
April	(c)	.069	1.745	1.814	.001	1.815	.002	1.818
May	(c)	.071	1.808	1.879	.001	1.880	.003	1.883
June	(c)	.069	1.831	1.900	.001	1.901	.003	1.904
July	(c)	.069	1.910	1.979	.001	1.980	.003	1.983
August	(c)	.066	1.869	1.935	.001	1.936	.003	1.939
September	(c)	.052	1.767	1.818	.001	1.819	.003	1.822
October	(c)	.072	R1.860	1.933	.001	1.934	.003	1.936
November	(c)	.055	1.726	1.781	.001	1.782	.002	1.785
December	(c)	.069	1.847	1.916	.001	1.917	.003	1.919
Total	**(c)**	**.826**	**21.414**	**22.240**	**.015**	**22.254**	**.032**	**22.286**

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

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

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

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

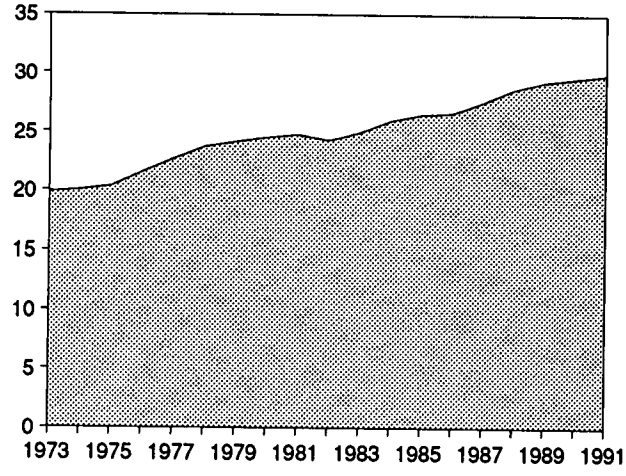
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Additional Notes and Sources: See end of section.

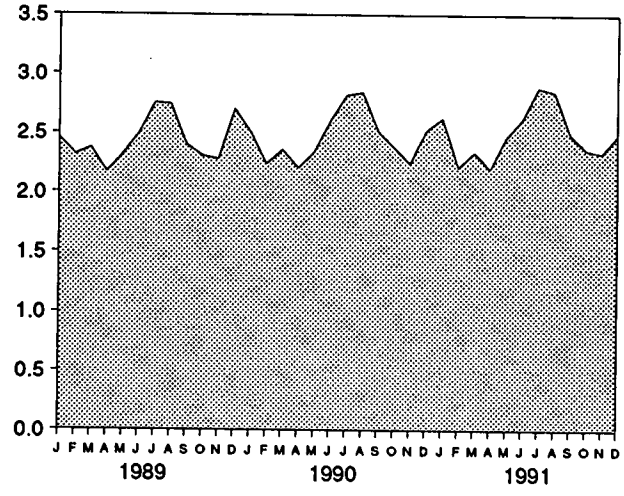
Figure 2.5 Energy Input at Electric Utilities

(Quadrillion Btu)

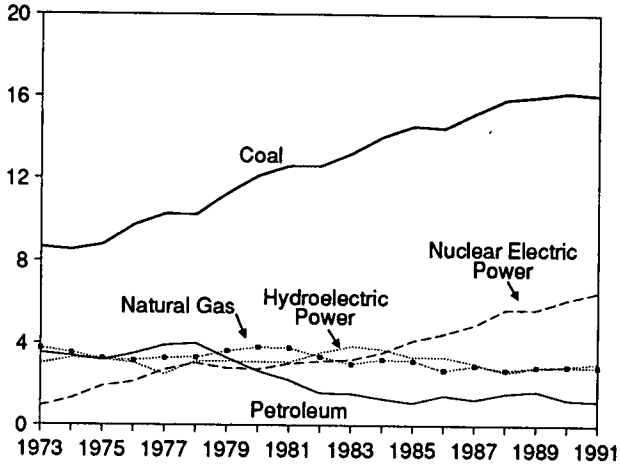
Total Input, 1973-1991



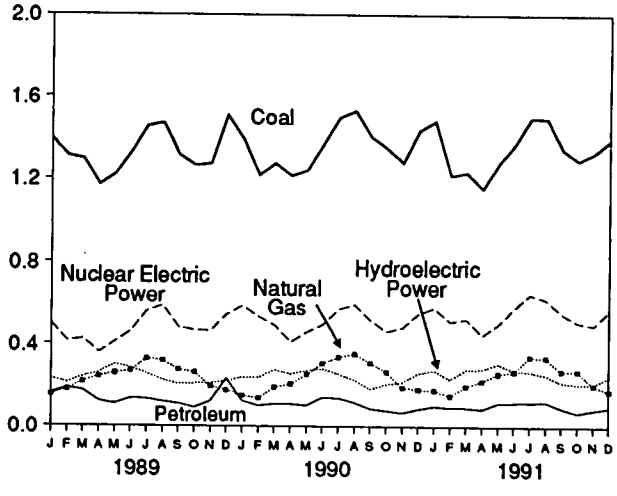
Total Input, Monthly



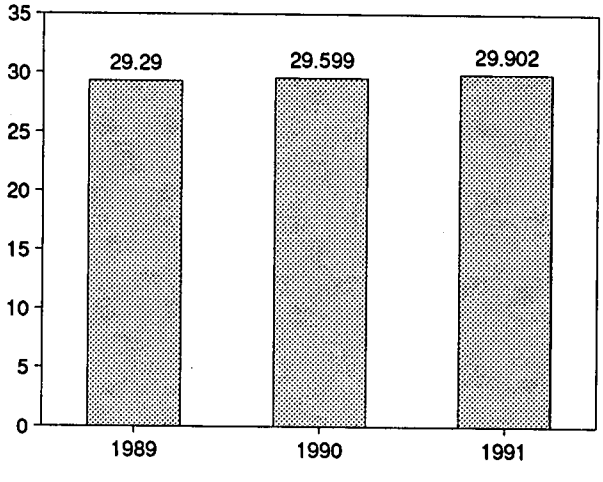
Input by Major Sources, 1973-1991



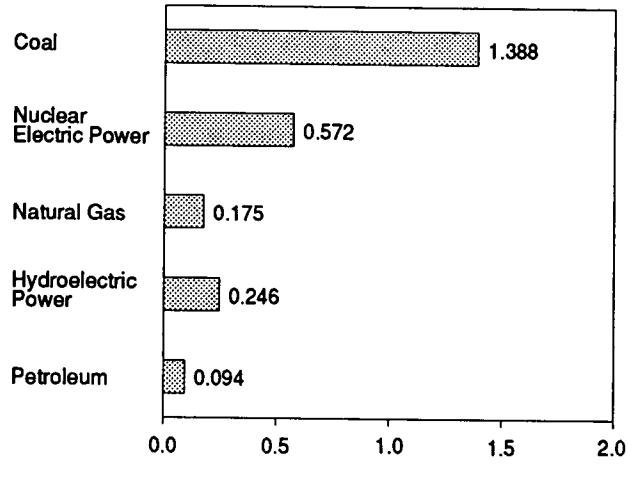
Input by Major Sources, Monthly



Total Input, January-December



Input by Major Sources, December 1991



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

Table 2.6 Energy Input at Electric Utilities

(Quadrillion Btu)

	Coal	Natural Gas[a]	Petroleum[b]	Nuclear Electric Power	Hydro-electric Power[c]	Other[d]	Total
1973 Total	**8.658**	**3.748**	**3.515**	**0.910**	**2.975**	**0.046**	**19.852**
1974 Total	**8.534**	**3.519**	**3.365**	**1.272**	**3.276**	**.056**	**20.022**
1975 Total	**8.786**	**3.240**	**3.166**	**1.900**	**3.187**	**.072**	**20.350**
1976 Total	**9.720**	**3.152**	**3.477**	**2.111**	**3.032**	**.081**	**21.574**
1977 Total	**10.262**	**3.284**	**3.901**	**2.702**	**2.482**	**.082**	**22.713**
1978 Total	**10.238**	**3.297**	**3.987**	**3.024**	**3.110**	**.068**	**23.724**
1979 Total	**11.260**	**3.613**	**3.283**	**2.776**	**3.107**	**.089**	**24.128**
1980 Total	**12.123**	**3.810**	**2.634**	**2.739**	**3.085**	**.114**	**24.505**
1981 Total	**12.583**	**3.768**	**2.202**	**3.008**	**3.072**	**.127**	**24.760**
1982 Total	**12.582**	**3.342**	**1.568**	**3.131**	**3.539**	**.108**	**24.270**
1983 Total	**13.213**	**2.998**	**1.544**	**3.203**	**3.866**	**.133**	**24.956**
1984 Total	**14.020**	**3.220**	**1.286**	**3.553**	**3.725**	**.174**	**25.977**
1985 Total	**14.542**	**3.160**	**1.090**	**4.149**	**3.330**	**.213**	**26.484**
1986 Total	**14.444**	**2.691**	**1.452**	**4.471**	**3.353**	**.231**	**26.642**
1987 Total	**15.173**	**2.935**	**1.257**	**4.906**	**3.035**	**.244**	**27.551**
1988 Total	**15.850**	**2.709**	**1.563**	**5.661**	**2.607**	**.235**	**28.626**
1989 January	1.392	.152	.161	.497	.231	.019	2.450
February	1.309	.178	.185	.415	.211	.017	2.315
March	1.293	.217	.175	.425	.240	.020	2.370
April	1.170	.242	.121	.359	.259	.017	2.169
May	1.220	.258	.107	.411	.302	.018	2.317
June	1.327	.268	.134	.461	.284	.018	2.492
July	1.454	.329	.132	.561	.256	.019	2.751
August	1.470	.319	.118	.589	.226	.018	2.741
September	1.312	.276	.109	.481	.205	.017	2.399
October	1.263	.262	.089	.467	.208	.018	2.306
November	1.272	.195	.121	.465	.210	.017	2.280
December	1.508	.176	.233	.545	.220	.018	2.701
Total	**15.988**	**2.871**	**1.685**	**5.677**	**2.852**	**.217**	**29.290**
1990 January	R1.391	.151	.123	R.589	R.239	.018	R2.510
February	R1.216	.136	.100	R.534	.238	.016	2.241
March	R1.274	.190	.108	R.492	.275	.018	R2.358
April	R1.213	.206	.108	R.411	.255	.014	R2.207
May	R1.240	.252	.101	R.459	.273	.017	R2.341
June	R1.367	.307	.141	R.495	R.281	.017	R2.608
July	R1.497	.337	.138	R.573	.256	.017	R2.819
August	R1.530	R.355	.117	R.595	.227	.017	R2.842
September	R1.402	.311	.086	R.518	.184	.016	R2.518
October	R1.347	R.266	.077	R.463	.207	.017	R2.378
November	R1.278	.191	.067	R.481	.217	.016	2.249
December	R1.434	.181	.085	R.551	.260	.017	R2.528
Total	**R16.189**	**R2.882**	**R1.250**	**R6.161**	**R2.914**	**.202**	**R29.599**
1991 January	R1.481	.177	.099	R.581	R.274	.017	R2.628
February	R1.216	.151	.092	R.511	.232	.014	R2.216
March	R1.231	.198	.092	R.525	R.278	.016	R2.340
April	R1.154	.223	.085	R.445	.281	.015	R2.202
May	R1.275	.258	.115	R.499	.308	.015	R2.471
June	R1.368	.269	.117	R.579	.275	.016	R2.624
July	R1.495	.341	.118	R.649	.268	.016	R2.886
August	R1.496	.337	.123	R.624	.253	.016	R2.851
September	R1.345	.271	.091	R.554	.218	.015	R2.495
October	R1.289	.272	.068	R.509	.209	.016	R2.363
November	R1.328	.204	.082	R.494	.208	.017	R2.334
December	1.388	.175	.094	.572	.246	.017	2.493
Total	**16.065**	**2.876**	**1.178**	**6.543**	**3.049**	**.192**	**29.902**

[a] Includes supplemental gaseous fuels.

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

[c] Includes net imports of electricity.

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

R=Revised data.

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

Additional Notes and Sources: See end of section.

Table 2.7 Energy Consumption Summary for December 1991

(Quadrillion Btu)

Energy Source	End-Use Sectors				Electric Utilities	Total
	Residential and Commercial	Industrial	Transportation	Total[a]		
Coal	0.021	0.249	([b])	0.266	1.388	1.654
Natural Gas[c]	1.048	.810	.069	1.928	.175	2.103
Petroleum	.230	.684	1.847	2.761	.094	2.855
Nuclear Electric Power	–	–	–	–	.572	.572
Hydroelectric Power	–	.002	–	.002	.246	.248
Net Imports of Coal Coke	–	(s)	–	(s)	–	(s)
Other[d]	–	–	–	–	.017	.017
Primary Consumption	**1.299**	**1.746**	**1.916**	**4.957**	**2.493**	**7.451**
Electricity	.515	.261	.001	.776	–	–
Net Consumption	**1.814**	**2.006**	**1.917**	**5.734**	–	–
Electrical System Energy Losses	1.138	.576	.003	1.717	–	–
Total Consumption[e]	**2.952**	**2.583**	**1.919**	**7.451**	–	–

[a] Totals for coal and natural gas may not equal sum of sectors due to the use of sector-specific conversion factors.
[b] Small amounts of coal consumed for transportation are reported as industrial sector consumption.
[c] Includes supplemental gaseous fuels. Transportation sector is pipeline fuel only.
[d] "Other" is electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy.
[e] Excludes wood, waste, geothermal, wind, photovoltaic, and solar thermal energy, except for small amounts used by electric utilities to generate electricity for distribution.

– =Not applicable. (s)=Less than +0.5 trillion Btu and greater than -0.5 trillion Btu.
Note: Totals may not equal sum of components due to independent rounding.
Additional Notes and Sources: See Tables 2.2-2.6 and end of section.

Energy Consumption Notes and Sources

The data in this section of the *Monthly Energy Review* (*MER*) are obtained initially from a group of energy-related surveys, typically called "supply surveys," conducted by the Energy Information Administration (EIA). Supply surveys are those surveys directed to suppliers and marketers of specific energy sources. They measure the quantities of specific energy sources produced, or the quantities supplied to the market, or both. The data obtained from the EIA's supply surveys are integrated to yield the summary consumption statistics published in this section (and in Section 1) of the *MER*. Users of the EIA's energy consumption statistics should be aware of a second group of energy-related surveys, typically called "consumption surveys." Consumption surveys gather information on the types of energy consumed by end users of energy, along with the characteristics of those end users that can be associated with energy use. For example, the Manufacturing Energy Consumption Survey belongs to the consumption survey group because it collects information directly from end users (the manufacturing establishments). There are important differences between the supply and consumption surveys that need to be taken into account in any analysis that uses both data sources. For information on those differences, see *Energy Consumption by End-Use Sector, A Comparison of Measures by Consumption and Supply Surveys*, DOE/EIA-0533, Energy Information Administration, Washington, DC, April 6, 1990. The numbered notes that follow elaborate on essential information in Section 2.

1. Total Energy Consumed: Total energy consumed includes coal, natural gas (including supplemental gaseous fuels), petroleum products supplied, electric utility and industrial generation of hydroelectric power, net imports of electricity generated from hydroelectric power, and electricity generated from nuclear power. Total energy consumed also includes electricity generated from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy but excludes other energy obtained from those sources because consistent historical data are not available.

2. Economic Sectors: Energy use is assigned to the major economic sectors according to the following guidelines as closely as possible:

- Residential—All private residences, whether occupied or vacant, owned or rented, including single-family homes, multifamily housing units, and mobile homes. Secondary homes, such as summer homes, are also included. Institutional housing, such as school dormitories, hospitals, and military barracks, generally are not included in the residential sector; they are included in the commercial sector. The SIC code used to classify an establishment as residential is 88 (Household).
- Commercial—Business establishments that are not engaged in transportation or in manufacturing or other types of industrial activity (agriculture, mining, or construction). Commercial establishments include hotels, motels, restaurants, wholesale businesses, retail stores, laundries, and other service enterprises; religious and nonprofit organizations; health, social, and educational institutions; and Federal, State, and local governments. Street lights, pumps, bridges, and public services are also included if the establishment operating them is considered commercial. SIC codes used to classify an establishment as commercial are 50 through 87, 89, and 91 through 97.
- Industrial—Manufacturing industries, which make up the largest part of the sector, along with mining, construction, agriculture, fisheries, and forestry. Establishments in the sector range from steel mills to small farms to companies assembling electronic components. The SIC codes used to classify establishments as industrial are 1 through 39.
- Transportation—Private and public vehicles that move people and commodities. Included are automobiles, trucks, buses, motorcycles, railroads and railways (including streetcars), aircraft, ships, barges, and natural gas pipelines. The SIC codes used to classify establishments as belonging to the transportation sector are 40 through 49.
- Electric Utility—Privately and publicly owned establishments that generate electricity primarily for use by the public.

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

3. Conversion Factors: See the conversion factors listed in the Appendix.

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

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

- Electric Utilities—October 1977 forward: Energy Information Administration (EIA), Form EIA-759 (formerly Form FPC-4), "Monthly Power Plant Report."
- Other Industrial—October 1977-December 1979: EIA, Form EIA-3, "Monthly Coal Consumption Report - Manufacturing Plants"; January 1980 forward: EIA, Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants" and Form EIA-6, "Coal Distribution Report."
- Coke Plants—October 1977-December 1980: EIA, Form EIA-5/5A, "Coke and Coal Chemicals - Monthly/Annual"; January 1981-December 1984: EIA, Form EIA-5/5A, "Coke Plant Report - Quarterly/Annual Supplement"; January 1985 forward: EIA, Form EIA-5/5A, "Coke Plant Report," quarterly.
- Residential and Commercial—October 1977-December 1979: EIA, Form EIA-2, "Monthly Coal Report, Retail Dealers - Upper Lake Docks"; January 1980 forward: EIA, Form EIA-6, "Coal Distribution Report."

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

- 1973-1975: DOI, BOM, *Minerals Yearbook*, "Natural Gas" chapter.
- 1976-1978: EIA, *Energy Data Reports*, "Natural Gas, Annual."
- 1979: EIA, *Natural Gas Production and Consumption 1979.*
- 1980-1990: EIA, *Natural Gas Annual.*
- 1991 forward: EIA, *Natural Gas Monthly.*
- Electric Utilities—1973-1976: Form FPC-4, "Monthly Power Plant Report"; 1977-1981: Federal Energy Regulatory Commission (FERC), Form FPC-4, "Monthly Power Plant Report"; 1982 forward: EIA, Form EIA-759, "Monthly Power Plant Report."
- American Gas Association, "Monthly Gas Utility Statistical Report," residential and commercial monthly sales data for 1973-1979, which are used to estimate monthly consumption values from EIA annual consumption values.

6. Petroleum: Petroleum consumption by end use is the sum of all individual petroleum products estimated to be consumed in each end-use sector. First, total consumption by product is determined. Petroleum consumption in this section of the *Monthly Energy Review (MER)* is the series called "petroleum products supplied" in Section 3. Sources for petroleum products supplied by individual products are:

- 1973-1975: DOI, BOM, *Mineral Industry Surveys*, "Petroleum Statement, Annual."
- 1976-1980: EIA, *Energy Data Reports*, "Petroleum Statement, Annual."
- 1981-1990: EIA, *Petroleum Supply Annual.*
- 1991 forward: EIA, *Petroleum Supply Monthly.*

Specific petroleum products' end-use allocation procedures follow:

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

Electric Utilities, All Periods.

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

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

Non-Electric Utilities, Annual Estimates Through 1990.

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:

- Since 1979, residential deliveries data are directly from the "Deliveries" reports. 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.

- Since 1979, commercial deliveries data are directly from the "Deliveries" reports. 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.

- Since 1979, industrial deliveries data are the sum of deliveries for industrial, farm, oil company, off-highway, diesel, and all other uses. Prior to 1979, each year's deliveries subtotal of the heating plus industrial category is split into residential, commercial, and industrial (including farm) in proportion to the 1979 shares, and this estimated industrial portion is added to oil company, off-highway diesel, and all other uses.

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

Non-Electric Utilities, Monthly Estimates Through 1990.

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

- The transportation highway use portion is allocated into the months in proportion to each month's share of the year's total sales for highway use as reported by the Federal Highway Administration's Table MF-25, "Private and Commercial Highway Use of Special Fuels by Months." The remaining transportation use of distillate fuel (i.e., for railroads, vessel bunkering, and military use) is evenly distributed over the months, adjusted for the number of days per month.

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

Non-Electric Utilities, 1991 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 1990.

- **Jet Fuel**—Through 1982, small amounts of kerosene-type jet fuel were consumed by electric utilities. Kerosene-type jet fuel deliveries to electric utilities as reported on the Form FERC-423 (formerly Form FPC-423) were used as estimates of this consumption. All remaining jet fuel (kerosene-type and naphtha-type) is consumed by the transportation sector.

- **Kerosene**—Total product supplied monthly is allocated to the major end-use sectors in proportion to annual deliveries grouped into end-use sectors from EIA's "Deliveries of Fuel Oil and Kerosene" ("Deliveries") reports (based primarily on data collected by Form EIA-821, previously Form EIA-172), as follows:

  - Residential deliveries are directly from the "Deliveries" reports for 1979-1990. Deliveries for 1990 are used as estimates for succeeding periods. Prior to 1979, each year's deliveries category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares.

  - Commercial deliveries are directly from the "Deliveries" reports for 1979-1990. Deliveries for 1990 are used as estimates for succeeding periods. Prior to 1979, each year's deliveries category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares.

  - Industrial deliveries are directly from the "Deliveries" reports for 1979-1990. Deliveries for 1990 are used as estimates for succeeding periods. Prior to 1979, each year's deliveries category called "heating" is split into residential, commercial and industrial in proportion to the 1979 shares, and this estimated industrial (including farm) portion is added to all other uses.

- **Liquefied Petroleum Gases (LPG)**—The annual shares of LPG's total consumption that are estimated to be consumed by each end-use sector are applied to each month's total LPG consumption (i.e., product supplied) to create monthly end-use consumption estimates. The annual end-use shares are calculated in the following manner:

  - Sales of LPG to the residential and commercial sector are converted from thousand gallons per year to thousand barrels per year and are assumed to be the annual consumption of LPG by the sector.

  - The quantity of LPG sold each year for consumption in internal combustion engines is allocated between the transportation and industrial sectors on the basis of data for special fuels used on highways published by the U.S. Department of Transportation, Federal Highway Administration, in *Highway Statistics*. The allocations of LPG sold for internal combustion engine use to the transportation sector range from a high of 67 percent in 1981 to a low of 37 percent in 1987.

  - LPG consumed annually by the industrial sector is estimated as the difference between LPG's total supplied and the estimated consumption by the sum of the residential and commercial sector and the transportation sector. The industrial sector includes LPG used by chemical plants as raw materials or solvents and for use in the production of synthetic rubber; refinery fuel use; use as syn-

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

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

- 1973-1982: EIA's "Sales of Liquefied Petroleum Gases and Ethane" reports, based primarily on data collected by Form EIA-174.

- 1983: End-use consumption estimates for 1983 are based on 1982 end-use consumption because the collection of data under Form EIA-174 was discontinued after data year 1982.

- 1984-1990: American Petroleum Institute (API), "Sales of Natural Gas Liquids and Liquefied Refinery Gases," which is based on an LPG sales survey jointly sponsored by API, the Gas Processors Association, and the National Liquefied Petroleum Gas Association.

- 1991 forward: The 1990 source is used to estimate succeeding periods.

- **Lubricants**—Total product supplied is allocated to the industrial and transportation sectors for all months according to proportions developed from annual sales of lubricants to the two sectors from U.S. Department of Commerce, Bureau of the Census, *Current Industrial Reports*, "Sales of Lubricating and Industrial Oils and Greases." The 1973 shares are applied to 1973 and 1974; the 1975 shares are applied to 1975 and 1976; and the 1977 shares are applied to 1977 forward.

- **Motor Gasoline**—Total product supplied monthly is allocated to the major end-use sectors in proportion to aggregations of annual sales categories formed from the U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, Tables MF-21, MF-24, and MF-25, as follows:

  - Commercial sales are the sum of sales for public non-highway use and miscellaneous and unclassified uses.

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

  - Transportation sales are the sum of sales for highway use (minus the sales of special fuels, which are primarily diesel fuel and are accounted for in the transportation sector of distillate fuel) and sales for marine use.

- **Petroleum Coke**—The portion consumed by electric utilities is from Form EIA-759, "Monthly Power Plant Report" (formerly Form FPC-4). The remaining petroleum coke is assigned to the industrial sector.

- **Residual Fuel**—Product supplied is assigned to electric utilities and non-electric utilities as follows:

  Electric Utilities, All Periods.

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

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

  Non-Electric Utilities, Annual Estimates Through 1990.

  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:

  - Since 1979, commercial deliveries data are directly from the "Deliveries" reports. 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.

  - Since 1979, industrial deliveries data are the sum of deliveries for industrial, oil company, and all other uses. Prior to 1979, each year's deliveries subtotal of the heating plus industrial category is split into commercial and industrial in proportion to the 1979 shares, and this estimated industrial portion is added to oil company and all other uses.

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

  Non-Electric Utilities, Monthly Estimates Through 1990.

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

Report," No. 2 Fuel Oil Sales to End Users and for Resale, since 1983.

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

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

Non-Electric Utilities, 1991 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 1990.

- **Road Oil**—All product supplied is assigned to the industrial sector.
- **All Other Petroleum Products**—The product supplied of all remaining petroleum products is assigned to the industrial sector.

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

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

8. Hydroelectric Power: Includes electricity generated by hydroelectric power at electric utilities, small amounts in the industrial sector, and net imports of electricity, which are assumed to be generated by hydroelectric power and are included in the electric utilities sector.

Sources for electric utilities sector:

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

Sources for industrial sector:

- 1973-1978: FPC, Form FPC-4, "Monthly Power Plant Report," for plants with generating capacity exceeding 10 megawatts, and FPC, Form FPC-12C, *Industrial Electric Generating Capacity*, for all other plants.
- 1979: FPC, Form FPC-4, "Monthly Power Plant Report," for plants with generating capacity exceeding 10 megawatts and EIA estimates for all other plants.
- 1980 forward: Annual generation estimated by EIA as the average generation over the 6-year period of 1974-1979; monthly generation estimated to be in proportion to each month's hydroelectricity generation in the electric utility industry in 1980.

Sources for imports and exports of electricity:

- 1973-September 1977: Unpublished Federal Power Commission data.
- October 1977-1980: Unpublished Economic Regulatory Administration (ERA) data.
- 1981: DOE, Office of Energy Emergency Operations, "Report on Electric Energy Exchanges with Canada and Mexico for Calendar Year 1981," April 1982 (revised June 1982).
- 1982 and 1983: DOE, ERA, *Electricity Exchanges Across International Borders.*
- 1984-1986: DOE, ERA, *Electricity Transactions Across International Borders.*
- 1987 and 1988: DOE, ERA, Form ERA-781R, "Annual Report of International Electrical Export/Import Data."
- 1989: DOE, Assistant Secretary for Fossil Energy, Form FE-781-R, "Annual Report of International Electrical Export/Import Data."
- 1990 forward: EIA estimates based on preliminary data from the National Energy Board of Canada and DOE, Assistant Secretary for Fossil Energy.

9. Net Imports of Coal Coke: Net imports means imports minus exports, and a minus sign indicates that exports are greater than imports. Sources:

- 1973-1975: DOI, BOM, *Minerals Yearbook*, "Coke and Coal Chemicals" chapter.
- 1976-1980: EIA, *Energy Data Report*, "Coke and Coal Chemicals" annual.
- 1981: EIA, *Energy Data Report*, "Coke Plant Report," quarterly.
- 1982 forward: EIA, *Quarterly Coal Report.*

10. Electricity: End-use consumption of electricity is based on Table 7.2 sales data. "Other," which is primarily for use in government buildings, is added to the commercial sector, except for approximately 4 percent used by railroads and railways and attributed to the transportation sector. For 1973-1983 and 1989 forward, "Monthly Series" data are used directly. For 1984-1988, monthly estimates are created by dividing

each month's "Monthly Series" value by the "Monthly Series" total for the year and multiplying by the "Annual Series" value for the year. Kilowatthours are converted to Btu at the rate of 3,412 Btu per kilowatthour. See Table 7.2 for sources of the electricity sales data.

11. Electrical System Energy Losses: Electrical system energy losses are calculated as the difference between total energy input at electric utilities and the total energy content of electricity sold to end-use consumers. Most of those losses occur at steam-electric power plants (conventional and nuclear) in the conversion of heat energy into mechanical energy to turn electric generators. The loss is a thermodynamically necessary feature of the steam-electric cycle. Part of the energy input-to-output losses is a result of imputing fossil energy equivalent inputs for hydroelectric and other energy sources, since there is no generally accepted practice for measuring those thermal conversion rates. In addition to conversion losses, other losses include power plant use of electricity, transmission and distribution of electricity from power plants to end-use consumers (also called "line losses"), and unaccounted for electricity. Total losses are allocated to the end-use sectors in proportion to each sector's share of total electricity sales. Overall, approximately 67 percent of total energy input is lost in conversion; of electricity generated, approximately 5 percent is lost in plant use and 9 percent is lost in transmission and distribution. Calculated electrical system energy losses may be less than actual losses, because primary consumption does not include the energy equivalent of utility purchases of electricity from non-electric utilities and from Canada and Mexico, although they are included in electricity sales.

Section 3. Petroleum

Total petroleum imports[2] averaged 7.0 million barrels per day in February 1992, 8 percent[3] lower than the January 1992 rate but 2 percent higher than the February 1991 rate.

In February 1992, 16.3 million barrels per day of petroleum products were supplied for domestic use, 4 percent lower than the previous month but slightly higher than the February 1991 rate. Motor gasoline accounted for 42 percent of the total; distillate fuel oil, 21 percent; and residual fuel oil, 8 percent.

Motor gasoline supplied during February 1992 averaged 6.9 million barrels per day, 1 percent lower than the previous month but 1 percent higher than the February 1991 rate. Stocks of total motor gasoline totaled 231 million barrels at the end of February 1992, 2 million barrels above the stock level in the previous month and 9 million barrels above the level 1 year earlier.

In February 1992, 3.4 million barrels of distillate fuel oil were supplied per day, 5 percent above the January 1992 rate and 13 percent above the February 1991 rate. Distillate fuel oil ending stocks for February 1992 were 108 million barrels, 19 million barrels below the stock level in the previous month but 7 million barrels above the stock level 1 year earlier.

Residual fuel oil supplied in February 1992 averaged 1.3 million barrels per day, 3 percent lower than the previous month but 3 percent higher than the February 1991 rate. Residual fuel oil stocks measured 45 million barrels at the end of February 1992, 1 million barrels higher than the stock level in the previous month but the same as the stock level 1 year earlier.

Estimates (except of crude production) for the most current month are based on Energy Information Administration (EIA) weekly data and will be revised to conform with data from the EIA Petroleum Reporting System as available. For the most recent month, crude production is an EIA estimate based on historical and provisional data through November 1991.

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

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

	Field Production			Stock Change[a]		Petroleum Products Supplied	Ending Stocks[b]
	Total Domestic[c]	Crude Oil	Natural Gas Plant Production	Crude Oil[d]	Petroleum Products		Crude Oil[d] and Petroleum Products
	Thousand Barrels per Day						Million Barrels
1973 Average	**10,975**	**9,208**	**1,738**	**-11**	**146**	**17,308**	**1,008**
1974 Average	**10,498**	**8,774**	**1,688**	**62**	**117**	**16,653**	**[9] 1,074**
1975 Average	**10,045**	**8,375**	**1,633**	**[9] 17**	**[9] 15**	**16,322**	**1,133**
1976 Average	**9,774**	**8,132**	**[*] 1,604**	**39**	**-96**	**17,461**	**1,112**
1977 Average	**9,913**	**8,245**	**1,618**	**170**	**378**	**18,431**	**1,312**
1978 Average	**10,328**	**8,707**	**1,567**	**78**	**-172**	**18,847**	**1,278**
1979 Average	**10,179**	**8,552**	**1,584**	**148**	**25**	**18,513**	**1,341**
1980 Average	**10,214**	**8,597**	**1,573**	**98**	**42**	**17,056**	**[9] 1,392**
1981 Average	**10,230**	**8,572**	**1,609**	**[9] 290**	**[9] -130**	**16,058**	**1,484**
1982 Average	**10,252**	**8,649**	**1,550**	**136**	**-283**	**15,296**	**[9] 1,430**
1983 Average	**10,299**	**8,688**	**1,559**	**[9] 214**	**[9] -234**	**15,231**	**1,454**
1984 Average	**10,554**	**8,879**	**1,630**	**199**	**81**	**15,726**	**1,556**
1985 Average	**10,636**	**8,971**	**1,609**	**50**	**-153**	**15,726**	**1,519**
1986 Average	**10,289**	**8,680**	**1,551**	**78**	**124**	**16,281**	**1,593**
1987 Average	**10,008**	**8,349**	**1,595**	**128**	**-87**	**16,665**	**1,607**
1988 Average	**9,818**	**8,140**	**1,625**	**1**	**-29**	**17,283**	**1,597**
1989 Average	**9,219**	**7,613**	**1,546**	**86**	**-129**	**17,325**	**1,581**
1990 January	9,178	7,546	1,541	273	1,284	16,964	1,630
February	9,147	7,497	1,570	-330	507	17,175	1,635
March	9,034	7,433	1,526	1,057	-823	17,087	1,642
April	8,979	7,407	1,493	26	-83	16,778	1,640
May	8,923	7,328	1,502	479	532	16,915	1,672
June	8,645	7,106	1,458	72	378	17,165	1,685
July	8,735	7,173	1,484	-154	929	17,084	1,709
August	8,931	7,287	1,575	-227	-113	18,050	1,699
September	8,891	7,224	1,597	-896	887	16,512	1,698
October	9,301	7,542	1,667	111	-879	16,934	1,674
November	9,155	7,387	1,690	-364	-322	16,695	1,654
December	9,019	7,338	1,604	-528	-544	16,494	1,621
Average	**8,994**	**7,355**	**1,559**	**-35**	**142**	**16,988**	**1,621**
1991 January	[E] 9,135	[E] 7,418	1,635	-94	-1,094	16,882	1,587
February	[E] 9,334	[E] 7,548	1,690	250	-688	16,284	1,574
March	[E] 9,225	[E] 7,481	1,670	-242	-261	16,100	1,559
April	[E] 9,206	[E] 7,467	1,656	65	560	16,103	1,578
May	[E] 9,116	[E] 7,368	1,647	638	986	16,098	1,628
June	[E] 8,976	[E] 7,282	1,616	-364	551	16,764	1,634
July	[E] 9,019	[E] 7,326	1,608	-163	174	16,910	1,634
August	[E] 8,972	[E] 7,272	1,617	91	265	17,133	1,645
September	[E] 9,027	[E] 7,332	1,609	-143	701	16,704	1,662
October	[E] 9,162	[E] 7,409	1,673	54	-656	16,894	1,643
November	[E] 9,107	[E] 7,307	1,706	45	52	16,674	1,646
December	[E] 9,066	[E] 7,281	1,689	-629	-346	17,099	1,616
Average	**[E] 9,111**	**[E] 7,373**	**1,651**	**-43**	**21**	**16,641**	**1,616**
1992 January	[RE] 9,184	[RE] 7,363	[R] 1,686	[R] 534	[R] -773	[R] 16,982	[R] 1,608
February	[PE] 9,156	[PE] 7,360	[E] 1,701	[E] 348	[E] -561	[E] 16,327	[E] 1,596
2-Month Average	**[PE] 9,171**	**[PE] 7,362**	**[E] 1,693**	**[E] 444**	**[E] -671**	**[E] 16,666**	**[E] 1,596**
1991 2-Month Average	**[E] 9,229**	**[E] 7,480**	**1,661**	**69**	**-901**	**16,598**	**1,574**
1990 2-Month Average	**9,163**	**7,523**	**1,555**	**-13**	**916**	**17,064**	**1,635**

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

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

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

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

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

Footnotes continued on following page.

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

	Imports			Exports			Net Imports[f]
	Total	Crude Oil[e]	Petroleum Products	Total	Crude Oil	Petroleum Products	
	Thousand Barrels per Day						
1973 Average	6,256	3,244	3,012	231	2	229	6,025
1974 Average	6,112	3,477	2,635	221	3	218	5,892
1975 Average	6,056	4,105	1,951	209	6	204	5,846
1976 Average	7,313	5,287	2,026	223	8	215	7,090
1977 Average	8,807	6,615	2,193	243	50	193	8,565
1978 Average	8,363	6,356	2,008	362	158	204	8,002
1979 Average	8,456	6,519	1,937	*471	235	*236	*7,985
1980 Average	6,909	5,263	1,646	544	287	258	6,365
1981 Average	5,996	4,396	1,599	595	228	367	5,401
1982 Average	5,113	3,488	1,625	815	236	579	4,298
1983 Average	5,051	3,329	1,722	739	164	575	4,312
1984 Average	5,437	3,426	2,011	722	181	541	4,715
1985 Average	5,067	3,201	1,866	781	204	577	4,286
1986 Average	6,224	4,178	2,045	785	154	631	5,439
1987 Average	6,678	4,674	2,004	764	151	613	5,914
1988 Average	7,402	5,107	2,295	815	155	661	6,587
1989 Average	8,061	5,843	2,217	859	142	717	7,202
1990 January	9,197	6,212	2,985	709	132	578	8,488
February	8,399	5,895	2,505	822	102	720	7,577
March	7,965	6,117	1,848	880	132	748	7,084
April	7,858	5,813	2,045	761	111	649	7,097
May	8,834	6,454	2,380	690	112	578	8,144
June	8,747	6,423	2,323	803	88	715	7,944
July	9,048	6,855	2,193	696	89	606	8,353
August	8,644	6,452	2,192	850	64	785	7,794
September	7,361	5,664	1,698	847	68	779	6,514
October	6,717	5,132	1,585	949	104	844	5,768
November	7,003	5,085	1,918	1,085	137	948	5,918
December	6,439	4,611	1,828	1,187	162	1,026	5,252
Average	**8,018**	**5,894**	**2,123**	**857**	**109**	**748**	**7,161**
1991 January	7,066	5,303	1,763	1,199	50	1,149	5,867
February	6,844	5,498	1,346	1,441	153	1,288	5,403
March	6,550	5,129	1,421	944	136	807	5,607
April	7,374	5,523	1,851	737	162	575	6,636
May	8,496	6,387	2,109	1,149	165	984	7,347
June	8,177	6,317	1,860	921	78	843	7,256
July	7,714	5,949	1,765	963	139	824	6,752
August	8,622	6,667	1,955	837	55	783	7,785
September	7,745	5,795	1,950	785	109	676	6,960
October	7,396	5,683	1,712	918	91	826	6,478
November	7,559	5,544	2,015	926	126	800	6,634
December	7,313	5,563	1,750	1,213	133	1,081	6,100
Average	**7,576**	**5,782**	**1,794**	**1,001**	**116**	**885**	**6,575**
1992 January	R7,593	R5,885	R1,708	R1,144	R118	R1,026	R6,449
February	E6,986	E5,303	E1,683	E897	E143	E754	E6,089
2-Month Average	**E7,300**	**E5,603**	**E1,696**	**E1,025**	**E130**	**E895**	**E6,275**
1991 2-Month Average	**6,961**	**5,396**	**1,565**	**1,314**	**99**	**1,215**	**5,647**
1990 2-Month Average	**8,819**	**6,061**	**2,757**	**763**	**117**	**645**	**8,056**

Footnotes continued.

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

[f] Net imports equals imports minus exports.

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

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

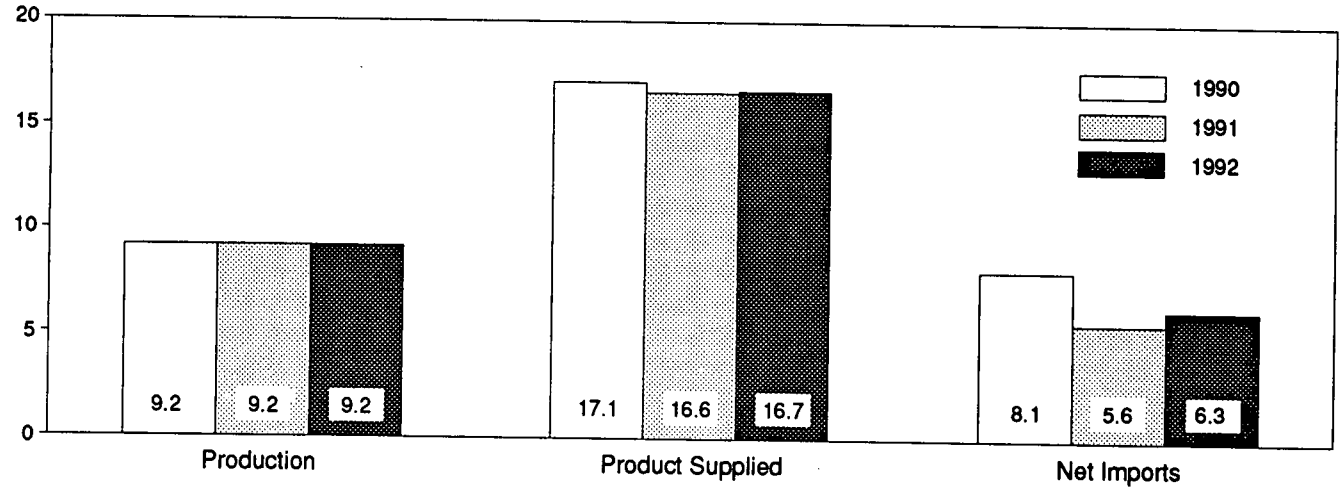
Notes: • Crude oil includes lease condensate. • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration, *Petroleum Supply Monthly*, March 1992, Table S1.

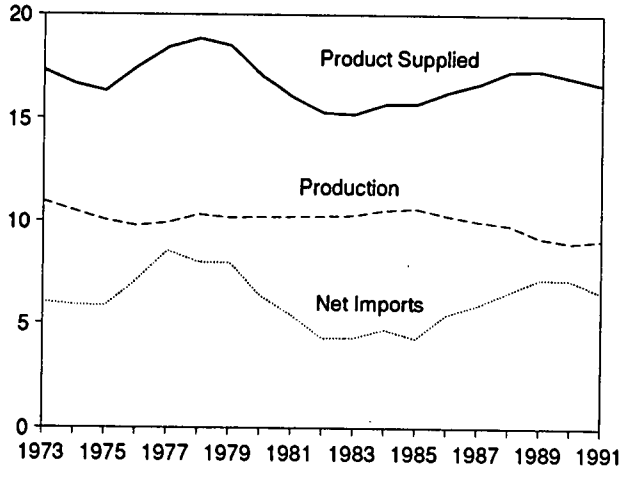
Figure 3.1 Petroleum Overview

(Million Barrels per Day)

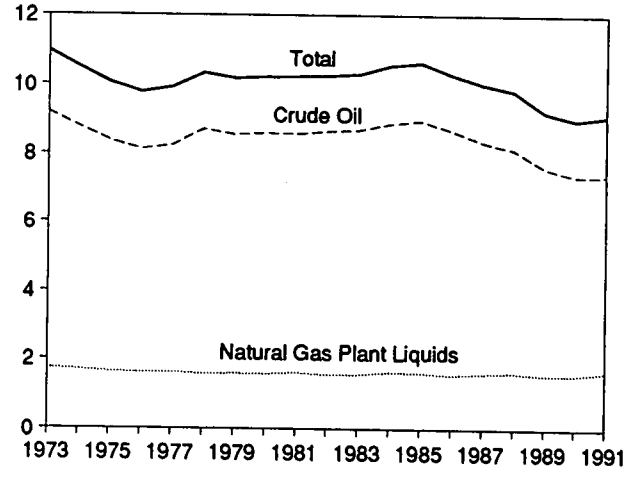
Overview, January and February



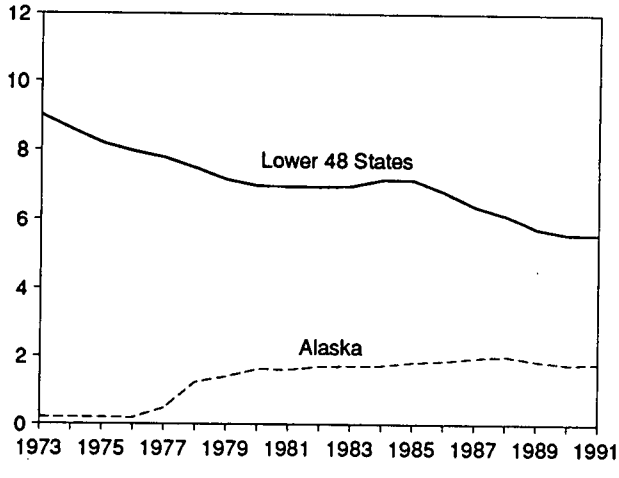
Overview, 1973-1991



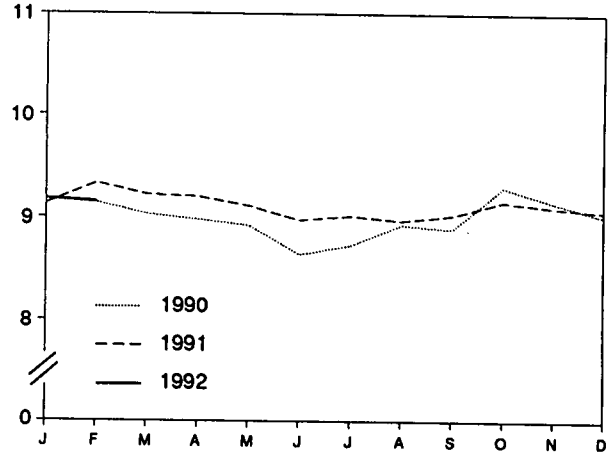
Production, 1973-1991



Crude Oil Production, 1973-1991



Total Production, Monthly

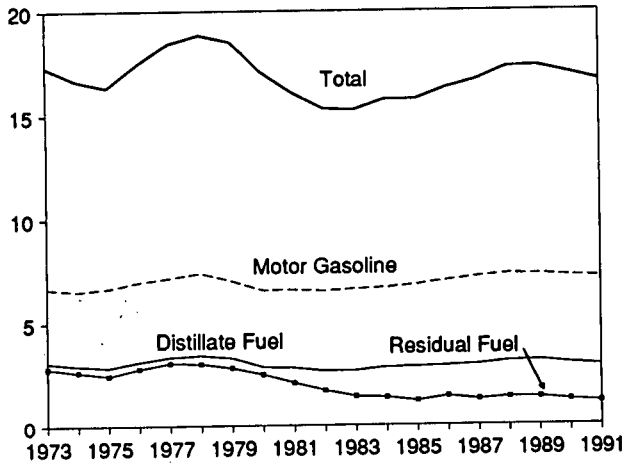


Note: Because vertical scales differ, graphs should not be compared.
Sources: Tables 3.1a, 3.1b, and 3.2a.

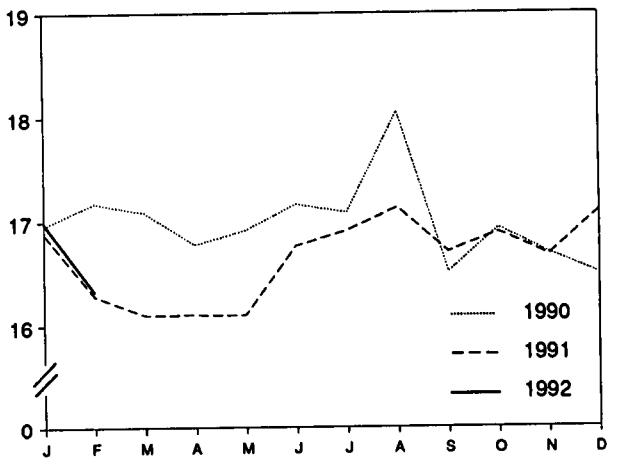
Figure 3.1 Petroleum Overview (Continued)

(Million Barrels per Day, Except as Noted)

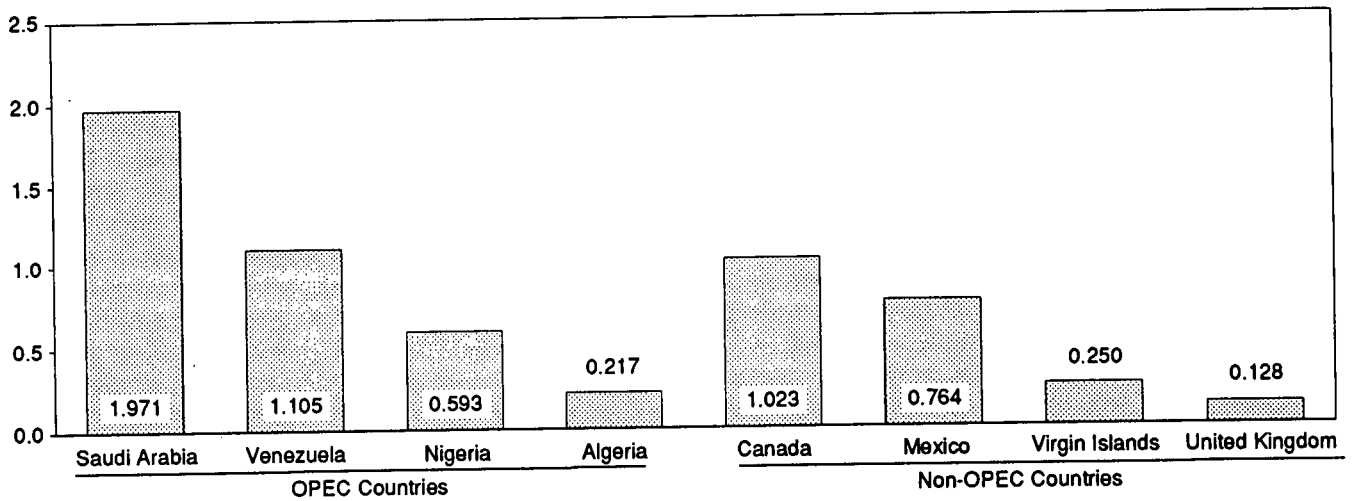
Product Supplied, 1973-1991



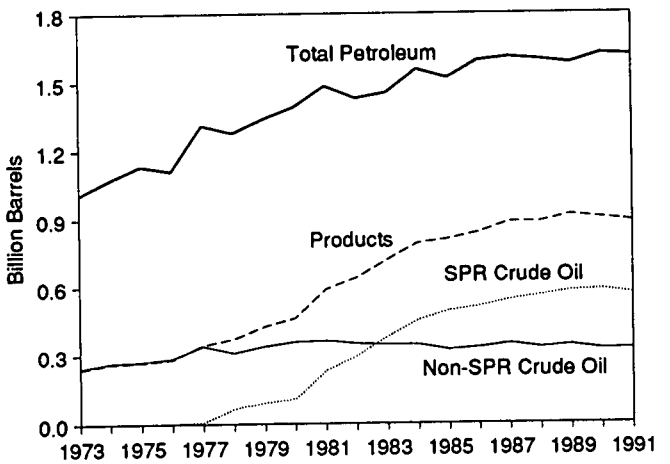
Total Product Supplied, Monthly



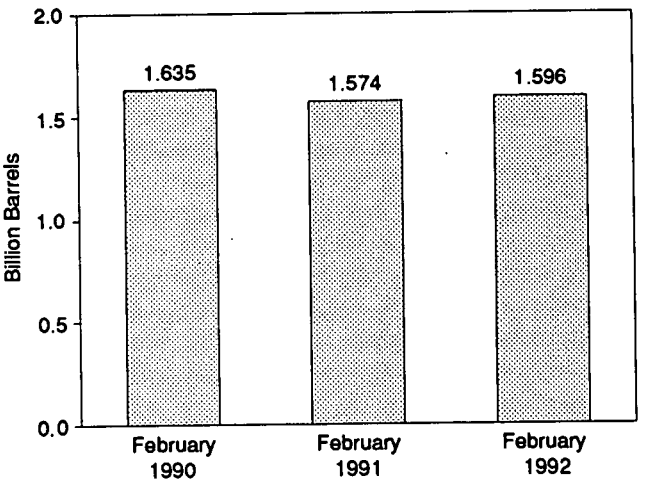
Imports from Selected Countries, January 1992



Stocks, End of Year, 1973-1991



Total Petroleum Stocks, End of Month



Note: OPEC = Organization of Petroleum Exporting Countries.
Note: SPR = Strategic Petroleum Reserve.
Note: Because vertical scales differ, graphs should not be compared.
Sources: Tables 3.1a, 3.2b, 3.3a, 3.3b, 3.3d-3.3h, 3.4, 3.5, and 3.6.

Table 3.2a Crude Oil Supply and Disposition: Supply

	Supply						
	Field Production		Imports			Unaccounted-for Crude Oil[d]	Crude Oil Used Directly[e]
	Total Domestic	Alaskan	Total	SPR[c]	Other		
	Thousand Barrels per Day						
1973 Average	9,208	198	3,244	–	3,244	3	-19
1974 Average	8,774	193	3,477	–	3,477	-25	-15
1975 Average	8,375	191	4,105	–	4,105	17	-17
1976 Average	8,132	173	5,287	–	5,287	77	*-19
1977 Average	8,245	464	6,615	21	6,594	-6	-14
1978 Average	8,707	1,229	6,356	*161	6,195	-57	*-15
1979 Average	8,552	1,401	6,519	67	6,452	-11	*-14
1980 Average	8,597	1,617	5,263	44	5,219	34	*-14
1981 Average	8,572	1,609	4,396	256	4,141	83	-58
1982 Average	8,649	1,696	3,488	165	3,323	71	-59
1983 Average	8,688	1,714	3,329	234	3,096	114	–
1984 Average	8,879	1,722	3,426	197	3,229	185	–
1985 Average	8,971	1,825	3,201	118	3,083	145	–
1986 Average	8,680	1,867	4,178	48	4,130	139	–
1987 Average	8,349	1,962	4,674	73	4,601	145	–
1988 Average	8,140	2,017	5,107	51	5,055	196	–
1989 Average	7,613	1,874	5,843	56	5,787	200	–
1990 January	7,546	1,864	6,212	24	6,188	178	–
February	7,497	1,834	5,895	12	5,883	-98	–
March	7,433	1,819	6,117	44	6,073	540	–
April	7,407	1,802	5,813	38	5,775	-9	–
May	7,328	1,765	6,454	89	6,365	225	–
June	7,106	1,612	6,423	17	6,407	349	–
July	7,173	1,687	6,855	0	6,855	150	–
August	7,287	1,727	6,452	95	6,357	259	–
September	7,224	1,702	5,664	0	5,664	402	–
October	7,542	1,884	5,132	0	5,132	382	–
November	7,387	1,746	5,085	0	5,085	269	–
December	7,338	1,838	4,611	0	4,611	409	–
Average	**7,355**	**1,773**	**5,894**	**27**	**5,867**	**258**	–
1991 January	E7,418	E1,848	5,303	0	5,303	-14	–
February	E7,548	E1,908	5,498	0	5,498	424	–
March	E7,481	E1,887	5,129	0	5,129	134	–
April	E7,467	E1,798	5,523	0	5,523	294	–
May	E7,368	E1,771	6,387	0	6,387	596	–
June	E7,282	E1,757	6,317	0	6,317	47	–
July	E7,326	E1,775	5,949	0	5,949	418	–
August	E7,272	E1,731	6,667	0	6,667	8	–
September	E7,332	E1,787	5,795	0	5,795	546	–
October	E7,409	E1,843	5,683	0	5,683	-30	–
November	E7,307	E1,765	5,544	0	5,544	269	–
December	E7,281	E1,718	5,563	0	5,563	147	–
Average	**E7,373**	**E1,798**	**5,782**	**0**	**5,782**	**234**	–
1992 January	RE7,363	RE1,789	R5,885	0	R5,885	R353	–
February	PE7,360	PE1,812	E5,303	E0	E5,303	E246	–
2-Month Average	**PE7,362**	**PE1,800**	**E5,603**	**E0**	**E5,603**	**E302**	–
1991 2-Month Average	**E7,480**	**E1,876**	**5,396**	**0**	**5,396**	**194**	–
1990 2-Month Average	**7,523**	**1,850**	**6,061**	**18**	**6,043**	**47**	–

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

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

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

[c] Strategic Petroleum Reserve.

[d] A balancing item.

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

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

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

Footnotes continued on following page.

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

	Disposition						Ending Stocks[a]		
	Crude Losses	Stock Change[b] SPR[c]	Stock Change[b] Other	Refinery Input	Exports	Product Supplied[e]	Total	SPR[c]	Other Primary
	Thousand Barrels per Day						Million Barrels		
1973 Average	13	–	-11	12,431	2	–	242	–	242
1974 Average	13	–	62	12,133	3	–	265	–	265
1975 Average	13	–	17	12,442	6	–	271	–	271
1976 Average	*14	–	39	13,416	8	–	285	–	285
1977 Average	16	20	150	14,602	50	–	348	7	340
1978 Average	16	163	-84	14,739	158	–	376	67	309
1979 Average	16	67	81	14,648	235	–	430	91	339
1980 Average	*14	45	52	13,481	287	–	[f]466	108	[f]358
1981 Average	5	336	[f]-46	12,470	228	–	594	230	363
1982 Average	3	174	-38	11,774	236	–	[g]644	294	[g]350
1983 Average	2	234	[g]-20	11,685	164	66	723	379	344
1984 Average	2	195	4	12,044	181	64	796	451	345
1985 Average	1	117	-67	12,002	204	60	814	493	321
1986 Average	(s)	50	28	12,716	154	49	843	512	331
1987 Average	(s)	80	49	12,854	151	34	890	541	349
1988 Average	(s)	52	-51	13,246	155	40	890	560	330
1989 Average	(s)	56	30	13,401	142	28	921	580	341
1990 January	(s)	24	249	13,491	132	40	930	581	349
February	0	12	-342	13,487	102	36	920	581	339
March	0	44	1,013	12,876	132	24	953	582	371
April	(s)	38	-12	13,051	111	24	954	583	370
May	0	89	389	13,386	112	30	969	586	383
June	(s)	16	56	13,689	88	29	971	587	384
July	0	0	-154	14,212	89	31	966	587	379
August	(s)	94	-321	14,142	64	18	959	590	370
September	(s)	(s)	-897	14,104	68	14	932	590	343
October	(s)	-8	120	12,825	104	15	936	589	346
November	(s)	-111	-253	12,953	137	13	925	586	339
December	(s)	-10	-517	12,708	162	15	908	586	323
Average	(s)	16	-51	13,409	109	24	908	586	323
1991 January	0	0	-94	12,727	50	23	906	586	320
February	0	-147	397	13,052	153	17	913	582	331
March	(s)	-422	180	12,832	136	18	905	568	337
April	(s)	0	65	13,037	162	21	907	568	339
May	(s)	0	638	13,533	165	15	927	568	359
June	(s)	(s)	-364	13,915	78	16	916	568	348
July	0	(s)	-163	13,701	139	15	911	569	343
August	0	(s)	91	13,789	55	13	914	569	345
September	(s)	0	-143	13,691	109	16	910	569	341
October	(s)	(s)	54	12,894	91	22	911	569	343
November	(s)	(s)	45	12,926	126	22	913	569	344
December	(s)	(s)	-629	13,465	133	23	893	569	325
Average	(s)	-47	4	13,298	116	18	893	569	325
1992 January	[R]0	(s)	[R]534	[R]12,923	[R]118	[R]26	[R]910	569	[R]341
February	[E](s)	[E](s)	[E]348	[E]12,395	[E]143	[E]22	[E]916	[E]569	[E]348
2-Month Average	[E](s)	[E](s)	[E]444	[E]12,668	[E]130	[E]24	[E]916	[E]569	[E]348
1991 2-Month Average	0	-70	139	12,881	99	20	913	582	331
1990 2-Month Average	(s)	18	-32	13,489	117	38	920	581	339

Footnotes continued.

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

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

Source: Energy Information Administration, *Petroleum Supply Monthly*, March 1992, Table S2.

Table 3.3a Petroleum Imports: Algeria, Iraq, Kuwait, and Libya
(Thousand Barrels per Day)

	Arab OPEC[a]							
	Algeria		Iraq		Kuwait[c]		Libya	
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average	136	120	4	4	47	42	164	133
1974 Average	190	180	0	0	5	5	4	4
1975 Average	282	264	2	2	16	4	232	223
1976 Average	432	408	26	26	5	1	453	444
1977 Average	559	544	74	74	48	42	723	704
1978 Average	649	634	62	62	6	5	654	638
1979 Average	636	608	88	88	8	5	658	642
1980 Average	488	456	28	28	27	27	554	548
1981 Average	311	261	(s)	0	0	0	319	317
1982 Average	170	90	3	3	5	2	26	23
1983 Average	240	176	10	10	14	7	0	0
1984 Average	323	194	12	12	36	24	1	0
1985 Average	187	84	46	46	21	4	4	0
1986 Average	271	78	81	81	68	28	0	0
1987 Average	295	115	83	82	84	70	0	0
1988 Average	300	58	345	343	92	80	0	0
1989 Average	269	60	449	441	157	155	0	0
1990 January	413	97	690	657	250	250	0	0
February	282	47	500	488	150	140	0	0
March	301	67	585	580	100	82	0	0
April	234	62	588	588	50	50	0	0
May	259	38	727	724	64	64	0	0
June	333	72	708	708	105	94	0	0
July	308	70	1,120	1,120	43	33	0	0
August	360	80	966	966	243	207	0	0
September	279	69	318	318	33	33	0	0
October	173	15	0	0	0	0	0	0
November	177	46	0	0	0	0	0	0
December	242	92	0	0	0	0	0	0
Average	**280**	**63**	**518**	**514**	**86**	**79**	**0**	**0**
1991 January	327	63	0	0	0	0	0	0
February	246	38	0	0	0	0	0	0
March	222	76	0	0	0	0	0	0
April	282	90	0	0	0	0	0	0
May	308	87	0	0	0	0	0	0
June	304	70	0	0	0	0	0	0
July	202	44	0	0	0	0	0	0
August	182	16	0	0	0	0	0	0
September	205	19	0	0	34	34	0	0
October	217	53	0	0	33	33	0	0
November	278	75	0	0	0	0	0	0
December	247	54	0	0	0	0	0	0
Average	**252**	**57**	**0**	**0**	**6**	**6**	**0**	**0**
1992 January	217	37	0	0	0	0	0	0

See footnotes at end of Table 3.3h.

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

(Thousand Barrels per Day)

	Arab OPEC[a]						Total Arab OPEC[a]	
	Qatar		Saudi Arabia[c]		United Arab Emirates			
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average	**7**	**7**	**486**	**462**	**71**	**71**	**915**	**838**
1974 Average	**17**	**17**	**461**	**438**	**74**	**69**	**752**	**713**
1975 Average	**18**	**18**	**715**	**701**	**117**	**117**	**1,383**	**1,330**
1976 Average	**24**	**24**	**1,230**	**1,222**	**254**	**254**	**2,424**	**2,378**
1977 Average	**67**	**67**	**1,380**	**1,373**	**335**	**333**	**3,185**	**3,136**
1978 Average	**64**	**64**	**1,144**	**1,142**	**385**	**385**	**2,963**	**2,930**
1979 Average	**31**	**31**	**1,356**	**1,347**	**281**	**281**	**3,058**	**3,002**
1980 Average	**22**	**22**	**1,261**	**1,250**	**172**	**172**	**2,551**	**2,503**
1981 Average	**7**	**7**	**1,129**	**1,112**	**81**	**77**	**1,848**	**1,774**
1982 Average	**7**	**7**	**552**	**530**	**92**	**81**	**854**	**736**
1983 Average	**(s)**	**0**	**337**	**321**	**30**	**18**	**632**	**533**
1984 Average	**5**	**4**	**325**	**309**	**117**	**90**	**819**	**634**
1985 Average	**(s)**	**0**	**168**	**132**	**45**	**35**	**472**	**300**
1986 Average	**13**	**12**	**685**	**618**	**44**	**38**	**1,162**	**854**
1987 Average	**0**	**0**	**751**	**642**	**61**	**56**	**1,274**	**965**
1988 Average	**0**	**0**	**1,073**	**911**	**29**	**23**	**1,839**	**1,415**
1989 Average	**2**	**2**	**1,224**	**1,116**	**28**	**21**	**2,130**	**1,794**
1990 January	0	0	1,214	1,055	37	0	2,605	2,060
February	0	0	1,557	1,372	18	18	2,506	2,065
March	0	0	1,157	1,060	17	17	2,161	1,805
April	43	43	1,149	950	9	0	2,073	1,693
May	0	0	1,225	1,076	73	60	2,349	1,963
June	0	0	1,153	1,041	20	0	2,318	1,916
July	0	0	1,369	1,242	13	13	2,853	2,478
August	0	0	1,189	1,052	0	0	2,757	2,305
September	0	0	1,286	1,168	0	0	1,915	1,588
October	0	0	1,619	1,473	0	0	1,792	1,488
November	0	0	1,581	1,431	0	0	1,758	1,477
December	0	0	1,587	1,431	14	0	1,843	1,523
Average	**4**	**4**	**1,339**	**1,195**	**17**	**9**	**2,244**	**1,864**
1991 January	0	0	1,934	1,782	0	0	2,261	1,846
February	0	0	1,566	1,538	0	0	1,812	1,576
March	0	0	1,623	1,586	0	0	1,845	1,662
April	0	0	1,764	1,702	0	0	2,046	1,792
May	0	0	2,258	2,053	0	0	2,566	2,140
June	0	0	1,841	1,795	0	0	2,145	1,865
July	0	0	1,725	1,641	0	0	1,928	1,685
August	0	0	2,019	1,964	7	0	2,208	1,980
September	0	0	1,708	1,562	0	0	1,947	1,615
October	0	0	1,652	1,545	18	18	1,920	1,649
November	0	0	1,778	1,626	16	0	2,072	1,701
December	0	0	1,645	1,566	0	0	1,892	1,620
Average	**0**	**0**	**1,795**	**1,698**	**3**	**2**	**2,055**	**1,763**
1992 January	0	0	1,971	1,865	18	0	2,206	1,902

See footnotes at end of Table 3.3h.

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

(Thousand Barrels per Day)

	Non-Arab OPEC[a]							
	Ecuador		Gabon		Indonesia		Iran	
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average	48	47	0	0	213	200	223	216
1974 Average	42	42	23	23	300	284	469	463
1975 Average	57	57	27	27	390	379	280	278
1976 Average	51	51	28	26	539	537	298	298
1977 Average	57	55	42	35	541	507	535	530
1978 Average	54	38	41	38	573	533	555	554
1979 Average	42	30	42	42	420	380	304	297
1980 Average	27	17	26	25	348	314	9	8
1981 Average	48	38	35	35	366	318	0	0
1982 Average	42	32	40	40	248	226	35	35
1983 Average	61	56	59	59	338	315	48	48
1984 Average	55	47	58	57	343	304	10	10
1985 Average	67	56	52	51	314	292	27	27
1986 Average	77	64	26	25	318	297	19	19
1987 Average	29	23	35	35	285	262	98	98
1988 Average	47	33	16	15	205	186	[d] (s)	[d] (s)
1989 Average	89	80	50	49	183	158	0	0
1990 January	48	35	75	75	153	118	0	0
February	60	40	43	43	254	189	0	0
March	49	38	134	134	138	97	0	0
April	31	29	32	28	88	80	0	0
May	17	12	27	27	85	77	0	0
June	98	86	59	59	138	129	0	0
July	60	43	69	69	143	137	0	0
August	81	69	119	119	69	55	0	0
September	43	37	59	59	111	111	0	0
October	49	43	50	50	88	88	0	0
November	13	13	71	71	72	72	0	0
December	35	12	30	30	45	36	0	0
Average	**49**	**38**	**64**	**64**	**114**	**98**	**0**	**0**
1991 January	12	6	41	41	61	61	0	0
February	66	55	95	95	162	153	0	0
March	67	58	29	29	93	93	0	0
April	35	24	72	72	61	61	0	0
May	109	103	96	96	111	111	0	0
June	129	126	70	70	187	187	0	0
July	62	47	137	137	88	88	81	81
August	112	93	56	56	93	87	48	48
September	31	25	91	91	83	64	152	152
October	30	24	137	137	118	91	43	43
November	55	48	91	91	120	96	64	64
December	41	23	91	91	163	134	0	0
Average	**62**	**53**	**84**	**84**	**111**	**102**	**32**	**32**
1992 January	23	23	91	91	125	117	0	0

See footnotes at end of Table 3.3h.

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

(Thousand Barrels per Day)

	Non-Arab OPEC[a]				Total Non-Arab OPEC[a]		Total OPEC[a]	
	Nigeria		Venezuela					
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average	459	448	1,135	344	2,078	1,257	2,993	2,095
1974 Average	713	697	979	319	2,527	1,827	3,280	2,540
1975 Average	762	746	702	395	2,219	1,882	3,601	3,211
1976 Average	1,025	1,014	700	241	2,642	2,167	5,066	4,545
1977 Average	1,143	1,130	690	250	3,008	2,507	6,193	5,643
1978 Average	919	910	646	181	2,788	2,254	5,751	5,184
1979 Average	1,080	1,069	690	293	2,579	2,110	5,637	5,112
1980 Average	857	841	481	156	1,749	1,361	4,300	3,864
1981 Average	620	611	406	147	1,476	1,149	3,323	2,922
1982 Average	514	510	412	155	1,291	998	2,146	1,734
1983 Average	302	301	422	164	1,231	944	1,862	1,477
1984 Average	216	207	548	253	1,230	878	2,049	1,512
1985 Average	293	280	605	306	1,358	1,012	1,830	1,312
1986 Average	440	437	793	416	1,674	1,259	2,837	2,113
1987 Average	535	529	804	488	1,787	1,435	3,060	2,400
1988 Average	618	607	794	439	1,681	1,281	3,520	2,696
1989 Average	815	800	873	495	2,010	1,582	4,140	3,376
1990 January	830	830	1,155	696	2,260	1,754	4,865	3,813
February	833	816	898	564	2,088	1,652	4,594	3,717
March	1,054	1,031	893	543	2,268	1,843	4,429	3,648
April	969	941	1,005	692	2,125	1,772	4,198	3,465
May	1,008	997	1,087	705	2,225	1,818	4,574	3,781
June	778	760	1,070	704	2,142	1,737	4,460	3,653
July	860	855	1,007	665	2,139	1,769	4,992	4,246
August	881	881	1,014	617	2,164	1,741	4,921	4,046
September	755	743	1,062	740	2,029	1,690	3,944	3,277
October	557	536	982	717	1,725	1,434	3,517	2,921
November	574	555	1,142	725	1,871	1,435	3,629	2,912
December	499	461	975	616	1,585	1,155	3,428	2,678
Average	**800**	**784**	**1,025**	**666**	**2,052**	**1,650**	**4,296**	**3,514**
1991 January	504	481	1,021	689	1,638	1,277	3,899	3,123
February	721	717	959	686	2,003	1,705	3,815	3,282
March	523	523	991	631	1,703	1,334	3,548	2,996
April	666	638	846	470	1,680	1,265	3,727	3,057
May	860	838	978	581	2,153	1,728	4,719	3,868
June	832	827	1,019	581	2,237	1,791	4,382	3,655
July	836	820	1,084	676	2,289	1,850	4,216	3,536
August	1,016	983	1,038	701	2,363	1,966	4,571	3,946
September	489	467	1,104	773	1,949	1,572	3,897	3,187
October	651	623	1,087	777	2,067	1,694	3,987	3,343
November	704	674	1,053	671	2,087	1,644	4,159	3,346
December	617	593	975	655	1,887	1,496	3,779	3,116
Average	**702**	**682**	**1,014**	**658**	**2,005**	**1,610**	**4,060**	**3,373**
1992 January	593	566	1,105	787	1,935	1,583	4,141	3,485

See footnotes at end of Table 3.3h.

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

(Thousand Barrels per Day)

	Non-OPEC[b]											
	Angola		Australia		Bahama Islands		Brazil		Canada		China	
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average	49	49	2	0	174	0	9	0	1,325	1,001	(s)	0
1974 Average	49	48	1	0	164	0	2	0	1,070	791	0	0
1975 Average	75	71	5	0	152	0	5	0	846	600	0	0
1976 Average	12	7	2	0	118	0	0	0	599	371	0	0
1977 Average	24	17	3	0	171	0	0	0	517	279	0	0
1978 Average	20	6	5	0	160	0	0	0	467	248	0	0
1979 Average	43	39	6	0	147	0	1	0	538	271	13	13
1980 Average	42	37	1	0	78	0	3	1	455	199	(s)	0
1981 Average	49	45	5	0	74	0	23	14	447	164	18	0
1982 Average	44	42	5	(s)	65	0	47	19	482	214	40	8
1983 Average	78	71	4	0	125	0	41	2	547	274	34	6
1984 Average	90	85	38	25	88	0	60	(s)	630	341	46	15
1985 Average	110	104	37	21	40	0	61	0	770	468	59	36
1986 Average	112	102	41	30	37	0	50	0	807	570	90	68
1987 Average	192	180	58	49	37	0	84	0	848	608	82	63
1988 Average	212	203	64	59	32	0	98	0	999	681	88	82
1989 Average	284	279	36	31	34	0	82	0	931	630	80	76
1990 January	262	262	41	41	80	0	48	0	982	605	121	121
February	346	346	58	55	78	0	45	0	946	585	53	51
March	296	296	41	41	35	0	8	0	850	583	83	83
April	281	281	25	20	51	0	40	0	925	617	80	74
May	235	235	69	69	29	0	114	0	981	654	66	65
June	260	260	44	44	36	0	82	0	942	699	49	43
July	303	303	126	101	25	0	93	0	899	659	132	122
August	134	134	56	33	40	0	45	0	952	676	79	77
September	135	123	57	45	45	0	8	0	924	632	47	42
October	139	139	31	31	9	0	12	0	917	636	85	85
November	238	238	28	28	0	0	74	0	902	645	113	113
December	224	224	64	60	13	0	16	0	987	713	47	47
Average	**237**	**236**	**53**	**47**	**37**	**0**	**49**	**0**	**934**	**643**	**80**	**77**
1991 January	232	232	21	21	25	0	29	0	967	722	68	63
February	202	202	0	0	14	0	13	0	1,123	877	102	96
March	186	186	0	0	0	0	0	0	1,051	764	96	96
April	337	337	55	55	35	0	17	0	1,092	764	113	113
May	220	220	57	57	42	0	31	0	1,022	752	119	113
June	205	205	43	31	30	0	41	0	1,081	806	144	139
July	264	264	12	12	19	0	21	0	831	606	88	88
August	298	298	37	22	78	0	27	0	995	687	85	75
September	230	230	24	24	29	0	19	0	1,132	849	91	86
October	300	300	13	0	51	0	16	0	925	639	29	24
November	213	213	25	13	46	0	45	0	1,088	794	96	96
December	359	359	13	13	53	0	8	0	1,080	757	65	65
Average	**254**	**254**	**25**	**21**	**35**	**0**	**22**	**0**	**1,031**	**750**	**91**	**87**
1992 January	360	360	11	11	63	0	18	0	1,023	783	144	144

See footnotes at end of Table 3.3h.

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

(Thousand Barrels per Day)

	Non-OPEC[b]									
	Colombia		Italy		Malaysia		Mexico		Netherlands	
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average	**9**	**2**	**125**	**0**	**12**	**1**	**16**	**1**	**53**	**0**
1974 Average	**5**	**0**	**74**	**0**	**12**	**1**	**8**	**2**	**43**	**0**
1975 Average	**9**	**0**	**27**	**0**	**8**	**5**	**71**	**70**	**19**	**4**
1976 Average	**21**	**6**	**39**	**0**	**18**	**16**	**87**	**87**	**8**	**0**
1977 Average	**17**	**0**	**51**	**0**	**66**	**55**	**179**	**177**	**31**	**4**
1978 Average	**20**	**0**	**38**	**0**	**42**	**37**	**318**	**316**	**5**	**2**
1979 Average	**18**	**0**	**30**	**0**	**66**	**52**	**439**	**437**	**23**	**7**
1980 Average	**4**	**0**	**4**	**0**	**70**	**61**	**533**	**507**	**2**	**(s)**
1981 Average	**1**	**0**	**11**	**0**	**36**	**33**	**522**	**469**	**30**	**(s)**
1982 Average	**5**	**0**	**18**	**(s)**	**20**	**18**	**685**	**645**	**35**	**(s)**
1983 Average	**10**	**0**	**18**	**(s)**	**4**	**3**	**826**	**766**	**65**	**3**
1984 Average	**8**	**0**	**45**	**(s)**	**1**	**0**	**748**	**659**	**65**	**3**
1985 Average	**23**	**0**	**60**	**(s)**	**3**	**1**	**816**	**715**	**58**	**0**
1986 Average	**87**	**57**	**76**	**0**	**12**	**11**	**699**	**621**	**54**	**0**
1987 Average	**148**	**115**	**54**	**1**	**13**	**12**	**655**	**602**	**60**	**0**
1988 Average	**134**	**106**	**65**	**5**	**19**	**19**	**747**	**674**	**61**	**0**
1989 Average	**172**	**136**	**34**	**3**	**39**	**39**	**767**	**716**	**49**	**0**
1990 January	188	146	124	0	14	14	776	691	129	0
February	203	168	76	0	42	38	725	669	80	0
March	177	146	47	0	28	28	815	757	21	0
April	198	143	53	0	38	38	466	414	47	0
May	220	175	101	10	0	0	788	688	63	0
June	180	117	95	0	9	9	912	815	92	0
July	169	111	56	11	20	20	706	651	54	0
August	203	132	43	0	142	142	773	676	39	0
September	97	84	38	0	105	105	871	807	20	0
October	183	159	21	0	78	78	828	793	37	0
November	209	177	32	0	8	8	761	706	49	0
December	161	121	13	0	6	6	637	595	28	0
Average	**182**	**140**	**58**	**2**	**41**	**40**	**755**	**689**	**55**	**0**
1991 January	194	174	25	0	0	0	779	759	6	0
February	151	98	42	13	9	9	742	693	8	0
March	157	127	29	0	21	21	791	772	33	0
April	163	131	41	12	0	0	889	819	35	0
May	163	112	60	0	66	66	757	736	45	0
June	169	124	46	0	49	49	919	872	49	0
July	163	111	54	0	9	9	835	748	47	0
August	219	179	57	11	14	14	878	797	30	0
September	157	103	89	0	10	10	805	768	44	0
October	128	80	41	0	64	64	799	754	16	0
November	145	135	15	0	10	10	690	656	24	0
December	138	117	61	0	14	14	723	708	4	0
Average	**162**	**125**	**47**	**3**	**22**	**22**	**801**	**757**	**28**	**0**
1992 January	158	111	40	0	0	0	764	721	31	0

See footnotes at end of Table 3.3h.

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

(Thousand Barrels per Day)

	Non-OPEC[b]											
	Netherlands Antilles		Norway		Puerto Rico		Spain		Trinidad and Tobago		United Kingdom	
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average	**585**	**0**	**1**	**0**	**99**	**0**	**26**	**0**	**255**	**60**	**15**	**0**
1974 Average	**511**	**0**	**1**	**1**	**90**	**0**	**12**	**0**	**251**	**63**	**8**	**0**
1975 Average	**332**	**0**	**17**	**12**	**90**	**0**	**1**	**0**	**242**	**115**	**14**	**(s)**
1976 Average	**275**	**0**	**36**	**35**	**88**	**0**	**1**	**0**	**274**	**104**	**31**	**13**
1977 Average	**211**	**0**	**50**	**48**	**105**	**0**	**10**	**0**	**289**	**134**	**126**	**97**
1978 Average	**229**	**0**	**104**	**104**	**94**	**0**	**3**	**0**	**253**	**142**	**180**	**169**
1979 Average	**231**	**0**	**75**	**75**	**92**	**0**	**4**	**0**	**190**	**123**	**202**	**197**
1980 Average	**225**	**0**	**144**	**144**	**88**	**0**	**1**	**0**	**176**	**115**	**176**	**173**
1981 Average	**197**	**0**	**119**	**114**	**62**	**0**	**1**	**(s)**	**133**	**102**	**375**	**369**
1982 Average	**175**	**0**	**102**	**102**	**50**	**0**	**3**	**(s)**	**112**	**92**	**456**	**441**
1983 Average	**189**	**0**	**66**	**65**	**40**	**0**	**2**	**(s)**	**96**	**83**	**382**	**365**
1984 Average	**188**	**0**	**114**	**112**	**42**	**0**	**11**	**0**	**94**	**87**	**402**	**378**
1985 Average	**40**	**0**	**32**	**31**	**28**	**0**	**29**	**1**	**113**	**98**	**310**	**278**
1986 Average	**25**	**0**	**60**	**53**	**21**	**0**	**53**	**0**	**125**	**93**	**350**	**317**
1987 Average	**29**	**0**	**80**	**70**	**21**	**0**	**55**	**0**	**106**	**75**	**352**	**304**
1988 Average	**36**	**0**	**67**	**62**	**22**	**0**	**68**	**0**	**97**	**71**	**315**	**254**
1989 Average	**42**	**0**	**138**	**127**	**32**	**0**	**67**	**0**	**94**	**73**	**215**	**160**
1990 January	9	0	75	67	35	0	60	0	109	84	219	147
February	27	0	43	37	32	0	53	0	89	67	74	23
March	10	0	50	50	32	0	13	0	103	96	257	221
April	40	0	134	118	33	0	17	0	114	81	304	288
May	20	0	166	166	38	0	87	0	88	58	369	305
June	21	0	209	199	27	0	66	0	118	83	249	233
July	30	0	129	129	35	0	104	0	107	73	224	179
August	41	0	159	159	29	0	54	0	108	91	183	179
September	33	0	125	119	20	0	23	0	89	70	155	155
October	43	0	67	67	29	0	21	0	83	76	81	44
November	46	0	17	17	50	0	25	0	81	73	112	56
December	53	0	43	17	29	0	38	0	62	62	33	19
Average	**31**	**0**	**102**	**96**	**32**	**0**	**47**	**0**	**96**	**76**	**189**	**155**
1991 January	103	0	45	34	22	0	26	0	75	64	32	19
February	23	0	37	37	20	0	18	0	76	76	34	21
March	56	0	25	16	14	0	13	0	86	73	48	19
April	61	0	43	35	23	0	66	0	84	64	61	37
May	113	0	165	156	42	0	53	0	61	61	222	188
June	84	0	99	84	19	0	41	0	114	104	97	70
July	86	0	69	63	25	0	22	0	91	72	228	164
August	100	0	142	136	42	0	48	0	91	66	254	217
September	75	0	79	72	28	0	42	0	119	75	218	194
October	90	0	98	98	12	0	24	0	88	76	189	166
November	100	0	73	65	35	0	19	0	77	69	84	18
December	88	0	94	88	36	0	26	0	87	71	154	151
Average	**82**	**0**	**81**	**74**	**27**	**0**	**33**	**0**	**87**	**72**	**136**	**106**
1992 January	40	0	25	17	32	0	35	0	108	79	128	115

See footnotes at end of Table 3.3h.

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

(Thousand Barrels per Day)

	Non-OPEC[b]						Total Non-OPEC[b]		Total Imports	
	Former U.S.S.R.		Virgin Islands		Other Non-OPEC					
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average	**26**	**0**	**329**	**0**	**153**	**36**	**3,263**	**1,149**	**6,256**	**3,244**
1974 Average	**20**	**0**	**391**	**0**	**122**	**30**	**2,832**	**937**	**6,112**	**3,477**
1975 Average	**14**	**0**	**406**	**0**	**120**	**14**	**2,454**	**893**	**6,056**	**4,105**
1976 Average	**11**	**2**	**422**	**0**	**203**	**101**	**2,247**	**742**	**7,313**	**5,287**
1977 Average	**12**	**2**	**466**	**0**	**287**	**157**	**2,614**	**971**	**8,807**	**6,615**
1978 Average	**8**	**1**	**428**	**0**	**239**	**146**	**2,612**	**1,172**	**8,363**	**6,356**
1979 Average	**1**	**0**	**431**	**0**	**269**	**192**	**2,819**	**1,407**	**8,456**	**6,519**
1980 Average	**1**	**0**	**388**	**0**	**219**	**162**	**2,609**	**1,399**	**6,909**	**5,263**
1981 Average	**5**	**(s)**	**327**	**0**	**236**	**163**	**2,672**	**1,474**	**5,996**	**4,396**
1982 Average	**1**	**0**	**316**	**0**	**306**	**174**	**2,968**	**1,754**	**5,113**	**3,488**
1983 Average	**1**	**(s)**	**282**	**0**	**378**	**215**	**3,189**	**1,853**	**5,051**	**3,329**
1984 Average	**13**	**(s)**	**294**	**0**	**411**	**210**	**3,388**	**1,914**	**5,437**	**3,426**
1985 Average	**8**	**(s)**	**247**	**0**	**394**	**137**	**3,237**	**1,888**	**5,067**	**3,201**
1986 Average	**18**	**(s)**	**244**	**0**	**426**	**144**	**3,387**	**2,065**	**6,224**	**4,178**
1987 Average	**10**	**0**	**272**	**0**	**459**	**196**	**3,617**	**2,274**	**6,678**	**4,674**
1988 Average	**29**	**0**	**242**	**0**	**487**	**196**	**3,882**	**2,411**	**7,402**	**5,107**
1989 Average	**48**	**0**	**321**	**0**	**457**	**197**	**3,921**	**2,467**	**8,061**	**5,843**
1990 January	62	0	409	0	588	220	4,332	2,399	9,197	6,212
February	40	0	323	0	471	139	3,805	2,177	8,399	5,895
March	0	0	264	0	405	168	3,536	2,469	7,965	6,117
April	20	0	283	0	513	275	3,660	2,348	7,858	5,813
May	0	0	285	0	541	248	4,260	2,673	8,834	6,454
June	19	0	299	0	579	270	4,287	2,771	8,747	6,423
July	92	0	252	0	500	251	4,057	2,609	9,048	6,855
August	73	0	230	0	340	107	3,722	2,406	8,644	6,452
September	49	0	240	0	336	206	3,417	2,386	7,361	5,664
October	87	10	204	0	245	92	3,199	2,210	6,717	5,132
November	63	0	312	0	254	112	3,374	2,173	7,003	5,085
December	34	0	291	0	233	70	3,011	1,933	6,439	4,611
Average	**45**	**1**	**282**	**0**	**417**	**180**	**3,721**	**2,381**	**8,018**	**5,894**
1991 January	28	0	261	0	229	91	3,167	2,180	7,066	5,303
February	17	0	222	0	180	96	3,030	2,217	6,844	5,498
March	13	0	214	0	169	60	3,002	2,133	6,550	5,129
April	33	0	245	0	256	99	3,647	2,466	7,374	5,523
May	42	0	264	0	233	58	3,777	2,519	8,496	6,387
June	0	0	234	0	330	179	3,795	2,662	8,177	6,317
July	58	0	191	0	384	275	3,498	2,414	7,714	5,949
August	80	23	208	0	369	197	4,052	2,721	8,622	6,667
September	23	0	261	0	374	197	3,848	2,608	7,745	5,795
October	13	0	262	0	252	139	3,409	2,340	7,396	5,683
November	16	0	264	0	335	130	3,400	2,199	7,559	5,544
December	16	0	286	0	229	104	3,534	2,447	7,313	5,563
Average	**28**	**2**	**243**	**0**	**279**	**135**	**3,515**	**2,409**	**7,576**	**5,782**
1992 January	17	0	250	0	206	59	3,452	2,399	[R]7,593	[R]5,885

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

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

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

[d] A small amount of Iranian crude oil entered the United States in January 1988 from the Virgin Islands. The oil originated in Iran and was exported to the Virgin Islands prior to the signing of Executive Order 12613 on October 29, 1987.

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

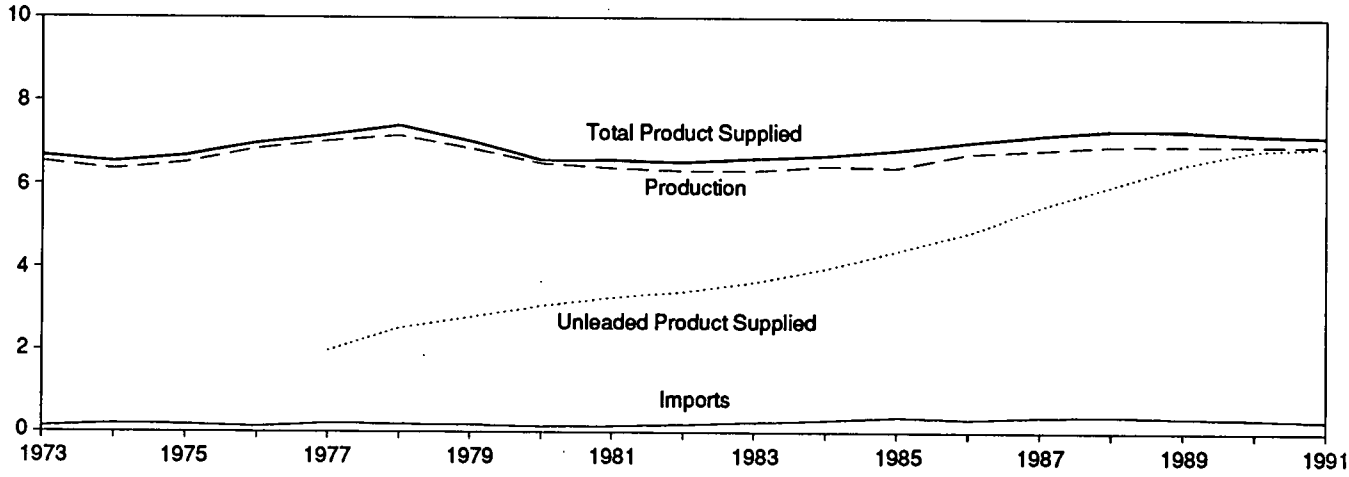
Notes: • Beginning in October 1977, Strategic Petroleum Reserve imports are included. • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration, *Petroleum Supply Monthly*, March 1992, Table S3.

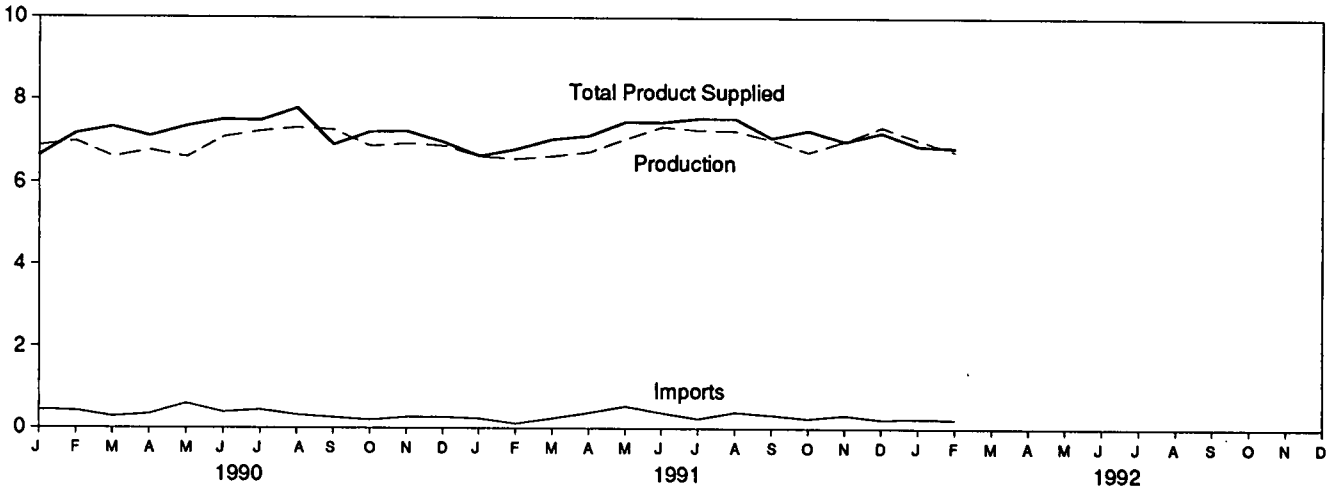
Figure 3.2 Finished Motor Gasoline

(Million Barrels per Day, Except as Noted)

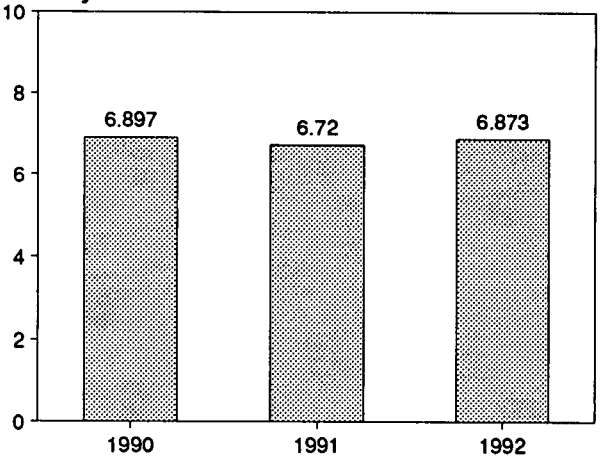
Overview, 1973-1991



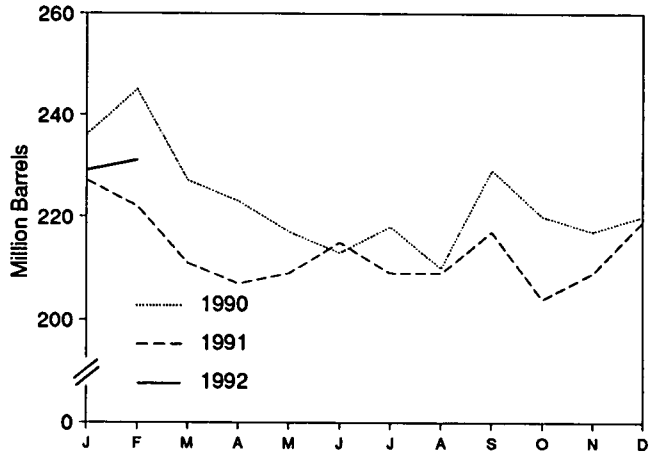
Overview, Monthly



Total Product Supplied, January and February



Total Stocks, End of Month



Note: Because vertical scales differ, graphs should not be compared.
Source: Table 3.4.

Table 3.4 Finished Motor Gasoline Supply and Disposition

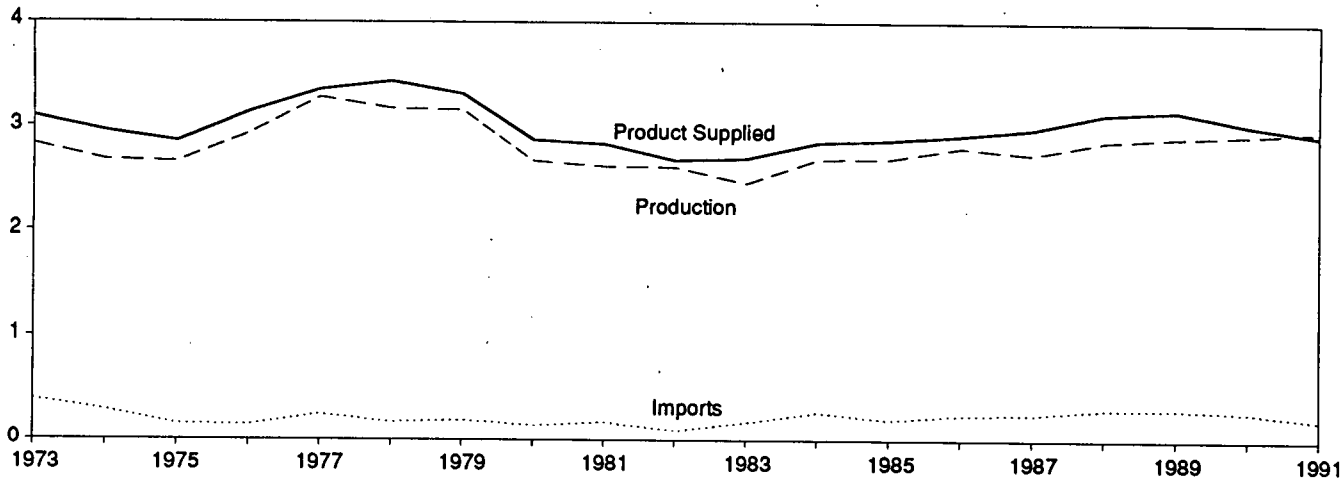
	Supply		Disposition					Ending Stocks[a]	
					Product Supplied				
	Total Production	Imports[b]	Stock Change[b,c]	Exports	Total	Unleaded[d]	Unleaded	Total Motor Gasoline[e]	Finished Motor Gasoline
	Thousand Barrels per Day						Percent of Total	Million Barrels	
1973 Average	**6,535**	**134**	**-9**	**4**	**6,674**	**–**	**–**	**209**	**–**
1974 Average	**6,360**	**204**	**24**	**2**	**6,537**	**–**	**–**	**[f]218**	**–**
1975 Average	**6,520**	**184**	**[f]28**	**2**	**6,675**	**–**	**–**	**235**	**–**
1976 Average	**6,841**	**131**	**-10**	**3**	**6,978**	**–**	**–**	**231**	**–**
1977 Average	**7,033**	**217**	**72**	**2**	**7,177**	**1,976**	**27.5**	**258**	**–**
1978 Average	**7,169**	**190**	**-54**	**1**	**7,412**	**2,521**	**34.0**	**238**	**–**
1979 Average	**6,852**	**181**	**-2**	**(s)**	**7,034**	**2,798**	**39.8**	**237**	**–**
1980 Average	**6,506**	**140**	**66**	**1**	**6,579**	**3,067**	**46.6**	**[f]261**	**–**
1981 Average[g]	**6,405**	**157**	**[f]-28**	**2**	**6,588**	**3,264**	**49.5**	**253**	**203**
1982 Average	**6,338**	**197**	**-25**	**20**	**6,539**	**3,409**	**52.1**	**[f]235**	**[f]194**
1983 Average	**6,340**	**247**	**[f]-45**	**10**	**6,622**	**3,647**	**55.1**	**222**	**186**
1984 Average	**6,453**	**299**	**54**	**6**	**6,693**	**3,987**	**59.6**	**243**	**205**
1985 Average	**6,419**	**381**	**-41**	**10**	**6,831**	**4,406**	**64.5**	**223**	**190**
1986 Average	**6,752**	**326**	**11**	**33**	**7,034**	**4,854**	**69.0**	**233**	**194**
1987 Average	**6,841**	**384**	**-15**	**35**	**7,206**	**5,470**	**75.9**	**226**	**189**
1988 Average	**6,956**	**405**	**3**	**22**	**7,336**	**5,995**	**81.7**	**228**	**190**
1989 Average	**6,963**	**369**	**-35**	**39**	**7,328**	**6,507**	**88.8**	**213**	**177**
1990 January	6,879	417	621	31	6,643	6,246	94.0	236	196
February	6,989	411	169	53	7,179	6,703	93.4	245	201
March	6,613	270	-499	45	7,338	6,894	93.9	227	186
April	6,775	328	-45	28	7,121	6,704	94.1	223	184
May	6,610	585	-189	25	7,358	6,937	94.3	217	178
June	7,101	376	-93	52	7,519	7,099	94.4	213	176
July	7,238	432	133	41	7,496	7,090	94.6	218	180
August	7,326	313	-233	77	7,796	7,383	94.7	210	172
September	7,274	254	511	103	6,914	6,589	95.3	229	188
October	6,880	192	-244	90	7,226	6,883	95.3	220	180
November	6,940	259	-108	66	7,241	6,940	95.8	217	177
December	6,887	264	119	53	6,978	6,713	96.2	220	181
Average	**6,959**	**342**	**10**	**55**	**7,235**	**6,850**	**94.7**	**220**	**181**
1991 January	6,629	227	164	50	6,643	6,361	95.8	227	187
February	6,573	106	-229	102	6,806	6,592	96.9	222	181
March	6,642	235	-267	97	7,047	6,737	95.6	211	173
April	6,742	371	-77	53	7,137	6,860	96.1	207	170
May	7,063	528	56	59	7,475	7,195	96.3	209	172
June	7,351	371	159	99	7,465	7,193	96.4	215	177
July	7,278	232	-173	122	7,561	7,271	96.2	209	171
August	7,257	385	-10	98	7,555	7,271	96.2	209	171
September	7,044	321	210	63	7,091	6,838	96.4	217	177
October	6,746	236	-350	58	7,273	7,030	96.6	204	167
November	7,018	318	227	104	7,005	6,827	97.5	209	173
December	7,354	216	270	79	7,221	7,081	98.1	219	182
Average	**6,977**	**297**	**-1**	**82**	**7,193**	**6,941**	**96.5**	**219**	**182**
1992 January	R7,043	R237	R300	R87	R6,893	R6,761	R98.1	R229	R191
February	E6,758	E215	E44	E77	E6,851	E6,717	E98.0	E231	E191
2-Month Average	**E6,905**	**E226**	**E176**	**E82**	**E6,873**	**E6,740**	**E98.1**	**E231**	**E191**
1991 2-Month Average	**6,603**	**169**	**-22**	**75**	**6,720**	**6,471**	**96.3**	**222**	**181**
1990 2-Month Average	**6,931**	**414**	**406**	**42**	**6,897**	**6,463**	**93.7**	**245**	**201**

[a] Stocks are totals as of end of period.
[b] Beginning in 1981, excludes blending components.
[c] A negative number indicates a decrease in stocks and a positive number indicates an increase.
[d] Includes gasohol.
[e] Includes motor gasoline blending components.
[f] In January 1975, 1981, and 1983, numerous respondents were added to surveys, thereby affecting stocks reported and stock change calculations. See Note 4 at end of section.
[g] Beginning in January 1981, survey forms were modified. See Notes 1 and 2 at end of section.
R=Revised data. – =Not applicable. E=Estimate. (s)=Less than 500 barrels per day.
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.
Source: Energy Information Administration, *Petroleum Supply Monthly*, March 1992, Table S4.

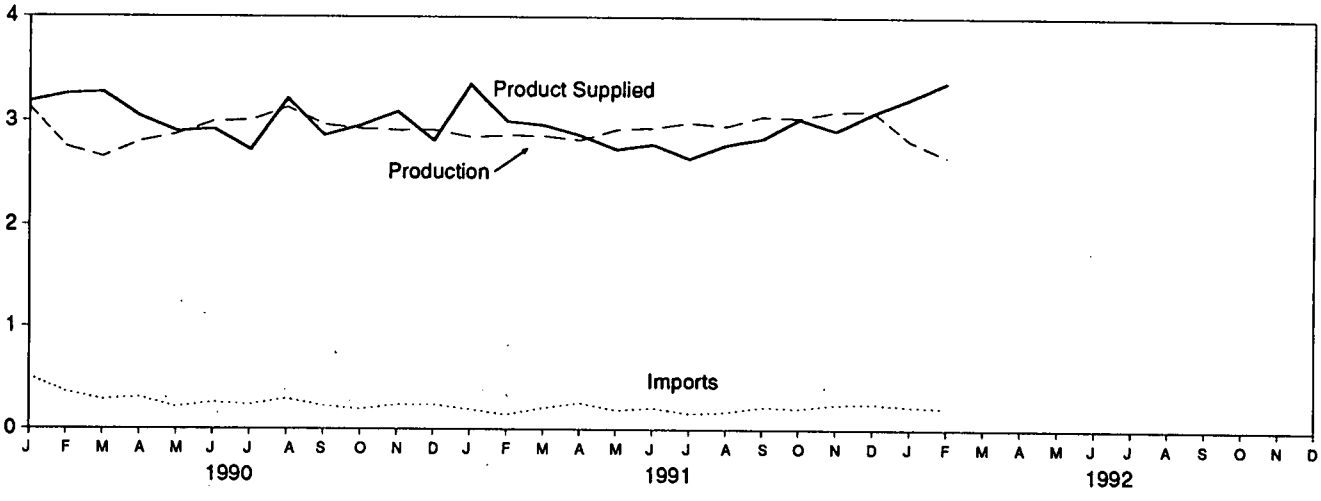
Figure 3.3 Distillate Fuel

(Million Barrels per Day, Except as Noted)

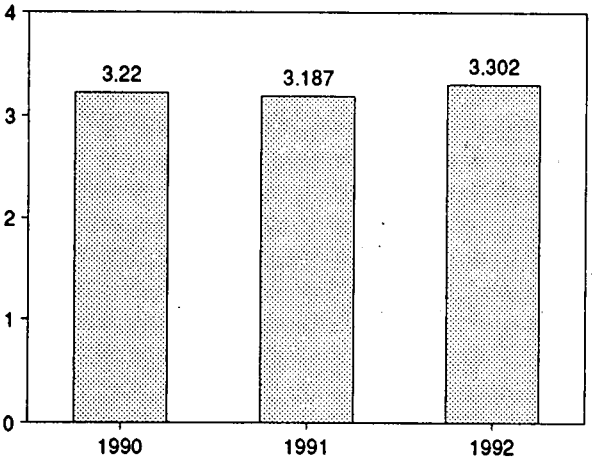
Overview, 1973-1991



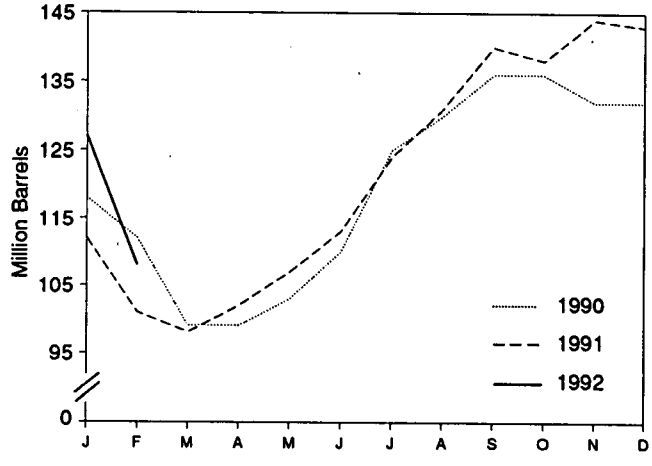
Overview, Monthly



Product Supplied, January and February



Stocks, End of Month



Source: Table 3.5.

Table 3.5 Distillate Fuel Oil Supply and Disposition

	Supply			Disposition			
	Total Production	Imports	Crude Used Directly[a]	Stock Change[b]	Exports	Product Supplied[a]	Ending Stocks[c]
	Thousand Barrels per Day						Million Barrels
1973 Average	**2,822**	**392**	**2**	**115**	**9**	**3,092**	**196**
1974 Average	**2,669**	**289**	**2**	***10**	**2**	**2,948**	**[d]200**
1975 Average	**2,654**	**155**	**2**	**[d]*-41**	**1**	**2,851**	**209**
1976 Average	**2,924**	**146**	**1**	**-62**	**1**	**3,133**	**186**
1977 Average	**3,278**	**250**	**1**	**176**	**1**	**3,352**	**250**
1978 Average	**3,167**	**173**	**1**	**-93**	**3**	**3,432**	**216**
1979 Average	**3,153**	**193**	**1**	**34**	**3**	**3,311**	**229**
1980 Average	**2,662**	**142**	**1**	**-64**	**3**	**2,866**	**[d]205**
1981 Average[e]	**2,613**	**173**	**10**	**[d]-38**	**5**	**2,829**	**192**
1982 Average	**2,606**	**93**	**10**	**-35**	**74**	**2,671**	**[d]179**
1983 Average	**2,456**	**174**	**–**	**[d]-124**	**64**	**2,690**	**140**
1984 Average	**2,681**	**272**	**–**	**57**	**51**	**2,845**	**161**
1985 Average	**2,687**	**200**	**–**	**-48**	**67**	**2,868**	**144**
1986 Average	**2,798**	**247**	**–**	**31**	**100**	**2,914**	**155**
1987 Average	**2,731**	**255**	**–**	**-56**	**66**	**2,976**	**134**
1988 Average	**2,859**	**302**	**–**	**-30**	**69**	**3,122**	**124**
1989 Average	**2,899**	**306**	**–**	**-49**	**97**	**3,157**	**106**
1990 January	3,130	505	–	388	62	3,185	118
February	2,753	357	–	-215	65	3,260	112
March	2,657	281	–	-415	75	3,277	99
April	2,803	308	–	9	59	3,043	99
May	2,874	209	–	108	75	2,900	103
June	2,996	257	–	246	84	2,923	110
July	3,008	236	–	487	30	2,726	125
August	3,131	293	–	156	51	3,218	130
September	2,968	226	–	207	123	2,864	136
October	2,928	190	–	8	150	2,960	136
November	2,915	238	–	-129	188	3,094	132
December	2,917	239	–	-7	347	2,816	132
Average	**2,925**	**278**	**–**	**73**	**109**	**3,021**	**132**
1991 January	2,851	190	–	-648	332	3,356	112
February	2,867	138	–	-388	393	3,000	101
March	2,862	206	–	-96	198	2,966	98
April	2,822	258	–	130	81	2,869	102
May	2,924	185	–	156	218	2,735	107
June	2,940	209	–	216	150	2,783	113
July	2,992	153	–	348	149	2,649	124
August	2,959	167	–	203	144	2,779	131
September	3,054	221	–	298	136	2,840	140
October	3,039	206	–	-42	259	3,029	138
November	3,103	245	–	207	224	2,916	144
December	3,107	252	–	-30	302	3,086	143
Average	**2,961**	**203**	**–**	**31**	**215**	**2,917**	**143**
1992 January	[R]2,818	[R]227	–	[R]-541	[R]360	[R]3,226	127
February	[E]2,665	[E]209	–	[E]-655	[E]146	[E]3,382	[E]108
2-Month Average	**[E]2,744**	**[E]218**	**–**	**[E]-596**	**[E]256**	**[E]3,302**	**[E]108**
1991 2-Month Average	**2,858**	**165**	**–**	**-524**	**361**	**3,187**	**101**
1990 2-Month Average	**2,951**	**435**	**–**	**102**	**63**	**3,220**	**112**

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

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

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

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

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

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

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

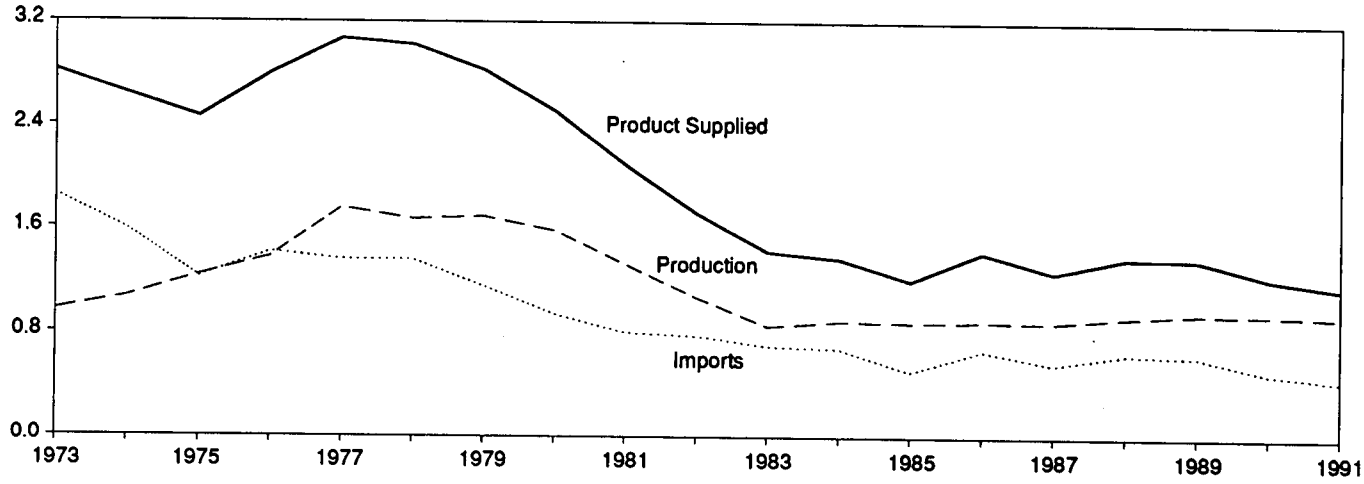
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration, *Petroleum Supply Monthly*, March 1992, Table S5.

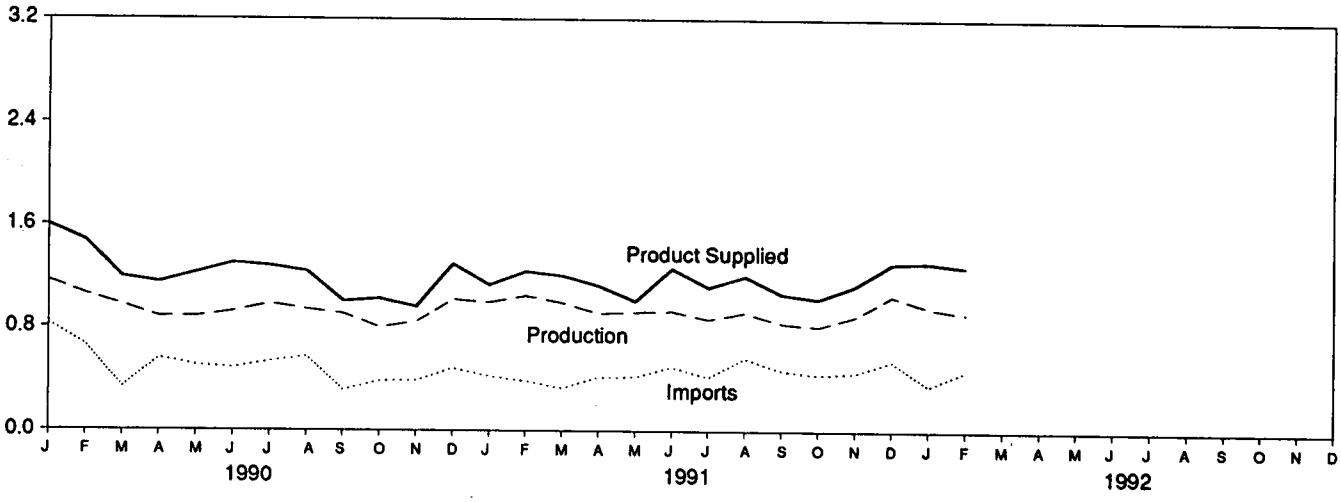
Figure 3.4 Residual Fuel

(Million Barrels per Day, Except as Noted)

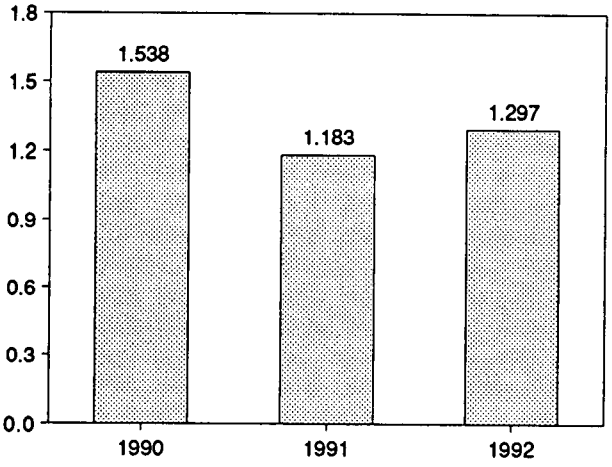
Overview, 1973-1991



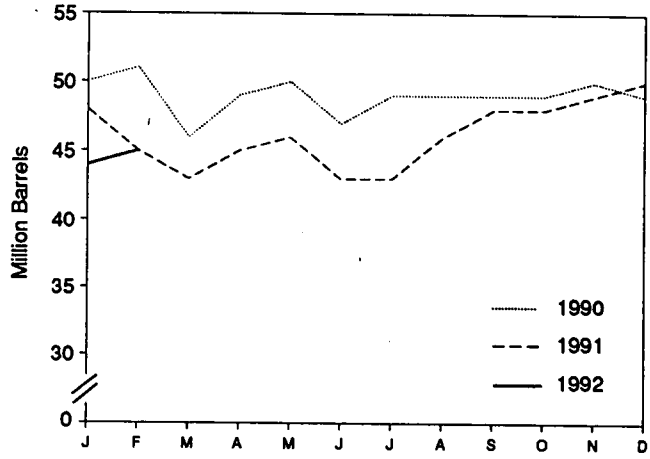
Overview, Monthly



Product Supplied, January and February



Stocks, End of Month



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

Table 3.6 Residual Fuel Oil Supply and Disposition

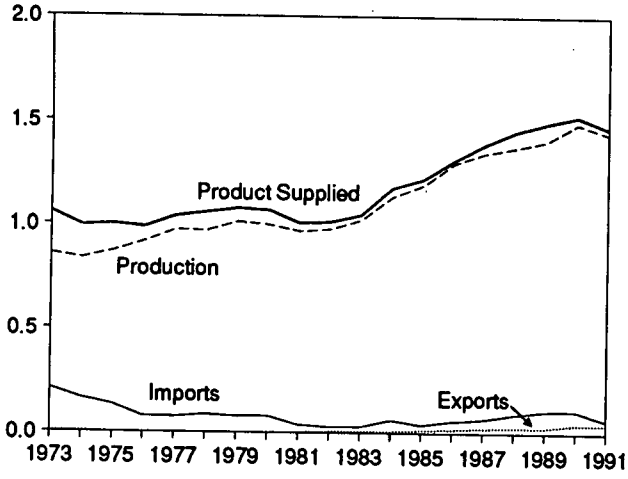
	Supply			Disposition			
	Total Production	Imports	Crude Used Directly[a]	Stock Change[b]	Exports	Product Supplied[a]	Ending Stocks[c]
	Thousand Barrels per Day						Million Barrels
1973 Average	**971**	**1,853**	**17**	**-5**	**23**	**2,822**	**53**
1974 Average	**1,070**	**1,587**	**13**	**17**	**14**	**2,639**	**[d]60**
1975 Average	**1,235**	**1,223**	**15**	**[d]-2**	**15**	**2,462**	**74**
1976 Average	**1,377**	**1,413**	**17**	**-5**	**12**	**2,801**	**72**
1977 Average	**1,754**	**1,359**	**13**	**48**	**6**	**3,071**	**90**
1978 Average	**1,667**	**1,355**	**13**	**1**	**13**	**3,023**	**90**
1979 Average	**1,687**	**1,151**	**12**	**15**	**9**	**2,826**	**96**
1980 Average	**1,580**	**939**	**12**	**-10**	**33**	**2,508**	**[d]92**
1981 Average[e]	**1,321**	**800**	**48**	**[d]-37**	**118**	**2,088**	**78**
1982 Average	**1,070**	**776**	**48**	**-32**	**209**	**1,716**	**[d]66**
1983 Average	**852**	**699**	**–**	**[d]-55**	**185**	**1,421**	**49**
1984 Average	**891**	**681**	**–**	**12**	**190**	**1,369**	**53**
1985 Average	**882**	**510**	**–**	**-7**	**197**	**1,202**	**50**
1986 Average	**889**	**669**	**–**	**-8**	**147**	**1,418**	**47**
1987 Average	**885**	**565**	**–**	**(s)**	**186**	**1,264**	**47**
1988 Average	**926**	**644**	**–**	**-8**	**200**	**1,378**	**45**
1989 Average	**954**	**629**	**–**	**-2**	**215**	**1,370**	**44**
1990 January	1,163	825	–	205	186	1,597	50
February	1,060	663	–	36	214	1,474	51
March	976	335	–	-158	277	1,192	46
April	882	559	–	90	200	1,151	49
May	884	507	–	22	141	1,227	50
June	926	485	–	-98	207	1,302	47
July	987	536	–	72	171	1,280	49
August	944	574	–	-1	280	1,238	49
September	909	313	–	15	200	1,007	49
October	799	383	–	-3	160	1,026	49
November	846	387	–	25	243	965	50
December	1,021	484	–	-50	259	1,296	49
Average	**950**	**504**	**–**	**13**	**211**	**1,229**	**49**
1991 January	1,000	422	–	-32	320	1,133	48
February	1,049	384	–	-106	299	1,239	45
March	997	331	–	-55	178	1,206	43
April	915	416	–	58	145	1,128	45
May	926	420	–	36	300	1,010	46
June	933	499	–	-78	245	1,265	43
July	870	419	–	-4	176	1,118	43
August	925	568	–	72	216	1,205	46
September	838	473	–	77	168	1,066	48
October	813	438	–	7	217	1,028	48
November	896	454	–	30	189	1,132	49
December	1,051	547	–	28	264	1,306	50
Average	**934**	**448**	**–**	**4**	**226**	**1,152**	**50**
1992 January	R964	R352	–	R-180	184	R1,313	R44
February	E917	E470	–	E-77	E184	E1,279	E45
2-Month Average	**E941**	**E409**	**–**	**E-130**	**E184**	**E1,297**	**E45**
1991 2-Month Average	**1,023**	**404**	**–**	**-67**	**310**	**1,183**	**45**
1990 2-Month Average	**1,114**	**748**	**–**	**125**	**199**	**1,538**	**51**

[a] Beginning in January 1983, product supplied for residual fuel oil does not include crude oil used directly.
[b] A negative number indicates a decrease in stocks and a positive number indicates an increase.
[c] Stocks are totals as of end of period.
[d] In January 1975, 1981, and 1983, numerous respondents were added to surveys, thereby affecting stocks reported and stock change calculations. See Note 4 at end of section.
[e] Beginning in January 1981, survey forms were modified. See Note 1 at end of section.
R=Revised data. – =Not applicable. E=Estimate. (s)=Less than 500 barrels per day.
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.
Source: Energy Information Administration, *Petroleum Supply Monthly*, March 1992, Table S6.

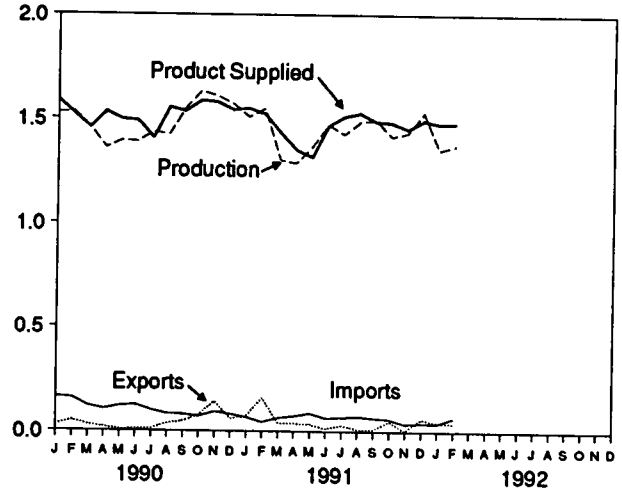
Figure 3.5 Jet Fuel

(Million Barrels per Day, Except as Noted)

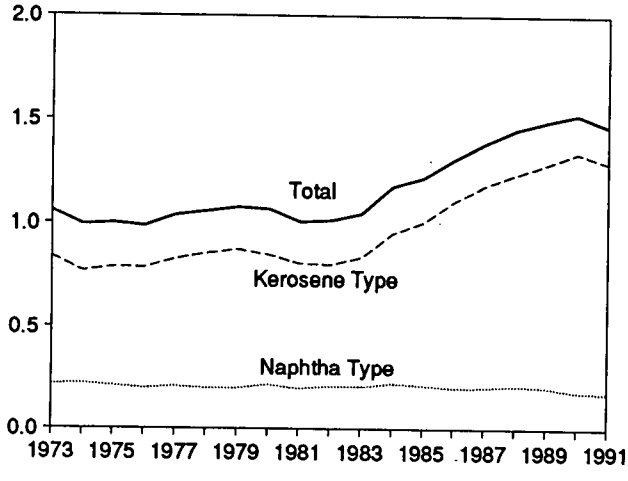
Total Jet Fuel Overview, 1973-1991



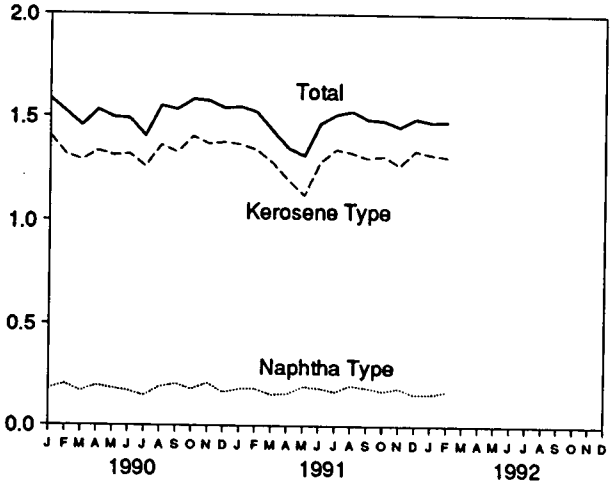
Total Jet Fuel Overview, Monthly



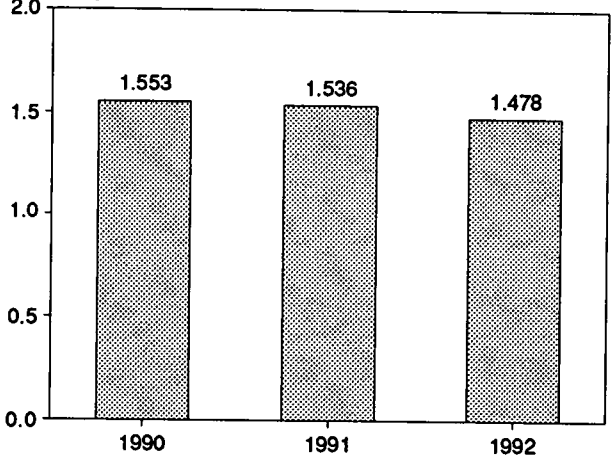
Product Supplied by Type, 1973-1991



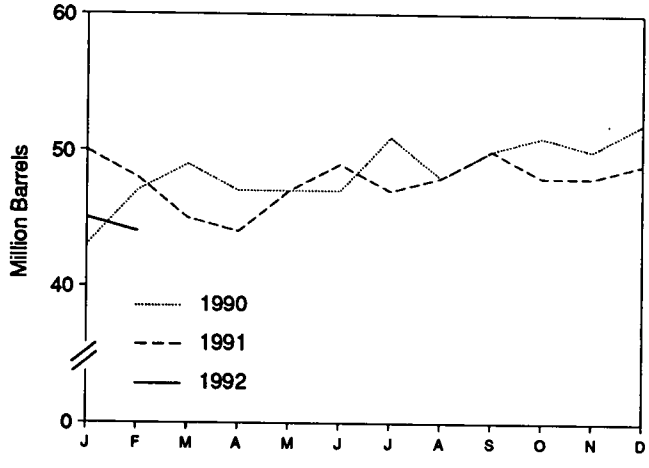
Product Supplied by Type, Monthly



Total Product Supplied, January and February



Total Stocks, End of Month



Source: Table 3.7.

Table 3.7 Jet Fuel Supply and Disposition

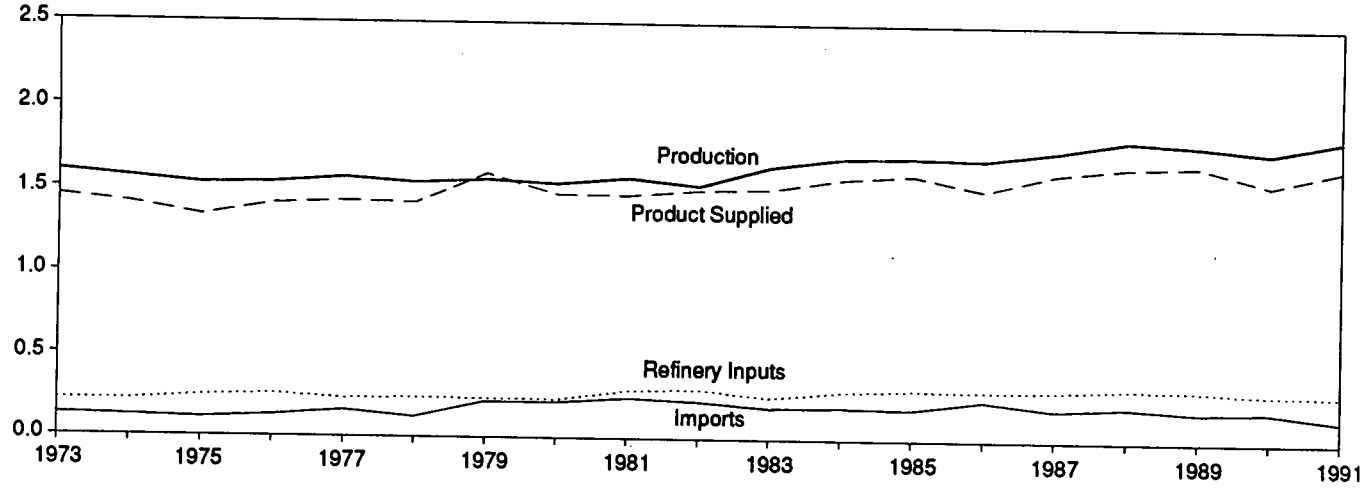
	Supply			Disposition				Ending Stocks[a]	
	Production		Imports	Stock Change[b]	Exports	Product Supplied			
	Total	Kerosene Type				Total	Kerosene Type	Total	Kerosene Type
	Thousand Barrels per Day							Million Barrels	
1973 Average	859	679	212	8	4	1,059	842	29	23
1974 Average	836	641	163	2	3	993	771	[c] 29	[c] 24
1975 Average	871	691	133	[c] 2	2	1,001	791	30	25
1976 Average	918	731	76	5	2	987	789	32	26
1977 Average	973	787	75	7	2	1,039	831	35	28
1978 Average	970	791	86	-2	1	1,057	858	34	28
1979 Average	1,012	835	78	13	1	1,076	876	39	33
1980 Average	999	811	80	10	1	1,068	851	[c] 42	[c] 36
1981 Average	968	775	38	[c] -4	2	1,007	809	41	34
1982 Average	978	778	29	-12	6	1,013	804	[c] 37	[c] 31
1983 Average	1,022	817	29	[c] (s)	6	1,046	839	39	32
1984 Average	1,132	919	62	9	9	1,175	953	42	35
1985 Average	1,189	983	39	-4	13	1,218	1,005	40	34
1986 Average	1,293	1,097	57	25	18	1,307	1,105	50	43
1987 Average	1,343	1,138	67	(s)	24	1,385	1,181	50	42
1988 Average	1,370	1,164	90	-17	28	1,449	1,236	44	38
1989 Average	1,403	1,197	106	-8	27	1,489	1,284	41	34
1990 January	1,527	1,340	163	76	30	1,584	1,404	43	37
February	1,530	1,330	158	120	50	1,519	1,316	47	40
March	1,457	1,256	120	92	30	1,455	1,289	49	42
April	1,357	1,179	103	-91	19	1,531	1,335	47	40
May	1,392	1,194	119	8	8	1,495	1,313	47	40
June	1,388	1,214	125	13	10	1,490	1,320	47	40
July	1,434	1,307	99	117	10	1,406	1,259	51	45
August	1,424	1,250	83	-82	37	1,552	1,363	48	43
September	1,548	1,339	81	48	47	1,534	1,329	50	44
October	1,630	1,463	71	39	77	1,585	1,406	51	45
November	1,606	1,445	93	-19	141	1,578	1,369	50	45
December	1,570	1,411	82	51	60	1,541	1,378	52	46
Average	1,488	1,311	108	31	43	1,522	1,340	52	46
1991 January	1,508	1,353	67	-46	73	1,548	1,367	50	44
February	1,548	1,384	44	-91	159	1,523	1,342	48	42
March	1,299	1,157	65	-109	40	1,433	1,279	45	39
April	1,286	1,135	73	-29	38	1,350	1,195	44	38
May	1,365	1,190	87	104	35	1,314	1,123	47	41
June	1,473	1,300	64	56	13	1,468	1,282	49	43
July	1,426	1,255	67	-49	31	1,511	1,344	47	41
August	1,486	1,316	72	20	11	1,527	1,328	48	42
September	1,495	1,322	65	63	10	1,488	1,302	50	45
October	1,415	1,253	59	-60	50	1,483	1,313	48	43
November	1,433	1,276	37	14	5	1,452	1,267	48	44
December	1,530	1,357	42	20	59	1,493	1,339	49	44
Average	1,438	1,274	62	-9	43	1,466	1,290	49	44
1992 January	[R] 1,350	[R] 1,199	[R] 39	[R] -133	[R] 44	[R] 1,477	[R] 1,321	[R] 45	[R] 40
February	[E] 1,370	[E] 1,215	[E] 65	[E] -85	[E] 40	[E] 1,479	[E] 1,310	[E] 44	[E] 39
2-Month Average	[E] 1,360	[E] 1,207	[E] 51	[E] -109	[E] 42	[E] 1,478	[E] 1,316	[E] 44	[E] 39
1991 2-Month Average	1,527	1,368	56	-67	114	1,536	1,355	48	42
1990 2-Month Average	1,528	1,336	161	97	39	1,553	1,363	47	40

[a] Stocks are totals as of end of period.
[b] A negative number indicates a decrease in stocks and a positive number indicates an increase.
[c] In January 1975, 1981, and 1983, a new stock basis was established, thereby affecting stocks reported and stock change calculations. See Note 4 at end of section.
R=Revised data. E=Estimate. (s)=Less than 500 barrels per day.
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.
Source: Energy Information Administration, *Petroleum Supply Monthly*, March 1992, Table S7.

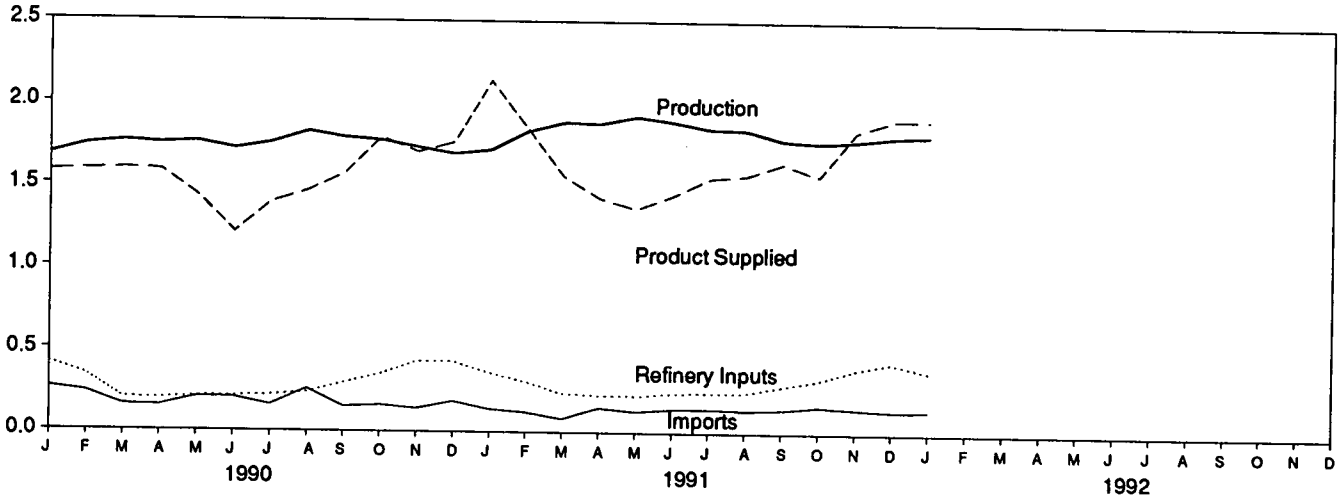
Figure 3.6 Liquefied Petroleum Gases

(Million Barrels per Day, Except as Noted)

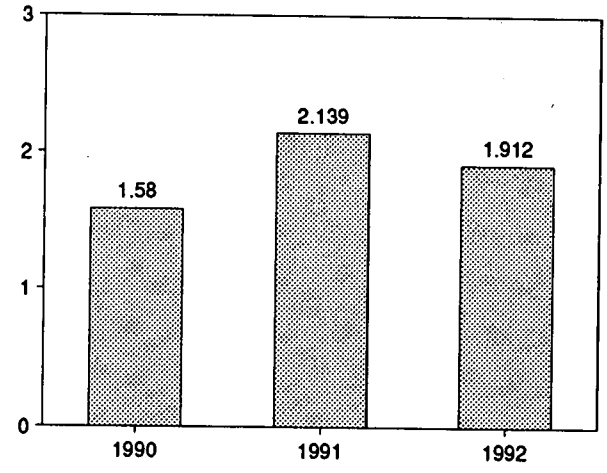
Overview, 1973-1991



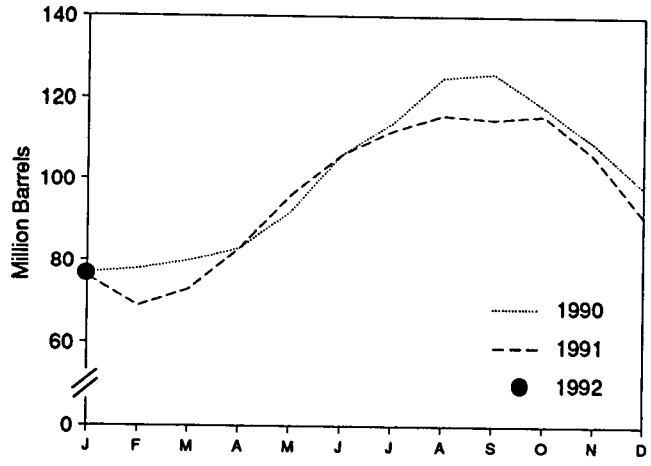
Overview, Monthly



Product Supplied, January



Stocks, End of Month



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

Table 3.8 Liquefied Petroleum Gases Supply and Disposition

	Supply		Disposition				
	Total Production	Imports	Stock Change[a]	Refinery Inputs	Exports	Product Supplied	Ending Stocks[b]
	Thousand Barrels per Day						Million Barrels
1973 Average	1,600	132	35	220	27	1,449	99
1974 Average	1,565	123	38	220	25	1,406	[c] 113
1975 Average	1,527	112	[c] 35	246	26	1,333	125
1976 Average	1,535	130	-24	260	25	1,404	116
1977 Average	1,566	161	55	233	18	1,422	136
1978 Average	1,537	123	-12	239	20	1,413	[c] 132
1979 Average	1,556	217	[c] -70	236	15	1,592	111
1980 Average	1,535	216	27	233	21	1,469	[c] 120
1981 Average	1,571	244	[c] 18	289	42	1,466	135
1982 Average	*1,527	226	-111	300	65	1,499	[c] 94
1983 Average	1,642	190	[c] -4	253	73	1,509	[c] 101
1984 Average	1,697	195	[c] -19	291	48	1,572	101
1985 Average	1,704	187	-75	304	62	1,599	74
1986 Average	1,695	242	80	302	42	1,512	103
1987 Average	1,748	190	-15	304	38	1,612	97
1988 Average	1,817	209	1	321	49	1,656	97
1989 Average	1,791	181	-47	315	35	1,668	80
1990 January	1,684	261	-92	414	44	1,580	77
February	1,743	235	11	339	42	1,587	78
March	1,763	155	80	199	44	1,595	80
April	1,751	150	91	195	25	1,589	83
May	1,761	204	287	209	36	1,433	92
June	1,719	202	469	212	28	1,211	106
July	1,756	157	268	217	36	1,392	114
August	1,825	256	339	236	43	1,463	125
September	1,789	149	37	293	41	1,567	126
October	1,773	159	-243	348	38	1,790	118
November	1,731	140	-296	427	39	1,702	109
December	1,692	184	-370	427	58	1,762	98
Average	**1,749**	**188**	**48**	**293**	**40**	**1,556**	**98**
1991 January	1,716	137	-700	359	56	2,139	76
February	1,829	119	-267	304	60	1,850	69
March	1,887	81	121	234	56	1,556	73
April	1,881	149	353	224	31	1,423	83
May	1,924	127	425	221	45	1,360	96
June	1,894	143	324	238	32	1,443	106
July	1,851	146	181	244	24	1,548	112
August	1,844	137	153	244	18	1,566	116
September	1,782	143	-30	284	31	1,640	115
October	1,768	163	12	323	31	1,564	116
November	1,781	150	-336	389	40	1,838	106
December	1,805	138	-472	431	73	1,910	91
Average	**1,830**	**136**	**-19**	**291**	**41**	**1,652**	**91**
1992 January	1,814	139	-417	378	80	1,912	78

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

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

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

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

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

Source: Energy Information Administration, *Petroleum Supply Monthly*, March 1992, Table S8.

Table 3.9 Other Petroleum Products Supply and Disposition

	Supply		Disposition				
	Total Production	Imports	Stock Change[a]	Refinery Inputs	Exports	Products Supplied	Ending Stocks[b]
	Thousand Barrels per Day						Million Barrels
1973 Average	**2,833**	**290**	**1**	**750**	**162**	**2,211**	**179**
1974 Average	**2,722**	**269**	**25**	**665**	**172**	**2,129**	**[c] 188**
1975 Average	**2,547**	**144**	**[c] -6**	**537**	**158**	**2,001**	**188**
1976 Average	**2,725**	**129**	**(s)**	**524**	**172**	**2,158**	**188**
1977 Average	**2,939**	**130**	**20**	**514**	**164**	**2,371**	**195**
1978 Average	**3,076**	**80**	**-12**	**492**	**165**	**2,511**	**191**
1979 Average	**3,141**	**116**	**24**	**352**	**208**	**2,673**	**200**
1980 Average	**2,957**	**130**	**15**	**310**	**197**	**2,566**	**[c] 205**
1981 Average	**2,771**	**188**	**[c] -42**	**723**	**197**	**2,081**	**241**
1982 Average	**2,475**	**305**	**-68**	**787**	**205**	*** 1,857**	**[c] 216**
1983 Average	**2,437**	**382**	**[c] -6**	**712**	**236**	**1,877**	**[c] 217**
1984 Average	**2,500**	**503**	**[c] -32**	**791**	**236**	**2,007**	**198**
1985 Average	**2,532**	**550**	**22**	**886**	**227**	**1,947**	**206**
1986 Average	**2,704**	**504**	**-15**	**888**	**291**	**2,045**	**201**
1987 Average	**2,737**	**543**	**-1**	**829**	**264**	**2,187**	**200**
1988 Average	**2,773**	**645**	**22**	**799**	**294**	**2,303**	**208**
1989 Average	**2,771**	**627**	**12**	**797**	**305**	**2,285**	**213**
1990 January	2,567	814	86	735	225	2,335	215
February	2,781	680	387	654	298	2,122	226
March	2,670	687	78	795	276	2,207	229
April	2,774	596	-138	869	318	2,320	224
May	2,847	756	295	544	292	2,471	234
June	2,907	879	-160	919	334	2,692	229
July	3,146	732	-148	958	317	2,752	224
August	3,097	673	-291	998	297	2,766	215
September	3,029	674	68	760	265	2,611	217
October	2,848	590	-436	1,211	329	2,334	204
November	2,788	800	206	1,010	270	2,102	210
December	2,644	575	-288	1,172	249	2,087	201
Average	**2,842**	**705**	**-32**	**887**	**289**	**2,402**	**201**
1991 January	2,640	720	167	835	317	2,041	207
February	2,683	555	391	723	275	1,849	218
March	2,585	504	145	832	239	1,873	223
April	2,735	584	125	790	228	2,176	226
May	2,884	762	209	921	327	2,190	233
June	3,032	574	-125	1,102	304	2,325	229
July	3,036	747	-129	1,082	321	2,508	225
August	3,005	625	-173	1,019	296	2,489	220
September	3,012	728	83	827	267	2,563	222
October	2,812	610	-224	940	211	2,495	215
November	2,741	811	-90	1,094	238	2,309	213
December	2,788	555	-163	1,143	304	2,058	208
Average	**2,830**	**648**	**15**	**944**	**277**	**2,242**	**208**
1992 January	2,704	713	197	815	272	2,135	214

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

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

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

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

(s)=Less than 500 barrels per day.

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

Source: Energy Information Administration, *Petroleum Supply Monthly*, March 1992, Table S9.

Petroleum Notes

1. The Energy Information Administration (EIA) uses a number of sources and methods to maintain the survey respondent lists. On a regular basis, survey managers review such industry publications as the *Oil and Gas Journal and Oil Daily* for information on facilities or companies starting up or closing down operations. Those sources are augmented by articles in newspapers, letters from respondents indicating changes in status, and information received from survey systems.

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

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

3. **Distillate and Residual Fuel Oils:** The requirement to report crude oil in pipelines or burned on leases as either distillate or residual fuel oil has been eliminated. Prior to January 1981, the refinery input of unfinished oils number typically exceeded the number for available supply of unfinished oils. That discrepancy was assumed to be due to the redesignation of distillate and residual fuel oils received as such but used as an unfinished oil input by the receiving refinery. The imbalance between supply and disposition of unfinished oils would then be subtracted from the production of distillate and residual fuel oils. Two-thirds of that difference was subtracted from distillate and one-third from residual. Beginning in January 1981, the EIA modified its survey forms to account for redesignated product and discontinued the above-mentioned adjustment. For further details, see the EIA, *Petroleum Supply Monthly.*

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

- Crude Oil: 1982—645 (Total) and 351 (Other Primary).
- Crude Oil and Petroleum Products: 1974—1,121; 1980—1,425; and 1982—1,461.
- Motor Gasoline: 1974—225; 1980—263; 1982—244 (Total) and 202 (Finished).
- Distillate Fuel Oil: 1974—224; 1980—205; and 1982—186.
- Residual Fuel Oil: 1974—75; 1980—91; and 1982—69.
- Jet Fuel: 1974—30 (Total) and 24 (Kerosene Type); 1980—42 (Total) and 36 (Kerosene Type); and 1982—39 (Total) and 32 (Kerosene Type).
- Liquefied Petroleum Gases: 1974—113; 1978—136; 1980—128; and 1982—102.
- Other Petroleum Products: 1974—190; 1980—207; and 1982—219.

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

In January 1984, changes were made in the reporting of natural gas liquids. As a result, unfractionated stream, which was formerly included in "Other Petroleum Products Supply and Disposition" table, is now reported on a component basis (ethane, propane, normal butane, isobutane, and pentanes plus). Most of these stocks now appear in the "Liquefied Petroleum Gases Supply and Disposition" table. This change affects stocks reported and stock change calculations in each table. Under the new basis, end-of-year 1983 stocks, in million barrels, would have been:

- Liquefied Petroleum Gases: 1983—108.
- Other Petroleum Products: 1983—210.

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

6. **Data Discrepancies:** Due to differences internal to EIA data processing systems, some small discrepancies exist between data in the *Monthly Energy Review* and the *Petroleum Supply Annual* and *Petroleum Supply Monthly.* The data that have discrepancies are noted with an asterisk in Section 3 tables and are summarized on the following page.

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

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

Section 4. Natural Gas

Total dry natural gas production in the United States during January 1992 was an estimated 1.6 trillion cubic feet, 1 percent[4] higher than during the previous January.

Consumption of natural and supplemental gas in January 1992 was 2.2 trillion cubic feet, 4 percent below the level in January 1991.

Deliveries to residential consumers in December 1991 (latest data available) were 660 billion cubic feet, 5 percent above the previous December. Total deliveries to industrial consumers during December 1991 were 676 billion cubic feet, 7 percent above the previous December.

Imports of natural gas in January 1992 were 135 billion cubic feet, 13 percent lower than imports in the previous January.

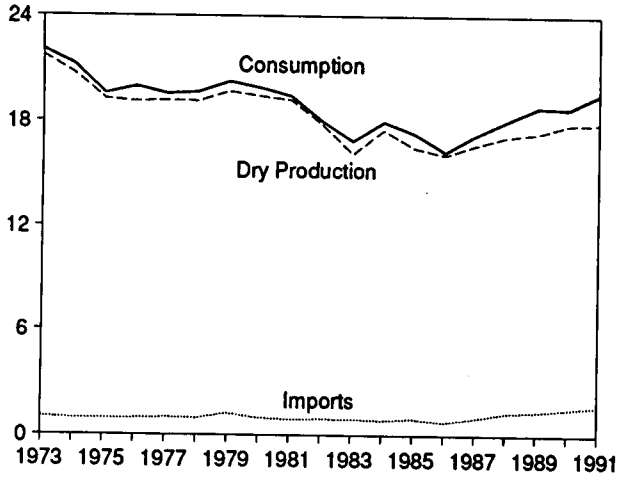
Stocks of working gas[5] in underground natural gas storage reservoirs at the end of January 1992 totaled 2.2 trillion cubic feet, 7 percent below the level of stocks available 1 year earlier. Net withdrawals from storage during January 1992 were 514 billion cubic feet, 12 percent less than the amount withdrawn during the previous January.

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

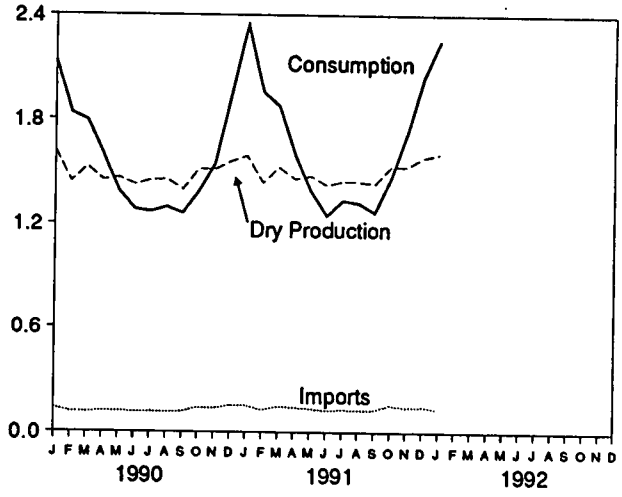
Figure 4.1 Natural Gas

(Trillion Cubic Feet)

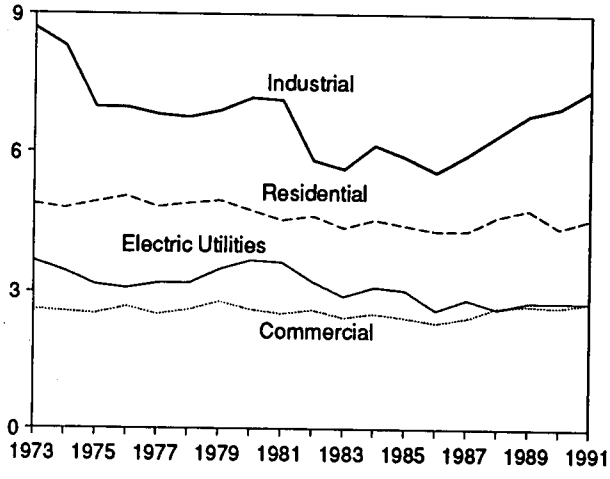
Overview, 1973-1991



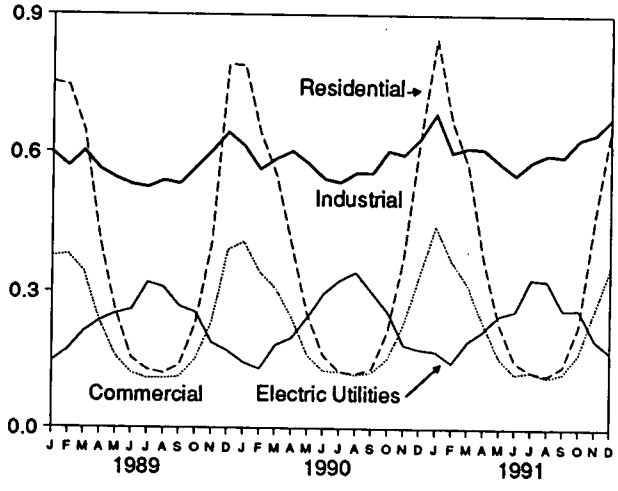
Overview, Monthly



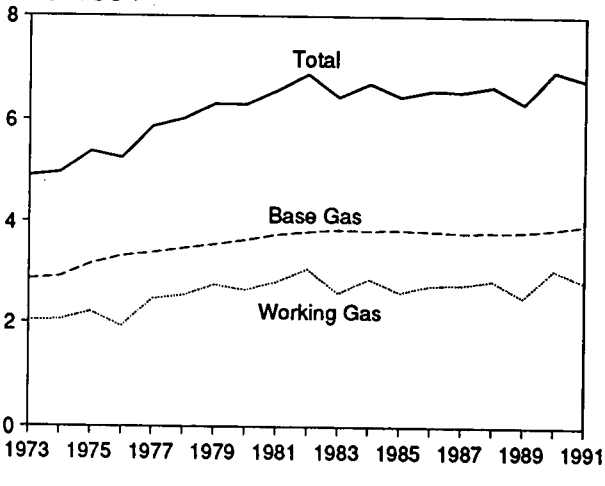
Consumption by Sector, 1973-1991



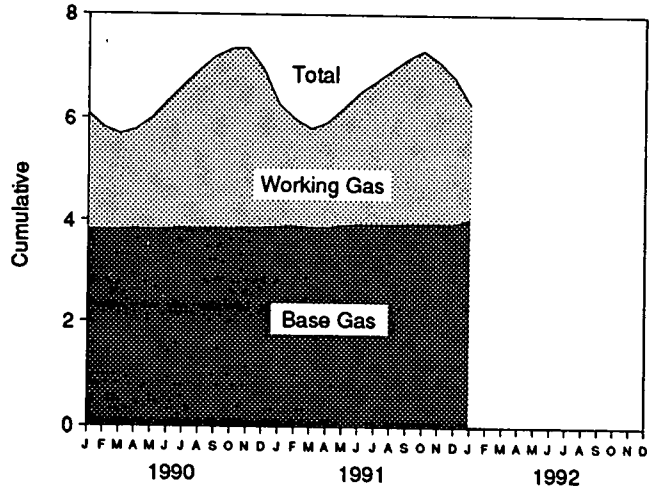
Consumption by Sector, Monthly



Underground Storage, End of Year, 1973-1991



Underground Storage, End of Month



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

Table 4.1 Natural Gas Production

(Billion Cubic Feet)

	Gross Withdrawals[a]	Repressuring[b]	Nonhydrocarbon Gases Removed[c]	Vented and Flared[d]	Marketed Production (Wet)[e]	Extraction Loss[f]	Total Dry Gas Production[g]
1973 Total	**24,067**	**1,171**	**NA**	**248**	**[h]22,648**	**917**	**[h]21,731**
1974 Total	**22,850**	**1,080**	**NA**	**169**	**[h]21,601**	**887**	**[h]20,713**
1975 Total	**21,104**	**861**	**NA**	**134**	**[h]20,109**	**872**	**[h]19,236**
1976 Total	**20,944**	**859**	**NA**	**132**	**[h]19,952**	**854**	**[h]19,098**
1977 Total	**21,097**	**935**	**NA**	**137**	**[h]20,025**	**863**	**[h]19,163**
1978 Total	**21,309**	**1,181**	**NA**	**153**	**[h]19,974**	**852**	**[h]19,122**
1979 Total	**21,883**	**1,245**	**NA**	**167**	**[h]20,471**	**808**	**[h]19,663**
1980 Total	**21,870**	**1,365**	**199**	**125**	**20,180**	**777**	**19,403**
1981 Total	**21,587**	**1,312**	**222**	**98**	**19,956**	**775**	**19,181**
1982 Total	**20,272**	**1,388**	**[R]208**	**93**	**18,582**	**762**	**17,820**
1983 Total	**18,659**	**1,458**	**222**	**95**	**16,884**	**790**	**16,094**
1984 Total	**[R]20,267**	**1,630**	**224**	**108**	**18,304**	**838**	**17,466**
1985 Total	**19,607**	**1,915**	**326**	**95**	**17,270**	**816**	**16,454**
1986 Total	**19,131**	**1,838**	**337**	**98**	**16,859**	**800**	**16,059**
1987 Total	**20,140**	**2,208**	**376**	**124**	**17,433**	**812**	**16,621**
1988 Total	**20,999**	**2,478**	**460**	**143**	**17,918**	**816**	**[R]17,103**
1989 January	1,872	219	34	11	1,607	70	1,537
February	1,717	193	29	11	1,484	64	1,420
March	1,815	197	31	13	1,573	68	1,505
April	1,742	203	29	12	1,499	65	1,434
May	1,775	214	31	12	1,519	66	1,453
June	1,688	192	28	12	1,456	63	1,393
July	1,725	199	30	12	1,484	64	1,420
August	1,720	207	28	12	1,473	63	1,410
September	1,649	207	28	12	1,402	60	1,342
October	1,724	211	29	12	1,472	64	1,408
November	1,789	214	31	12	1,533	66	1,467
December	1,856	219	33	12	1,592	72	1,520
Total	**21,074**	**2,475**	**362**	**142**	**18,095**	**785**	**17,311**
1990 January	1,940	211	25	15	1,689	[R]71	[R]1,618
February	1,718	183	22	10	1,503	[R]63	[R]1,440
March	1,841	211	24	11	1,595	[R]67	[R]1,528
April	1,754	206	24	11	1,513	[R]64	[R]1,449
May	1,781	213	26	13	1,529	[R]65	[R]1,464
June	1,711	191	24	9	1,487	[R]63	[R]1,424
July	1,759	207	26	13	1,513	[R]64	[R]1,449
August	1,764	207	25	14	1,518	[R]64	[R]1,454
September	1,693	199	24	13	1,457	[R]61	[R]1,396
October	1,843	224	23	13	1,583	[R]67	[R]1,516
November	1,827	211	23	13	1,580	[R]67	[R]1,513
December	1,890	225	24	14	1,627	[R]69	[R]1,558
Total	**[R]21,523**	**2,489**	**289**	**150**	**18,594**	**[R]784**	**[R]17,810**
1991 January	1,928	226	25	14	1,663	73	1,590
February	1,740	202	24	12	1,502	66	1,436
March	1,845	210	28	12	1,595	70	1,525
April	1,765	200	29	11	1,525	67	1,458
May	1,782	198	31	10	1,543	68	1,475
June	1,718	191	30	10	1,487	66	1,421
July	1,747	194	31	10	1,512	67	1,445
August	1,731	185	29	10	1,508	67	1,441
September	1,727	190	30	10	1,497	66	1,431
October	[R]1,847	202	32	11	[R]1,602	[R]71	[R]1,531
November	[R]1,845	200	32	11	[R]1,602	[R]71	[R]1,531
December	[E]1,907	[E]209	[E]33	[E]11	[E]1,654	[E]73	[E]1,581
Total	**[E]21,582**	**[E]2,407**	**[E]354**	**[E]132**	**[E]18,689**	**[E]823**	**[E]17,866**
1992 January	[E]1,923	[E]210	[E]33	[E]11	[E]1,669	[E]69	[E]1,600

[a] Gas withdrawn from gas and oil wells.
[b] The injection of natural gas into oil and gas formations for pressure maintenance and cycling purposes.
[c] See Note 1 at end of section.
[d] Vented: Natural gas released into the air on the base site or at processing plants. Flared: Natural gas burned in flares on the base site or at gas processing plants.
[e] Gross Withdrawals minus Repressuring, Nonhydrocarbon Gases Removed, and Vented and Flared. See Note 2 at end of section.
[f] See Note 3 at end of section.
[g] Marketed Production (Wet) minus Extraction Loss.
[h] May include unknown quantities of nonhydrocarbon gases.
R=Revised data. NA=Not available. E=Estimate.
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.
Sources: • **1973-1984:** Energy Information Administration (EIA), *Natural Gas Annual 1990, Vol. I*, Table 95. • **1985 forward:** EIA, *Natural Gas Monthly*, March 1992, Table 1.

Table 4.2 Natural Gas Supply and Disposition

(Billion Cubic Feet)

	Supply						Disposition		
	Total Dry Gas Production	Withdrawals from Storage[a]	Supplemental Gaseous Fuels[b]	Imports[b]	Balancing Item[b]	Total Supply/ Disposition[c]	Additions to Storage[a]	Exports[b]	Consumption[b]
1973 Total	[d] 21,731	1,533	NA	1,033	-196	24,101	1,974	77	22,049
1974 Total	[d] 20,713	1,701	NA	959	-289	23,084	1,784	77	21,223
1975 Total	[d] 19,236	1,760	NA	953	-235	21,714	2,104	73	19,538
1976 Total	[d] 19,098	1,921	NA	964	-216	21,767	1,756	65	19,946
1977 Total	[d] 19,163	1,750	NA	1,011	-41	21,883	2,307	56	19,521
1978 Total	[d] 19,122	2,158	NA	966	-287	21,958	2,278	53	19,627
1979 Total	[d] 19,663	2,047	NA	1,253	-372	22,591	2,295	56	20,241
1980 Total	19,403	1,972	155	985	-640	21,875	1,949	49	19,877
1981 Total	19,181	1,930	176	904	-500	21,691	2,228	59	19,404
1982 Total	17,820	2,164	145	933	-537	20,525	2,472	52	18,001
1983 Total	16,094	2,270	132	918	[e] -703	18,712	1,822	55	16,835
1984 Total	17,466	2,098	110	843	[e] -217	20,300	2,295	55	17,951
1985 Total	16,454	2,397	126	950	-428	19,499	2,163	55	17,281
1986 Total	16,059	1,837	113	750	-493	18,266	1,984	61	16,221
1987 Total	16,621	1,905	101	993	-444	19,176	1,911	54	17,211
1988 Total	[R] 17,103	2,270	101	1,294	-452	20,315	2,211	74	18,030
1989 January	1,537	427	11	119	-10	2,084	53	7	2,024
February	1,420	614	10	110	-106	2,048	32	7	2,009
March	1,505	369	10	113	67	2,064	106	11	1,947
April	1,434	138	8	110	86	1,776	183	11	1,582
May	1,453	44	8	108	72	1,685	327	8	1,350
June	1,393	20	7	104	67	1,591	380	9	1,202
July	1,420	29	8	101	49	1,607	377	9	1,221
August	1,410	29	8	108	33	1,588	362	9	1,217
September	1,342	39	7	117	11	1,516	325	9	1,182
October	1,408	96	9	123	-62	1,574	225	10	1,339
November	1,467	228	9	123	-146	1,681	105	8	1,568
December	1,520	822	12	145	-282	2,217	52	8	2,157
Total	**17,311**	**2,854**	**107**	**1,382**	[R] -218	[R] 21,435	**2,528**	**107**	[R] 18,801
1990 January	[R] 1,618	356	[R] 12	140	[R] 116	2,242	96	14	2,132
February	[R] 1,440	345	[R] 10	118	[R] 0	[R] 1,913	71	8	[R] 1,834
March	[R] 1,528	267	[R] 11	116	10	1,932	128	11	1,793
April	[R] 1,449	141	[R] 10	123	[R] 74	1,797	194	6	1,597
May	[R] 1,464	44	[R] 9	123	[R] 57	[R] 1,697	304	6	[R] 1,387
June	[R] 1,424	41	[R] 9	117	[R] 33	[R] 1,624	335	6	[R] 1,283
July	[R] 1,449	26	[R] 10	120	[R] 6	1,611	337	5	1,269
August	[R] 1,454	40	[R] 9	118	[R] 10	[R] 1,631	330	5	[R] 1,296
September	[R] 1,396	36	[R] 9	120	2	1,563	295	7	1,261
October	[R] 1,516	66	[R] 9	142	[R] -125	[R] 1,608	217	6	[R] 1,385
November	[R] 1,513	151	[R] 10	140	[R] -125	[R] 1,689	139	6	[R] 1,544
December	[R] 1,558	490	[R] 12	156	[R] -197	[R] 2,019	71	7	[R] 1,941
Total	[R] 17,810	**2,002**	[R] 120	**1,532**	[R] -139	[R] 21,326	[R] 2,516	**86**	[R] 18,724
1991 January	1,590	639	11	156	[R] 19	[R] 2,415	58	[R] 13	2,344
February	1,436	363	10	131	82	2,022	61	7	1,954
March	1,525	263	11	149	[R] 36	[R] 1,984	99	[R] 11	1,874
April	1,458	83	10	145	122	1,818	213	8	1,597
May	1,475	30	9	137	[R] 51	[R] 1,702	307	[R] 8	1,387
June	1,421	20	8	129	-12	1,566	309	8	1,249
July	1,445	47	9	132	[R] -24	[R] 1,609	267	[R] 8	1,334
August	1,441	54	9	129	[R] -49	[R] 1,584	257	[R] 8	1,319
September	1,431	48	8	131	[R] -60	[R] 1,558	279	[R] 12	1,267
October	[R] 1,531	69	10	[R] 158	[R] -62	[R] 1,706	228	[R] 13	[R] 1,465
November	[R] 1,531	329	9	[R] 146	[R] -164	[R] 1,851	117	[R] 12	[R] 1,722
December	[E] 1,581	424	10	[R] 150	[R] -19	[R] 2,146	92	[R] 14	[R] 2,040
Total	[E] 17,866	**2,369**	**114**	[R] 1,693	[R] -83	[R] 21,959	**2,287**	[R] 122	[R] 19,550
1992 January	[E] 1,600	571	5	135	7	2,318	57	12	2,249

[a] Data for 1980-1990 include underground storage and liquefied natural gas storage. All other data include underground storage only. Computation procedures are discussed in Note 8 at end of section.
[b] See Notes at end of section.
[c] Data for 1978 forward do not include in-transit receipts and deliveries.
[d] May include unknown quantities of nonhydrocarbon gases.
[e] See Note 7 at end of section.
R=Revised data. NA=Not available. E=Estimate.
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.
Sources: See end of section.

Table 4.3 Natural Gas Consumption by End-Use Sector

(Billion Cubic Feet)

	Lease and Plant Fuel	Pipeline Fuel[a]	Delivered to Consumers					Total Consumption
			Residential	Commercial	Industrial	Electric Utilities	Total	
1973 Total	**1,496**	**728**	**4,879**	**2,597**	**8,689**	**3,660**	**19,825**	**22,049**
1974 Total	**1,477**	**669**	**4,786**	**2,556**	**8,292**	**3,443**	**19,077**	**21,223**
1975 Total	**1,396**	**583**	**4,924**	**2,508**	**6,968**	**3,158**	**17,558**	**19,538**
1976 Total	**1,634**	**548**	**5,051**	**2,668**	**6,964**	**3,081**	**17,764**	**19,946**
1977 Total	**1,659**	**533**	**4,821**	**2,501**	**6,815**	**3,191**	**17,329**	**19,521**
1978 Total	**1,648**	**530**	**4,903**	**2,601**	**6,757**	**3,188**	**17,449**	**19,627**
1979 Total	**1,499**	**601**	**4,965**	**2,786**	**6,899**	**3,491**	**18,141**	**20,241**
1980 Total	**1,026**	**635**	**4,752**	**2,611**	**7,172**	**3,682**	**18,216**	**19,877**
1981 Total	**928**	**642**	**4,546**	**2,520**	**7,128**	**3,640**	**17,834**	**19,404**
1982 Total	**1,109**	**596**	**4,633**	**2,606**	**5,831**	**3,226**	**16,295**	**18,001**
1983 Total	**978**	**490**	**4,381**	**2,433**	**5,643**	**2,911**	**15,367**	**16,835**
1984 Total	**1,077**	**529**	**4,555**	**2,524**	**6,154**	**3,111**	**16,345**	**17,951**
1985 Total	**966**	**504**	**4,433**	**2,432**	**5,901**	**3,044**	**15,811**	**17,281**
1986 Total	**923**	**485**	**4,314**	**2,318**	**5,579**	**2,602**	**14,814**	**16,221**
1987 Total	**1,149**	**519**	**4,315**	**2,430**	**5,953**	**2,844**	**15,542**	**17,211**
1988 Total	**1,096**	**614**	**4,630**	**2,670**	**6,383**	**2,636**	**16,320**	**18,030**
1989 January	95	57	751	376	598	147	1,872	2,024
February	88	57	743	380	570	172	1,864	2,009
March	93	54	646	342	602	211	1,800	1,947
April	88	49	414	233	563	235	1,445	1,582
May	89	51	257	159	544	251	1,210	1,350
June	86	50	155	121	530	260	1,066	1,202
July	88	50	129	110	525	320	1,083	1,221
August	87	50	121	110	539	310	1,080	1,217
September	82	48	139	113	532	268	1,052	1,182
October	87	49	229	152	568	254	1,203	1,339
November	90	50	405	231	603	189	1,428	1,568
December	97	65	791	391	643	171	1,995	2,157
Total	**1,070**	**629**	**4,781**	**2,718**	**6,816**	**2,787**	**17,102**	R**18,801**
1990 January	112	64	788	408	614	146	1,956	2,132
February	R100	54	642	342	564	132	1,680	R1,834
March	106	56	552	308	587	184	1,631	1,793
April	100	54	400	242	603	199	1,443	1,597
May	R102	55	248	162	577	244	1,230	R1,387
June	R99	54	161	127	544	297	1,130	R1,283
July	100	54	126	126	536	326	1,115	1,269
August	R101	55	121	118	557	R343	1,140	R1,296
September	96	52	132	124	556	301	1,113	1,261
October	105	50	214	155	604	R257	1,230	R1,385
November	R106	53	376	229	596	185	1,385	R1,544
December	R109	58	630	338	631	175	1,774	R1,941
Total	**R1,236**	**660**	**4,391**	**2,680**	**6,970**	**R2,787**	**16,827**	R**18,724**
1991 January	111	86	848	443	685	171	2,147	2,344
February	100	71	668	368	601	146	1,783	1,954
March	106	71	576	318	611	192	1,697	1,874
April	101	67	375	231	608	215	1,429	1,597
May	103	69	230	157	579	249	1,215	1,387
June	99	67	148	121	553	260	1,083	1,249
July	101	67	127	127	582	330	1,166	1,334
August	100	64	118	114	597	326	1,155	1,319
September	100	50	139	123	593	262	1,117	1,267
October	R107	70	226	167	631	263	1,288	R1,465
November	R107	53	462	261	642	197	1,562	R1,722
December	110	67	660	357	676	170	1,863	R2,040
Total	**1,245**	**802**	**4,577**	**2,787**	**7,357**	**2,781**	**17,503**	R**19,550**

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

R=Revised data.

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

Sources: • **1973-1984:** Energy Information Administration (EIA), *Natural Gas Annual 1989*, Table 94. • **1985 forward:** EIA, *Natural Gas Monthly*, March 1992, Table 3.

Table 4.4 Natural Gas in Underground Storage

(Volumes in Billion Cubic Feet)

	Natural Gas in Underground Storage, End of Period			Change in Working Gas from Same Period Previous Year		Storage Activity		
	Base Gas	Working Gas	Total[a]	Volume	Percent	Injections[b]	Withdrawals[b]	Net[c]
1973 Total	**2,864**	**2,034**	**4,898**	**305**	**17.6**	**1,974**	**1,533**	**442**
1974 Total	**2,912**	**2,050**	**4,962**	**16**	**.8**	**1,784**	**1,701**	**84**
1975 Total	**3,162**	**2,212**	**5,374**	**162**	**7.9**	**2,104**	**1,760**	**344**
1976 Total	**3,323**	**1,926**	**5,250**	**-286**	**-12.9**	**1,756**	**1,921**	**-165**
1977 Total	**3,391**	**2,475**	**5,866**	**549**	**28.5**	**2,307**	**1,750**	**557**
1978 Total	**3,473**	**2,547**	**6,020**	**72**	**2.9**	**2,278**	**2,158**	**120**
1979 Total	**3,553**	**2,753**	**6,306**	**207**	**8.1**	**2,295**	**2,047**	**248**
1980 Total	**3,642**	**2,655**	**6,297**	**-99**	**-3.6**	**1,896**	**1,910**	**-14**
1981 Total	**3,752**	**2,817**	**6,569**	**162**	**6.1**	**2,180**	**1,887**	**293**
1982 Total	**3,808**	**3,071**	**6,879**	**255**	**9.0**	**2,399**	**2,094**	**306**
1983 Total	**3,847**	**2,595**	**6,442**	**-476**	**-15.5**	**1,700**	**2,142**	**-442**
1984 Total	**3,830**	**2,876**	**6,706**	**281**	**10.8**	**2,252**	**2,064**	**188**
1985 Total	**3,842**	**2,607**	**6,448**	**-270**	**-9.4**	**2,128**	**2,359**	**-231**
1986 Total	**3,819**	**2,749**	**6,567**	**142**	**5.5**	**1,952**	**1,812**	**140**
1987 Total	**3,792**	**2,756**	**6,548**	**7**	**.3**	**1,887**	**1,881**	**6**
1988 Total	**3,800**	**2,850**	**6,650**	**94**	**3.4**	**2,174**	**2,244**	**-69**
1989 January	3,798	2,509	6,307	281	12.6	53	418	-365
February	3,801	1,994	5,796	168	9.2	32	602	-570
March	3,801	1,776	5,578	94	5.6	106	362	-256
April	3,801	1,823	5,624	54	3.0	180	138	42
May	3,802	2,062	5,863	34	1.7	321	44	277
June	3,802	2,374	6,176	82	3.6	374	20	354
July	3,802	2,644	6,446	77	3.0	371	29	341
August	3,802	2,938	6,740	103	3.6	356	29	328
September	3,802	3,187	6,990	67	2.2	320	39	281
October	3,792	3,268	7,061	25	.8	221	96	124
November	3,809	3,199	7,008	28	.9	105	223	-118
December	3,812	2,513	6,325	-337	-11.8	52	805	-752
Total	3,812	2,513	6,325	-337	-11.8	2,491	2,804	-313
1990 January	3,818	2,268	6,086	-241	-9.6	94	345	-251
February	3,814	1,999	5,813	5	.3	70	335	-265
March	3,818	1,867	5,685	91	5.1	125	261	-136
April	3,839	1,939	5,778	116	6.4	189	138	51
May	3,823	2,175	5,998	113	5.5	295	43	252
June	3,844	2,482	6,326	108	4.5	326	40	286
July	3,850	2,790	6,640	146	5.5	328	26	302
August	3,851	3,073	6,924	135	4.6	321	39	282
September	3,852	3,326	7,178	139	4.4	287	35	252
October	3,852	3,474	7,326	206	6.3	211	63	148
November	3,868	3,478	7,346	279	8.7	135	147	-12
December	3,868	3,070	R6,939	557	22.2	70	478	-408
Total	3,868	3,070	R6,939	557	22.2	2,451	1,949	502
1991 January	3,896	2,367	6,262	99	4.4	58	639	-581
February	3,898	2,087	5,984	88	4.4	61	363	-302
March	3,879	1,922	5,801	55	2.9	99	263	-164
April	3,880	2,042	5,922	103	5.3	213	83	130
May	3,916	2,285	6,200	110	5.1	307	30	277
June	3,944	2,554	6,498	72	2.9	309	20	289
July	3,940	2,767	6,708	-23	-.8	267	47	220
August	3,944	2,977	6,920	-96	-3.1	257	54	202
September	3,947	3,194	7,141	-132	-4.0	279	48	231
October	3,949	3,351	7,299	-123	-3.5	228	69	159
November	3,949	3,138	7,088	-340	-9.8	117	329	-212
December	3,952	2,817	6,769	-253	-8.2	92	424	-332
Total	3,952	2,817	6,769	-253	-8.2	2,287	2,369	-83
1992 January	4,048	2,213	6,261	-154	-6.5	57	571	-514

[a] Total underground storage capacity at the end of each calendar year (in billion cubic feet): 1975--6,280(first data available); 1976--6,544; 1977--6,678; 1978--6,890; 1979--6,929; 1980--7,434; 1981--7,805; 1982--7,915; 1983--7,985; 1984--8,043; 1985--8,087; 1986--8,145; 1987-1989--8,124; and 1990--8125. Current capacity remains at 8,125.

[b] For 1980-1990, data differ from those shown on Table 4.2, which includes liquefied natural gas storage for that period.

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

R=Revised data.

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

Sources: • **Storage Activity—1973-1975:** Energy Information Administration (EIA), *Natural Gas Annual 1988, Volume II*, Table 9. **1976-1979:** EIA, *Natural Gas Production and Consumption 1979*, Table 1. **1980-1984:** EIA, *Natural Gas Annual 1988, Volume II*, Table 11. **1985 forward:** EIA, *Natural Gas Monthly*, March 1992, Table 17. • **Other Data—1973:** American Gas Association (AGA), *Gas Facts, 1972 Data*, Table 57, and *Gas Facts, 1973 Data*, Table 57. 1974: AGA, *Gas Facts, 1974 Data*, Table 40. **1975 and 1976:** Federal Energy Administration, Form FEA-G318-M-O, and Federal Power Commission (FPC), Form FPC-8. **1977 and 1978:** EIA, Form FEA-G318-M-O, and Federal Energy Regulatory Commission (FERC), Form FERC-8. **1979-1984:** EIA, Form EIA-191, and FERC, Form FERC-8. **1985 forward:** EIA, *Natural Gas Monthly*, March 1992, Table 17.

Natural Gas Notes

1. Nonhydrocarbon Gases Removed: Annual data on nonhydrocarbon gases removed from marketed production—carbon dioxide, helium, hydrogen sulfide, and nitrogen—are from the Energy Information Administration (EIA) *Natural Gas Annual (NGA) 1989*. Data are not available for periods prior to 1980. Monthly data are reported by three States and computed for six States. Monthly data are preliminary until after publication of the EIA *NGA*. Differences between annual data published in the EIA *NGA* and the sum of the preliminary monthly data (January-December) are allocated proportionally to the months to create final monthly data. For further information on methods of estimating preliminary monthly data, see the EIA *Natural Gas Monthly (NGM)*.

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

Estimated monthly data. Data for the two most recent months presented are estimated. Some of the data for earlier months are also estimated or computed. For a discussion of computation and estimation procedures, see the EIA *NGM*.

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

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

3. Extraction Loss: Extraction loss is the reduction in volume of natural gas resulting from the removal of natural gas liquid constituents at natural gas processing plants.

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

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

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

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

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

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

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

Annual and final monthly data are from the annual Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas," which requires data to be reported by month for the calendar year.

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

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

Final data are from the EIA *NGA*. Monthly data are considered preliminary until after publication of the EIA *NGA*. For more detailed information on the methods of estimating preliminary and final monthly data, see the EIA *NGM*.

7. Balancing Item: The balancing item for natural gas represents the difference between the sum of the components of natural gas supply and the sum of components of natural gas disposition. The differences may be due to quantities lost or to the effects of data reporting problems. Reporting problems include differences due to the net result of conversions of flow data

metered at varying temperature and pressure bases and converted to a standard temperature and pressure base; the effect of variations in company accounting and billing practices; differences between billing cycle and calendar period time frames; and imbalances resulting from the merger of data reporting systems which vary in scope, format, definitions, and type of respondents.

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

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

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

The final monthly and annual storage and withdrawal data for 1980-1989 include both underground and liquefied natural gas (LNG) storage. Annual data on LNG additions and withdrawals are from Form EIA-176. Monthly data are estimated by computing the ratio of each month's underground storage additions and withdrawals to annual underground storage additions and withdrawals and applying the ratio to the annual LNG data.

Sources for Table 4.2

• **1973-1984: Supplemental Gaseous Fuels**—Energy Information Administration (EIA), *Natural Gas Annual 1990, Volume II* (December 1991), Table 12. **All Other Data**—EIA, *Natural Gas Annual 1990, Volume II* (December 1991), Table 2.

• **1985 forward:** EIA, *Natural Gas Monthly*, March 1992, Table 2.

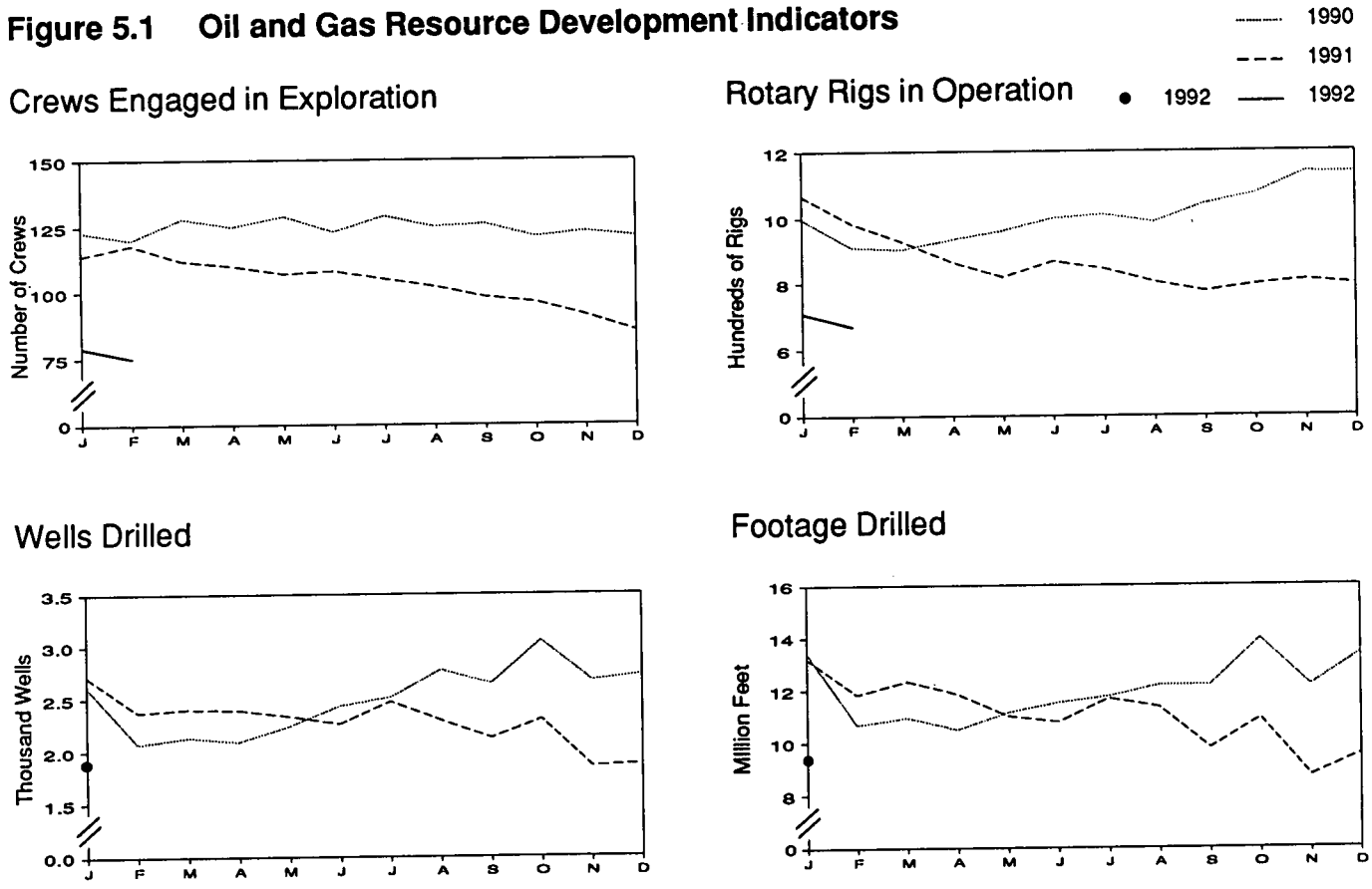
Section 5. Oil and Gas Resource Development

A total of 75 seismic exploration crews were active in February 1992, 43 fewer than a year earlier. Of the total, 62 were land crews and 13 were aboard marine vessels. The number of land crews was down by 35, and the number of operating marine vessels decreased by 8 vessels from the February 1991 count.

The February 1992 rotary rig count of 669 was 6 percent lower than in the previous month and 32 percent lower than in February 1991. Of the total number of rigs in operation, 618 were onshore and 51 were offshore. The number of onshore rigs was down 31 percent from the number in February 1991, and the number of offshore rigs was down 42 percent.

The estimated number of exploratory and development gas and oil wells drilled during January 1992 was 1,460, 9 percent higher than in December 1991 and 31 percent lower than in January 1991. The estimated number of oil wells drilled was 840 and the estimated number of gas wells was 620, down 32 percent and 30 percent, respectively, from the January 1991 levels. The estimated number of dry holes drilled in January 1992 was 470, down 11 percent from December 1991 and 20 percent lower than in January 1991. Total footage drilled in January 1992 was 9.85 million feet, up 3 percent from footage drilled in December 1991 but down 25 percent from that drilled in January 1991.

Figure 5.1 Oil and Gas Resource Development Indicators



Sources: Tables 5.1 and 5.2.

Table 5.1 Seismic Crews and Rotary Rigs

	Crews Engaged In Seismic Exploration			Rotary Rigs In Operation[a]		
	Offshore	Onshore	Total	Offshore	Onshore	Total
	Monthly Average			Weekly Average		
1973 Average	**23**	**227**	**250**	**84**	**1,110**	**1,194**
1974 Average	**31**	**274**	**305**	**94**	**1,378**	**1,472**
1975 Average	**30**	**254**	**284**	**106**	**1,554**	**1,660**
1976 Average	**25**	**237**	**262**	**129**	**1,529**	**1,658**
1977 Average	**27**	**281**	**308**	**167**	**1,834**	**2,001**
1978 Average	**25**	**327**	**352**	**185**	**2,074**	**2,259**
1979 Average	**30**	**370**	**400**	**207**	**1,970**	**2,177**
1980 Average	**37**	**493**	**530**	**231**	**2,678**	**2,909**
1981 Average	**44**	**637**	**681**	**256**	**3,714**	**3,970**
1982 Average	**57**	**531**	**588**	**243**	**2,862**	**3,105**
1983 Average	**47**	**426**	**473**	**199**	**2,033**	**2,232**
1984 Average	**49**	**445**	**494**	**213**	**2,215**	**2,428**
1985 Average	**45**	**333**	**378**	**206**	**1,774**	**1,980**
1986 Average	**24**	**176**	**201**	**99**	**865**	**964**
1987 Average	**24**	**153**	**176**	**95**	**841**	**936**
1988 Average	**29**	**153**	**182**	**123**	**813**	**936**
1989 Average	**23**	**109**	**132**	**105**	**764**	**869**
1990 January	20	103	123	113	885	998
February	20	100	120	105	806	911
March	21	107	128	108	797	905
April	24	101	125	111	824	935
May	25	104	129	120	841	961
June	23	100	123	113	886	999
July	24	105	129	108	902	1,010
August	23	102	125	108	879	987
September	25	101	126	107	935	1,042
October	23	98	121	99	974	1,073
November	23	100	123	106	1,031	1,137
December	23	98	121	101	1,035	1,136
Average	**23**	**102**	**125**	**108**	**902**	**1,010**
1991 January	22	92	114	91	977	1,068
February	21	97	118	88	896	984
March	24	88	112	81	848	929
April	23	87	110	95	770	865
May	22	85	107	98	721	819
June	21	87	108	93	774	867
July	16	89	105	80	764	844
August	15	87	102	68	735	803
September	14	84	98	71	704	775
October	15	81	96	68	727	795
November	18	73	91	72	736	808
December	19	66	85	65	731	796
Average	**19**	**85**	**104**	**81**	**779**	**860**
1992 January	18	61	79	56	654	710
February	13	62	75	51	618	669
Average	**16**	**62**	**77**	**53**	**638**	**692**
1991 2-Month Average	**22**	**95**	**117**	**89**	**937**	**1,026**
1990 2-Month Average	**20**	**102**	**122**	**110**	**850**	**960**

[a] Monthly data are averages of 4- or 5-week reporting periods, not calendar months. Annual data are averages of 52- or 53-week reporting periods, not calendar years.

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

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

Table 5.2 Oil and Gas Exploratory and Development Wells

	Wells Drilled				Footage Drilled
	Oil	Gas	Dry	Total	
	Thousand Wells				Million Feet
1973 Total	10.25	6.98	10.47	27.69	139.42
1974 Total	13.66	7.17	12.21	33.04	153.79
1975 Total	16.98	8.17	13.74	38.89	181.05
1976 Total	17.70	9.44	13.81	40.94	187.29
1977 Total	18.70	12.12	15.04	45.86	215.70
1978 Total	19.07	14.41	16.59	50.06	238.39
1979 Total	20.70	15.17	16.04	51.91	243.69
1980 Total	32.28	17.22	20.34	69.84	312.30
1981 Total	42.84	19.91	27.28	90.03	408.84
1982 Total	39.13	18.94	26.38	84.45	378.39
1983 Total	37.12	14.53	24.30	75.95	318.09
1984 Total	42.51	16.99	25.73	85.23	370.20
1985 Total	34.94	14.23	21.09	70.26	311.77
1986 Total	18.76	8.20	12.85	39.81	178.11
1987 Total	16.22	7.82	11.63	35.68	162.17
1988 Total	13.42	8.33	10.25	31.99	153.74
1989 Total	10.33	9.10	8.32	27.74	131.18
1990 January	R1.01	.87	R.73	R2.61	R13.42
February	.85	.70	.52	2.07	10.67
March	.86	.70	.57	2.13	10.95
April	R.85	R.64	.59	R2.09	R10.48
May	.86	.78	.60	2.24	11.13
June	R.91	.85	.67	R2.43	R11.50
July	.93	.90	.68	2.51	11.75
August	1.08	.97	.72	2.77	12.16
September	1.03	.92	.69	2.64	12.16
October	R1.26	1.02	.77	R3.05	R13.95
November	1.11	.76	.81	2.67	12.16
December	1.15	.87	.70	2.72	13.38
Total	R11.90	R9.97	R8.06	R29.92	R143.70
1991 January	R1.24	R.88	R.59	R2.71	R13.21
February	1.12	.67	.58	R2.37	11.82
March	1.07	.72	.61	2.40	R12.33
April	R1.06	.70	.63	2.39	11.84
May	1.01	.69	R.63	2.33	11.00
June	.93	.74	.59	2.26	10.77
July	R.97	R.82	R.68	R2.47	R11.66
August	.97	.75	.58	2.29	R11.33
September	.84	R.70	R.58	R2.12	R9.78
October	R.98	R.71	R.61	2.30	R10.91
November	.72	.63	.50	1.85	8.72
December	.73	.61	.53	1.87	9.54
Total	R11.64	R8.62	R7.11	R27.37	R132.92
1992 January	.84	.62	.47	1.92	9.85

R=Revised data.

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

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

Oil and Gas Resource Development Notes

Three well types are considered in the *Monthly Energy Review (MER)* drilling statisitics: "completed for oil," "completed for gas," and "dry hole." Wells that productively encounter both crude oil and natural gas are categorized as "completed for oil." Both development wells and exploratory wells (new field wildcats, new pool tests, and extension tests) are included in the statistics. All other classes of wells drilled in connection with the search for producible hydrocarbons are excluded.

Prior to the March 1985 *MER*, drilling statistics consisted of completion data for the above types and classes of wells as reported to the American Petroleum Institute (API) during a given month. Due to time lags between the date of well completion and the date of completion reporting to the API, as-reported well completions proved to be an inaccurate indicator of drilling activity. During 1982, for example, as-reported well completions rose, while the number of actual completions fell. Consequently, the drilling statistics published since the March 1985 *MER* are Energy Information Administration-generated (EIA) estimates produced by statistically imputing well counts and footage based on the partial data available from the API.

Estimates for a given month are first published in the *MER* for that month. Revisions are made in the 6th, 12th, and 24th subsequent months, as newly reported data allow refinement of the estimates. Unscheduled revisions may also occur when the latest estimate differs by more that 15 percent during the first 5 months, more than 10 percent during the next 6 months, or more than 2 percent thereafter through 5 years. After 5 years, the reported API data are published in lieu of EIA-generated estimates. Additional information about the EIA estimation methodology may be found in "Estimating Well Completions," the feature article published in the March 1985 *MER*.

Section 6. Coal

Coal production in January 1992 totaled 85 million short tons, 1 percent[6] lower than the 86 million short tons produced in January 1991.

Electric utility coal consumption in December 1991 totaled 67 million short tons, 2 million short tons lower than the consumption level in December 1990. Total 1991 coal consumption at electric utilities was 772 million short tons, slightly lower than the 773 million short tons consumed during 1990.

Electric utility coal stocks were 158 million short tons at the end of December 1991, compared to stocks of 156 million short tons at the end of December 1990.

Exports of coal in December 1991 totaled 9 million short tons, 20 percent more than exports in December 1990. Coal exports for 1991 totaled 109 million short tons, 3 percent higher than exports for 1990.

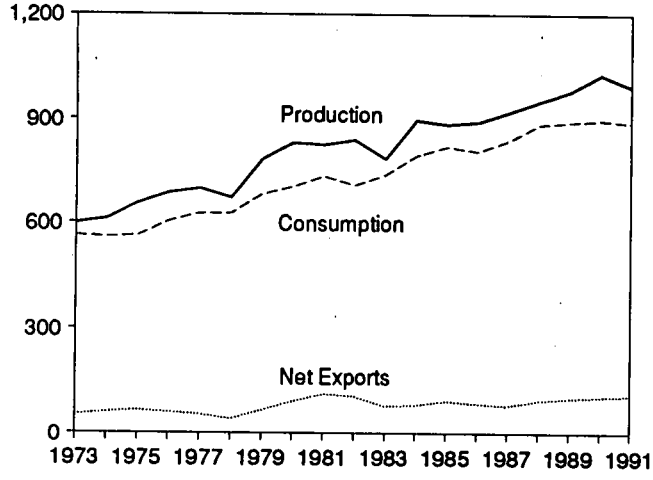
Coal imports for December 1991 totaled 225 thousand short tons, 16 percent lower than imports in December 1990. Coal imports for 1991 totaled 3 million short tons, 26 percent higher than imports during 1990.

[6]Calculated values are computed using unrounded data.

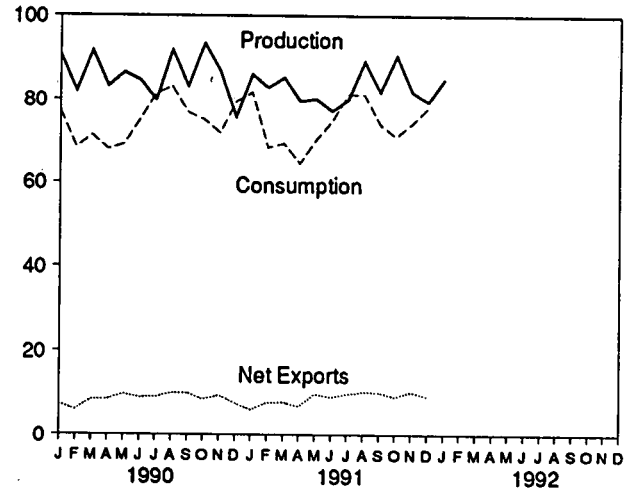
Figure 6.1 Coal

(Million Short Tons)

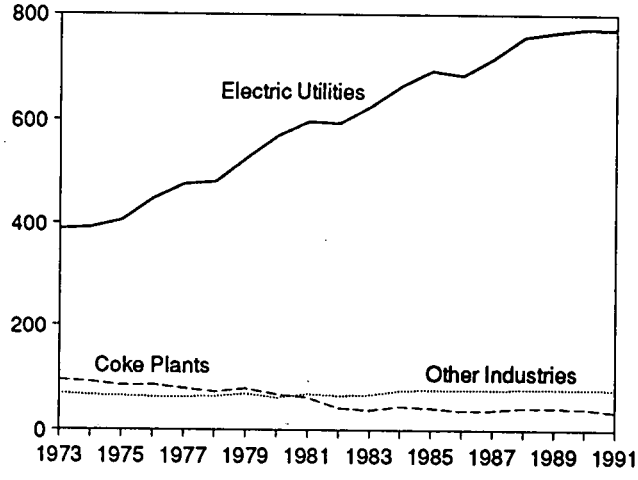
Overview, 1973-1991



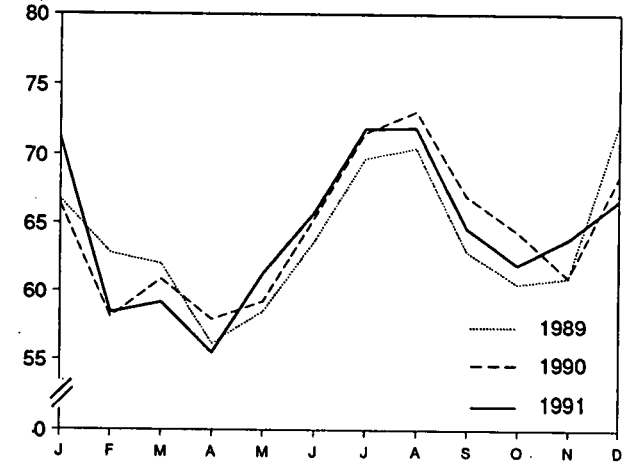
Overview, Monthly



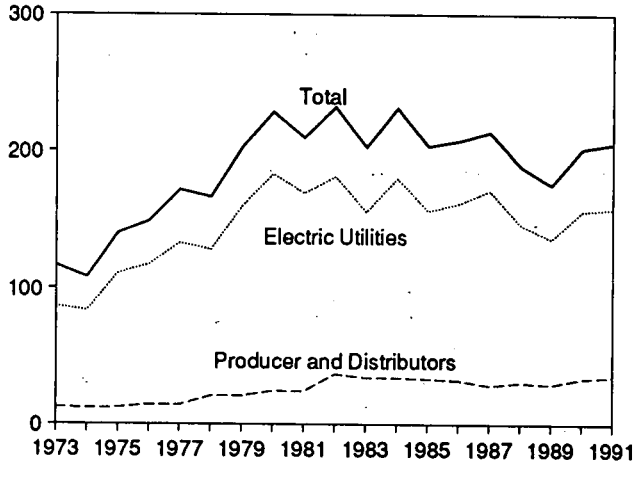
Consumption by Sector, 1973-1991



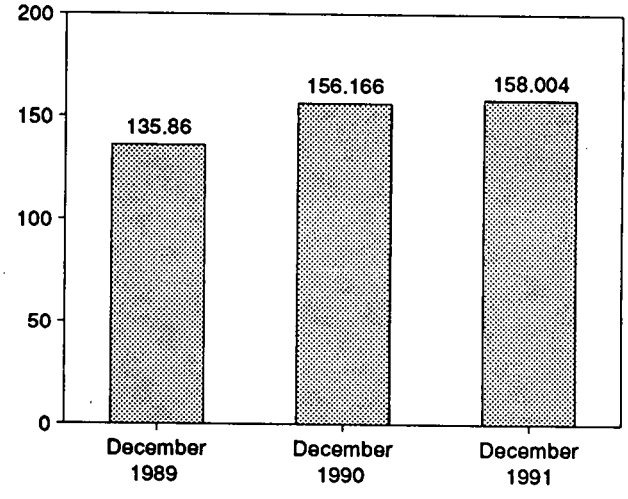
Consumption by Electric Utilities, Monthly



Stocks, End of Year, 1973-1991



Stocks at Electric Utilities, End of Month



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

Table 6.1 Coal Overview

(Thousand Short Tons)

	Production	Consumption	Imports[a]	Exports	Stocks[b]
1973 Total	**598,568**	**562,584**	**127**	**53,587**	**116,865**
1974 Total	**610,023**	**558,402**	**2,080**	**60,661**	**107,957**
1975 Total	**654,641**	**562,640**	**940**	**66,309**	**140,158**
1976 Total	**684,913**	**603,790**	**1,203**	**60,021**	**148,659**
1977 Total	**697,205**	**625,291**	**1,647**	**54,312**	**171,323**
1978 Total	**670,164**	**625,225**	**2,953**	**40,714**	**166,246**
1979 Total	**781,134**	**680,524**	**2,059**	**66,042**	**202,472**
1980 Total	**829,700**	**702,729**	**1,194**	**91,742**	**228,407**
1981 Total	**823,775**	**732,628**	**1,043**	**112,541**	**209,423**
1982 Total	**838,111**	**706,910**	**742**	**106,277**	**232,037**
1983 Total	**782,091**	**736,671**	**1,271**	**77,772**	**202,585**
1984 Total	**895,921**	**791,291**	**1,286**	**81,483**	**231,300**
1985 Total	**883,638**	**818,049**	**1,952**	**92,680**	**203,367**
1986 Total	**890,315**	**804,312**	**2,212**	**85,518**	**207,319**
1987 Total	**918,762**	**836,941**	**1,747**	**79,607**	**213,780**
1988 Total	**950,265**	**883,664**	**2,134**	**95,023**	**188,831**
1989 January	82,331	77,638	66	6,306	185,952
February	75,414	73,391	131	6,748	181,866
March	89,421	72,834	334	8,375	184,630
April	77,456	66,355	158	9,104	188,578
May	82,776	68,438	312	9,685	193,282
June	78,795	73,372	218	9,657	189,507
July	66,601	79,619	375	6,209	175,341
August	91,349	80,170	247	8,122	174,372
September	85,115	72,413	303	9,661	176,013
October	89,873	71,200	160	9,293	182,271
November	87,236	71,653	245	9,768	186,815
December	74,363	83,478	303	7,888	175,087
Total	**980,729**	**890,559**	**2,851**	**100,815**	**175,087**
1990 January	90,561	R77,041	175	7,447	R179,459
February	82,021	R68,369	268	6,243	R186,448
March	91,602	R71,308	292	8,693	R195,842
April	83,167	R67,851	182	8,590	R203,424
May	86,519	R69,127	144	9,827	R210,094
June	84,592	R75,081	348	9,316	R209,956
July	79,798	R81,435	200	9,194	R200,970
August	91,842	R83,115	120	10,065	R197,284
September	83,120	R76,742	194	10,238	R195,298
October	93,424	R75,098	284	8,756	R201,683
November	86,763	R71,855	224	9,621	R206,348
December	75,666	R79,405	268	7,813	R201,629
Total	**1,029,076**	**R896,427**	**2,699**	**105,804**	**R201,629**
1991 January	86,058	81,734	263	6,214	196,651
February	82,835	68,309	429	8,127	202,570
March	85,271	69,321	246	7,977	209,852
April	79,554	64,394	198	6,917	215,146
May	80,141	70,214	248	10,018	217,347
June	77,131	74,716	284	9,278	212,796
July	79,973	81,245	348	10,099	204,562
August	89,131	81,244	248	10,541	199,633
September	81,789	73,943	387	10,557	197,960
October	R90,478	E70,959	214	9,244	E205,726
November	R81,858	E74,230	298	10,602	E205,620
December	79,414	E78,122	225	9,393	E205,230
Total	**R993,635**	**E888,432**	**3,390**	**108,969**	**E205,230**
1992 January	84,891	NA	NA	NA	NA

[a] Includes Puerto Rico.

[b] Stocks held by electric utilities, coke plants, general industry, and coal producers and distributors at end of period. Excludes stocks held at retail dealers for consumption by the residential and commercial sector.

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

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

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

Table 6.2 Coal Consumption by End-Use Sector

(Thousand Short Tons)

	Residential and Commercial	Industrial		Electric Utilities	Total
		Coke Plants	Other Industrial including Transportation		
1973 Total	**11,117**	**94,101**	**68,154**	**389,212**	**562,584**
1974 Total	**11,417**	**90,191**	**64,983**	**391,811**	**558,402**
1975 Total	**9,410**	**83,598**	**63,670**	**405,962**	**562,640**
1976 Total	**8,916**	**84,704**	**61,799**	**448,371**	**603,790**
1977 Total	**8,954**	**77,739**	**61,472**	**477,126**	**625,291**
1978 Total	**9,511**	**71,394**	**63,085**	**481,235**	**625,225**
1979 Total	**8,388**	**77,368**	**67,717**	**527,051**	**680,524**
1980 Total	**6,452**	**66,657**	**60,347**	**569,274**	**702,729**
1981 Total	**7,422**	**61,015**	**67,395**	**596,797**	**732,628**
1982 Total	**8,240**	**40,908**	**64,096**	**593,666**	**706,910**
1983 Total	**8,448**	**37,033**	**65,979**	**625,211**	**736,671**
1984 Total	**9,128**	**44,022**	**73,744**	**664,399**	**791,291**
1985 Total	**7,779**	**41,056**	**75,372**	**693,841**	**818,049**
1986 Total	**7,667**	**36,006**	**75,583**	**685,056**	**804,312**
1987 Total	**6,914**	**36,957**	**75,175**	**717,894**	**836,941**
1988 Total	**7,130**	**41,910**	**76,252**	**758,372**	**883,664**
1989 January	632	3,568	6,671	66,767	77,638
February	693	3,295	6,619	62,784	73,391
March	512	3,722	6,595	62,005	72,834
April	511	3,613	6,088	56,144	66,355
May	336	3,525	6,050	58,527	68,438
June	296	3,368	6,073	63,635	73,372
July	496	3,527	5,875	69,720	79,619
August	449	3,336	5,891	70,493	80,170
September	318	3,320	5,865	62,910	72,413
October	210	3,599	6,829	60,561	71,200
November	530	3,301	6,815	61,006	71,653
December	1,184	3,195	6,764	72,336	83,478
Total	**6,167**	**41,369**	**76,134**	**766,888**	**890,559**
1990 January	713	3,354	6,533	R66,441	R77,041
February	656	3,025	6,576	R58,112	R68,369
March	551	3,369	6,504	R60,885	R71,308
April	532	3,357	6,025	R57,937	R67,851
May	360	3,501	6,007	R59,260	R69,127
June	373	3,331	6,037	R65,340	R75,081
July	535	3,275	6,075	R71,551	R81,435
August	498	3,397	6,113	R73,106	R83,115
September	409	3,276	6,056	R67,001	R76,742
October	413	3,450	6,853	R64,381	R75,098
November	624	3,351	6,838	R61,041	R71,855
December	1,059	3,139	6,713	R68,493	R79,405
Total	**6,724**	**39,824**	**76,330**	**R773,549**	**R896,427**
1991 January	862	3,031	6,651	71,190	81,734
February	605	2,566	6,695	58,443	68,309
March	541	2,985	6,601	59,195	69,321
April	445	2,675	5,791	55,483	64,394
May	365	2,710	5,841	61,298	70,214
June	355	2,690	5,893	65,777	74,716
July	427	2,929	6,027	71,862	81,245
August	387	2,916	6,023	71,919	81,244
September	320	2,932	6,039	64,652	73,943
October	E501	E2,158	E6,352	61,948	E70,959
November	E639	E3,149	E6,611	63,830	E74,230
December	E901	E3,380	E7,123	66,718	E78,122
Total	**E6,349**	**E34,121**	**E75,647**	**772,315**	**E888,432**

R=Revised data. E=Estimate.

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

Sources: • **Residential and Commercial: 1973-1976**—U.S. Department of the Interior (DOI), Bureau of Mines (BOM), *Minerals Yearbook*. **January-September 1977:** DOI, BOM, Form 6-1400, "Monthly Coal Report, Retail Dealers-Upper Lake Docks." **October 1977-1979:** EIA, Form EIA-2, "Monthly Coal Report, Retail Dealers-Upper Lake Docks." **1980 forward:** EIA, Form EIA-6, "Coal Distribution Report." • **Coke Plants: 1973-September 1977**—DOI, BOM, *Minerals Yearbook* and *Minerals Industry Surveys*. **October 1977-1980:** EIA, Form EIA-5/5A, "Coke and Coal Chemicals-Monthly/Annual." **1981-1984:** EIA, Form EIA-5/5A, "Coke Plant Report-Quarterly/Annual Supplement." **1985 forward:** EIA Form EIA-5, "Coke Plant Report," quarterly. • **Other Industrial: 1973-September 1977**—DOI, BOM, *Minerals Yearbook* and *Minerals Industry Surveys*. **October 1977-1979:** EIA, Form EIA-3, "Monthly Coal Consumption Report-Manufacturing Plants." **1980 forward:** EIA, Form EIA-3, "Quarterly Coal Consumption Report-Manufacturing Plants," and Form EIA-6, "Coal Distribution Report." • **Electric Utilities: 1973-September 1977**—DOI, BOM, *Minerals Yearbook* and *Minerals Industry Surveys*. **October 1977 forward:** EIA, Form EIA-759 (formerly Form FPC-4), "Monthly Power Plant Report."

Table 6.3 Coal Stocks, End of Period

(Thousand Short Tons)

	Consumer				Producers and Distributors	Total[a]
	Coke Plants	Other Industrial	Electric Utilities	Total[a]		
1973 Year	**6,998**	**10,370**	**86,967**	**104,335**	**12,530**	**116,865**
1974 Year	**6,209**	**6,605**	**83,509**	**96,323**	**11,634**	**107,957**
1975 Year	**8,797**	**8,529**	**110,724**	**128,050**	**12,108**	**140,158**
1976 Year	**9,902**	**7,100**	**117,436**	**134,438**	**14,221**	**148,659**
1977 Year	**12,816**	**11,063**	**133,219**	**157,098**	**14,225**	**171,323**
1978 Year	**8,278**	**9,048**	**128,225**	**145,551**	**20,695**	**166,246**
1979 Year	**10,155**	**11,777**	**159,714**	**181,646**	**20,826**	**202,472**
1980 Year	**9,067**	**11,951**	**183,010**	**204,028**	**24,379**	**228,407**
1981 Year	**6,475**	**9,906**	**168,893**	**185,274**	**24,149**	**209,423**
1982 Year	**4,642**	**9,479**	**181,132**	**195,253**	**36,784**	**232,037**
1983 Year	**4,346**	**8,710**	**155,598**	**168,654**	**33,931**	**202,585**
1984 Year	**6,166**	**11,317**	**179,727**	**197,210**	**34,090**	**231,300**
1985 Year	**3,420**	**10,438**	**156,376**	**170,234**	**33,133**	**203,367**
1986 Year	**2,992**	**10,429**	**161,806**	**175,226**	**32,093**	**207,319**
1987 Year	**3,884**	**10,777**	**170,797**	**185,459**	**28,321**	**213,780**
1988 Year	**3,137**	**8,768**	**146,507**	**158,413**	**30,418**	**188,831**
1989 January	3,264	8,073	142,538	153,876	32,076	185,952
February	3,391	7,378	137,363	148,132	33,734	181,866
March	3,518	6,683	139,036	149,238	35,392	184,630
April	3,466	6,679	144,674	154,819	33,759	188,578
May	3,413	6,675	151,067	161,155	32,127	193,282
June	3,361	6,671	148,981	159,013	30,494	189,507
July	3,476	7,054	134,865	145,395	29,946	175,341
August	3,591	7,436	133,948	144,975	29,397	174,372
September	3,707	7,818	135,640	147,165	28,848	176,013
October	3,426	7,666	142,280	153,372	28,899	182,271
November	3,145	7,515	147,207	157,866	28,949	186,815
December	**2,864**	**7,363**	**135,860**	**146,087**	**29,000**	**175,087**
1990 January	3,123	7,237	R 138,067	R 148,426	31,033	R 179,459
February	3,382	7,110	R 142,890	R 153,382	33,066	R 186,448
March	3,641	6,984	R 150,118	R 160,743	35,099	R 195,842
April	3,674	7,127	R 156,925	R 167,726	35,698	R 203,424
May	3,706	7,270	R 162,821	R 173,798	36,296	R 210,094
June	3,739	7,413	R 161,908	R 173,061	36,895	R 209,956
July	3,387	7,810	R 153,957	R 165,153	35,816	R 200,970
August	3,255	8,206	R 151,085	R 162,546	34,738	R 197,284
September	3,124	8,603	R 149,913	R 161,639	33,659	R 195,298
October	3,192	8,640	R 156,271	R 168,104	33,579	R 201,683
November	3,260	8,678	R 160,911	R 172,850	33,499	R 206,348
December	**3,329**	**8,716**	**R 156,166**	**R 168,210**	**33,418**	**R 201,629**
1991 January	3,262	8,226	148,736	160,224	36,428	196,651
February	3,196	7,735	152,202	163,133	39,437	202,570
March	3,130	7,245	157,031	167,406	42,446	209,852
April	3,181	7,113	162,804	173,098	42,049	215,146
May	3,232	6,982	165,483	175,696	41,651	217,347
June	3,283	6,850	161,410	171,543	41,253	212,796
July	3,087	6,986	155,668	165,741	38,821	204,562
August	2,891	7,122	153,231	163,244	36,389	199,633
September	2,695	7,257	154,051	164,004	33,957	197,960
October	E 3,214	E 8,699	158,813	E 170,726	E 35,000	E 205,726
November	E 3,281	E 8,734	158,605	E 170,620	E 35,000	E 205,620
December	**E 3,379**	**E 8,847**	**158,004**	**E 170,230**	**E 35,000**	**E 205,230**

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

R=Revised data. E=Estimate.

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

Sources: • **Coke Plants: 1973-September 1977**—U.S. Department of the Interior (DOI), Bureau of Mines (BOM), *Minerals Yearbook* and *Minerals Industry Surveys*. **October 1977-1980:** Energy Information Administration (EIA), Form EIA-5/5A, "Coke and Coal Chemicals-Monthly/Annual." **1981-1984:** EIA, Form EIA-5/5A, "Coke Plant Report-Quarterly/Annual Supplement." **1985 forward:** EIA Form EIA-5, "Coke Plant Report," quarterly. • **Other Industrial: 1973-September 1977**—DOI, BOM, *Minerals Yearbook* and *Minerals Industry Surveys*. **October 1977-1979:** EIA, Form EIA-3, "Monthly Coal Consumption Report-Manufacturing Plants." **1980 forward:** EIA, Form EIA-3, "Quarterly Coal Consumption Report-Manufacturing Plants," and Form EIA-6, "Coal Distribution Report." • **Electric Utilities: 1973-September 1977**—DOI, BOM, *Minerals Yearbook* and *Minerals Industry Surveys*. **October 1977 forward:** EIA, Form EIA-759 (formerly Form FPC-4), "Monthly Power Plant Report." • **Producers and Distributors:** EIA, Form EIA-6, "Coal Distribution Report."

Coal Notes

1. Production: Preliminary monthly estimates of national coal production are the sum of weekly estimates developed by the Energy Information Administration (EIA) and published in the *Weekly Coal Production* report. When a week extends into a new month, production is allocated on a daily basis and added to the appropriate month. Weekly estimates are based on Association of American Railroads data showing the number of railcars loaded with coal during the week by Class I and certain other railroads. This number is converted into tons of coal by EIA by using the average number of tons of coal per railcar loaded reported in the most recent "Quarterly Freight Commodity Statistics" from the Interstate Commerce Commission. If an average coal tonnage per railcar loaded is not available for a specific railroad, the national average is used. To derive the estimate of total weekly production, the total rail tonnage for the week is divided by the ratio of quarterly production shipped by rail and total quarterly production. Data for the corresponding quarter of previous years are used to derive this ratio. This method insures that the seasonal variations are preserved in the production estimates.

When preliminary quarterly data become available, the monthly and weekly estimates are adjusted to conform to the quarterly figure. The adjustment procedure uses State-level production data and is explained in EIA's *Quarterly Coal Report.* Initial estimates of annual production published in January of the following year are based on preliminary production data covering the first 9 months (three quarters) and weekly/monthly estimates for the fourth quarter. The fourth quarter estimates may or may not be revised when preliminary data become available in March of the following year, depending on the magnitude of the difference between the estimates and the preliminary data. In any event, all quarterly, monthly, and weekly production figures are adjusted to conform to the final annual production data published in the *Monthly Energy Review* in the fall of the following year.

2. Consumption: Coal consumption data are reported by major end-use sector. Estimated data for the most recent months (designated by an "E") are derived from forecasted values shown in the EIA *Short-Term Energy Outlook* (DOE/EIA-0202) table titled "Supply and Disposition of Coal: Mid World Oil Price Case." The monthly estimates are one-third of the quarterly values shown in the then current issue of the publication, regularly released in February, May, August, and November. The estimates are revised quarterly as collected data become available from the data sources. Sector-specific information follows.

- Residential and Commercial—Prior to 1980, monthly consumption estimates for the residential and commercial sector were derived by using reported data to modify baseline figures developed by the Bureau of Mines. From 1980-1987, monthly estimates were derived by proportioning reported quarterly data by using the ratios of monthly-to-quarterly consumption data in 1979, the last year in which monthly data were reported on Form EIA-2. During 1981 and 1982, the estimates were also modified to reflect air temperature degree-days. Quarterly consumption data were directly from reported data and were defined as distribution to the residential and commercial sector as reported by coal producers and distributors on Form EIA-6. Beginning in January 1988, monthly residential and commercial consumption estimates are derived from reported quarterly data by using monthly national average population weighted heating/cooling degree-days obtained from the National Oceanic and Atmospheric Administration. The monthly ratios are the monthly national sum of heating and cooling degree-days as a proportion of the quarterly national sum. Quarterly consumption data are directly from reported data.

- Coke Plants—Prior to 1980, monthly coke plant consumption data were directly from reported data. From 1980-1987, coke plant consumption estimates were derived by proportioning reported quarterly data by using the ratios of monthly-to-quarterly consumption data in 1979, the last year in which monthly data were reported. Beginning in January 1988, monthly coke plant consumption estimates are derived from the reported quarterly data by using monthly ratios of raw steel production data from the American Iron and Steel Institute. The ratios are the monthly raw steel production from open hearth and basic oxygen process furnaces as a proportion of the quarterly production from those kinds of furnaces.

- Other Industrial—Prior to 1978, monthly consumption data for the other industrial sector (i.e., all industrial users minus coke plants) were derived by using reported data to modify baseline consumption figures from the most recent Bureau of the Census Annual Survey of Manufactures or Census of Manufactures. For 1978 and 1979, monthly estimates were derived from data reported on Forms EIA-3 and EIA-6. From 1980-1987, monthly figures were estimated by proportioning quarterly data by using the ratios of monthly-to-quarterly consumption data in 1979, the last year in which monthly data were reported on Form EIA-3. Quarterly consumption data were derived by adding beginning stocks at manufacturing plants to current receipts and subtracting ending stocks at manufacturing plants. In this calculation, current receipts were the greater of either reported receipts from manufacturing plants (Form EIA-3) or reported shipments to the other industrial sector (Form EIA-6), thereby ensuring that agriculture, forestry, fishing, mining, and construction consumption were included where appropriate. Starting in January 1988, monthly consumption for the other

industrial sector is estimated from reported quarterly data by using ratios derived from industrial production indices published by the Board of Governors of the Federal Reserve System. Indices for six major industry groups are used as the basis for calculating the ratios: foods (SIC 20); paper and products (SIC 26); chemicals and products (SIC 28); petroleum products (SIC 29); clay, glass, and stone products (SIC 32); and primary metals (SIC 33). The monthly ratios are computed as the monthly sum of the weighted indices as a proportion of the quarterly sum of the weighted indices by using the 1977 proportion as the weights.

- Electric Utilities—Monthly consumption data for electric utility plants are directly from reported data.

3. Stocks: Coal stocks data are reported by major end-use sector. Estimated data for the most recent months (designated by an "E") are derived from forecasted values shown in the EIA *Short-Term Energy Outlook* (DOE/EIA-0202) table titled "Supply and Disposition of Coal: Mid World Oil Price Case." The monthly estimates are one-third of the quarterly values shown in the then current issue of the publication, regularly released in February, May, August, and November. The estimates are revised quarterly as collected data become available from the data sources. Sector-specific information follows.

- Coke Plants—Prior to 1980, monthly stocks at coke plants were directly from reported data. From 1980 forward, coke plant stocks are estimated by using one-third of the current quarterly change to indicate the monthly change in stocks. Quarterly stocks are directly from data reported on Form EIA-5.
- Other Industrial—Prior to 1978, stocks for the other industrial sector were derived by using reported data to modify baseline figures from a one-time Bureau of Mines survey of consumers. For 1978-1982, monthly estimates were derived by judgmentally proportioning reported quarterly data based on representative seasonal patterns of supply and demand. From 1983 forward, other industrial coal stocks are estimated as indicated above for coke plants. Quarterly stocks are directly from data reported on Form EIA-3 and therefore include only manufacturing industries; data for agriculture, forestry, fishing, mining, and construction stocks are not available.
- Electric Utilities—Monthly stocks data at electric utility plants are directly from reported data.
- Producers and Distributors—Quarterly stocks at producers and distributors are directly from reported data. Monthly data are estimated by using one-third of the current quarterly change to indicate the monthly change in stocks.

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

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

Section 7. Electricity

During December 1991, electric utilities generated 234 billion kilowatthours of electricity, 2 percent[7] below the December 1990 generation level. Coal-fired generation totaled 133 billion kilowatthours, 3 percent below the December 1990 level. Nuclear generation totaled 54 billion kilowatthours, 4 percent above the level 1 year earlier. Hydroelectric generation totaled 22 billion kilowatthours, 9 percent below the December 1990 level. Natural gas-fired generation was 16 billion kilowatthours, 3 percent below the December 1990 level. Petroleum-fired generation totaled 9 billion kilowatthours, 12 percent above the level 1 year earlier.

During 1991, electric utilities generated 2,822 billion kilowatthours of electricity, slightly higher than the 1990 generation level. Coal-fired generation totaled 1,548 billion kilowatthours, 1 percent below the level 1 year earlier. Nuclear generation totaled 613 billion kilowatthours, 6 percent above the 1990 level. Hydroelectric generation totaled 275 billion kilowatthours, 2 percent below the level 1 year earlier. Natural gas-fired generation totaled 264 billion kilowatthours, slightly lower than the 1990 level. Petroleum-fired generation totaled 111 billion kilowatthours, 5 percent below the 1990 level.

Sales of electricity to all ultimate consumers in the United States in December 1991 were 228 billion kilowatthours, 2 percent higher than the December 1990 level. Sales to residential consumers during December 1991 were 82 billion kilowatthours, 5 percent higher than the level of sales during the previous December. Sales to industrial consumers during December 1991 were 76 billion kilowatthours, slightly higher than the December 1990 level. Commercial sales were 61 billion kilowatthours, 1 percent higher than the amount sold to commercial consumers 1 year earlier. In December 1991, other sales totaled 8 billion kilowatthours, 5 percent above the December 1990 level.

During 1991, sales of electricity to all ultimate consumers in the United States were 2,759 billion kilowatthours, 2 percent higher than the 1990 level. Sales to residential consumers during 1991 were 957 billion kilowatthours, 4 percent higher than the level of sales during the previous year. Sales to industrial consumers during 1991 were 941 billion kilowatthours, slightly higher than the 1990 level. Commercial sales were 765 billion kilowatthours, 2 percent higher than the amount sold to commercial consumers 1 year earlier. During 1991, other sales totaled 97 billion kilowatthours, 1 percent above the 1990 level.

Electric utility consumption of petroleum (excluding petroleum coke) during December 1991 was 15 million barrels, 11 percent above the December 1990 level. Coal consumption during December 1991 was 67 million short tons, 3 percent lower than consumption in December 1990. During December 1991, electric utilities consumed 170 billion cubic feet of natural gas, 3 percent below the December 1990 consumption level.

During 1991 electric utility consumption of petroleum (excluding petroleum coke) was 185 million barrels, 6 percent below the 1990 level. Coal consumption during 1991 was 772 million short tons, slightly below the 1990 consumption level. During 1991, electric utilities consumed 2,781 billion cubic feet of natural gas, slightly below the 1990 rate.

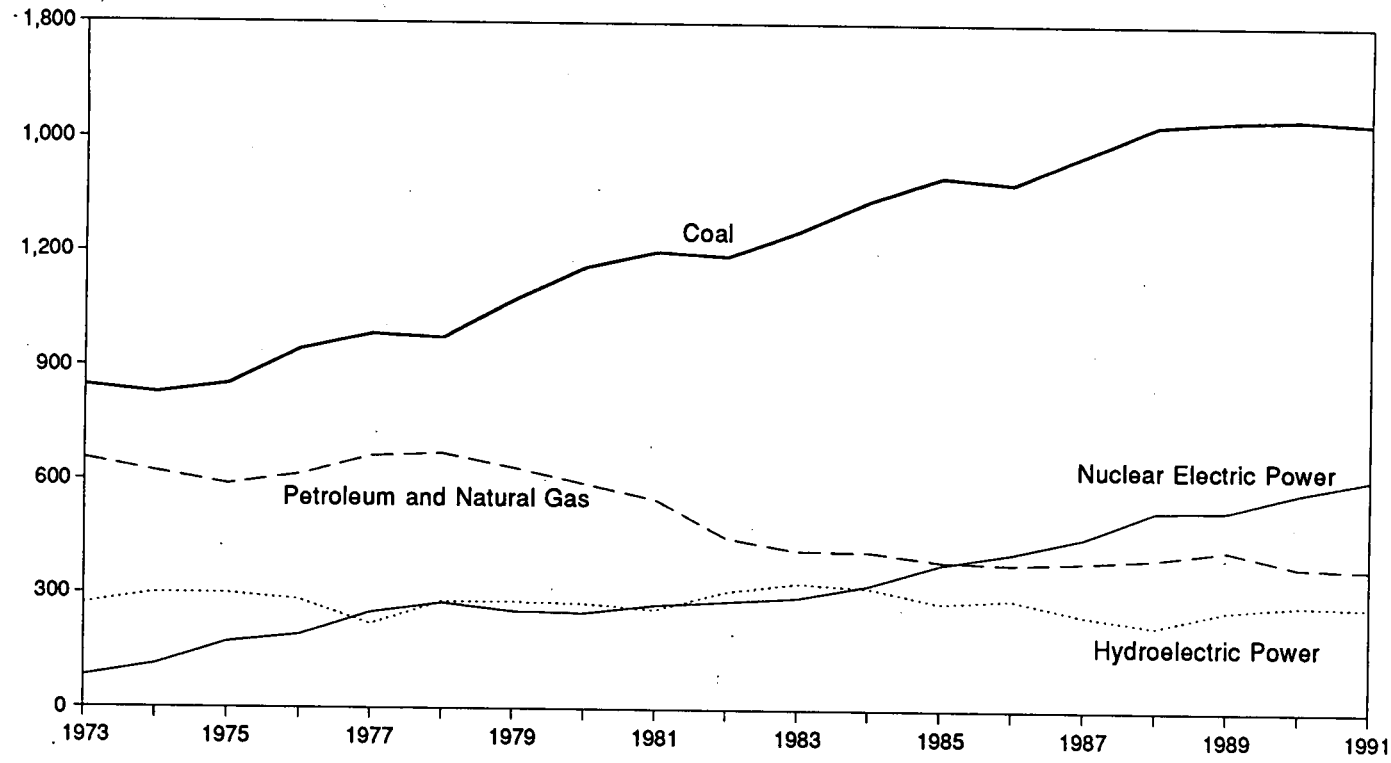
On December 31, 1991, electric utility stocks of all types of coal totaled 158 million short tons, 1 percent higher than the level on December 31, 1990. Stocks of petroleum (excluding petroleum coke) on December 31, 1991, totaled 75 million barrels, 10 percent below the level on December 31, 1990.

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

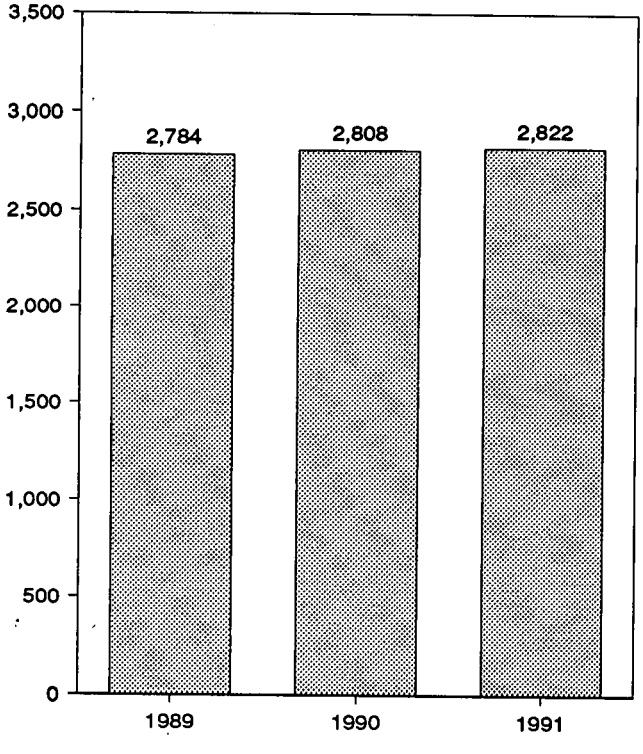
Figure 7.1 Electric Utility Net Generation of Electricity

(Billion Kilowatthours)

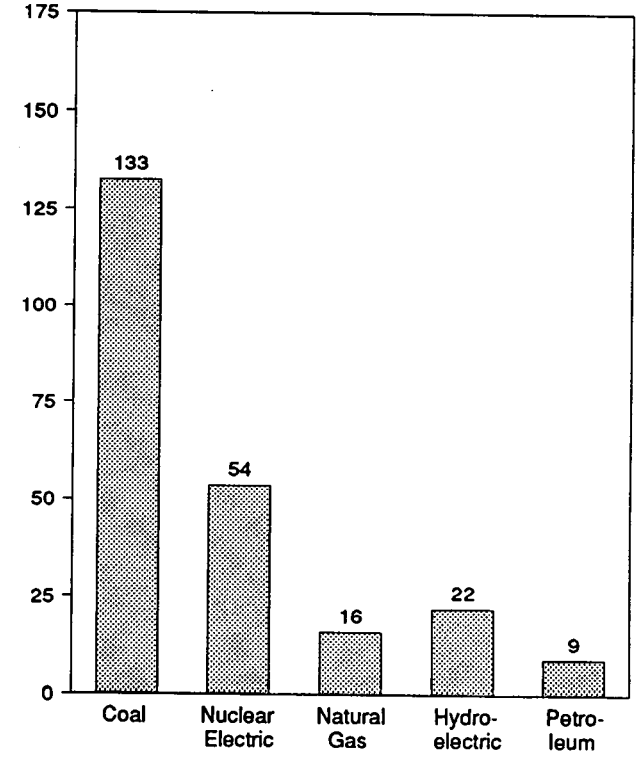
Net Generation by Source, 1973-1991



Net Generation, January-December



Net Generation by Source, December 1991



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

Table 7.1 Electric Utility Net Generation of Electricity

(Million Kilowatthours)

	Coal	Natural Gas[a]	Petroleum[b]	Nuclear Electric Power	Hydro-Electric Power	Other[c]	Total
1973 Total	**847,651**	**340,858**	**314,343**	**83,479**	**272,083**	**2,294**	**1,860,710**
1974 Total	**828,433**	**320,065**	**300,931**	**113,976**	**301,032**	**2,703**	**1,867,140**
1975 Total	**852,786**	**299,778**	**289,095**	**172,505**	**300,047**	**3,437**	**1,917,649**
1976 Total	**944,391**	**294,624**	**319,988**	**191,104**	**283,707**	**3,883**	**2,037,696**
1977 Total	**985,219**	**305,505**	**358,179**	**250,883**	**220,475**	**4,063**	**2,124,323**
1978 Total	**975,742**	**305,391**	**365,060**	**276,403**	**280,419**	**3,315**	**2,206,331**
1979 Total	**1,075,037**	**329,485**	**303,525**	**255,155**	**279,783**	**4,387**	**2,247,372**
1980 Total	**1,161,562**	**346,240**	**245,994**	**251,116**	**276,021**	**5,506**	**2,286,439**
1981 Total	**1,203,203**	**345,777**	**206,421**	**272,674**	**260,684**	**6,054**	**2,294,812**
1982 Total	**1,192,004**	**305,260**	**146,797**	**282,773**	**309,213**	**5,164**	**2,241,211**
1983 Total	**1,259,424**	**274,098**	**144,499**	**293,677**	**332,130**	**6,456**	**2,310,285**
1984 Total	**1,341,681**	**297,394**	**119,808**	**327,634**	**321,150**	**8,638**	**2,416,304**
1985 Total	**1,402,128**	**291,946**	**100,202**	**383,691**	**281,149**	**10,724**	**2,469,841**
1986 Total	**1,385,831**	**248,508**	**136,585**	**414,038**	**290,844**	**11,503**	**2,487,310**
1987 Total	**1,463,781**	**272,621**	**118,493**	**455,270**	**249,695**	**12,267**	**2,572,127**
1988 Total	**1,540,653**	**252,801**	**148,900**	**526,973**	**222,940**	**11,984**	**2,704,250**
1989 January	135,181	14,014	15,332	46,328	20,930	961	232,747
February	127,187	16,672	17,748	38,725	18,620	874	219,826
March	126,725	20,072	16,667	39,636	22,642	1,000	226,742
April	115,451	22,571	11,561	33,495	24,077	886	208,042
May	119,108	23,747	9,939	38,339	28,049	942	220,124
June	128,615	24,680	12,591	42,976	25,882	945	235,689
July	138,638	30,351	12,081	52,331	22,671	977	257,050
August	141,901	29,709	10,983	54,948	20,187	959	258,687
September	126,898	25,515	10,072	44,837	18,919	909	227,150
October	122,393	24,664	8,263	43,558	20,076	956	219,910
November	124,338	18,107	11,343	43,399	21,186	927	219,300
December	147,227	16,496	21,737	50,784	21,823	972	259,038
Total	**1,553,661**	**266,598**	**158,318**	**529,355**	**265,063**	**11,309**	**2,784,304**
1990 January	R 132,623	13,687	11,515	55,119	23,412	933	R 237,289
February	R 116,071	12,450	9,385	49,963	24,151	861	R 212,880
March	R 123,139	17,647	10,172	46,087	28,042	948	R 226,034
April	R 117,260	18,991	10,141	38,516	25,387	775	R 211,070
May	119,785	22,867	9,442	42,945	27,001	868	222,908
June	R 132,624	R 28,280	R 13,348	46,332	R 27,708	883	R 249,175
July	R 144,359	R 30,983	12,824	53,645	23,658	907	R 266,375
August	R 147,305	R 32,610	R 10,887	55,758	21,048	919	R 268,527
September	R 135,493	R 28,212	7,981	48,485	16,971	875	R 238,017
October	R 130,182	R 24,408	R 7,198	43,395	18,605	905	R 224,694
November	R 124,003	R 17,637	6,221	45,034	19,993	860	R 213,748
December	R 136,762	R 16,317	7,902	51,582	23,952	919	R 237,434
Total	**R 1,559,606**	**R 264,089**	**R 117,017**	**576,862**	**R 279,926**	**10,651**	**R 2,808,151**
1991 January	141,677	16,165	9,206	54,369	25,671	897	247,984
February	117,536	13,731	8,685	47,863	21,918	764	210,497
March	118,066	18,432	8,815	49,121	25,820	863	221,117
April	112,177	20,569	8,032	41,662	25,687	809	208,936
May	123,664	23,309	10,999	46,755	28,457	808	233,991
June	131,681	24,380	11,215	54,208	25,832	848	248,165
July	143,586	31,089	10,993	60,735	24,250	839	271,492
August	143,898	30,855	11,863	58,473	21,744	865	267,698
September	129,244	24,922	8,644	51,874	18,387	827	233,897
October	125,327	25,339	6,481	47,653	17,537	R 843	223,180
November	128,973	18,936	7,643	46,295	18,299	R 883	221,029
December	132,545	15,818	8,841	53,589	21,873	916	233,583
Total	**1,548,373**	**263,546**	**111,417**	**612,596**	**275,475**	**10,163**	**2,821,569**

[a] Includes supplemental gaseous fuel.
[b] Includes fuel oil Nos. 2, 4, 5, and 6, crude oil, kerosene, and petroleum coke.
[c] "Other" is electricity produced from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems.

R=Revised data.

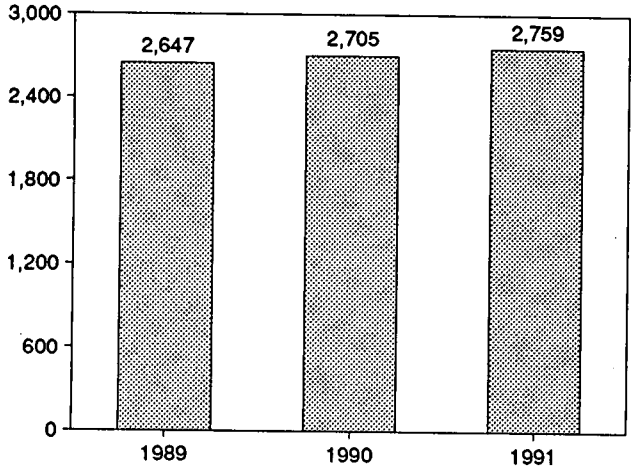
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Sources: • **1973-September 1977:** Federal Power Commission, Form FPC-4, "Monthly Power Plant Report." • **October 1977-1979:** Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report." • **1980 forward:** Energy Information Administration (EIA), *Electric Power Monthly*, March 1992, Table 4.

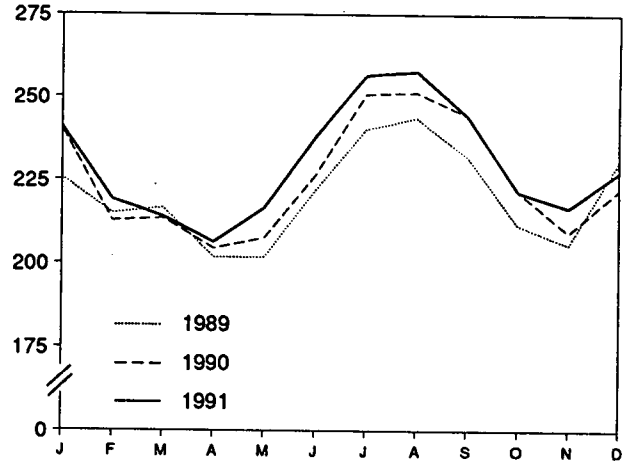
Figure 7.2 Electricity Sales

(Billion Kilowatthours)

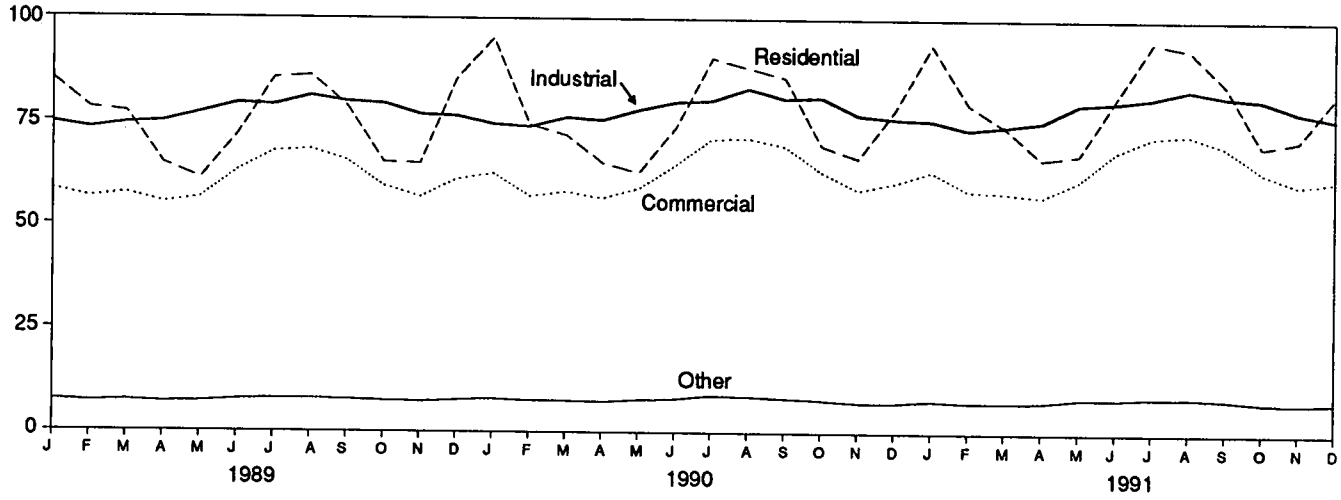
Total Sales, January-December



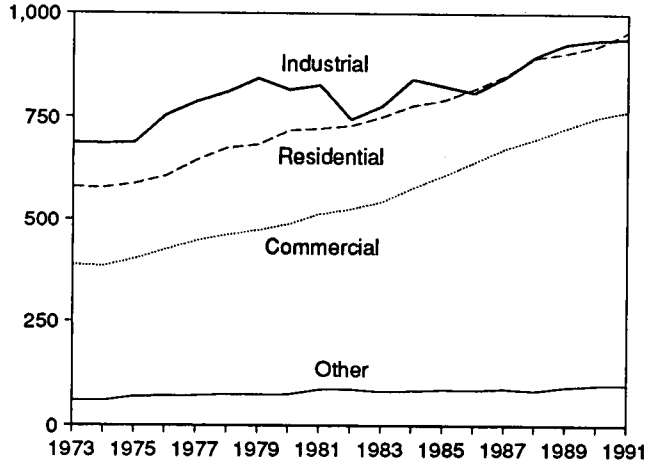
Total Sales, Monthly



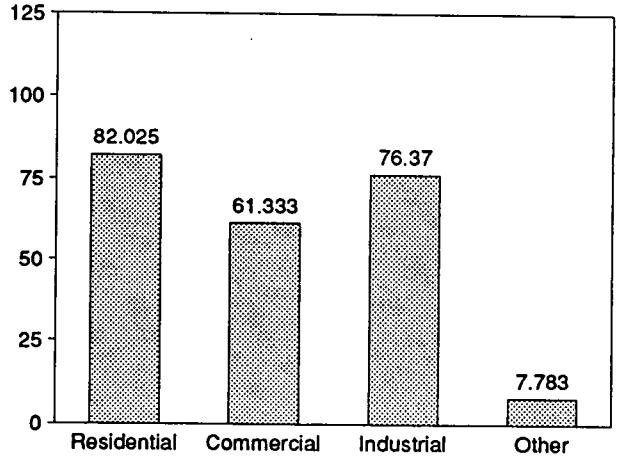
Sales by Sector, Monthly



Sales by Sector, 1973-1991



Sales by Sector, December 1991



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

Table 7.2 Electricity Sales by End-Use Sector

(Million Kilowatthours)

	Residential		Commercial		Industrial		Other[a]		Total	
	Monthly Series[b]	Annual Series	Monthly Series[b]	Annual Series	Monthly Series[b]	Annual Series	Monthly Series[b]	Annual Series	Monthly Series[b]	Annual Series
1973 Total	**579,231**	**NA**	**388,266**	**NA**	**686,085**	**NA**	**59,326**	**NA**	**1,712,909**	**NA**
1974 Total	**578,184**	**NA**	**384,826**	**NA**	**684,875**	**NA**	**58,039**	**NA**	**1,705,924**	**NA**
1975 Total	**588,140**	**NA**	**403,049**	**NA**	**687,680**	**NA**	**68,222**	**NA**	**1,747,091**	**NA**
1976 Total	**606,452**	**NA**	**425,094**	**NA**	**754,069**	**NA**	**69,631**	**NA**	**1,855,246**	**NA**
1977 Total	**645,239**	**NA**	**446,514**	**NA**	**786,037**	**NA**	**70,571**	**NA**	**1,948,361**	**NA**
1978 Total	**674,466**	**NA**	**461,163**	**NA**	**809,078**	**NA**	**73,215**	**NA**	**2,017,922**	**NA**
1979 Total	**682,819**	**NA**	**473,307**	**NA**	**841,903**	**NA**	**73,070**	**NA**	**2,071,099**	**NA**
1980 Total	**717,495**	**NA**	**488,155**	**NA**	**815,067**	**NA**	**73,732**	**NA**	**2,094,449**	**NA**
1981 Total	**722,265**	**NA**	**514,338**	**NA**	**825,743**	**NA**	**84,756**	**NA**	**2,147,103**	**NA**
1982 Total	**729,520**	**NA**	**526,397**	**NA**	**744,949**	**NA**	**85,575**	**NA**	**2,086,441**	**NA**
1983 Total	**750,948**	**NA**	**543,788**	**NA**	**775,999**	**NA**	**80,219**	**NA**	**2,150,955**	**NA**
1984 Total	**777,654**	**780,092**	**578,281**	**582,621**	**840,588**	**837,836**	**81,849**	**85,248**	**2,278,372**	**2,285,796**
1985 Total	**790,977**	**793,934**	**608,968**	**605,989**	**824,523**	**836,772**	**85,075**	**87,279**	**2,309,543**	**2,323,974**
1986 Total	**817,663**	**819,088**	**641,469**	**630,520**	**808,292**	**830,531**	**83,409**	**88,615**	**2,350,835**	**2,368,753**
1987 Total	**849,613**	**850,410**	**673,707**	**660,433**	**845,266**	**858,233**	**86,854**	**88,196**	**2,455,440**	**2,457,272**
1988 Total	**892,125**	**892,866**	**697,711**	**699,100**	**895,751**	**896,498**	**82,362**	**89,598**	**2,567,949**	**2,578,062**
1989 January	85,075	–	58,324	–	74,590	–	7,597	–	225,587	–
February	78,158	–	56,433	–	73,175	–	7,190	–	214,956	–
March	77,215	–	57,453	–	74,448	–	7,484	–	216,600	–
April	64,698	–	55,210	–	74,923	–	7,094	–	201,926	–
May	61,108	–	56,428	–	77,119	–	7,278	–	201,933	–
June	71,675	–	62,969	–	79,379	–	7,758	–	221,781	–
July	85,596	–	67,624	–	79,011	–	8,033	–	240,263	–
August	86,143	–	68,187	–	81,240	–	8,046	–	243,615	–
September	78,725	–	65,532	–	79,845	–	7,824	–	231,926	–
October	65,136	–	59,352	–	79,421	–	7,592	–	211,500	–
November	64,844	–	56,716	–	76,788	–	7,394	–	205,742	–
December	85,605	–	61,001	–	76,437	–	7,777	–	230,820	–
Total	**903,979**	**905,525**	**725,229**	**725,861**	**926,376**	**925,659**	**91,066**	**89,765**	**2,646,651**	**2,646,809**
1990 January	R95,190	–	R62,462	–	74,472	–	8,088	–	R240,212	–
February	R74,343	–	R56,905	–	73,891	–	7,643	–	R212,781	–
March	R71,747	–	R57,990	–	76,114	–	7,631	–	R213,482	–
April	R65,048	–	R56,490	–	75,528	–	7,479	–	R204,545	–
May	R62,731	–	R58,936	–	78,021	–	7,914	–	R207,602	–
June	R73,661	–	R64,571	–	79,901	–	8,196	–	R226,327	–
July	R90,590	–	R70,912	–	80,345	–	9,009	–	R250,855	–
August	R88,257	–	R71,103	–	83,232	–	8,764	–	R251,356	–
September	R85,927	–	R69,244	–	80,813	–	8,402	–	R244,385	–
October	R69,410	–	R63,091	–	81,152	–	7,979	–	R221,633	–
November	R66,282	–	R58,657	–	76,909	–	7,428	–	R209,276	–
December	R78,288	–	R60,474	–	76,050	–	7,404	–	R222,216	–
Total	**R921,473**	**924,019**	**R750,835**	**751,027**	**936,428**	**945,522**	**95,936**	**91,988**	**R2,704,672**	**2,712,555**
1991 January	93,890	–	63,265	–	75,678	–	7,953	–	240,787	–
February	79,607	–	58,542	–	73,466	–	7,474	–	219,090	–
March	74,055	–	58,102	–	74,372	–	7,513	–	214,041	–
April	66,172	–	57,145	–	75,421	–	7,647	–	206,386	–
May	67,301	–	61,136	–	79,694	–	8,446	–	216,576	–
June	81,090	–	68,070	–	80,237	–	8,472	–	237,868	–
July	94,694	–	71,812	–	81,271	–	8,822	–	256,599	–
August	93,066	–	72,460	–	83,349	–	8,864	–	257,739	–
September	84,658	–	69,433	–	81,739	–	8,464	–	244,295	–
October	69,431	–	63,417	–	80,981	–	7,744	–	221,573	–
November	71,031	–	60,225	–	77,984	–	7,466	–	216,706	–
December	82,025	–	61,333	–	76,370	–	7,783	–	227,511	–
Total	**957,020**	**957,020**	**764,939**	**764,939**	**940,564**	**940,564**	**96,648**	**96,648**	**2,759,170**	**2,759,170**

[a] "Other" is public street and highway lighting, other sales to public authorities, sales to railroads and railways, and interdepartmental sales.

[b] Annual totals are the sums of the monthly values.

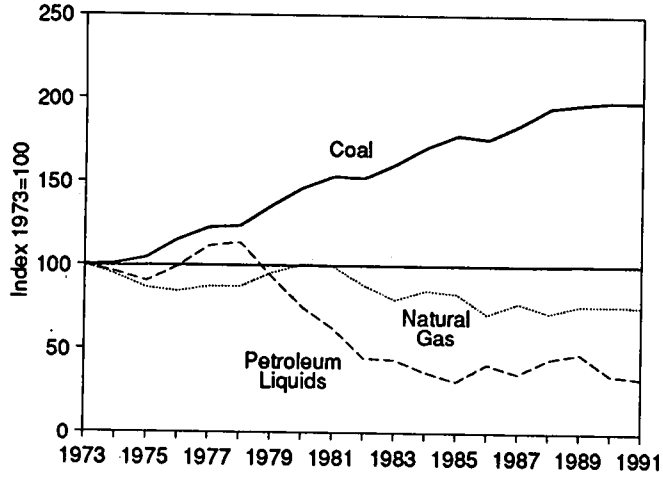
R=Revised data. NA=Not available. – =Not applicable.

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

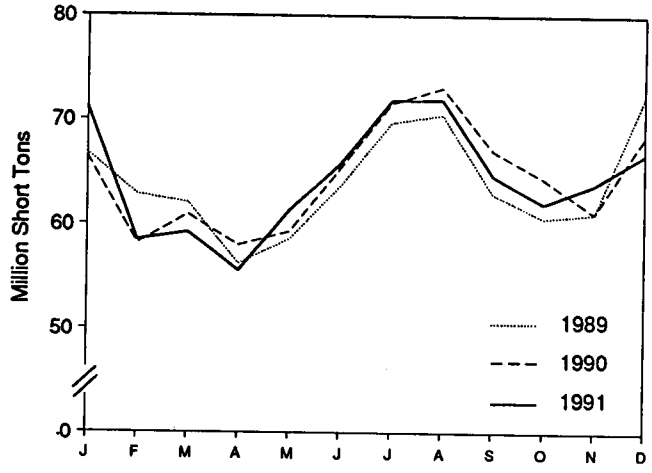
Sources: **1973-1979:** • **1973-September 1977**—Federal Power Commission, Form FPC-5, "Monthly Statement of Electric Operating Revenue and Income." • **October 1977-1979**—Federal Energy Regulatory Commission, Form FERC-5, "Electric Operating Revenue and Income." **1980 forward**—Energy Information Administration, *Electric Power Monthly*, March 1992, Table 51.

Figure 7.3 Electric Utility Consumption and Stocks of Fossil Fuels

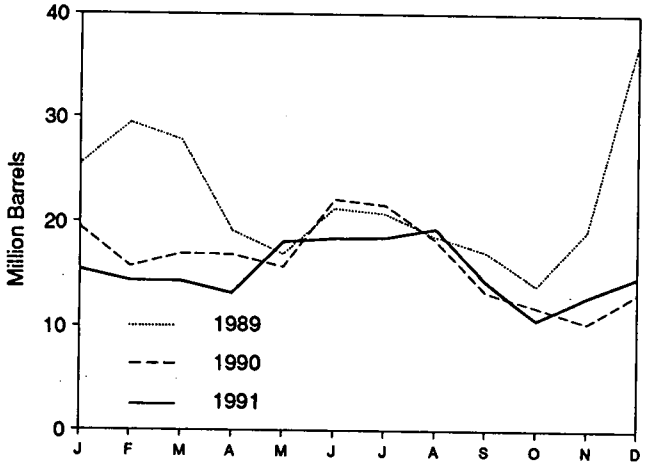
Fuels Consumed, 1973-1991



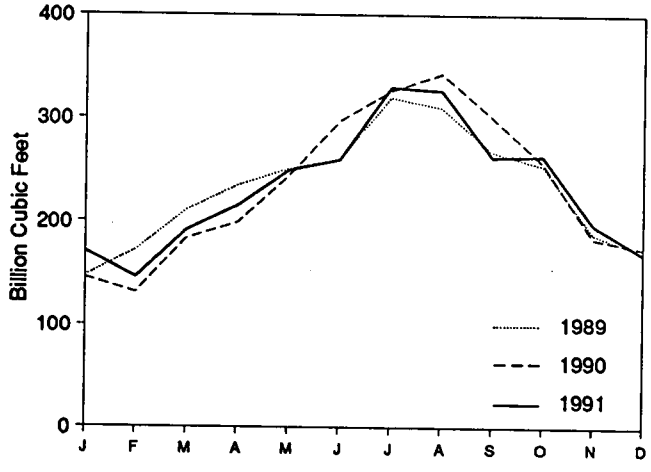
Coal Consumed, Monthly



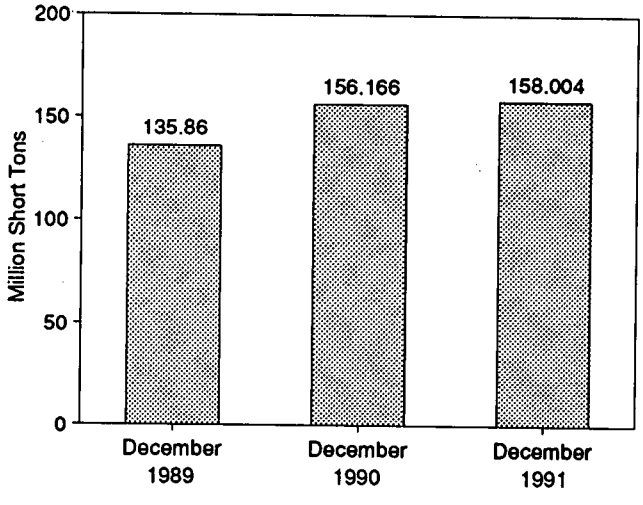
Petroleum Liquids Consumed, Monthly



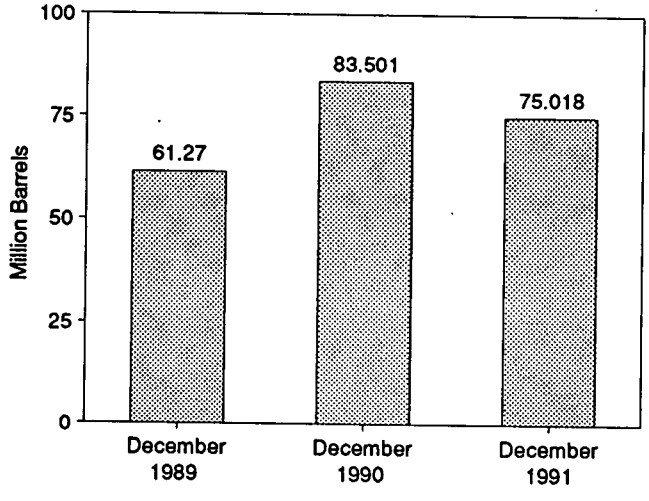
Natural Gas Consumed, Monthly



Coal Stocks, End of Month



Petroleum Liquids Stocks, End of Month



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

Table 7.3 Electric Utility Consumption of Fossil Fuels To Generate Electricity

	Coal				Petroleum						
					By Type of Petroleum		By Prime Mover Type				
	Anthracite	Bituminous Coal	Lignite	Total	Heavy Oil[a]	Light Oil[b]	Steam Plants	GT/IC[c]	Total Liquids	Petroleum Coke	Natural Gas[d]
	Thousand Short Tons				Thousand Barrels					Thousand Short Tons	Million Cubic Feet
1973 Total	**1,443**	**376,975**	**10,794**	**389,212**	**NA**	**NA**	**513,190**	**47,058**	**560,248**	**507**	**3,660,172**
1974 Total	**1,498**	**378,643**	**11,670**	**391,811**	**NA**	**NA**	**483,146**	**53,128**	**536,274**	**625**	**3,443,428**
1975 Total	**1,480**	**388,523**	**15,960**	**405,962**	**NA**	**NA**	**467,221**	**38,907**	**506,128**	**70**	**3,157,669**
1976 Total	**1,350**	**425,205**	**21,817**	**448,371**	**NA**	**NA**	**514,077**	**41,843**	**555,920**	**68**	**3,080,868**
1977 Total	**1,425**	**451,051**	**24,650**	**477,126**	**NA**	**NA**	**574,869**	**48,837**	**623,705**	**98**	**3,191,200**
1978 Total	**1,064**	**448,763**	**31,407**	**481,235**	**NA**	**NA**	**588,319**	**47,520**	**635,839**	**398**	**3,188,363**
1979 Total	**1,046**	**488,129**	**37,876**	**527,051**	**NA**	**NA**	**492,606**	**30,691**	**523,297**	**268**	**3,490,523**
1980 Total	**951**	**526,680**	**41,642**	**569,274**	**391,163**	**29,051**	**401,863**	**18,351**	**420,214**	**179**	**3,681,595**
1981 Total	**1,221**	**550,784**	**44,792**	**596,797**	**329,798**	**21,313**	**339,680**	**11,431**	**351,111**	**139**	**3,640,154**
1982 Total	**1,075**	**543,346**	**49,245**	**593,666**	**234,434**	**15,337**	**243,537**	**6,234**	**249,771**	**149**	**3,225,518**
1983 Total	**1,036**	**570,108**	**54,067**	**625,211**	**228,984**	**16,512**	**237,845**	**7,652**	**245,497**	**261**	**2,910,767**
1984 Total	**1,070**	**606,339**	**56,990**	**664,399**	**189,289**	**15,190**	**197,050**	**7,429**	**204,479**	**252**	**3,111,342**
1985 Total	**1,033**	**631,885**	**60,923**	**693,841**	**158,779**	**14,635**	**166,842**	**6,572**	**173,414**	**231**	**3,044,083**
1986 Total	**829**	**616,134**	**68,093**	**685,056**	**216,156**	**14,326**	**222,500**	**7,983**	**230,482**	**313**	**2,602,370**
1987 Total	**972**	**647,824**	**69,098**	**717,894**	**184,011**	**15,367**	**190,818**	**8,560**	**199,378**	**348**	**2,844,051**
1988 Total	**1,063**	**681,048**	**76,260**	**758,372**	**229,327**	**18,769**	**235,817**	**12,279**	**248,096**	**409**	**2,635,613**
1989 January	98	59,707	6,962	66,767	23,425	2,055	24,273	1,206	25,479	47	147,141
February	75	56,764	5,945	62,784	27,056	2,427	27,981	1,502	29,483	33	172,379
March	82	55,937	5,986	62,005	25,133	2,691	25,900	1,924	27,824	35	211,095
April	96	50,259	5,789	56,144	18,144	1,045	18,652	538	19,190	38	234,726
May	98	52,420	6,009	58,527	15,448	1,522	16,014	957	16,970	36	250,555
June	75	56,841	6,719	63,635	19,253	2,070	19,832	1,490	21,322	38	259,941
July	97	62,322	7,302	69,720	18,643	2,180	19,233	1,590	20,822	58	319,709
August	95	63,278	7,121	70,493	17,133	1,530	17,623	1,040	18,663	58	309,597
September	81	56,533	6,295	62,910	15,642	1,526	16,126	1,041	17,168	54	267,545
October	87	54,775	5,699	60,561	12,807	1,180	13,334	653	13,987	39	254,074
November	85	54,628	6,294	61,006	17,762	1,484	18,371	875	19,247	33	188,924
December	81	65,040	7,215	72,336	31,514	5,781	32,975	4,320	37,295	50	171,326
Total	**1,049**	**688,504**	**77,335**	**766,888**	**241,960**	**25,491**	**250,315**	**17,136**	**267,451**	**517**	**2,787,012**
1990 January	92	R59,129	7,220	R66,441	R18,291	R1,237	18,900	628	19,528	40	R145,649
February	85	R51,715	6,313	R58,112	14,769	974	15,194	549	15,743	62	R131,592
March	91	R54,693	6,101	R60,885	16,068	916	16,541	442	16,984	62	R183,983
April	81	R52,480	5,376	R57,937	15,882	1,035	16,364	554	16,917	61	R198,994
May	90	R53,182	5,988	R59,260	14,586	1,146	15,113	619	15,732	77	R243,781
June	90	R58,357	6,892	R65,340	20,619	1,555	21,145	1,028	22,174	66	R297,036
July	96	R64,272	7,183	R71,551	20,041	1,615	20,514	1,141	21,655	74	R326,087
August	93	R65,696	7,317	R73,106	R16,715	1,618	R17,212	1,121	R18,333	72	R342,965
September	84	R60,461	6,455	R67,001	12,037	1,318	12,491	863	13,354	79	R300,858
October	82	R58,118	6,181	R64,381	10,772	1,186	11,272	686	11,958	86	R256,797
November	71	R54,927	6,043	R61,041	9,473	910	9,998	385	10,383	61	R184,695
December	75	R61,287	7,132	R68,493	11,979	1,313	12,785	507	13,292	78	R174,893
Total	**1,031**	**R694,317**	**78,201**	**R773,549**	**R181,231**	**R14,823**	**R187,531**	**8,523**	**R196,054**	**819**	**R2,787,332**
1991 January	74	63,563	7,553	71,190	14,264	1,189	14,911	542	15,453	74	171,140
February	68	51,919	6,456	58,443	13,595	798	14,021	372	14,393	57	145,947
March	93	52,847	6,255	59,195	13,513	848	14,019	342	14,361	73	191,879
April	92	50,172	5,219	55,483	12,142	1,098	12,722	518	13,240	72	215,213
May	73	55,300	5,926	61,298	16,311	1,821	16,919	1,214	18,132	75	249,071
June	72	58,415	7,290	65,777	17,325	1,153	17,879	600	18,478	50	259,673
July	101	64,213	7,548	71,862	17,289	1,259	17,784	764	18,548	61	329,512
August	90	64,315	7,514	71,919	18,041	1,374	18,500	916	19,416	56	326,342
September	90	57,728	6,833	64,652	13,209	1,159	13,633	734	14,368	52	262,308
October	86	55,651	6,212	61,948	9,791	897	10,289	398	10,688	50	263,429
November	79	57,678	6,073	63,830	11,805	1,141	12,360	586	12,946	52	197,209
December	77	59,521	7,120	66,718	13,656	1,146	14,213	589	14,802	59	169,674
Total	**994**	**691,322**	**79,999**	**772,315**	**170,941**	**13,884**	**177,250**	**7,575**	**184,825**	**731**	**2,781,398**

[a] Heavy oil includes Grade Nos. 4, 5, and 6, and residual fuel oils.
[b] Light oil includes Grade No. 2 heating oil, kerosene, and jet fuel.
[c] GT/IC = Gas turbine and internal combustion plants.
[d] Includes supplemental gaseous fuels.
R=Revised data. NA=Not available.
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.
Sources: See end of section.

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

	Coal				Petroleum					
					By Type of Petroleum		By Prime Mover Type			
	Anthracite	Bituminous Coal	Lignite	Total	Heavy Oil[a]	Light Oil[b]	Steam Plants	GT/IC[c]	Total Liquids	Petroleum Coke
	Thousand Short Tons				Thousand Barrels					Thousand Short Tons
1973 Year	1,066	84,941	961	86,967	NA	NA	79,121	10,095	89,216	312
1974 Year	930	81,712	867	83,509	NA	NA	97,718	15,199	112,917	35
1975 Year	982	107,927	1,815	110,724	NA	NA	108,825	16,432	125,257	31
1976 Year	1,000	114,130	2,306	117,436	NA	NA	106,993	14,703	121,696	32
1977 Year	2,321	128,210	2,688	133,219	NA	NA	124,750	19,281	144,031	44
1978 Year	2,178	123,020	3,027	128,225	NA	NA	102,402	16,386	118,788	198
1979 Year	3,274	152,981	3,459	159,714	NA	NA	111,121	20,301	131,422	183
1980 Year	4,741	174,154	4,115	183,010	105,351	30,023	117,227	18,147	135,374	52
1981 Year	5,537	158,258	5,098	168,893	102,042	26,094	112,380	15,756	128,136	42
1982 Year	6,080	170,480	4,573	181,132	95,515	23,369	105,287	13,597	118,884	41
1983 Year	6,507	145,250	3,841	155,598	70,573	18,801	78,285	11,090	89,375	55
1984 Year	6,710	167,118	5,899	179,727	68,503	19,116	76,836	10,784	87,619	50
1985 Year	7,189	142,144	7,043	156,376	57,304	16,386	64,704	8,985	73,689	49
1986 Year	7,099	148,665	6,042	161,806	56,841	16,269	64,258	8,853	73,111	40
1987 Year	6,940	156,670	7,187	170,797	55,069	15,759	61,705	9,123	70,827	51
1988 Year	6,561	133,434	6,512	146,507	54,187	15,099	60,311	8,974	69,285	86
1989 January	6,513	129,937	6,088	142,538	55,845	14,809	61,627	9,027	70,654	58
February	6,494	124,652	6,217	137,363	50,063	13,980	55,683	8,360	64,043	56
March	6,475	126,195	6,367	139,036	45,142	13,370	50,500	8,013	58,513	62
April	6,447	131,750	6,477	144,674	47,237	13,607	52,789	8,055	60,844	102
May	6,416	137,884	6,767	151,067	52,595	13,279	57,994	7,879	65,873	64
June	6,427	136,126	6,428	148,981	51,922	14,621	57,610	8,934	66,544	77
July	6,413	122,227	6,226	134,865	52,883	14,405	58,368	8,921	67,289	81
August	6,440	121,281	6,227	133,948	55,608	14,724	61,248	9,085	70,332	69
September	6,437	122,912	6,291	135,640	54,346	14,825	60,233	8,938	69,171	92
October	6,437	129,679	6,164	142,280	56,660	15,090	62,708	9,042	71,750	107
November	6,423	134,309	6,475	147,207	56,258	15,332	62,610	8,980	71,590	115
December	6,403	122,967	6,490	135,860	47,446	13,824	53,309	7,962	61,270	105
1990 January	6,360	R125,226	R6,482	R138,067	54,365	15,410	60,421	9,353	69,775	114
February	6,315	R130,281	R6,294	R142,890	58,169	15,622	64,454	9,337	73,791	108
March	6,294	R137,522	R6,302	R150,118	57,728	15,249	63,746	9,231	72,977	104
April	6,298	R143,648	R6,979	R156,925	55,419	14,837	61,314	8,942	70,256	93
May	6,315	R149,130	R7,377	R162,821	56,321	15,432	62,341	9,412	71,753	102
June	6,376	R148,278	R7,255	R161,908	53,347	15,356	59,397	9,306	68,703	110
July	6,420	R140,429	R7,108	R153,957	56,294	15,618	62,386	9,525	71,911	109
August	6,441	R137,678	R6,966	R151,085	R57,320	15,468	R63,342	9,446	R72,788	113
September	6,486	R136,716	R6,711	R149,913	60,274	15,574	66,336	9,512	75,848	95
October	6,513	R142,465	R7,294	R156,271	61,835	16,142	68,143	9,833	77,977	83
November	6,528	R147,112	R7,271	R160,911	65,160	16,411	71,414	10,157	81,571	84
December	6,499	R142,650	R7,016	R156,166	67,030	16,471	73,306	10,195	83,501	94
1991 January	6,470	136,584	5,681	148,736	64,240	16,450	70,434	10,257	80,690	103
February	6,442	140,184	5,576	152,202	60,470	16,882	67,337	10,015	77,352	111
March	6,384	145,073	5,574	157,031	58,220	16,385	64,748	9,857	74,605	101
April	6,347	150,766	5,690	162,804	58,835	16,173	65,389	9,619	75,008	90
May	6,387	152,539	6,556	165,483	57,232	15,495	63,541	9,186	72,727	81
June	6,441	149,184	5,784	161,410	58,245	15,683	64,499	9,429	73,928	89
July	6,484	142,792	6,392	155,668	57,932	15,889	64,119	9,701	73,820	86
August	6,506	140,454	6,272	153,231	56,576	15,444	62,802	9,219	72,021	79
September	6,514	141,607	5,930	154,051	59,035	15,477	65,189	9,323	74,512	73
October	6,544	146,178	6,090	158,813	60,225	15,755	66,257	9,723	75,980	64
November	6,533	145,775	6,298	158,605	58,246	15,802	64,395	9,653	74,048	75
December	6,513	145,494	5,996	158,004	58,636	16,382	65,032	9,987	75,018	70

[a] Heavy oil includes Grade Nos. 4, 5, and 6, and residual fuel oils.
[b] Light oil includes Grade No. 2 heating oil, kerosene, and jet fuel.
[c] GT/IC = Gas turbine and internal combustion plants.
R=Revised data. NA=Not available.
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.
Sources: **Prime Mover Type Data:** • **1973-September 1977**—Federal Power Commission, Form FPC-4, "Monthly Power Plant Report." • **October 1977-1981**—Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report." • **1982 forward**—Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report." **All Other Data:** • **1973-September 1977**—Federal Power Commission, Form FPC-4, "Monthly Power Plant Report." • **October 1977-1979**—Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report." • **1980 forward**—EIA, *Electric Power Monthly*, March 1992, Table 28.

Sources for Table 7.3

• **Prime Mover Type Data: 1973-September 1977**—Federal Power Commission (FPC), Form FPC-4, "Monthly Power Plant Report." **October 1977-1981**—Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report." **1982 forward**—Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report."

• **All Other Data: 1973-September 1977**—FPC, Form FPC-4, "Monthly Power Plant Report." **October 1977-1979**—Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report." **1980-1990**—EIA, *Electric Power Monthly*, January 1992, Table 17. **1991**—EIA, *Electric Power Monthly*, March 1992, Table 17.

Section 8. Nuclear Energy

In December 1991, U.S. nuclear generating units produced a total of 54 net terawatthours (billion kilowatthours) of electricity, 4 percent[8] more than in December 1990. Nuclear units generated at an average capacity factor of 72.3 percent, 3 percentage points more than in December 1990. Nuclear power supplied 22.9 percent of the total electric utility-generated electricity in December 1991, compared with 21.7 percent in December 1990.

The average capacity factor for U.S. nuclear units was 70.2 percent in 1991, compared with 66.0 percent in 1990. This is the highest average capacity factor for U.S. nuclear units ever recorded. The previous high was 66.0 percent recorded in 1990. This record generation contributed to an average nuclear share of total utility-generated electricity of 21.7 percent in 1991, compared with 20.5 percent in 1990.

No nuclear unit received a full-power or low-power license from the Nuclear Regulatory Commission (NRC) in 1991; however, eight units remain in either the Under Construction or Indefinitely Deferred status at the end of 1991. Currently, no nuclear unit is on the NRC operating license hearing schedule for 1992.

On December 31, 1991, there were 111 operable nuclear generating units in the United States, with a collective net summer capability of 99.6 million kilowatts of electricity. Of the 111 operable units, 28 units generated at less than 25 percent of capacity because of maintenance, refueling, or repair outage, and 17 of the 21 units generated no electricity during the month.

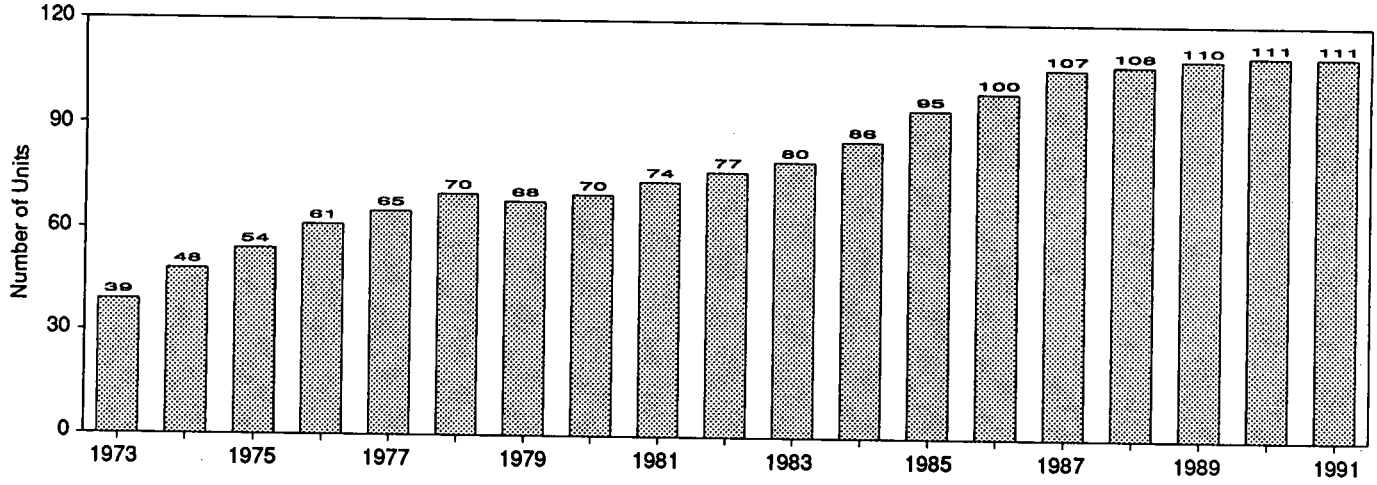
Two operable units, Browns Ferry 1 and 3, have been shut down since March 1985. Each unit had a capacity of 1,065 megawatts electric.

As of December 31, there were 119 domestic nuclear generating units in all stages of construction and operation. The aggregate net design capacity of operable units was 101.6 million kilowatts, and the design capacity of units under construction was 9.7 million kilowatts, for a total design capacity of 111.3 million kilowatts.

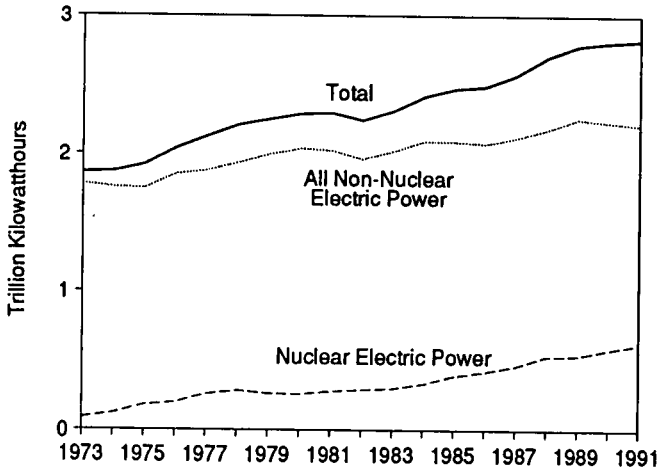
[8]Percentage changes are based on numbers shown in the following tables.

Figure 8.1 Nuclear Power Plant Operations

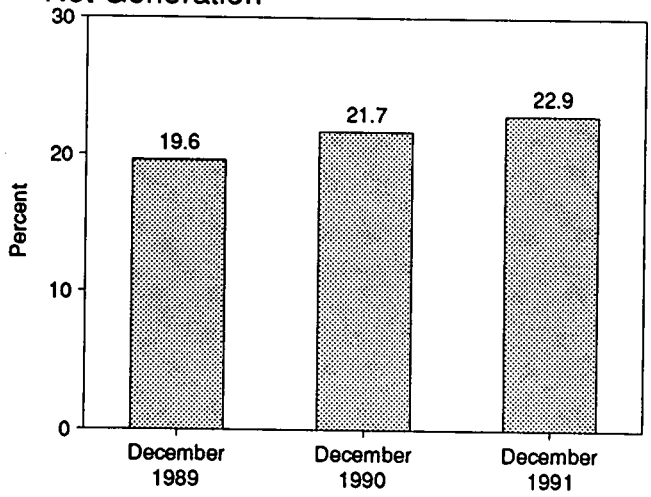
Operable Units, End of Year, 1973-1991



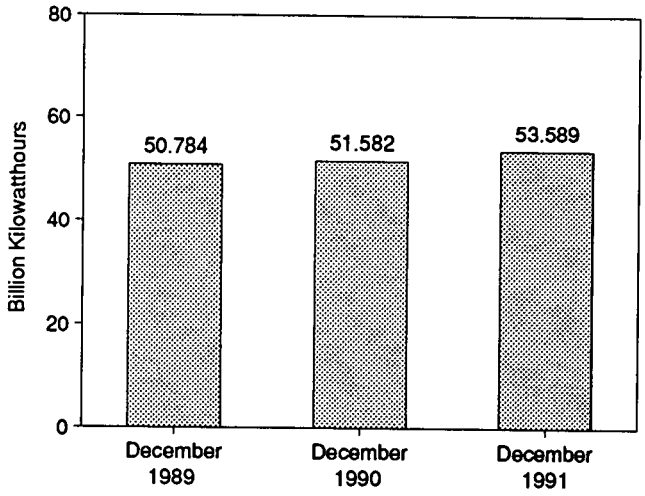
Net Generation of Electricity, 1973-1991



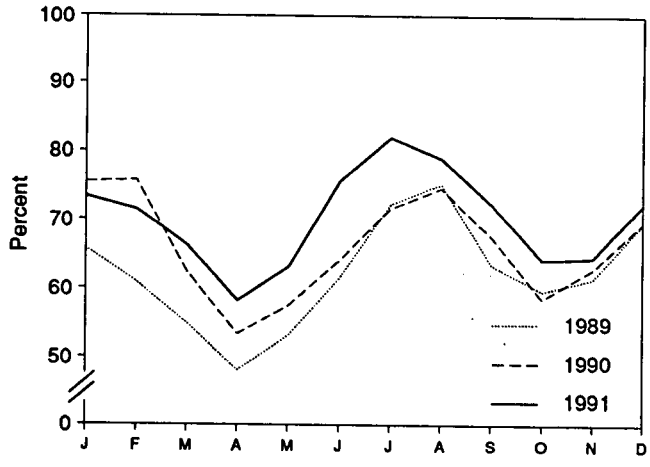
Nuclear Portion of Domestic Electricity Net Generation



Nuclear Electricity Net Generation



Capacity Factor, Monthly



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

Table 8.1 Nuclear Power Plant Operations

	Operable Units[a,b]	Nuclear Electricity Net Generation	Nuclear Portion of Domestic Electricity Net Generation	Net Summer Capability of Operable Units[a,c]	Capacity Factor[d]
	Number	Million Kilowatthours	Percent	Million Kilowatts	Percent
1973 Year	**39**	**83,479**	**4.5**	**22.683**	**53.5**
1974 Year	**48**	**113,976**	**6.1**	**31.867**	**47.8**
1975 Year	**54**	**172,505**	**9.0**	**37.267**	**55.9**
1976 Year	**61**	**191,104**	**9.4**	**43.822**	**54.7**
1977 Year	**65**	**250,883**	**11.8**	**46.303**	**63.3**
1978 Year	**70**	**276,403**	**12.5**	**50.824**	**64.5**
1979 Year	**68**	**255,155**	**11.4**	**49.747**	**58.4**
1980 Year	**70**	**251,116**	**11.0**	**51.810**	**56.3**
1981 Year	**74**	**272,674**	**11.9**	**56.042**	**58.2**
1982 Year	**77**	**282,773**	**12.6**	**60.035**	**56.6**
1983 Year	**80**	**293,677**	**12.7**	**63.009**	**54.4**
1984 Year	**86**	**327,634**	**13.6**	**69.652**	**56.3**
1985 Year	**95**	**383,691**	**15.5**	**79.397**	**58.0**
1986 Year	**100**	**414,038**	**16.6**	**85.241**	**56.9**
1987 Year	**107**	**455,270**	**17.7**	**93.583**	**57.4**
1988 Year	**108**	**526,973**	**19.5**	**94.695**	**63.5**
1989 January	108	46,328	19.9	94.695	65.8
February	108	38,725	17.6	94.695	60.9
March	110	39,636	17.5	97.031	54.9
April	110	33,495	16.1	97.031	48.0
May	110	38,339	17.4	97.031	53.1
June	110	42,976	18.2	97.031	61.5
July	110	52,331	20.4	97.323	72.3
August	110	54,948	21.2	98.161	75.2
September	110	44,837	19.7	98.161	63.4
October	110	43,558	19.8	98.161	59.6
November	110	43,399	19.8	98.161	61.4
December	110	50,784	19.6	98.161	69.5
Year	**110**	**529,355**	**19.0**	**98.161**	**62.2**
1990 January	110	55,119	23.2	98.161	75.5
February	110	49,963	23.5	98.161	75.7
March	111	46,087	20.4	99.311	62.4
April	112	38,516	18.2	100.461	53.3
May	112	42,945	19.3	100.461	57.5
June	112	46,332	18.6	100.461	64.1
July	112	53,645	20.1	100.497	71.7
August	112	55,758	20.8	100.497	74.6
September	111	48,485	20.4	99.624	67.5
October	111	43,395	19.3	99.624	58.5
November	111	45,034	21.1	99.624	62.8
December	111	51,582	21.7	99.624	69.6
Year	**111**	**576,862**	R**20.5**	**99.624**	**66.0**
1991 January	111	54,369	21.9	99.624	73.4
February	111	47,863	22.7	99.624	71.5
March	111	49,121	22.2	99.624	66.3
April	111	41,662	19.9	99.624	58.2
May	111	46,755	20.0	99.624	63.1
June	111	54,208	21.8	99.624	75.6
July	111	60,735	22.4	99.624	81.9
August	111	58,473	21.8	99.624	78.9
September	111	51,874	22.2	99.624	72.3
October	111	47,653	R21.3	99.624	64.2
November	111	46,295	20.9	99.624	64.5
December	111	53,589	22.9	99.624	72.3
Year	**111**	**612,596**	**21.7**	**99.624**	**70.2**

[a] At end of period.
[b] See Note 1 at end of section.
[c] For the definition of Net Summer Capability, see Note 3 at end of section .
[d] For an explanation of the method of calculating the capacity factor, see Note 4 at end of section.
R=Revised data.

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

Sources: • **Operable Units—1973-1982:** U.S. Department of Energy (DOE), Office of Nuclear Programs, "U.S. Central Station Nuclear Electric Generating Units: Significant Milestones." **1983 forward:** Nuclear Regulatory Commission (NRC), "Licensed Operating Reactors" (NUREG-0020). • **Nuclear Electricity Net Generation:** Table 7.1. • **Nuclear Portion of Domestic Electricity Net Generation:** Calculated from data in Table 7.1. • **Net Summer Capability of Operable Units—1973-1982:** Compiled from various sources, primarily DOE, Office of Nuclear Reactor Programs, "U.S. Central Station Nuclear Electric Generating Units: Significant Milestones." **1983 forward:** Energy Information Administration (EIA), Form EIA-860, "Annual Electric Generation Report." • **Capacity Factor:** EIA, Office of Coal, Nuclear, Electric and Alternate Fuels.

Table 8.2 Nuclear Generating Units, End of Period

	Licensed for Operation		Construction Permits		On Order	Announced	Total	Total Design Capacity[c]
	Operable[a]	In Startup[b]	Granted	Pending				
	Number of Units							Million Kilowatts
1973 Year	39	2	57	52	49	9	208	198
1974 Year	48	5	62	75	30	6	226	223
1975 Year	54	2	69	69	14	5	213	212
1976 Year	61	1	71	63	16	2	214	211
1977 Year	65	2	78	49	13	2	209	203
1978 Year	70	0	88	32	5	0	195	191
1979 Year	68	0	90	24	3	0	185	180
1980 Year	70	1	82	12	3	0	168	162
1981 Year	74	0	76	11	2	0	163	157
1982 Year	77	2	60	3	2	0	144	134
1983 Year	80	3	53	0	2	0	138	129
1984 Year	86	6	38	0	2	0	132	123
1985 Year	95	3	30	0	2	0	130	121
1986 Year	100	7	19	0	2	0	128	119
1987 Year	107	4	14	0	2	0	127	119
1988 Year	108	3	12	0	0	0	123	115
1989 January	108	3	12	0	0	0	123	115
February	108	3	12	0	0	0	123	115
March	110	2	11	0	0	0	123	115
April	[d] 110	1	11	0	0	0	[d] 122	114
May	110	1	11	0	0	0	122	114
June	110	1	11	0	0	0	122	114
July	110	2	10	0	0	0	122	114
August	110	1	10	0	0	0	121	113
September	110	1	10	0	0	0	121	113
October	110	1	10	0	0	0	121	113
November	110	1	10	0	0	0	121	113
December	110	1	10	0	0	0	121	113
1990 January	110	1	10	0	0	0	121	113
February	110	2	9	0	0	0	121	113
March	111	1	9	0	0	0	121	113
April	112	0	9	0	0	0	121	113
May	112	0	9	0	0	0	121	113
June	112	0	9	0	0	0	121	113
July	112	0	9	0	0	0	121	113
August	112	0	9	0	0	0	121	113
September	[e] 111	0	9	0	0	0	[e] 120	113
October	111	0	9	0	0	0	120	113
November	111	0	9	0	0	0	120	113
December	111	0	8	0	0	0	119	111
1991 January	111	0	8	0	0	0	119	111
February	111	0	8	0	0	0	119	111
March	111	0	8	0	0	0	119	111
April	111	0	8	0	0	0	119	111
May	111	0	8	0	0	0	119	111
June	111	0	8	0	0	0	119	111
July	111	0	8	0	0	0	119	111
August	111	0	8	0	0	0	119	111
September	111	0	8	0	0	0	119	111
October	111	0	8	0	0	0	119	111
November	111	0	8	0	0	0	119	111
December	111	0	8	0	0	0	119	111

[a] See Note 1 at end of section.
[b] See Note 2 at end of section.
[c] Net design electrical rating (DER) is used because many of the units were canceled prior to being assigned a net summer capability. See Note 3 at end of section.
[d] Shoreham received a full-power license in April 1989. Because the unit is not currently scheduled to operate, it is deleted from the total.
[e] As of September 1990, Rancho Seco is deleted from this category, because the unit is not currently scheduled to operate.
Note: Geographic coverage is the 50 States and the District of Columbia.
Sources: See end of section.

Nuclear Energy Notes

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

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

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

2. In Startup: The period of time between a nuclear generating unit's initial fuel loading date and the issuance of its full-power license. During that period, the unit is undergoing low-power testing and the maximum level of operation is 5 percent of the unit's design thermal rating.

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

(a) Net Summer Capability—The steady hourly output that generating equipment is expected to supply to system load, exclusive of auxiliary power, as demonstrated by test at the time of summer peak demand. Auxiliary power of a typical nuclear power plant is about 5 percent of gross generation.

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

4. Monthly Capacity Factors: The monthly capacity factors are computed as the actual monthly generation divided by the maximum possible generation for that month. The maximum possible generation is the number of hours in the month multiplied by the net summer capability at the end of the month. That fraction is then multiplied by 100 to obtain a percentage. Annual capacity factors are averages of the monthly values for that year.

Sources for Table 8.2

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

• **Construction Permits, On Order, and Announced: 1973-1982**—Compiled from various sources, primarily DOE, Office of Nuclear Reactor Programs, "U.S. Central Station Nuclear Electric Generating Units: Significant Milestones"; EIA, Office of Coal, Nuclear, Electric and Alternate Fuels (CNEAF), "Nuclear Steam-Electric Units That Have Been in Operation as of 1957-1989"; EIA, CNEAF, "Nuclear Plant Cancellations: Causes, Costs, and Consequences"; and Utility Data Institute, Inc., "U.S. Nuclear Plant Statistics, 1987." **1983 forward**—NRC, "Summary Information Report" (NUREG-0871); NRC, "Licensed Operating Reactors" (NUREG-0020); and various journals.

• **Total Design Capacity: 1973-1982**—Compiled from various sources, primarily DOE, Office of Nuclear Reactor Programs, "U.S. Central Station Nuclear Electric Generating Units: Significant Milestones"; EIA, CNEAF, "Nuclear Steam-Electric Units That Have Been in Operation as of 1957-1987"; EIA, CNEAF, "Monthly Report for Electric Utilities-Power Generation"; EIA, CNEAF, "Nuclear Plant Cancellations: Causes, Costs, and Consequences"; and Utility Data Institute, Inc., "U.S. Nuclear Plant Statistics, 1987." **1983 forward**—NRC, "Summary Information Report" (NUREG-0871); NRC, "Licensed Operating Reactors" (NUREG-0020); and EIA, Form EIA-860, "Annual Electric Generator Report."

Section 9. Energy Prices

Crude Oil. The average price of domestic crude oil purchased at the wellhead was $14.64 per barrel in December 1991, 35 percent below the level in December 1990. The refiner acquisition cost of imported crude oil in December 1991 was $17.17 per barrel, 33 percent below the December 1990 level. The cost of domestic crude oil in December 1991 was $17.84, 33 percent less than the December 1990 average.

Motor Gasoline. The national city average retail price of unleaded regular gasoline at all types of stations was $1.07 per gallon in January 1992, 14 percent lower than the price in January 1991. The price of unleaded premium gasoline averaged $1.27 per gallon in January 1992, 11 percent lower than the price in January 1991.

Residual Fuel Oil. The average price, excluding taxes, of residual fuel oil sold to end users in December 1991 was 33 cents per gallon, 6 percent lower than the previous month's price and 40 percent below the December 1990 average. The average resale price, excluding taxes, of residual fuel oil in December 1991 was 29 cents per gallon, 6 percent lower than the November 1991 average and 41 percent below the price 1 year earlier.

Aviation Fuel. The average price, excluding taxes, of aviation gasoline sold to end users in December 1991 was $1.02 per gallon, 2 percent lower than the previous month's price and 17 percent lower than the December 1990 price. The average price, excluding taxes, of kerosene-type jet fuel sold to end users in December 1991 was 62 cents per gallon, 12 percent lower than the previous month's price and 32 percent lower than the December 1990 average price.

No. 2 Distillate Fuel Oil. The December 1991 national average price, excluding taxes, of heating oil sold to residential customers was 96 cents per gallon, 2 percent below the November 1991 price and 20 percent lower than the December 1990 price. The average price of No. 2 fuel oil sold to all end users was 63 cents per gallon in December 1991, 11 percent below the November 1991 price and 27 percent lower than the December 1990 price.

Electricity. The average price of electricity sold to all ultimate consumers in the United States in December 1991 was 6.6 cents per kilowatthour, 3 percent above the December 1990 mean price. The price of electricity sold to residential consumers in December 1991 averaged 7.8 cents per kilowatthour, 3 percent higher than the price 1 year earlier. The price of electricity sold to commercial consumers averaged 7.3 cents per kilowatthour in December 1991, 1 percent above the December 1990 price. The price of electricity sold to other consumers in December 1991 averaged 6.4 cents per kilowatthour, 2 percent less than the December 1990 price. The price of electricity sold to industrial users in December 1991 averaged 4.7 cents per kilowatthour, 2 percent above the price 1 year earlier.

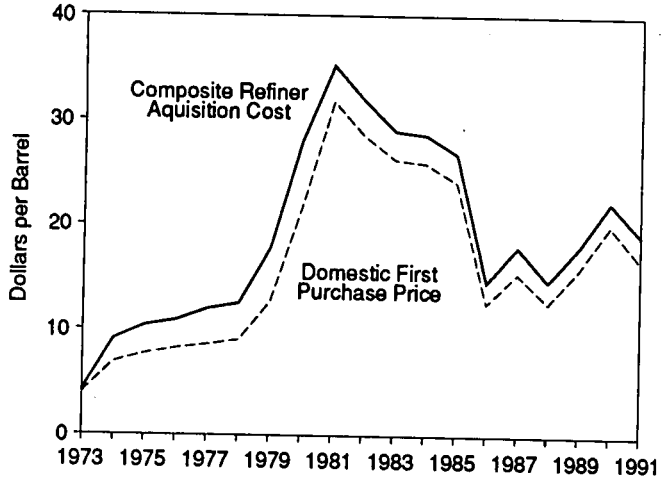
Beginning with January 1986, there were new series of national average price estimates based on a statistically derived sample of both publicly and privately owned electric utilities. Previously, average price estimates were derived from selected privately owned electric utilities and were not national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

Natural Gas. In November 1991, the average wellhead price of natural gas was $1.83 per thousand cubic feet, 6 percent below the November 1990 price, and in December 1991, the average wellhead price of natural gas was $1.93 per thousand cubic feet, 5 percent below the December 1990 price.

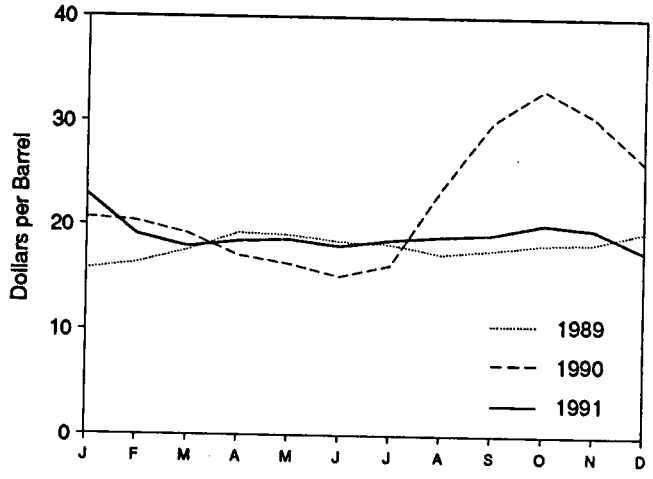
The average price of natural gas delivered to electric utility plants was $2.43 per thousand cubic feet in November 1991 (latest data available), 13 percent below the November 1990 price. The average price of natural gas used by residential consumers in December 1991 was $5.51 per thousand cubic feet, 2 percent lower than the December 1990 price. The average price of natural gas used by commercial consumers in December 1991 was $5.09 per thousand cubic feet, 4 percent higher than the December 1990 price. The average price of natural gas used by industrial consumers in December 1991 was $3.03 per thousand cubic feet, 7 percent below the December 1990 price.

Figure 9.1 Petroleum Prices

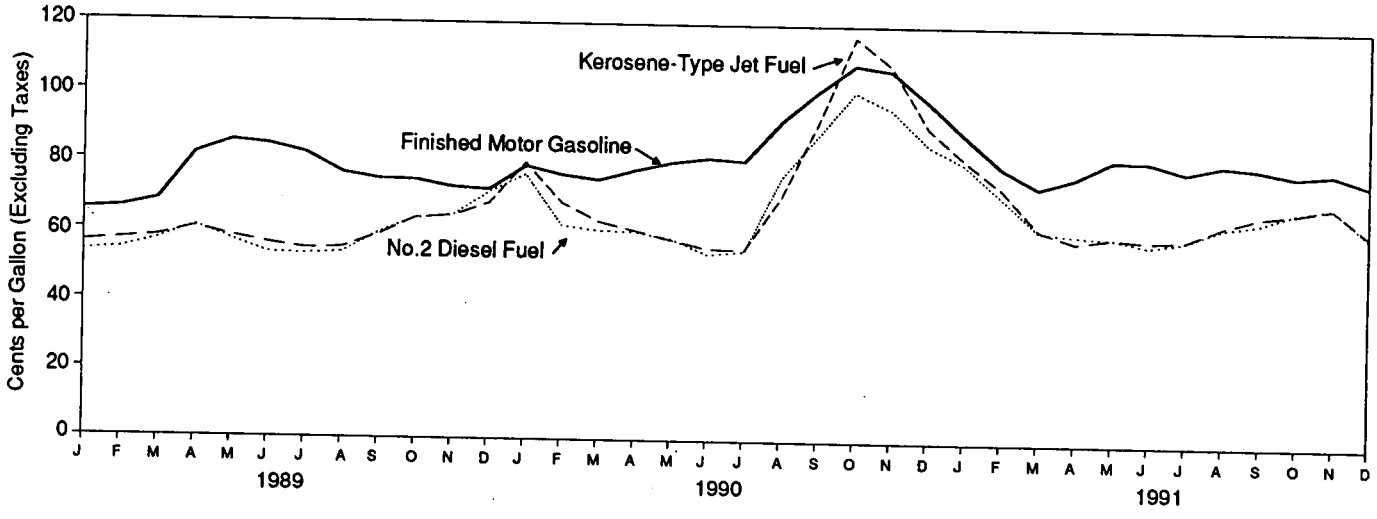
Crude Oil Prices, 1973-1991



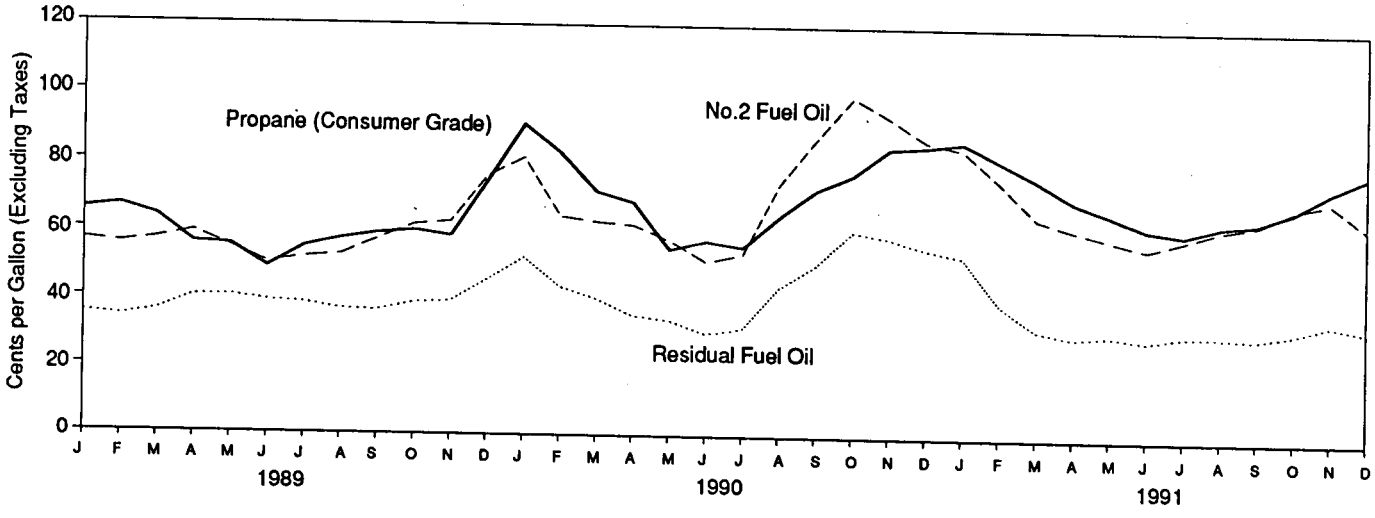
Composite Refiner Acquisition Cost, Monthly



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



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



Sources: Tables 9.1, 9.5, and 9.7.

Table 9.1 Crude Oil Price Summary

(Dollars per Barrel)

	Domestic First Purchase Price[b]	F.O.B. Cost of Imports[c]	Landed Cost of Imports[d]	Refiner Acquisition Cost[a]		
				Domestic	Imported	Composite
1973 Average	**3.89**	[e] **5.21**	[e] **6.41**	[E] **4.17**	[E] **4.08**	[E] **4.15**
1974 Average	**6.87**	**10.91**	**12.32**	**7.18**	**12.52**	**9.07**
1975 Average	**7.67**	**11.18**	**12.70**	**8.39**	**13.93**	**10.38**
1976 Average	**8.19**	**12.15**	**13.32**	**8.84**	**13.48**	**10.89**
1977 Average	**8.57**	**13.24**	**14.36**	**9.55**	**14.53**	**11.96**
1978 Average	**9.00**	**13.29**	**14.35**	**10.61**	**14.57**	**12.46**
1979 Average	**12.64**	**20.07**	**21.45**	**14.27**	**21.67**	**17.72**
1980 Average	**21.59**	**32.37**	**33.67**	**24.23**	**33.89**	**28.07**
1981 Average	**31.77**	**35.15**	**36.47**	**34.33**	**37.05**	**35.24**
1982 Average	**28.52**	**32.02**	**33.18**	**31.22**	**33.55**	**31.87**
1983 Average	**26.19**	**27.81**	**28.93**	**28.87**	**29.30**	**28.99**
1984 Average	**25.88**	**27.60**	**28.54**	**28.53**	**28.88**	**28.63**
1985 Average	**24.09**	**25.84**	**26.67**	**26.66**	**26.99**	**26.75**
1986 Average	**12.51**	**12.52**	**13.49**	**14.82**	**14.00**	**14.55**
1987 Average	**15.40**	**16.69**	**17.65**	**17.76**	**18.13**	**17.90**
1988 Average	**12.58**	**13.25**	**14.08**	**14.74**	**14.56**	**14.67**
1989 January	13.80	14.67	15.68	15.50	16.04	15.73
February	14.24	15.49	16.41	16.11	16.61	16.32
March	15.65	16.73	17.47	17.34	17.77	17.52
April	17.04	18.23	18.97	18.91	19.59	19.22
May	16.76	17.51	18.33	19.01	19.05	19.03
June	16.42	16.80	17.61	18.56	18.27	18.43
July	16.32	16.47	17.39	18.32	17.99	18.18
August	15.01	16.12	16.83	17.23	17.23	17.23
September	15.58	16.49	17.28	17.70	17.62	17.66
October	16.25	17.10	17.93	18.20	18.29	18.24
November	16.30	17.34	18.16	18.45	18.32	18.39
December	17.01	18.80	19.54	19.16	20.05	19.54
Average	**15.86**	**16.89**	**17.68**	**17.87**	**18.08**	**17.97**
1990 January	18.49	18.81	19.81	20.75	20.51	20.64
February	18.16	18.01	18.96	20.75	19.78	20.31
March	16.57	16.91	17.93	19.32	18.94	19.14
April	14.52	14.94	15.96	17.37	16.66	17.05
May	13.82	14.50	15.30	16.45	16.07	16.27
June	12.79	13.84	14.99	15.06	15.15	15.11
July	14.03	16.52	17.65	15.86	16.54	16.19
August	21.87	23.84	24.63	22.96	24.26	23.55
September	28.46	29.07	29.48	30.14	29.88	30.03
October	30.86	30.75	31.47	33.32	32.88	33.14
November	27.53	27.55	28.34	30.75	30.19	30.52
December	22.63	23.24	24.05	26.46	25.56	26.09
Average	**20.03**	**20.37**	**21.13**	**22.59**	**21.76**	**22.22**
1991 January	19.58	19.94	20.89	23.25	22.41	22.90
February	16.22	16.31	17.26	19.53	18.30	19.02
March	15.08	15.88	17.16	18.12	17.59	17.89
April	16.14	16.64	17.81	18.56	18.27	18.43
May	16.41	16.42	17.82	18.98	18.14	18.60
June	15.55	15.84	17.17	18.16	17.78	17.98
July	16.32	16.67	17.78	18.91	18.14	18.57
August	16.57	16.94	18.11	19.10	18.71	18.92
September	16.67	17.49	18.64	19.31	19.00	19.17
October	17.70	18.53	19.36	20.39	19.92	20.18
November	[R] 17.07	17.83	18.68	20.01	19.35	19.72
December	14.64	15.12	16.22	17.84	17.17	17.56
Average	**16.50**	**16.97**	**18.08**	**19.33**	**18.70**	**19.05**

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

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

Sources: See end of section.

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

(Dollars per Barrel)

	Algeria	Indonesia	Iran	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela	Other Countries	Arab OPEC[a]	Total OPEC[b]
1973 Average[c]	**7.23**	**5.67**	**4.24**	**NA**	**7.81**	**3.25**	**NA**	**5.39**	**4.84**	**4.06**	**5.43**
1974 Average	**13.23**	**11.99**	**10.85**	**W**	**12.44**	**10.17**	**NA**	**10.71**	**10.02**	**10.96**	**11.33**
1975 Average	**11.93**	**12.55**	**10.81**	**11.44**	**11.82**	**10.87**	**NA**	**11.04**	**10.86**	**11.18**	**11.34**
1976 Average	**13.05**	**12.76**	**11.61**	**12.22**	**13.08**	**11.62**	**W**	**11.39**	**11.92**	**12.06**	**12.23**
1977 Average	**14.35**	**13.57**	**12.68**	**13.42**	**14.44**	**12.38**	**14.11**	**12.63**	**13.19**	**13.13**	**13.29**
1978 Average	**14.12**	**13.61**	**12.65**	**13.24**	**14.05**	**12.70**	**13.82**	**12.38**	**13.35**	**13.28**	**13.31**
1979 Average	**20.53**	**19.03**	**22.93**	**20.27**	**21.69**	**17.28**	**21.70**	**16.90**	**21.10**	**19.27**	**19.88**
1980 Average	**36.67**	**32.17**	**NA**	**31.06**	**35.93**	**28.17**	**34.36**	**24.81**	**34.34**	**31.57**	**32.21**
1981 Average	**39.08**	**35.62**	**(d)**	**33.01**	**38.31**	**32.60**	**36.06**	**28.95**	**36.69**	**34.79**	**35.17**
1982 Average	**34.20**	**35.11**	**30.97**	**28.08**	**35.13**	**33.73**	**33.42**	**23.74**	**31.96**	**33.84**	**33.48**
1983 Average	**30.09**	**29.92**	**28.39**	**25.20**	**29.81**	**27.53**	**29.91**	**21.48**	**27.96**	**28.28**	**28.46**
1984 Average	**28.34**	**29.13**	**27.42**	**26.39**	**29.51**	**27.67**	**28.87**	**24.23**	**27.79**	**27.79**	**27.79**
1985 Average	**26.89**	**27.12**	**W**	**25.33**	**28.04**	**22.04**	**27.64**	**23.64**	**26.12**	**24.34**	**25.67**
1986 Average	**13.62**	**13.19**	**W**	**11.84**	**14.35**	**11.36**	**13.84**	**10.92**	**13.32**	**11.59**	**12.21**
1987 Average	**16.79**	**17.40**	**W**	**16.36**	**18.47**	**15.12**	**18.28**	**15.08**	**17.11**	**15.80**	**16.43**
1988 Average	**W**	**13.81**	**(d)**	**12.18**	**15.16**	**12.16**	**14.80**	**12.96**	**13.45**	**12.57**	**13.43**
1989 January	W	14.52	(d)	13.98	16.11	W	W	13.10	15.05	14.91	14.77
February	W	17.14	(d)	14.25	17.15	W	16.33	14.00	15.83	16.35	15.98
March	W	17.05	(d)	14.98	18.37	W	W	16.62	17.29	17.45	17.37
April	W	17.78	(d)	17.44	19.81	W	W	17.77	18.75	16.85	18.35
May	W	W	(d)	16.95	18.60	W	W	16.78	17.97	15.98	17.28
June	W	17.78	(d)	16.62	17.68	15.54	W	15.42	17.12	16.01	16.49
July	W	17.61	(d)	16.41	17.67	W	17.66	14.34	16.74	15.66	16.02
August	W	W	(d)	15.22	17.25	W	17.11	15.82	16.08	15.91	16.36
September	W	16.37	(d)	15.37	18.00	W	17.22	16.02	16.62	16.50	16.68
October	W	16.35	(d)	16.12	18.99	W	17.78	15.45	17.37	17.05	17.20
November	W	17.28	(d)	16.44	19.11	18.09	18.37	15.56	17.45	17.53	17.52
December	W	W	(d)	17.74	19.93	W	19.57	19.32	18.43	18.70	19.24
Average	**W**	**17.01**	**(d)**	**15.96**	**18.31**	**16.29**	**17.89**	**16.09**	**17.12**	**16.72**	**17.06**
1990 January	W	19.25	(d)	18.04	21.22	W	21.00	16.73	19.13	17.96	18.67
February	W	19.43	(d)	16.68	20.41	W	W	16.01	18.36	16.64	18.11
March	W	18.98	(d)	16.24	18.41	W	W	15.95	16.82	14.98	16.85
April	W	17.38	(d)	13.30	16.79	11.44	16.13	15.57	14.77	13.02	15.09
May	W	16.19	(d)	12.11	16.50	12.97	15.69	14.60	14.19	12.42	14.67
June	W	15.20	(d)	10.74	15.58	W	W	13.11	13.89	14.56	14.59
July	W	15.06	(d)	12.84	17.12	W	15.10	16.66	17.79	20.27	18.17
August	W	19.12	(d)	21.16	25.65	31.09	21.18	24.33	22.63	28.97	25.44
September	W	W	(d)	27.04	32.74	W	33.05	27.71	30.02	28.02	29.23
October	W	35.41	(d)	29.15	37.31	28.73	32.53	26.39	33.13	29.85	30.39
November	W	W	(d)	27.18	33.56	21.20	W	22.96	29.56	23.39	26.77
December	W	W	(d)	22.58	29.38	14.41	W	20.41	25.32	16.17	21.87
Average	**W**	**21.29**	**(d)**	**19.26**	**22.46**	**20.36**	**23.43**	**19.55**	**19.88**	**18.84**	**20.40**
1991 January	W	W	(d)	19.39	24.68	12.69	W	17.04	21.22	16.04	19.45
February	W	20.82	(d)	13.62	20.48	14.06	W	14.50	17.12	14.56	16.73
March	W	W	(d)	13.59	19.44	W	24.50	14.90	16.18	15.21	16.47
April	W	16.80	(d)	15.34	19.12	15.51	W	15.38	16.90	16.01	16.98
May	W	W	W	15.24	19.30	15.05	W	14.79	16.95	15.64	16.65
June	W	16.77	(d)	14.65	18.38	14.88	W	13.54	16.33	15.54	16.10
July	W	W	W	15.25	19.44	W	19.45	14.85	17.44	15.52	16.73
August	W	W	W	15.49	20.12	15.74	W	14.62	17.82	16.33	17.07
September	W	W	W	15.39	21.08	16.10	20.24	15.52	18.79	16.96	17.60
October	W	18.17	W	16.93	22.55	17.20	W	16.44	19.52	17.95	R18.80
November	W	W	(d)	R16.31	R21.60	15.49	21.67	R14.78	R18.98	16.88	R17.62
December	W	W	(d)	13.70	19.18	13.83	W	12.52	16.49	15.04	15.05
Average	**W**	**18.69**	**15.42**	**15.41**	**20.31**	**15.14**	**20.81**	**14.94**	**17.80**	**16.00**	**17.11**

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

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

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

[d] No data reported.

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

Notes: • The Free on Board (F.O.B) cost at the country of origin excludes all costs related to insurance and transportation. See Note 2 at end of section. • Values for the current 2 months are preliminary. • Prices through 1980 reflect the period of reporting; prices after 1980 reflect the period of loading. • Annual averages are averages of the monthly prices, including prices not published, weighted by volume. • Cargoes that are purchased on a "netback" basis, or under similar contractual arrangements whereby the actual purchase price is not established at the time the crude oil is acquired for importation into the United States, are not included in the published data until the actual prices have been determined and reported.

Sources: **October 1973-September 1977:** Federal Energy Administration, Form FEA-F701-M-0, "Transfer Pricing Report." **October 1977-December 1977:** Energy Information Administration (EIA), Form FEA-F701-M-0, "Transfer Pricing Report." **1978 forward:** EIA, *Petroleum Marketing Monthly*, March 1992, Table 21.

Table 9.3 Landed Costs of Crude Oil Imports from Selected Countries

(Dollars per Barrel)

	Algeria	Canada	Indonesia	Iran	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela	Other Countries	Arab OPEC[a]	Total OPEC[b]
1973 Average[c]	8.39	5.33	7.22	6.48	NA	9.08	5.37	NA	5.99	6.99	5.92	6.85
1974 Average	13.97	11.48	13.20	12.48	W	13.16	11.63	NA	11.25	12.93	12.39	12.49
1975 Average	12.86	12.84	13.83	12.51	12.61	12.70	12.50	NA	12.36	12.66	12.71	12.70
1976 Average	13.90	13.36	13.85	12.86	12.64	13.81	13.06	W	11.89	13.36	13.31	13.32
1977 Average	15.24	14.13	14.65	13.86	13.82	15.29	13.69	14.83	13.11	14.56	14.30	14.35
1978 Average	14.93	14.41	14.65	13.89	13.56	14.88	13.94	14.53	12.84	14.58	14.36	14.34
1979 Average	21.88	20.22	20.63	24.21	20.77	22.97	18.95	22.97	17.65	22.86	20.79	21.29
1980 Average	37.92	30.11	33.92	NA	31.77	37.15	29.80	35.68	25.92	36.15	32.97	33.56
1981 Average	40.46	32.32	37.31	(d)	33.70	39.66	34.20	37.29	29.91	38.54	36.22	36.60
1982 Average	35.35	27.15	36.70	32.46	28.63	36.16	34.99	34.25	24.93	34.03	35.15	34.81
1983 Average	31.26	25.63	31.57	29.81	25.78	30.85	29.27	30.87	22.94	29.68	29.87	29.84
1984 Average	29.06	26.56	30.87	28.70	26.85	30.36	29.20	29.45	25.19	29.21	29.10	29.06
1985 Average	27.51	25.71	28.67	25.79	25.63	28.96	24.72	28.36	24.43	27.33	25.90	26.86
1986 Average	14.82	13.43	14.63	12.38	12.17	15.29	12.84	14.63	11.52	14.25	13.14	13.46
1987 Average	17.87	17.04	18.49	18.28	16.69	19.32	16.81	18.78	15.76	18.30	17.32	17.64
1988 Average	W	13.50	15.15	W	12.58	15.88	13.37	15.82	13.66	14.45	13.60	14.18
1989 January	W	14.47	16.30	(d)	14.48	17.54	15.90	17.17	14.05	15.88	15.73	15.98
February	W	14.97	17.86	(d)	14.55	18.19	16.60	17.88	14.62	17.22	16.52	16.74
March	W	15.88	18.67	(d)	15.37	19.32	17.00	17.90	17.30	18.34	17.33	17.80
April	22.13	17.42	19.11	(d)	17.78	20.53	18.95	20.00	18.45	19.36	18.90	19.23
May	W	17.81	19.37	(d)	17.35	19.65	17.43	20.04	17.32	18.79	17.58	18.15
June	W	17.69	18.92	(d)	16.99	18.90	16.84	18.74	16.13	17.96	17.01	17.45
July	W	17.89	18.92	(d)	16.84	18.68	16.72	18.81	15.13	17.44	16.73	17.13
August	W	16.62	W	(d)	15.62	18.01	16.42	18.20	16.50	16.89	16.45	16.86
September	W	17.00	17.82	(d)	15.76	18.72	16.84	18.11	16.67	17.54	16.97	17.29
October	W	17.44	17.70	(d)	16.52	19.82	17.90	18.71	16.13	18.27	17.82	17.97
November	18.55	17.08	18.16	(d)	16.85	20.14	18.08	19.31	16.38	18.74	18.16	18.27
December	W	17.49	19.20	(d)	18.01	20.98	19.28	20.32	20.16	19.84	19.52	19.93
Average	**19.13**	**16.81**	**18.35**	(d)	**16.35**	**19.19**	**17.34**	**18.74**	**16.78**	**18.08**	**17.41**	**17.78**
1990 January	W	18.52	20.86	(d)	18.49	22.36	19.18	21.56	17.86	20.45	19.33	19.77
February	W	18.52	21.21	(d)	17.13	21.46	18.32	W	16.69	19.56	18.27	18.98
March	W	17.30	20.65	(d)	16.64	19.69	16.63	20.61	16.64	18.22	16.65	17.68
April	W	15.65	18.98	(d)	13.79	18.06	14.50	17.92	16.30	16.18	14.68	15.83
May	W	15.44	17.83	(d)	12.76	17.53	14.21	17.10	15.47	15.27	14.02	15.15
June	W	14.00	16.43	(d)	11.29	16.62	16.31	17.24	14.00	15.21	15.53	15.53
July	17.67	15.01	15.96	(d)	13.37	18.04	19.89	16.68	17.40	18.57	19.85	19.01
August	W	21.26	20.23	(d)	21.50	26.71	28.84	23.80	25.08	23.23	26.97	26.31
September	W	27.80	26.88	(d)	27.38	33.41	30.06	30.26	28.56	29.46	30.10	30.27
October	W	31.04	36.61	(d)	29.61	37.72	30.46	33.75	27.00	34.51	30.75	31.08
November	W	28.60	W	(d)	27.64	34.55	26.37	W	23.77	30.42	26.71	27.77
December	W	23.60	28.53	(d)	23.00	30.45	20.92	W	21.30	27.59	21.35	23.26
Average	**W**	**20.48**	**22.50**	(d)	**19.64**	**23.33**	**21.82**	**22.65**	**20.31**	**20.52**	**20.64**	**21.23**
1991 January	W	20.81	W	(d)	19.98	26.00	18.56	W	18.35	24.07	18.98	20.21
February	W	17.05	22.61	(d)	14.23	21.66	16.15	W	15.76	19.42	16.26	17.43
March	W	15.20	20.03	(d)	14.15	20.60	17.07	25.77	16.18	18.59	17.22	17.88
April	W	16.26	18.80	(d)	15.85	20.31	17.65	20.56	16.34	18.76	17.75	18.22
May	W	16.28	W	W	15.81	20.50	17.29	20.21	15.85	19.55	17.45	17.99
June	W	16.22	18.25	(d)	15.16	19.78	16.95	19.35	14.54	18.36	17.10	17.36
July	W	17.20	17.70	17.03	15.85	20.68	17.36	20.41	15.92	18.82	17.49	17.87
August	W	17.60	W	W	15.74	21.15	17.79	20.71	15.63	19.27	17.95	18.26
September	W	17.84	W	W	15.79	22.09	18.25	21.16	16.43	20.34	18.48	18.73
October	W	18.38	R19.64	W	17.32	23.66	R18.76	22.07	17.26	20.88	R19.06	19.60
November	W	17.53	21.05	(d)	R16.51	R22.66	R17.41	22.71	R15.67	R21.11	R17.89	R18.54
December	W	15.87	W	(d)	14.18	20.20	15.23	20.29	13.35	18.73	15.74	15.95
Average	**W**	**17.17**	**20.16**	**17.38**	**15.90**	**21.40**	**17.40**	**21.36**	**15.95**	**19.74**	**17.63**	**18.18**

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

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

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

[d] No data reported.

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

Notes: • See Note 3 at end of section. • Values for the current 2 months are preliminary. • Prices through 1980 reflect the period of reporting; prices since then reflect the period of loading. • Annual averages are averages of the monthly prices, including prices not published, weighted by volume. • Cargoes that are purchased on a "netback" basis, or under similar contractual arrangements whereby the actual purchase price is not established at the time the crude oil is acquired for importation into the United States, are not included in the published data until the actual prices have been determined and reported.

Sources: **October 1973-September 1977:** Federal Energy Administration, Form FEA-F701-M-0, "Transfer Pricing Report." **October 1977-December 1977:** Energy Information Administration (EIA), Form FEA-F701-M-0, "Transfer Pricing Report." **1978 forward:** EIA, *Petroleum Marketing Monthly*, March 1992, Table 22.

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

(Cents per Gallon, Including Taxes)

	Leaded Regular	Unleaded Regular	Unleaded Premium	All Types[a]
1973 Average	**38.8**	**NA**	**NA**	**NA**
1974 Average	**53.2**	**NA**	**NA**	**NA**
1975 Average	**56.7**	**NA**	**NA**	**NA**
1976 Average	**59.0**	**61.4**	**NA**	**NA**
1977 Average	**62.2**	**65.6**	**NA**	**NA**
1978 Average	**62.6**	**67.0**	**NA**	**65.2**
1979 Average	**85.7**	**90.3**	**NA**	**88.2**
1980 Average	**119.1**	**124.5**	**NA**	**122.1**
1981 Average[b]	**131.1**	**137.8**	**[c] 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 Average	**85.7**	**92.7**	**108.5**	**93.1**
1987 Average	**89.7**	**94.8**	**109.3**	**95.7**
1988 Average	**89.9**	**94.6**	**110.7**	**96.3**
1989 January	87.6	91.8	109.1	94.4
February	88.6	92.6	110.0	95.5
March	90.7	94.0	111.5	97.4
April	104.7	106.5	122.1	109.8
May	109.8	111.9	127.8	115.2
June	109.3	111.4	127.8	115.0
July	107.5	109.2	126.4	113.2
August	103.4	105.7	123.3	109.6
September	100.7	102.9	121.3	107.3
October	100.1	102.7	120.9	107.1
November	97.5	99.9	118.7	104.6
December	96.1	98.0	117.0	103.0
Average	**99.8**	**102.1**	**119.7**	**106.0**
1990 January	100.6	104.2	123.0	109.0
February	101.1	103.7	122.7	108.6
March	99.9	102.3	121.8	107.6
April	102.7	104.4	123.3	109.6
May	104.4	106.1	124.8	111.4
June	107.7	108.8	127.1	114.0
July	108.9	108.4	127.2	113.9
August	119.8	119.0	136.9	124.6
September	129.7	129.4	146.7	134.7
October	135.4	137.8	155.4	143.1
November	135.1	137.7	155.9	143.2
December	133.5	135.4	153.7	141.0
Average	**114.9**	**116.4**	**134.9**	**121.7**
1991 January	124.6	124.7	143.1	130.4
February	113.7	114.3	132.1	119.8
March	104.7	108.2	126.4	113.8
April	106.2	110.4	128.1	115.9
May	NA	115.6	133.1	120.9
June	NA	116.0	133.8	121.4
July	NA	112.7	131.3	118.5
August	NA	114.0	131.8	119.6
September	NA	114.3	132.4	119.9
October	NA	112.2	130.7	118.0
November	NA	113.4	131.8	119.3
December	NA	112.3	130.9	118.2
Average	**NA**	**114.0**	**132.1**	**119.6**
1992 January	NA	107.3	126.7	113.5

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

[b] In September 1981, the Bureau of Labor Statistics changed the weights used in the calculation of average motor gasoline prices. From September 1981 forward, gasohol is included in the average for all types, and unleaded premium is weighted more heavily.

[c] Based on September through December data only.

NA=Not available.

Notes: • See Note 5 at end of section. • Geographic coverage for 1973-1977 is 56 urban areas. Geographic coverage for 1978 forward is 85 urban areas.

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

Table 9.5 Refiner Prices of Residual Fuel Oil

(Cents per Gallon, Excluding Taxes)

	Residual Fuel Oil Sulfur Content Less Than or Equal to 1 Percent		Residual Fuel Oil Sulfur Content Greater Than 1 Percent		Average	
	Sales for Resale	Sales to End Users	Sales for Resale	Sales to End Users	Sales for Resale	Sales to End Users
1978 Average	**29.3**	**31.4**	**24.5**	**27.5**	**26.3**	**29.8**
1979 Average	**45.0**	**46.8**	**36.6**	**38.9**	**39.9**	**43.6**
1980 Average	**60.8**	**67.5**	**47.9**	**52.3**	**52.8**	**60.7**
1981 Average	**74.8**	**82.9**	**62.2**	**67.3**	**66.3**	**75.6**
1982 Average	**69.5**	**74.7**	**57.2**	**61.1**	**61.2**	**67.6**
1983 Average	**64.3**	**69.5**	**59.1**	**61.1**	**60.9**	**65.1**
1984 Average	**68.5**	**72.0**	**63.9**	**65.9**	**65.4**	**68.7**
1985 Average	**61.0**	**64.4**	**56.0**	**58.2**	**57.7**	**61.0**
1986 Average	**32.8**	**37.2**	**28.9**	**31.7**	**30.5**	**34.3**
1987 Average	**41.2**	**44.7**	**36.2**	**39.6**	**38.5**	**42.3**
1988 Average	**33.3**	**37.2**	**27.1**	**30.0**	**30.0**	**33.4**
1989 January	38.8	41.7	29.1	30.5	32.8	35.4
February	37.0	39.8	30.5	29.9	33.2	34.3
March	38.8	42.0	28.1	29.7	32.1	36.1
April	44.1	46.6	34.2	34.9	38.1	40.3
May	43.6	46.5	34.7	36.3	37.6	40.5
June	39.3	42.8	33.9	36.2	35.5	39.1
July	39.0	42.1	34.0	35.5	35.7	38.5
August	37.3	39.6	33.0	34.5	34.4	36.8
September	38.2	40.2	32.3	34.2	35.1	36.5
October	40.2	43.2	34.5	35.9	36.9	38.8
November	40.5	44.1	34.2	36.2	36.6	39.3
December	47.7	53.4	38.3	39.5	42.1	45.7
Average	**40.7**	**43.6**	**33.1**	**34.4**	**36.0**	**38.5**
1990 January	56.0	60.1	42.0	45.2	48.2	52.2
February	44.4	51.5	34.6	37.3	38.1	43.7
March	39.7	45.4	31.9	35.5	34.8	40.2
April	36.1	39.6	31.2	32.6	33.4	35.5
May	34.5	37.9	28.3	31.4	30.5	34.1
June	31.1	34.2	24.8	27.6	27.1	30.4
July	33.2	36.3	25.4	28.4	29.1	31.9
August	49.1	50.7	41.4	39.4	44.5	44.1
September	56.4	59.4	46.1	46.2	50.9	50.7
October	64.1	68.6	53.1	54.8	57.7	60.5
November	63.3	66.5	49.7	53.9	55.6	58.7
December	57.6	62.2	43.0	50.2	48.6	55.5
Average	**47.2**	**50.5**	**37.2**	**40.0**	**41.3**	**44.4**
1991 January	51.4	59.4	48.7	49.7	49.7	53.4
February	34.9	43.7	32.3	37.1	33.4	39.7
March	36.2	38.2	24.2	28.2	28.2	32.3
April	33.6	37.6	25.8	27.1	28.7	30.2
May	36.5	36.6	27.7	27.6	30.3	31.0
June	32.0	35.3	28.6	26.9	29.7	29.5
July	32.6	36.4	27.6	28.2	29.0	31.2
August	33.4	36.8	25.9	27.7	27.9	31.1
September	33.7	36.8	25.4	27.3	27.9	30.6
October	34.1	38.5	27.6	29.7	29.5	32.3
November	R36.6	40.8	27.9	31.8	R30.7	35.1
December	34.8	40.0	26.0	28.8	28.9	33.1
Average	**36.1**	**40.2**	**28.8**	**30.6**	**31.2**	**34.0**

R=Revised data.

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

Sources: Energy Information Administration (EIA), *Petroleum Marketing Monthly*, March 1992, Table 17.

Table 9.6 Refiner Prices of Petroleum Products for Resale

(Cents per Gallon, Excluding Taxes)

	Finished Motor Gasoline[a]	Finished Aviation Gasoline	Kerosene-Type Jet Fuel	Kerosene	No. 2 Fuel Oil	No. 2 Diesel Fuel	Propane (Consumer Grade)
1978 Average	**43.4**	**53.7**	**38.6**	**40.4**	**36.9**	**36.5**	**23.7**
1979 Average	**63.7**	**72.1**	**66.0**	**62.4**	**56.9**	**57.4**	**29.1**
1980 Average	**94.1**	**112.8**	**86.8**	**86.4**	**80.3**	**80.1**	**41.5**
1981 Average	**106.4**	**125.0**	**101.2**	**106.6**	**97.6**	**97.2**	**46.6**
1982 Average	**97.3**	**122.8**	**95.3**	**101.8**	**91.4**	**91.4**	**42.7**
1983 Average	**88.2**	**117.8**	**85.4**	**89.2**	**81.5**	**80.8**	**48.4**
1984 Average	**83.2**	**116.5**	**83.0**	**91.6**	**82.1**	**80.3**	**45.0**
1985 Average	**83.5**	**113.0**	**79.4**	**87.4**	**77.6**	**77.2**	**39.8**
1986 Average	**53.1**	**91.2**	**49.5**	**60.6**	**48.6**	**45.2**	**29.0**
1987 Average	**58.9**	**85.9**	**53.8**	**59.2**	**52.7**	**53.4**	**25.2**
1988 Average	**57.7**	**85.0**	**49.5**	**54.9**	**47.3**	**47.3**	**24.0**
1989 January	56.3	84.8	56.2	63.1	53.2	51.1	24.0
February	57.4	86.0	55.4	59.5	51.1	52.8	22.7
March	61.2	86.6	56.5	61.3	54.4	56.0	22.5
April	74.0	94.2	59.5	60.3	56.5	59.5	22.7
May	76.3	101.8	56.6	55.9	52.6	54.0	22.1
June	73.8	101.3	54.4	53.8	49.6	50.8	21.4
July	69.0	100.9	53.5	57.0	50.4	50.5	20.7
August	62:7	97.7	54.5	59.9	51.2	52.4	21.7
September	65.7	96.2	58.6	63.6	56.4	58.5	23.1
October	64.2	93.3	63.2	67.5	60.1	62.2	24.4
November	61.4	92.5	63.4	68.5	60.4	62.0	24.3
December	61.6	92.8	67.3	81.7	72.8	68.4	36.4
Average	**65.4**	**95.0**	**58.3**	**66.9**	**56.5**	**56.7**	**24.7**
1990 January	69.2	96.8	76.6	87.1	73.8	69.3	54.4
February	67.2	95.0	66.7	67.9	57.8	57.1	34.1
March	66.3	93.8	61.6	64.8	57.9	57.6	27.1
April	69.7	96.4	59.5	62.4	57.4	57.6	25.2
May	72.7	97.4	57.1	59.2	54.5	55.4	24.0
June	72.3	99.5	54.6	53.9	49.4	50.5	24.9
July	70.6	100.2	55.5	57.1	51.9	52.0	27.3
August	85.5	110.4	71.4	80.7	72.1	73.7	36.3
September	94.9	122.2	92.9	100.4	85.3	87.2	43.5
October	98.6	127.9	114.7	115.7	95.0	99.4	53.5
November	95.4	126.2	107.0	106.6	90.6	93.6	50.5
December	80.2	116.1	90.1	92.6	80.9	79.8	44.6
Average	**78.6**	**106.3**	**77.3**	**83.9**	**69.7**	**69.4**	**38.6**
1991 January	76.1	110.8	82.2	87.9	76.3	75.5	42.2
February	68.0	104.1	73.8	75.7	67.8	67.4	31.6
March	67.2	97.4	62.2	66.0	59.6	57.7	31.3
April	70.7	97.8	58.8	62.8	57.2	57.4	31.6
May	74.2	100.3	60.8	60.7	56.0	57.2	32.0
June	70.5	99.5	58.8	58.8	54.0	54.5	29.3
July	69.1	98.9	59.4	63.0	56.7	57.1	27.6
August	72.7	100.2	63.3	66.9	60.6	61.8	29.6
September	69.1	99.9	65.9	68.7	62.1	62.9	34.9
October	68.8	98.8	67.0	73.5	66.3	65.6	40.2
November	69.9	R99.5	R68.2	R74.6	66.6	66.5	R43.0
December	62.9	97.3	60.1	62.6	55.8	55.6	37.7
Average	**69.9**	**100.1**	**65.0**	**72.0**	**62.2**	**61.5**	**34.8**

[a] See Note 5 at end of section.

R=Revised data.

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

Sources: Energy Information Administration (EIA), *Petroleum Marketing Monthly*, March 1992, Table 4.

Table 9.7 Refiner Prices of Petroleum Products to End Users

(Cents per Gallon, Excluding Taxes)

	Finished Motor Gasoline[a]	Finished Aviation Gasoline	Kerosene-Type Jet Fuel	Kerosene	No. 2 Fuel Oil	No. 2 Diesel Fuel	Propane (Consumer Grade)
1978 Average	**48.4**	**51.6**	**38.7**	**42.1**	**40.0**	**37.7**	**33.5**
1979 Average	**71.3**	**68.9**	**54.7**	**58.5**	**51.6**	**58.5**	**35.7**
1980 Average	**103.5**	**108.4**	**86.8**	**90.2**	**78.8**	**81.8**	**48.2**
1981 Average	**114.7**	**130.3**	**102.4**	**112.3**	**91.4**	**99.5**	**56.5**
1982 Average	**106.0**	**131.2**	**96.3**	**108.9**	**90.5**	**94.2**	**59.2**
1983 Average	**95.4**	**125.5**	**87.8**	**96.1**	**91.6**	**82.6**	**70.9**
1984 Average	**90.7**	**123.4**	**84.2**	**103.6**	**91.6**	**82.3**	**73.7**
1985 Average	**91.2**	**120.1**	**79.6**	**103.0**	**84.9**	**78.9**	**71.7**
1986 Average	**62.4**	**101.1**	**52.9**	**79.0**	**56.0**	**47.8**	**74.5**
1987 Average	**66.9**	**90.7**	**54.3**	**77.0**	**58.1**	**55.1**	**70.1**
1988 Average	**67.3**	**89.1**	**51.3**	**73.8**	**54.4**	**50.0**	**71.4**
1989 January	65.6	89.2	56.2	71.4	56.7	53.5	65.6
February	66.1	89.7	57.0	72.2	55.6	54.3	66.8
March	68.4	90.6	57.9	67.6	57.1	57.0	63.8
April	81.7	99.1	60.6	66.2	59.2	61.0	55.9
May	85.5	107.0	58.1	59.7	54.8	57.1	55.4
June	84.5	107.1	56.2	53.9	50.3	53.4	49.0
July	82.0	105.5	54.7	55.3	51.9	53.1	54.9
August	76.6	101.9	55.1	58.0	52.7	53.7	57.4
September	74.9	100.7	58.9	66.8	57.3	59.5	59.0
October	74.7	100.4	63.8	73.6	61.7	63.7	59.9
November	72.7	98.6	64.4	77.7	62.6	64.5	58.4
December	72.1	97.3	68.1	90.0	76.0	71.3	74.4
Average	**75.6**	**99.5**	**59.2**	**70.9**	**58.7**	**58.5**	**61.5**
1990 January	78.8	102.0	79.8	101.7	81.2	76.5	90.8
February	76.5	102.4	68.4	82.6	64.3	61.9	82.6
March	75.1	100.9	63.2	84.1	62.8	60.6	71.5
April	77.9	101.4	60.7	76.6	61.9	60.3	68.5
May	80.2	103.6	58.1	67.0	57.5	58.4	54.8
June	81.5	104.2	55.7	59.9	51.4	54.0	57.4
July	80.8	103.9	55.4	60.0	53.6	55.0	55.6
August	92.4	112.8	70.7	90.6	74.2	76.2	64.7
September	101.2	125.6	92.1	104.4	87.3	88.4	72.5
October	108.7	134.4	116.8	121.2	99.4	101.0	76.9
November	107.2	131.7	108.4	119.6	93.5	96.0	84.6
December	98.4	122.5	90.9	112.1	86.8	85.9	85.3
Average	**88.3**	**112.0**	**76.6**	**92.3**	**73.4**	**72.5**	**74.5**
1991 January	88.7	112.1	81.6	105.0	84.5	80.4	86.6
February	79.6	106.4	73.7	93.5	75.3	71.3	81.3
March	74.1	101.3	62.1	88.8	64.8	61.7	76.0
April	77.1	101.1	58.7	73.8	61.6	60.6	69.8
May	82.1	105.3	60.1	69.3	58.9	60.1	66.0
June	81.9	105.2	59.3	62.3	56.3	57.9	62.1
July	79.0	103.6	59.7	64.7	59.1	59.5	60.6
August	81.2	105.8	63.8	68.7	62.3	63.3	63.4
September	80.2	105.7	66.6	73.6	63.9	64.8	64.4
October	78.2	104.6	67.8	81.6	68.5	68.1	68.0
November	R79.1	R104.3	69.6	R94.3	R70.8	69.7	73.8
December	75.9	102.0	61.5	85.8	63.0	60.9	78.3
Average	**79.7**	**104.7**	**65.3**	**83.6**	**66.7**	**64.8**	**72.9**

[a] See Note 5 at end of section.

R=Revised data.

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

Sources: Energy Information Administration (EIA), *Petroleum Marketing Monthly*, March 1992, Table 2.

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

(Cents per Gallon, Excluding Taxes)

	Maine	New Hampshire	Vermont	Massachusetts	Rhode Island	Connecticut	New York	New Jersey	Pennsylvania
1978 Average	**48.6**	**50.3**	**50.8**	**48.8**	**50.7**	**50.1**	**50.1**	**49.6**	**48.8**
1979 Average	**68.8**	**72.5**	**72.5**	**70.9**	**72.8**	**72.0**	**71.2**	**71.0**	**69.8**
1980 Average	**96.3**	**100.4**	**101.5**	**97.8**	**101.1**	**98.3**	**98.2**	**97.9**	**96.4**
1981 Average	**120.4**	**123.7**	**125.4**	**121.3**	**123.8**	**121.7**	**123.2**	**121.5**	**118.1**
1982 Average	**115.5**	**117.4**	**120.1**	**117.6**	**120.1**	**118.3**	**120.5**	**117.4**	**113.7**
1983 Average	**102.8**	**104.1**	**112.9**	**109.1**	**110.5**	**109.1**	**112.1**	**107.9**	**105.8**
1984 Average	**103.9**	**108.4**	**111.9**	**111.6**	**111.4**	**112.1**	**115.5**	**111.0**	**107.9**
1985 Average	**99.7**	**102.4**	**107.7**	**107.0**	**106.7**	**108.0**	**111.3**	**105.9**	**102.3**
1986 Average	**74.4**	**75.9**	**86.6**	**82.1**	**82.8**	**89.0**	**91.1**	**90.2**	**81.4**
1987 Average	**74.7**	**76.5**	**81.1**	**80.6**	**82.5**	**83.4**	**85.2**	**84.3**	**76.9**
1988 Average	**77.7**	**78.2**	**82.6**	**82.1**	**83.6**	**85.3**	**86.3**	**84.8**	**77.8**
1989 January	85.6	83.0	86.0	87.1	87.5	88.4	91.0	87.3	81.6
February	87.4	83.8	86.9	86.3	88.3	88.7	92.2	87.0	82.2
March	88.3	84.8	87.8	88.1	90.0	89.8	93.4	88.9	83.2
April	87.4	83.2	87.5	87.8	89.9	89.4	93.8	87.8	83.2
May	81.0	83.1	86.4	86.8	88.8	88.1	92.9	87.2	82.2
June	73.5	79.5	84.3	83.4	87.6	85.6	92.0	83.0	77.6
July	72.1	77.8	82.9	81.1	85.4	84.9	90.9	82.3	74.1
August	70.0	78.2	82.0	81.1	84.1	84.6	90.1	80.1	72.6
September	74.6	79.4	82.6	84.9	86.5	85.2	86.6	81.8	74.2
October	82.7	83.2	85.3	88.5	90.3	88.9	91.0	87.3	78.9
November	86.7	87.5	86.1	91.1	92.3	90.3	93.7	89.7	81.6
December	106.0	112.1	109.8	115.2	114.0	112.5	113.0	108.5	103.1
Average	**89.4**	**89.3**	**90.5**	**92.6**	**93.9**	**92.9**	**95.8**	**91.8**	**85.1**
1990 January	116.1	118.5	121.5	117.0	122.5	120.0	122.2	117.3	113.7
February	85.4	96.2	98.7	99.8	98.5	100.8	103.2	99.5	93.4
March	84.0	93.2	95.6	98.7	97.3	97.7	101.6	98.5	90.3
April	83.2	90.1	94.2	95.1	95.9	96.3	100.2	96.5	87.6
May	81.2	87.0	91.7	92.4	93.9	92.7	98.9	94.4	84.4
June	76.7	82.8	87.2	88.9	89.1	87.1	94.5	88.6	78.3
July	74.2	80.7	85.4	88.0	86.9	85.4	93.0	85.4	74.3
August	97.7	99.2	97.4	102.3	102.3	104.1	102.3	102.1	92.5
September	118.4	110.9	114.4	118.1	118.8	114.7	117.9	117.2	108.7
October	126.0	119.8	124.2	126.8	120.1	128.2	130.2	129.4	122.3
November	116.4	116.2	123.7	122.8	119.5	128.1	129.6	126.8	122.5
December	113.4	111.2	119.6	120.0	115.3	124.7	126.6	122.2	119.3
Average	**98.9**	**102.8**	**107.0**	**108.4**	**108.6**	**109.8**	**112.5**	**108.7**	**102.6**
1991 January	114.4	107.2	117.5	117.2	112.9	122.6	123.7	119.7	117.7
February	105.9	100.7	111.3	111.3	109.5	116.0	119.7	113.3	110.9
March	95.4	90.5	104.0	102.7	101.6	109.0	112.8	104.3	101.8
April	87.1	83.9	98.3	96.1	94.6	101.4	106.7	97.6	95.5
May	81.9	79.4	93.5	91.7	89.7	96.5	101.1	93.5	89.9
June	79.4	77.3	91.3	88.9	87.1	92.7	97.9	90.3	85.7
July	82.2	77.6	88.1	88.4	88.8	90.0	93.9	88.5	80.8
August	83.4	80.6	88.6	88.7	88.7	89.7	92.9	89.0	81.8
September	87.3	84.2	91.9	90.9	90.3	92.0	98.7	92.3	83.3
October	91.3	87.8	93.9	94.9	94.9	96.3	103.4	97.1	88.7
November	95.1	R90.1	R95.6	R97.4	R95.8	99.8	R108.2	R100.6	R93.5
December	89.5	89.1	95.0	95.8	93.4	98.2	106.0	97.4	93.0
Average	**96.0**	**91.7**	**101.9**	**102.8**	**99.8**	**106.1**	**111.2**	**104.0**	**99.7**

See footnotes at end of Table 9.8c.

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

(Cents per Gallon, Excluding Taxes)

	Delaware	District of Columbia	Maryland	Virginia	West Virginia	Ohio	Michigan	Indiana	Illinois	Wisconsin	Minnesota
1978 Average	**47.8**	**50.7**	**49.2**	**49.1**	**46.2**	**47.4**	**47.9**	**48.5**	**46.5**	**44.7**	**47.8**
1979 Average	**68.2**	**74.2**	**70.1**	**70.4**	**65.1**	**68.6**	**70.9**	**72.7**	**68.8**	**67.3**	**72.4**
1980 Average	**95.4**	**102.6**	**97.9**	**98.5**	**92.2**	**91.9**	**97.8**	**99.6**	**95.8**	**91.5**	**99.9**
1981 Average	**117.3**	**127.4**	**121.4**	**120.5**	**115.0**	**113.2**	**118.3**	**118.5**	**114.9**	**109.1**	**118.4**
1982 Average	**111.3**	**124.5**	**117.1**	**117.7**	**109.3**	**110.2**	**113.9**	**114.3**	**110.9**	**107.8**	**115.1**
1983 Average	**106.0**	**117.0**	**110.3**	**108.7**	**101.0**	**101.3**	**106.4**	**100.7**	**100.4**	**101.2**	**103.1**
1984 Average	**109.6**	**118.7**	**113.5**	**110.5**	**102.1**	**102.1**	**105.0**	**103.1**	**100.1**	**101.0**	**104.1**
1985 Average	**104.6**	**114.3**	**108.8**	**106.3**	**98.0**	**99.7**	**102.1**	**99.1**	**97.5**	**98.3**	**101.9**
1986 Average	**85.0**	**93.1**	**91.4**	**86.6**	**74.6**	**77.7**	**81.0**	**74.8**	**NA**	**75.6**	**79.2**
1987 Average	**79.3**	**91.8**	**86.6**	**79.5**	**76.4**	**74.7**	**77.5**	**75.4**	**79.8**	**75.1**	**74.6**
1988 Average	**80.1**	**91.6**	**87.0**	**80.5**	**74.2**	**74.7**	**77.5**	**75.4**	**77.6**	**73.9**	**73.5**
1989 January	82.4	94.0	88.1	82.6	75.8	77.5	78.8	77.8	76.6	73.9	75.3
February	81.8	95.1	88.8	82.3	76.2	76.7	79.3	77.0	75.8	74.0	75.7
March	82.9	96.0	89.4	82.5	76.7	77.5	80.1	77.6	76.6	75.6	77.1
April	84.8	95.4	90.3	82.1	77.0	79.4	81.5	79.7	79.8	76.3	82.3
May	83.4	92.1	89.6	81.5	77.4	78.5	81.2	78.1	78.5	78.0	82.1
June	80.3	92.0	88.4	79.6	80.9	79.3	80.1	76.5	77.0	78.0	81.0
July	79.0	90.7	86.5	78.4	78.1	79.4	80.3	77.0	74.5	75.7	80.8
August	78.8	90.1	85.7	77.9	73.6	78.1	79.1	76.5	78.4	75.4	79.4
September	78.8	91.4	83.1	79.7	79.3	77.5	82.9	80.1	77.5	76.5	80.7
October	82.4	92.0	88.2	84.0	81.7	78.4	86.4	83.3	81.9	79.5	82.5
November	86.1	94.7	91.1	86.0	83.1	78.8	88.2	84.0	82.8	82.2	86.1
December	111.6	110.8	110.6	105.2	100.0	97.2	102.2	98.6	93.9	97.5	95.6
Average	**88.2**	**98.6**	**93.8**	**87.0**	**83.0**	**81.6**	**85.3**	**83.2**	**80.9**	**81.1**	**82.4**
1990 January	119.4	119.0	119.8	117.8	109.2	96.0	103.5	99.8	94.9	91.6	99.7
February	97.1	96.4	100.9	102.9	89.5	82.8	92.1	86.2	83.1	83.9	88.1
March	93.2	94.4	98.8	97.9	87.1	82.5	88.7	83.8	83.4	83.1	85.6
April	91.8	93.1	97.5	94.9	83.7	82.3	86.5	84.1	82.2	82.9	85.6
May	90.1	94.2	94.9	90.4	83.0	83.1	83.7	82.4	78.3	81.0	85.1
June	83.2	93.2	89.4	88.0	83.4	82.6	81.1	72.8	73.8	79.5	80.3
July	77.9	97.6	86.2	89.8	79.2	81.6	82.4	74.7	76.7	77.6	82.8
August	93.1	107.1	100.2	102.4	98.1	93.3	100.3	98.0	96.9	92.0	101.4
September	112.0	116.1	115.7	114.7	116.3	115.3	113.2	110.7	NA	107.1	111.6
October	119.8	134.3	130.8	128.3	124.4	120.9	124.1	123.3	116.9	117.2	120.7
November	118.8	133.3	130.4	125.6	121.7	117.0	121.2	117.8	113.1	114.4	119.8
December	113.7	128.4	125.3	122.8	113.1	111.8	113.5	111.3	104.9	108.3	111.2
Average	**105.8**	**107.8**	**111.9**	**110.6**	**99.1**	**98.1**	**100.9**	**99.3**	**96.1**	**94.2**	**101.4**
1991 January	113.0	124.1	122.7	117.7	110.4	105.5	109.1	105.8	102.4	102.4	105.5
February	105.4	118.6	116.1	110.5	101.2	94.5	97.0	95.4	93.0	92.3	93.6
March	98.4	112.3	107.7	102.6	90.8	85.8	90.9	87.9	85.9	87.6	87.2
April	92.3	105.6	102.8	96.2	87.4	83.2	90.9	85.7	88.3	84.0	87.7
May	91.4	101.1	98.8	90.7	85.5	83.1	88.5	86.3	88.5	82.9	88.0
June	83.1	94.6	95.9	87.8	83.5	80.7	87.5	80.3	86.8	80.8	87.0
July	81.5	98.6	93.7	86.9	81.7	79.6	83.4	79.1	82.2	78.0	84.3
August	85.8	98.6	94.0	87.5	82.3	81.1	84.5	85.5	86.5	78.8	NA
September	87.3	101.7	96.7	90.7	84.7	84.8	86.6	85.5	86.9	82.7	83.7
October	92.8	104.0	100.0	93.9	89.5	88.7	89.4	85.8	88.7	85.4	86.6
November	96.9	107.3	R103.4	R96.7	91.8	91.8	92.7	R87.1	R92.4	R90.2	R89.2
December	94.7	107.7	102.5	95.3	88.9	86.8	90.0	82.8	90.1	84.9	84.7
Average	**99.7**	**112.1**	**108.7**	**101.5**	**93.2**	**91.0**	**93.8**	**91.7**	**92.7**	**89.5**	**91.2**

See footnotes at end of Table 9.8c.

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

(Cents per Gallon, Excluding Taxes)

	Idaho	Washington	Oregon	Alaska	U.S. Average
1978 Average	**43.6**	**48.6**	**45.8**	**53.2**	**49.0**
1979 Average	**62.1**	**69.7**	**68.0**	**68.2**	**70.4**
1980 Average	**91.6**	**100.8**	**97.3**	**97.8**	**97.4**
1981 Average	**110.4**	**116.5**	**111.4**	**118.0**	**119.4**
1982 Average	**110.4**	**117.6**	**111.6**	**117.4**	**116.0**
1983 Average	**101.8**	**109.0**	**103.6**	**108.8**	**107.8**
1984 Average	**98.5**	**102.6**	**99.3**	**106.9**	**109.1**
1985 Average	**97.2**	**101.1**	**97.1**	**108.3**	**105.3**
1986 Average	**73.8**	**77.5**	**70.4**	**94.9**	**83.6**
1987 Average	**68.8**	**79.5**	**72.5**	**86.5**	**80.3**
1988 Average	**68.8**	**78.5**	**70.9**	**86.9**	**81.3**
1989 January	68.1	76.9	66.3	86.7	84.9
February	71.5	86.0	76.7	90.9	85.5
March	78.3	92.8	84.2	96.0	87.1
April	85.8	94.2	87.3	99.5	87.8
May	83.5	87.3	79.6	100.1	86.6
June	80.3	77.6	74.9	101.5	84.1
July	77.3	74.7	71.1	105.8	82.1
August	77.2	78.2	71.2	101.6	81.5
September	80.3	83.9	81.5	96.0	81.5
October	82.2	91.7	86.4	97.8	85.6
November	84.9	93.4	86.4	97.9	88.3
December	84.5	93.1	86.1	98.1	107.6
Average	**77.8**	**87.4**	**80.2**	**96.4**	**90.0**
1990 January	85.8	96.0	88.7	96.5	114.0
February	80.9	89.0	83.9	97.4	96.5
March	80.9	88.6	84.3	102.6	94.9
April	81.7	90.0	85.0	96.5	93.2
May	79.5	84.9	84.6	99.3	90.7
June	74.8	85.0	81.9	100.5	86.4
July	70.5	76.2	79.3	93.5	83.7
August	90.7	89.5	95.3	113.7	98.8
September	108.3	115.8	111.9	122.3	114.2
October	121.0	133.3	128.1	129.7	125.8
November	127.3	134.2	127.1	128.6	124.1
December	119.9	121.9	109.2	128.2	119.7
Average	**97.4**	**102.9**	**97.0**	**110.1**	**106.3**
1991 January	110.8	118.4	108.3	129.3	116.8
February	97.3	112.0	102.9	122.8	110.3
March	84.1	95.3	89.4	109.5	102.6
April	83.5	94.0	86.4	101.9	96.9
May	84.4	94.9	86.5	101.3	92.5
June	83.4	91.7	85.6	98.2	89.3
July	80.0	85.4	84.5	98.6	86.6
August	84.6	92.3	87.3	96.8	87.0
September	87.4	93.5	90.8	92.4	89.6
October	87.6	94.8	89.1	93.2	94.0
November	R94.7	R99.5	R90.5	R95.7	97.9
December	95.7	96.1	88.6	94.9	95.9
Average	**95.4**	**101.7**	**93.6**	**105.2**	**101.8**

R=Revised data.

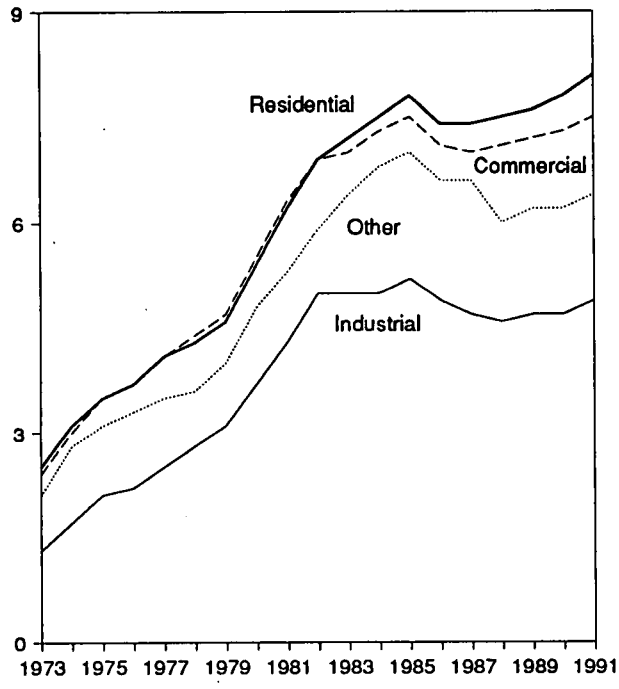
Notes: • States are grouped in Tables 9.8a, 9.8b, and 9.8c by geographic region of the country. • Values for the current month are preliminary. • Prices prior to 1983 are Energy Information Administration estimates. See Note 6 at end of section.

Sources: Energy Information Administration (EIA), *Petroleum Marketing Monthly*, March 1992, Table 16.

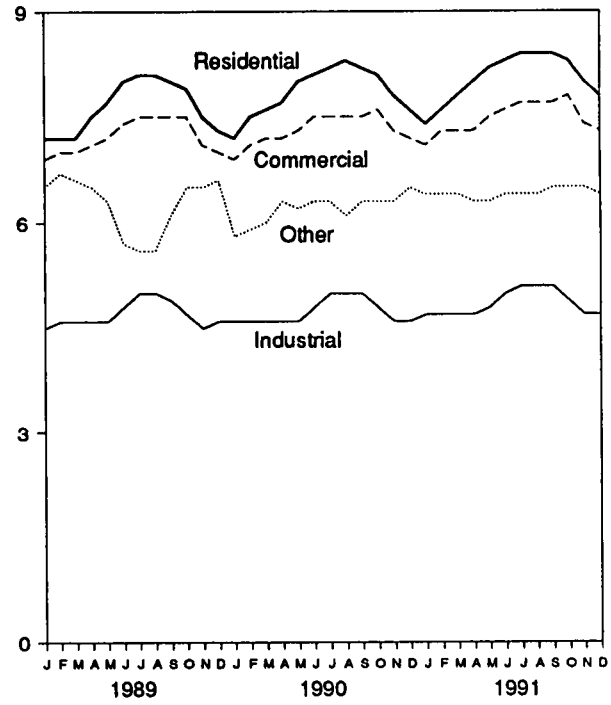
Figure 9.2 Electricity Retail Prices

(Cents per Kilowatthour)

Prices by Sector, 1973-1991



Prices by Sector, Monthly

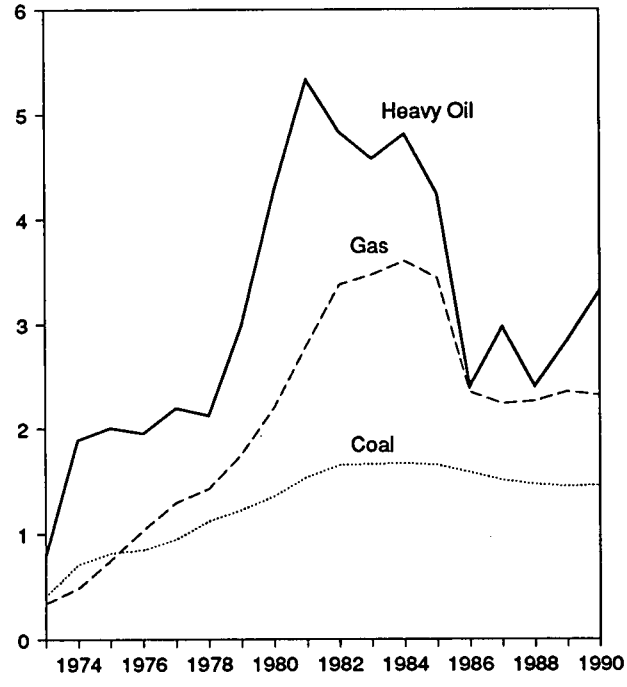


Source: Table 9.9, Monthly Series.

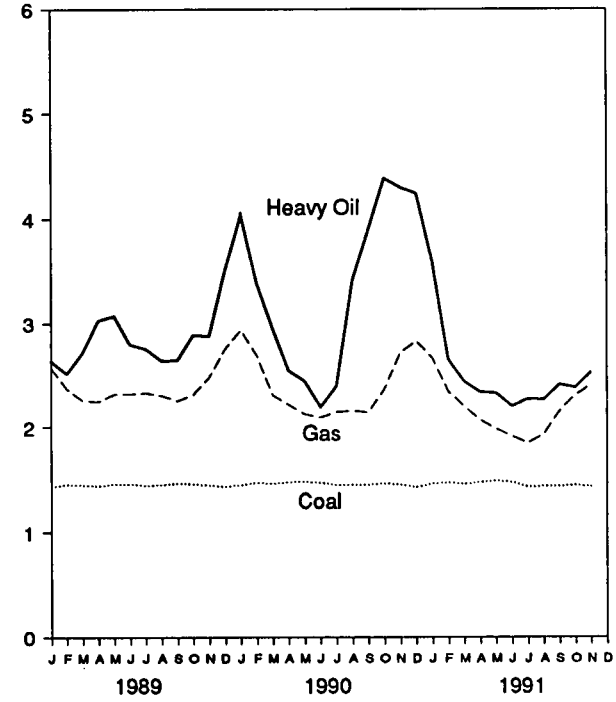
Figure 9.3 Cost of Fossil-Fuel Receipts at Steam-Electric Plants

(Dollars per Million Btu)

Fossil Fuels Costs, 1973-1990



Fossil Fuel Costs, Monthly



Source: Table 9.10.

Table 9.9 Electricity Retail Prices

(Cents per Kilowatthour)

	Residential		Commercial		Industrial		Other[a]		Total[b]	
	Monthly Series[c]	Annual Series	Monthly Series[c]	Annual Series	Monthly Series[c]	Annual Series	Monthly Series[c]	Annual Series	Monthly Series[c]	Annual Series
1973 Average	2.5	NA	2.4	NA	1.3	NA	2.1	NA	2.0	NA
1974 Average	3.1	NA	3.0	NA	1.7	NA	2.8	NA	2.5	NA
1975 Average	3.5	NA	3.5	NA	2.1	NA	3.1	NA	2.9	NA
1976 Average	3.7	NA	3.7	NA	2.2	NA	3.3	NA	3.1	NA
1977 Average	4.1	NA	4.1	NA	2.5	NA	3.5	NA	3.4	NA
1978 Average	4.3	NA	4.4	NA	2.8	NA	3.6	NA	3.7	NA
1979 Average	4.6	NA	4.7	NA	3.1	NA	4.0	NA	4.0	NA
1980 Average	5.4	NA	5.5	NA	3.7	NA	4.8	NA	4.7	NA
1981 Average	6.2	NA	6.3	NA	4.3	NA	5.3	NA	5.5	NA
1982 Average	6.9	NA	6.9	NA	5.0	NA	5.9	NA	6.1	NA
1983 Average	7.2	NA	7.0	NA	5.0	NA	6.4	NA	6.3	NA
1984 Average	7.5	7.2	7.3	7.1	5.0	4.8	6.8	5.9	6.5	6.3
1985 Average	7.8	7.4	7.5	7.3	5.2	5.0	7.0	6.1	6.7	6.4
1986 Average	7.4	7.4	7.1	7.2	4.9	4.9	6.6	6.1	6.4	6.4
1987 Average	7.4	7.4	7.0	7.1	4.7	4.8	6.6	6.2	6.3	6.4
1988 Average	7.5	7.5	7.1	7.0	4.6	4.7	6.0	6.2	6.3	6.4
1989 January	7.2	–	6.9	–	4.5	–	6.5	–	6.2	–
February	7.2	–	7.0	–	4.6	–	6.7	–	6.2	–
March	7.2	–	7.0	–	4.6	–	6.6	–	6.2	–
April	7.5	–	7.1	–	4.6	–	6.5	–	6.3	–
May	7.7	–	7.2	–	4.6	–	6.3	–	6.3	–
June	8.0	–	7.4	–	4.8	–	5.7	–	6.6	–
July	8.1	–	7.5	–	5.0	–	5.6	–	6.8	–
August	8.1	–	7.5	–	5.0	–	5.6	–	6.8	–
September	8.0	–	7.5	–	4.9	–	6.1	–	6.7	–
October	7.9	–	7.5	–	4.7	–	6.5	–	6.5	–
November	7.5	–	7.1	–	4.5	–	6.5	–	6.2	–
December	7.3	–	7.0	–	4.6	–	6.6	–	6.3	–
Average	7.6	7.6	7.2	7.2	4.7	4.7	6.2	6.2	6.4	6.5
1990 January	7.2	–	6.9	–	4.6	–	5.8	–	6.3	–
February	7.5	–	R7.1	–	4.6	–	5.9	–	6.3	–
March	7.6	–	7.2	–	4.6	–	6.0	–	6.4	–
April	7.7	–	7.2	–	4.6	–	6.3	–	6.4	–
May	8.0	–	7.3	–	4.6	–	6.2	–	6.5	–
June	8.1	–	7.5	–	4.8	–	6.3	–	6.7	–
July	8.2	–	7.5	–	5.0	–	6.3	–	6.9	–
August	8.3	–	7.5	–	5.0	–	6.1	–	6.9	–
September	8.2	–	7.5	–	5.0	–	6.3	–	6.9	–
October	8.1	–	7.6	–	4.8	–	6.3	–	6.7	–
November	7.8	–	7.3	–	4.6	–	6.3	–	6.5	–
December	7.6	–	7.2	–	4.6	–	6.5	–	6.4	–
Average	7.8	7.8	7.3	7.3	R4.7	4.7	6.2	6.4	6.6	6.6
1991 January	7.4	–	7.1	–	4.7	–	6.4	–	6.4	–
February	7.6	–	7.3	–	4.7	–	6.4	–	6.5	–
March	7.8	–	7.3	–	4.7	–	6.4	–	6.6	–
April	8.0	–	7.3	–	4.7	–	6.3	–	6.5	–
May	8.2	–	7.5	–	4.8	–	6.3	–	6.7	–
June	8.3	–	7.6	–	5.0	–	6.4	–	6.9	–
July	8.4	–	7.7	–	5.1	–	6.4	–	7.1	–
August	8.4	–	7.7	–	5.1	–	6.4	–	7.1	–
September	8.4	–	7.7	–	5.1	–	6.5	–	7.0	–
October	8.3	–	7.8	–	4.9	–	6.5	–	6.9	–
November	8.0	–	7.4	–	4.7	–	6.5	–	6.6	–
December	7.8	–	7.3	–	4.7	–	6.4	–	6.6	–
Average	8.1	NA	7.5	NA	4.9	NA	6.4	NA	6.8	NA

[a] Other is public street and highway lighting, other sales to public authorities, sales to railroads and railways, and interdepartmental sales.

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

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

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

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

Sources: **Monthly Series: 1973-September 1977**—Federal Power Commission, Form FPC-5, "Monthly Statement of Electric Operating Revenue and Income"; **October 1977-February 1980**—Federal Energy Regulatory Commission (FERC), Form FERC-5, "Electric Operating Revenue and Income"; **March 1980-December 1980**—FERC, Form FERC-5, "Electric Utility Company Monthly Statement"; **1981 forward**—Energy Information Administration (EIA), *Electric Power Monthly*, March 1992, Table 59. **Annual Series:** EIA, *Electric Power Monthly*, March 1992, Table 59.

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

	Coal		Petroleum				Gas[a]		All Fossil Fuels[b]
			Heavy Oil[b]		Total[b,c]				
	Quantity (thousand short tons)	Cost (cents per million Btu)	Quantity (thousand barrels)	Cost (cents per million Btu)	Quantity (thousand barrels)	Cost (cents per million Btu)	Quantity (million cubic feet)	Cost (cents per million Btu)	Cost (cents per million Btu)
1973 Year	**374,842**	**40.5**	**512,650**	**78.5**	**535,859**	**80.0**	**3,382,677**	**33.8**	**47.6**
1974 Year	**384,868**	**70.9**	**479,166**	**189.0**	**515,217**	**191.0**	**3,225,203**	**48.2**	**91.4**
1975 Year	**431,527**	**81.4**	**457,582**	**200.5**	**510,352**	**202.3**	**3,034,808**	**75.2**	**104.4**
1976 Year	**454,858**	**84.8**	**495,363**	**195.2**	**549,973**	**199.0**	**2,962,811**	**103.4**	**111.9**
1977 Year	**490,415**	**94.7**	**563,685**	**219.8**	**635,556**	**224.9**	**3,106,403**	**129.1**	**129.7**
1978 Year	**476,169**	**111.6**	**546,197**	**212.5**	**616,040**	**219.1**	**3,140,654**	**142.2**	**141.1**
1979 Year	**556,558**	**122.4**	**479,705**	**298.8**	**515,695**	**307.2**	**3,368,976**	**174.9**	**163.9**
1980 Year	**593,995**	**135.1**	**394,159**	**426.7**	**419,140**	**435.1**	**3,588,814**	**219.9**	**192.8**
1981 Year	**579,374**	**153.2**	**327,477**	**533.4**	**345,544**	**542.5**	**3,573,558**	**280.5**	**225.6**
1982 Year	**601,427**	**164.7**	**228,200**	**483.2**	**239,111**	**492.2**	**3,161,348**	**337.6**	**224.9**
1983 Year	**592,728**	**165.6**	**211,705**	**457.8**	**219,652**	**462.8**	**2,732,248**	**347.4**	**220.6**
1984 Year	**684,111**	**166.4**	**193,832**	**481.2**	**202,372**	**486.3**	**2,878,808**	**360.3**	**219.1**
1985 Year	**666,743**	**164.8**	**156,410**	**424.4**	**164,947**	**431.7**	**2,808,921**	**344.4**	**209.4**
1986 Year	**686,964**	**157.9**	**220,585**	**240.1**	**228,522**	**243.7**	**2,387,622**	**235.1**	**175.0**
1987 Year	**721,298**	**150.6**	**187,300**	**297.6**	**194,578**	**301.1**	**2,605,191**	**224.0**	**170.6**
1988 Year	**727,775**	**146.6**	**230,234**	**240.5**	**236,924**	**243.9**	**2,362,721**	**226.3**	**164.3**
1989 January	62,443	142.7	25,855	264.1	26,516	267.4	124,572	257.5	164.8
February	56,634	145.0	20,489	251.9	21,179	256.0	150,950	237.2	164.6
March	63,218	144.4	22,427	271.8	23,199	276.0	180,668	225.7	165.0
April	62,076	143.6	19,831	303.0	20,292	305.6	207,401	224.6	166.7
May	64,796	145.3	20,569	307.2	21,211	310.1	226,859	232.0	169.7
June	61,272	145.5	18,677	279.9	19,354	283.5	234,010	232.1	168.5
July	55,429	144.1	19,778	275.6	20,364	278.6	285,117	233.3	172.2
August	70,147	144.7	19,701	264.2	20,563	268.9	282,481	230.6	166.6
September	64,539	146.0	14,967	264.8	15,609	270.6	239,696	225.4	164.9
October	66,578	145.4	15,779	289.1	16,495	295.6	230,629	231.6	166.1
November	65,570	144.2	16,862	288.0	17,602	294.5	162,361	248.1	164.9
December	60,515	142.8	22,734	350.2	24,040	359.0	147,763	275.4	176.7
Year	**753,217**	**144.5**	**237,668**	**284.6**	**246,422**	**289.3**	**2,472,506**	**235.5**	**167.5**
1990 January	67,636	144.6	26,481	403.9	27,415	409.6	126,806	293.8	182.3
February	62,296	146.6	19,190	338.2	19,683	340.7	113,552	269.3	171.2
March	67,536	145.7	15,023	295.2	15,494	299.3	166,055	231.0	163.1
April	63,888	147.3	13,521	254.7	13,977	260.4	181,153	221.7	162.1
May	64,958	147.8	15,000	244.7	15,534	250.6	220,420	212.5	162.4
June	63,649	146.6	18,068	219.4	18,612	224.1	267,995	209.3	161.9
July	63,427	144.6	22,149	239.9	22,783	243.8	294,671	214.6	164.8
August	70,571	144.5	18,773	341.1	19,321	346.2	304,429	215.9	169.1
September	65,715	144.7	13,520	389.9	14,038	397.8	269,002	214.3	168.6
October	69,170	146.2	13,254	438.8	13,969	452.4	225,855	236.8	173.2
November	65,393	144.8	13,378	430.1	13,900	439.0	164,781	271.9	174.0
December	62,386	142.4	13,923	424.7	14,625	434.0	156,262	283.1	174.3
Year	**786,627**	**145.5**	**202,281**	**331.9**	**209,350**	**338.4**	**2,490,979**	**232.1**	**168.9**
1991 January	63,356	145.7	11,478	359.5	12,325	373.8	164,872	266.8	170.2
February	61,059	146.9	10,417	265.6	10,887	275.7	137,559	234.7	161.3
March	63,537	145.4	11,269	244.2	11,667	251.2	182,833	220.0	159.2
April	60,747	147.3	13,119	234.2	13,468	239.5	203,862	206.7	160.3
May	63,005	148.3	14,730	233.1	15,276	240.1	233,424	198.2	160.8
June	61,488	147.2	17,122	220.2	17,671	226.1	244,415	191.2	159.3
July	64,752	142.7	17,169	227.2	17,701	233.0	310,723	184.6	156.0
August	69,552	143.2	16,831	226.7	17,298	232.4	306,419	192.7	156.7
September	65,071	143.4	15,590	241.4	16,063	247.7	248,900	215.4	160.3
October	66,043	144.4	9,658	238.3	10,287	252.8	251,431	231.0	161.6
November	62,634	142.8	11,289	253.4	11,832	264.4	186,721	240.7	160.5
11 Months	**701,244**	**145.2**	**148,672**	**245.9**	**154,473**	**254.2**	**2,471,157**	**212.3**	**160.4**
1990 11 Months	**724,241**	**145.8**	**188,358**	**325.1**	**194,725**	**331.2**	**2,334,717**	**228.7**	**168.4**
1989 11 Months	**692,701**	**144.6**	**214,935**	**277.7**	**222,382**	**281.8**	**2,324,743**	**233.0**	**166.7**

[a] Includes supplemental gaseous fuels.

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

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

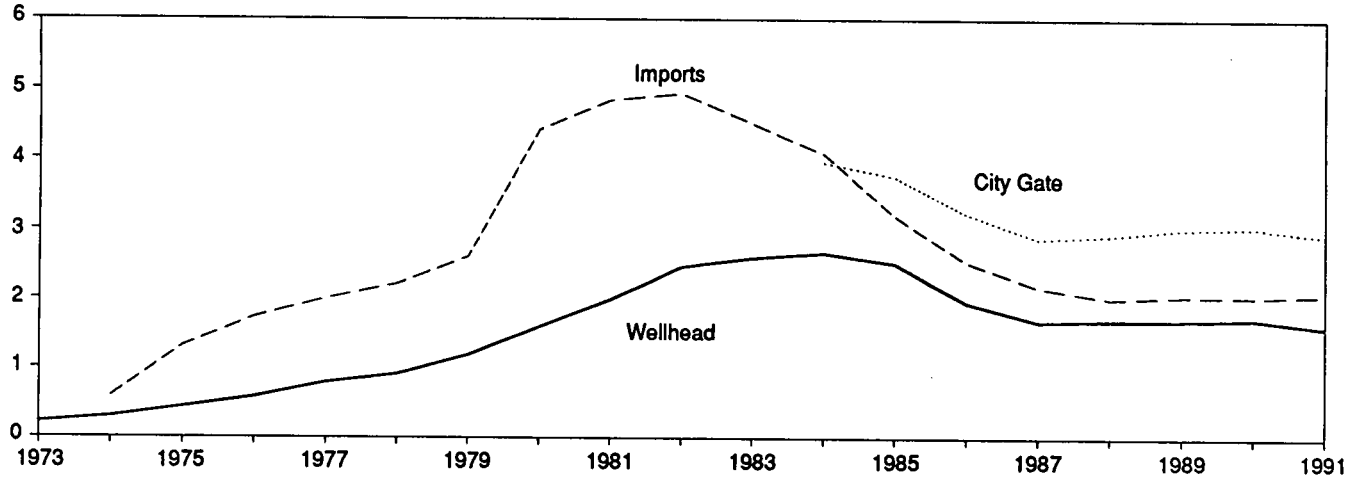
Notes: • Data for 1973-1982 cover all electric generating plants at which the generator nameplate capacity of all steam-electric units combined totaled 25 megawatts or greater. From 1974-1982, peaking units were included in the data and counted towards the 25-megawatt-or-greater total. Data for 1983-1990 cover all electric generating plants at which the generator nameplate capacity of all steam-electric units combined totaled 50 megawatts or greater. Data for 1991 forward cover all electric generating plants at which the generator nameplate capacity of all steam-electric units and combined-cycle units combined totaled 50 megawatts or greater. • Geographic coverage is the 50 States and the District of Columbia.

Sources: See end of section.

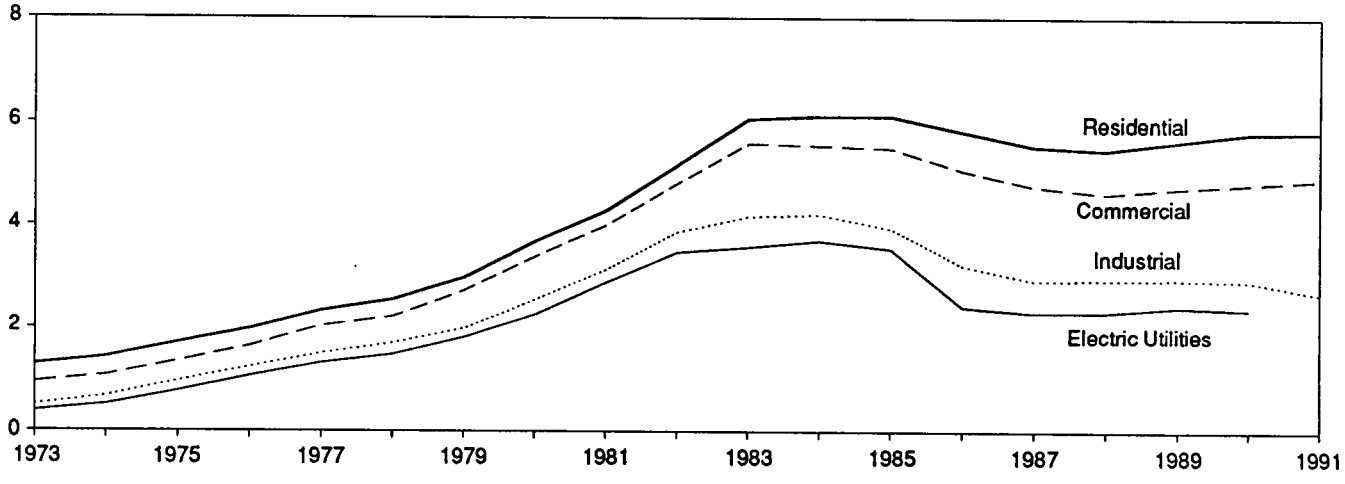
Figure 9.4 Natural Gas Prices

(Dollars per Thousand Cubic Feet)

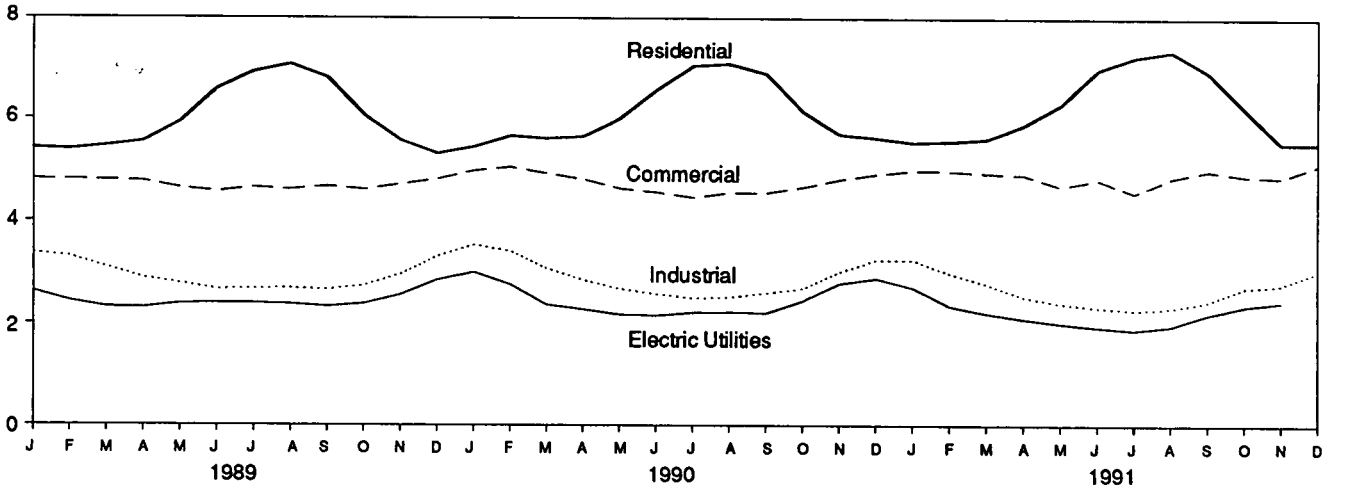
Selected Prices, 1973-1991



Delivered to Consumers, 1973-1991



Delivered to Consumers, Monthly



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

Table 9.11 Natural Gas Prices

(Dollars per Thousand Cubic Feet)

	Wellhead	Major Interstate Pipeline Companies		City Gate	Delivered to Consumers[a,b]			
		Imports	Purchases from Producers		Residential	Commercial	Industrial	Electric Utilities[b]
1973 Average	**0.22**	**NA**	**NA**	**NA**	**1.29**	**0.94**	**0.50**	**0.38**
1974 Average	**.30**	**.59**	**.27**	**NA**	**1.43**	**1.07**	**.67**	**.51**
1975 Average	**.44**	**1.31**	**.37**	**NA**	**1.71**	**1.35**	**.96**	**.77**
1976 Average	**.58**	**1.73**	**.48**	**NA**	**1.98**	**1.64**	**1.24**	**1.06**
1977 Average	**.79**	**1.99**	**.70**	**NA**	**2.35**	**2.04**	**1.50**	**1.32**
1978 Average	**.91**	**2.21**	**.83**	**NA**	**2.56**	**2.23**	**1.70**	**1.48**
1979 Average	**1.18**	**2.60**	**1.22**	**NA**	**2.98**	**2.73**	**1.99**	**1.81**
1980 Average	**1.59**	**4.42**	**1.63**	**NA**	**3.68**	**3.39**	**2.56**	**2.27**
1981 Average	**1.98**	**4.84**	**2.15**	**NA**	**4.29**	**4.00**	**3.14**	**2.89**
1982 Average	**2.46**	**4.94**	**2.72**	**NA**	**5.17**	**4.82**	**3.87**	**3.48**
1983 Average	**2.59**	**4.51**	**2.93**	**NA**	**6.06**	**5.59**	**4.18**	**3.58**
1984 Average	**2.66**	**4.08**	**2.91**	**3.95**	**6.12**	**5.55**	**4.22**	**3.70**
1985 Average	**2.51**	**3.19**	**2.85**	**3.75**	**6.12**	**5.50**	**3.95**	**3.55**
1986 Average	**1.94**	**2.53**	**2.39**	**3.22**	**5.83**	**5.08**	**3.23**	**2.43**
1987 Average	**1.67**	**2.17**	**2.10**	**2.87**	**5.54**	**4.77**	**2.94**	**2.32**
1988 Average	**1.69**	**2.00**	**2.13**	**2.92**	**5.47**	**4.63**	**2.95**	**2.33**
1989 January	1.99	1.77	2.35	3.17	5.41	4.81	3.37	2.63
February	1.81	2.20	2.16	3.10	5.38	4.80	3.31	2.44
March	1.69	1.99	2.14	2.89	5.45	4.79	3.10	2.32
April	1.56	2.01	2.19	2.83	5.54	4.77	2.89	2.31
May	1.61	2.00	2.11	2.94	5.93	4.64	2.78	2.39
June	1.65	2.04	2.05	2.98	6.58	4.57	2.67	2.40
July	1.65	1.88	2.00	3.08	6.92	4.65	2.68	2.40
August	1.61	2.27	2.11	3.04	7.07	4.61	2.69	2.38
September	1.55	2.02	2.08	2.99	6.80	4.67	2.66	2.33
October	1.58	2.17	2.13	2.84	6.06	4.61	2.74	2.39
November	1.66	2.13	2.23	2.98	5.56	4.71	2.96	2.56
December	1.92	2.08	2.39	3.10	5.30	4.81	3.31	2.85
Average	**1.69**	**2.04**	**2.18**	**3.01**	**5.64**	**4.74**	**2.96**	**2.43**
1990 January	R2.23	2.04	2.42	3.24	5.43	4.97	3.53	3.00
February	1.85	2.25	2.17	3.10	5.65	5.04	3.41	2.76
March	R1.55	1.99	1.94	2.94	5.60	4.92	3.08	2.37
April	R1.49	2.00	2.17	2.83	5.64	4.81	2.85	2.28
May	1.47	2.08	1.98	2.81	6.00	4.63	2.68	2.18
June	R1.48	1.91	2.18	3.00	6.56	4.56	2.58	2.16
July	R1.49	1.88	2.00	3.03	7.04	4.46	2.50	2.22
August	1.51	1.93	1.86	2.91	7.08	4.55	2.52	2.23
September	R1.56	1.89	1.93	2.92	6.89	4.55	2.60	2.21
October	R1.76	1.90	2.18	2.81	6.14	4.66	2.69	2.45
November	R1.94	2.21	2.45	3.14	5.69	4.81	3.02	2.79
December	R2.04	2.27	2.58	3.19	5.62	4.91	3.25	2.89
Average	**1.71**	**2.03**	**2.19**	**3.03**	**5.80**	**4.82**	**2.93**	**2.38**
1991 January	R1.94	2.24	2.23	3.08	5.53	4.98	3.25	2.71
February	R1.59	2.12	1.98	2.94	5.55	4.97	2.99	2.35
March	R1.47	1.94	2.06	2.79	5.60	4.93	2.78	2.21
April	1.47	2.05	1.91	2.75	5.88	4.90	2.53	2.10
May	R1.44	2.00	2.04	2.77	6.28	4.68	2.40	2.01
June	1.39	2.05	1.98	2.85	6.97	4.81	2.33	1.94
July	R1.29	2.13	1.87	2.76	7.23	4.55	2.27	1.88
August	1.37	1.71	1.77	2.80	7.35	4.84	2.31	1.96
September	R1.54	1.85	1.81	2.93	6.92	4.98	2.44	2.19
October	R1.74	2.24	1.96	2.93	6.20	4.88	2.71	2.35
November	1.83	2.20	2.01	2.92	5.51	4.85	2.77	2.43
December	1.93	2.09	2.13	3.06	5.51	5.09	3.03	NA
Average	**1.59**	**2.06**	**2.01**	**2.91**	**5.82**	**4.91**	**2.68**	**NA**

[a] Includes supplemental gaseous fuels.

[b] See Note 8 at end of section.

R=Revised data. NA=Not available.

Notes: • Prices shown on this page are intended to include all taxes. See Note 8 at end of section. • Geographic coverage is the 50 States and the District of Columbia. • Data through 1988 are final. Subsequent data are preliminary. • Wellhead annual and year-to-date prices are simple averages of the monthly prices; all other annual and year-to-date prices are volume-weighted averages of the monthly prices.

Sources: **1973-1983:** Wellhead: Energy Information Administration (EIA), *Natural Gas Annual 1988, Volume 1*, Table 92. Major Interstate Pipeline Companies, **1974 through 1977:** Calculated from revenue and sales data reported to the Federal Power Commission (FPC) on Form FPC-11, "Natural Gas Pipeline Company Monthly Statement." **1978-1983:** EIA, *Natural Gas Monthly*, December 1984, Table 10. Delivered to Consumers: EIA, *Natural Gas Annual 1988, Volume 1*, Table 95. **1984-forward:** EIA, *Natural Gas Monthly*, March 1992, Table 4.

Energy Prices Notes

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

2. F.O.B. literally means "Free on Board." It denotes a transaction whereby the seller makes the product available with an agreement on a given port at a given price; it is the responsibility of the buyer to arrange for the transportation and insurance.

3. The landed cost of imported crude oil from selected countries does not represent the total cost of all imported crude. Prior to March 1975, imported crude costs to U.S. company-owned refineries in the Caribbean were not included in the landed cost, and costs of crude oil from countries that export only small amounts to the United States were also excluded. Beginning in March 1975, however, coverage was expanded to include U.S. company-owned refineries in the Caribbean. Landed costs do not include supplemental fees.

4. Beginning with January 1981, refiner acquisition costs of crude oil are from data collected on Form EIA-14, "Refiners' Monthly Cost Report." Those costs were previously published from data collected on Form ERA-49, "Domestic Crude Oil Entitlements Program Refiners Monthly Report." Form ERA-49 was discontinued with the decontrol of crude oil on January 28, 1981. Crude oil purchases and costs are defined for Form EIA-14 in accordance with conventions used for Form ERA-49. Also, the respondents for the two forms are essentially the same. However, due to possible different interpretations of the filing requirements and a different method for handling prior period adjustments, care must be taken when comparing the data collected on the two forms.

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

Crude oil costs and volumes reported on Form ERA-49 excluded unfinished oils but included the Strategic Petroleum Reserve (SPR). Crude oil costs and volumes reported on Form FEA-P110-M-1, "Refiners' Monthly Cost Allocation Report," included unfinished oils but excluded SPR. Imported averages derived from Form ERA-49 exclude oil purchased for SPR, whereas the composite averages derived from Form ERA-49 include SPR. None of the prices derived from Form EIA-14 include either unfinished oils or SPR.

5. Several different series of motor gasoline prices are published in this section. U.S. City Average Retail Prices of Motor Gasoline are calculated monthly by the Bureau of Labor Statistics during the development of the Consumer Price Index (CPI). These prices include all Federal, State, and local taxes paid at the time of sale. For the period 1974-1977, prices were collected in 56 urban areas. For the period 1978 forward, prices were collected from a new sample of service stations in 85 urban areas selected to represent all urban consumers—about 80 percent of the total U.S. population. The service stations are selected initially, and on a replacement basis, in such a way that they represent the purchasing habits of the CPI population. Service stations in the current sample include those providing all types of service (i.e., full-, mini-, and self-serve).

Refiner prices of finished motor gasoline for resale and to end users are determined by the Energy Information Administration (EIA) in a monthly survey of refiners and gas plant operators (Form EIA-782A). The prices do not include any Federal, State, or local taxes paid at the time of sale. Estimates of prices prior to January 1983 are based on Form FEA-P302-M-1/EIA-460, "Petroleum Industry Monthly Report for Product Prices," and also exclude all Federal, State, or local taxes paid at the time of sale. Sales for resale are those made to purchasers who are other-than-ultimate consumers. Sales to end users are sales made directly to the consumer of the product, including bulk consumers such as agriculture, industry, and utilities, as well as residential and commercial consumers.

6. Starting in January 1983, Form EIA-782, "Monthly Petroleum Product Sales Report," replaced 10 previous surveys. Every attempt was made to continue the most important price series. However, prices published through December 1982 and those published since January 1983 do not necessarily form continuous data series due to changes in survey forms, definitions, instructions, populations, samples, processing systems, and statistical procedures. To provide historical data, continuous series were generated for annual data 1978-1982 and for monthly data 1981 and 1982 by estimating the prices that would have been published had Form EIA-782 survey and system been in operation at that time. This form of estimation was performed after detailed adjustment was made for product and sales type matching and for discontinuity due to other factors. An important difference between the previous and present prices is the distinction between wholesale and resale and between retail and end user. The resale category continues to include sales among resellers. However, bulk sales to utility, industrial, and commercial accounts previously included in the wholesale category are now counted as made to end users. The

end-user category continues to include retail sales through company owned and operated outlets but also includes the bulk utility, industrial, and commercial sales. Additional information may be found in Estimated Historic Time Series for the EIA-782, a feature article reprinted from the December 1983 [3] *Petroleum Marketing Monthly*, published by EIA.

7. National average electricity prices are shown in two data series. The "Annual Series" is based on data from more than 3,000 publicly and privately owned electric utilities that report on Form EIA-861, "Annual Electric Utility Report." The "Monthly Series" is based on data from over 400 utilities statistically chosen as a stratified sample of the utilities that report on Form EIA-861. The selected utilities report monthly on Form EIA-826, "Monthly Electric Utility Sales and Revenue Report with State Distributions," formerly the "Electric Utility Company Monthly Statement." Annual values shown for the monthly series are the sum of the monthly revenue divided by the sum of the monthly sales. Prior to January 1986, only privately owned utilities were included in the monthly survey and the sample was chosen using cut-off, rather than stratification, techniques.

8. Natural gas prices are intended to include all taxes. Instructions on the data collection forms specifically direct that all U.S., State, and local taxes, surcharges, and/or adjustments billed to consumers are to be included. However, sales and other taxes itemized on consumers' bills are sometimes excluded by the reporting utilities.

Delivered-to-consumers prices for 1987 forward represent natural gas delivered and sold to residential, commercial, industrial, and electric utility consumers. They do not include the price of natural gas delivered to industrial and commercial consumers on behalf of third parties. Volumes of natural gas delivered on behalf of third parties are included in the consumption data shown in Table 4.3. Additional information is available in the Energy Information Administration *Natural Gas Monthly*, Appendix C.

Electric utility data for 1973-1982 cover all electric generating plants at which the generator nameplate capacity of all steam-electric units combined totaled 25 megawatts or greater. From 1974-1982, peaking units were included in the data and counted towards the 25-megawatt-or-greater total. Data for 1983-1990 cover all electric generating plants at which the generator nameplate capacity of all steam-electric units combined totaled 50 megawatts or greater. Data for 1991 cover all electric generating plants at which the generator nameplate capacity of all steam-electric units and combined-cycle units combined totaled 50 megawatts or greater.

Sources for Table 9.1

• **Domestic First Purchase Price: 1973-1976**—U.S. Department of the Interior (DOI), Bureau of Mines (BOM), *Minerals Yearbook*, "Crude Petroleum and Petroleum Products" chapter. **1977**—Federal Energy Administration (FEA), based on Form FEA-P124, "Domestic Crude Oil Purchaser's Monthly Report." **1978 forward**—Energy Information Administration (EIA), *Petroleum Marketing Monthly*, March 1992, Table 1.

• **F.O.B. and Landed Cost of Imports: October 1973-September 1977**—Federal Energy Administration, Form FEA-F701-M-0, "Transfer Pricing Report." **October-December 1977**—EIA, Form FEA-F701-M-0, "Transfer Pricing Report." **1978 forward**—EIA, *Petroleum Marketing Monthly*, March 1992, Table 1.

• **Refiner Acquisition Cost: 1973**—EIA estimates. The domestic price was derived by adding estimated transportation costs to the reported domestic first purchase price. The imported price was derived by adding an estimated ocean transport cost to the average "Free Alongside Ship" value published by the U.S. Bureau of the Census. **1974-1976**—DOI, BOM, *Minerals Yearbook*, "Crude Petroleum and Petroleum Products" chapter. **1977**—January-September, FEA, based on Form FEA-P110-M-1, "Refiners' Monthly Cost Allocation Report." October-December, EIA, based on Form FEA-P110-M-1, "Refiners' Monthly Cost Allocation Report." **1978 forward**—EIA, *Petroleum Marketing Monthly*, March 1992, Table 1.

Sources for Table 9.10

• **1973-1979:** Annual data for quantity are simple sums of unrounded monthly values and for cost are averages of monthly values, weighted by quantities, from the following: **1973-May 1977:** Federal Power Commission, Form FPC-423, "Monthly Report on Cost and Quality of Fuels for Electric Utility Plants." **June 1977-December 1977:** Federal Energy Regulatory Commission, Form FERC-423, "Monthly Report on Cost and Quality of Fuels for Electric Utility Plants." **1978 and 1979:** Energy Information Administration (EIA), Form FERC-423, "Monthly Report on Cost and Quality of Fuels for Electric Utility Plants."

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

• **1981 forward:** EIA, *Electric Power Monthly*, April 1991, Table 33, for 1989 monthly data, and *Electric Power Monthly*, March 1992, Table 33, for all other data.

Section 10. International Energy

Crude Oil Production. World crude oil production during December 1991 was 61 million barrels per day, up 0.4 million barrels per day from the level in the previous month. World crude oil production during 1991 averaged 60 million barrels per day, down 1 percent compared with production in 1990.

Organization of Petroleum Exporting Countries (OPEC) production during December 1991 averaged 25 million barrels per day, up 0.4 million barrels per day from the level during the previous month. OPEC production during 1991 averaged 24 million barrels per day, a 1-percent increase compared wih production in the previous year. Production by the Arab members of OPEC during December 1991 averaged 15 million barrels per day, up 0.1 million barrels per day from the November 1991 level. During December 1991, production increased in Saudi Arabia by 200 thousand barrels per day and in Kuwait by 20 thousand barrels per day. Production decreased in Qatar by 60 thousand barrels per day and in the United Arab Emirates by 35 thousand barrels per day. Production was unchanged in Algeria, Iraq, and Libya. Among the non-Arab members of OPEC, production during December 1991 increased in Iran by 200 thousand barrels per day and in Nigeria by 25 thousand barrels per day. Production remained unchanged in Indonesia and Venezuela.

Among the non-OPEC nations, production during December 1991 increased in Mexico by 15 thousand barrels per day and in the United Kingdom by 5 thousand barrels per day. Production decreased in the United States by 26 thousand barrels per day, in Canada by 15 thousand barrels per day, and in the U.S.S.R. by 5 thousand barrels per day. Production remained unchanged in China.

Petroleum Consumption. In October 1991, consumption in all Organization for Economic Cooperation and Development (OECD) countries was 38.6 million barrels per day, higher by 4 percent than the October 1990 level. Consumption was lower in Japan by 2 percent and slightly lower in the United States, compared with levels 1 year earlier. In October 1991, consumption in all European OECD countries combined was 14.0 million barrels per day, 14 percent higher than consumption in the previous October. Consumption was higher in France by 20 percent, higher in the United Kingdom by 14 percent, higher in Italy by 12 percent but lower in Canada by 4 percent, compared with levels 1 year earlier. Beginning with January 1991, data for Germany are for the unified Germany, formerly East Germany and West Germany.

Petroleum Stocks. For all OECD countries, petroleum stocks at the end of October 1991 totaled 3.6 billion barrels, slightly higher than the ending stock level in October 1990. Stocks were higher in Japan by 5 percent but lower in the United States by 2 percent, compared with levels 1 year earlier. In October 1991, stock levels in all European OECD countries totaled 1.2 billion barrels, the same as in the previous October. Stocks were higher in Canada by 6 percent, higher in France by 1 percent, but lower in Italy by 4 percent, and unchanged in the United Kingdom, compared with levels 1 year earlier. Beginning with January 1991, data for Germany are for the unified Germany, formerly East Germany and West Germany.

Nuclear Electricity Generation. Based on *Nucleonics Week* information for December 1991, reporting countries with nuclear capacity generated 167 gross terawatthours (billion kilowatthours) of nuclear-generated electricity, 4 percent more than in December 1990.

Japan's Ohi 3, a 1,175-megawatts electric nuclear unit, went commercial on December 18, 1991. The unit has been added to the total of operable nuclear generating units for the month of December.

As of December 31, 1991, there were 355 operable nuclear generating units in the reporting countries. The units had a collective gross generating capacity of 299.2 gigawatts (million kilowatts). The 111 U.S. units accounted for 106.0 gross gigawatts, 35.4 percent of the total reported nuclear generating capacity.

Total nuclear generation for 1991 is estimated to be 1,826 gross terawatthours, 6 percent more than in 1990. The annual growth rate in the nuclear generation from 1981 through 1991 averaged 9 percent per year. Four nuclear units became operable in the reporting countries in 1991: Japan's Tomari 2 and Ohi 3; India's Norora 1; and France's Cattenum 4. However, one unit retired in 1991: France's Chooz A.

Table 10.1a World Crude Oil Production: Algeria Through Venezuela

(Thousand Barrels per Day)

	Algeria	Iraq	Kuwait[a]	Libya	Qatar	Saudi Arabia[a]	United Arab Emirates	Arab OPEC[b]	Indonesia	Iran	Nigeria	Venezuela
1973 Average	**1,097**	**2,018**	**3,020**	**2,175**	**570**	**7,596**	**1,533**	**18,009**	**1,339**	**5,861**	**2,054**	**3,366**
1974 Average	**1,009**	**1,971**	**2,546**	**1,521**	**518**	**8,480**	**1,679**	**17,724**	**1,375**	**6,022**	**2,255**	**2,976**
1975 Average	**983**	**2,262**	**2,084**	**1,480**	**438**	**7,075**	**1,664**	**15,985**	**1,307**	**5,350**	**1,783**	**2,346**
1976 Average	**1,075**	**2,415**	**2,145**	**1,933**	**497**	**8,577**	**1,936**	**18,579**	**1,504**	**5,883**	**2,067**	**2,294**
1977 Average	**1,152**	**2,348**	**1,969**	**2,063**	**445**	**9,245**	**1,999**	**19,221**	**1,686**	**5,663**	**2,085**	**2,238**
1978 Average	**1,231**	**2,563**	**2,131**	**1,983**	**487**	**8,301**	**1,831**	**18,525**	**1,635**	**5,242**	**1,897**	**2,165**
1979 Average	**1,224**	**3,477**	**2,500**	**2,092**	**508**	**9,532**	**1,831**	**21,163**	**1,591**	**3,168**	**2,302**	**2,356**
1980 Average	**1,106**	**2,514**	**1,656**	**1,787**	**472**	**9,900**	**1,709**	**19,144**	**1,577**	**1,662**	**2,055**	**2,168**
1981 Average	**1,002**	**1,000**	**1,125**	**1,140**	**405**	**9,815**	**1,474**	**15,961**	**1,605**	**1,380**	**1,433**	**2,102**
1982 Average	**987**	**1,012**	**823**	**1,150**	**330**	**6,483**	**1,250**	**12,035**	**1,339**	**2,214**	**1,295**	**1,895**
1983 Average	**968**	**1,005**	**1,064**	**1,105**	**295**	**5,086**	**1,149**	**10,672**	**1,343**	**2,440**	**1,241**	**1,801**
1984 Average	**1,014**	**1,209**	**1,157**	**1,087**	**394**	**4,663**	**1,146**	**10,670**	**1,412**	**2,174**	**1,388**	**1,798**
1985 Average	**1,037**	**1,433**	**1,023**	**1,059**	**301**	**3,388**	**1,193**	**9,434**	**1,325**	**2,250**	**1,495**	**1,677**
1986 Average	**945**	**1,690**	**1,419**	**1,034**	**308**	**4,870**	**1,330**	**11,596**	**1,390**	**2,035**	**1,467**	**1,787**
1987 Average	**1,048**	**2,079**	**1,585**	**972**	**293**	**4,265**	**1,541**	**11,783**	**1,343**	**2,298**	**1,341**	**1,752**
1988 Average	**1,040**	**2,685**	**1,492**	**1,175**	**346**	**5,086**	**1,565**	**13,389**	**1,342**	**2,240**	**1,450**	**1,903**
1989 January	1,085	2,720	1,237	1,102	389	4,918	1,647	13,098	1,401	2,748	1,474	1,862
February	1,085	2,720	1,336	1,102	408	4,673	1,566	12,889	1,401	2,797	1,474	1,862
March	1,085	2,720	1,375	1,102	330	4,515	1,590	12,718	1,401	3,141	1,626	1,862
April	1,085	2,823	1,677	1,154	321	4,914	1,618	13,592	1,401	2,846	1,677	1,862
May	1,085	2,823	1,984	1,154	398	5,022	1,618	14,084	1,401	2,454	1,677	1,862
June	1,085	2,772	2,083	1,154	408	4,825	1,875	14,201	1,401	2,748	1,778	1,913
July	1,105	2,926	1,885	1,154	389	4,923	1,823	14,204	1,384	2,748	1,879	1,875
August	1,105	3,080	1,885	1,154	389	5,022	1,861	14,494	1,434	2,945	1,778	1,926
September	1,105	2,977	1,885	1,154	389	5,219	2,046	14,774	1,384	2,797	1,778	1,926
October	1,105	3,080	1,885	1,154	389	5,317	2,141	15,070	1,434	2,896	1,677	1,977
November	1,105	3,028	2,073	1,207	369	5,701	2,236	15,718	1,434	2,748	1,879	1,977
December	1,105	3,080	2,068	1,207	384	5,696	2,283	15,821	1,434	2,846	1,879	1,977
Average	**1,095**	**2,897**	**1,783**	**1,150**	**380**	**5,064**	**1,860**	**14,229**	**1,409**	**2,810**	**1,716**	**1,907**
1990 January	1,190	2,946	1,998	1,222	370	5,571	2,054	15,352	1,306	2,700	1,754	1,990
February	1,190	2,946	1,998	1,375	380	5,670	2,029	15,589	1,306	3,000	1,754	2,140
March	1,190	2,946	2,179	1,324	400	5,800	2,054	15,893	1,411	3,000	1,754	2,040
April	1,190	2,997	1,953	1,273	400	5,924	2,099	15,837	1,463	2,900	1,855	2,040
May	1,190	3,150	1,953	1,273	365	5,426	2,109	15,466	1,411	3,200	1,754	2,040
June	1,190	3,251	1,758	1,273	365	5,431	2,049	15,317	1,411	3,100	1,754	2,040
July	1,190	3,454	1,853	1,273	370	5,426	2,049	15,616	1,442	3,050	1,754	2,040
August	1,190	1,016	100	1,426	400	5,825	1,649	11,606	1,516	3,300	1,855	2,090
September	1,220	508	100	1,426	400	7,706	2,199	13,560	1,536	3,300	1,905	2,290
October	1,241	457	75	1,579	400	7,776	2,309	13,837	1,542	3,000	1,955	2,275
November	1,241	432	75	1,528	400	8,274	2,374	14,324	1,568	3,200	1,955	2,320
December	1,241	432	75	1,528	370	8,533	2,449	14,628	1,620	3,300	1,955	2,340
Average	**1,205**	**2,040**	**1,172**	**1,375**	**385**	**6,449**	**2,119**	**14,745**	**1,462**	**3,088**	**1,834**	**2,137**
1991 January	1,210	250	50	1,500	350	8,140	2,500	14,000	1,630	3,200	1,960	2,390
February	1,210	0	0	1,500	390	8,200	2,525	13,825	1,630	3,300	1,960	2,390
March	1,210	0	0	1,450	390	8,000	2,550	13,600	1,630	3,400	1,960	2,390
April	1,210	200	0	1,450	390	7,400	2,550	13,200	1,630	3,300	1,960	2,340
May	1,210	350	0	1,450	390	7,400	2,350	13,150	1,630	3,300	1,960	2,340
June	1,210	350	75	1,450	390	8,150	2,350	13,975	1,630	3,300	1,910	2,340
July	1,210	350	165	1,450	390	8,475	2,350	14,390	1,680	3,400	1,910	2,340
August	1,210	350	195	1,450	390	8,465	2,350	14,410	1,630	3,400	1,960	2,340
September	1,210	350	300	1,500	390	8,400	2,340	14,490	1,580	3,300	1,960	2,340
October	1,210	350	430	1,500	390	8,450	2,430	14,760	1,530	3,300	1,860	2,390
November	1,210	350	500	1,550	370	8,440	2,495	14,915	1,580	3,300	1,960	2,390
11-Mo. Avg.	**1,210**	**265**	**157**	**1,477**	**384**	**8,138**	**2,435**	**14,066**	**1,616**	**3,319**	**1,942**	**2,363**
1990 11-Mo. Avg.	**1,202**	**2,189**	**1,274**	**1,361**	**386**	**6,256**	**2,088**	**14,756**	**1,447**	**3,068**	**1,823**	**2,118**
1989 11-Mo. Avg.	**1,094**	**2,880**	**1,757**	**1,145**	**380**	**5,006**	**1,821**	**14,081**	**1,407**	**2,807**	**1,701**	**1,900**

[a] Includes about one-half of the production in the Kuwait-Saudi Arabia Neutral Zone from 1973 through July 1990 and in June 1991. Kuwaiti Neutral Zone output was discontinued following Iraq's invasion of Kuwait on August 2, 1990, but was resumed in June 1991. In December 1991, Neutral Zone production by both Kuwait and Saudi Arabia totaled about 280 thousand barrels per day.

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

[c] "Total OPEC" consists of Algeria, Ecuador, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela. Production from the Neutral Zone between Kuwait and Saudi Arabia is included in "Total OPEC".

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

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

Footnotes continue on following page.

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

(Thousand Barrels per Day)

	Total OPEC[c]	Persian Gulf Nations[d]	Canada	Mexico	United Kingdom	United States	China	U.S.S.R.	Other[e]	Market Economies[f]	World
1973 Average	**30,988**	**20,668**	**1,798**	**465**	**2**	**9,208**	**1,090**	**8,329**	**3,804**	**45,805**	**55,684**
1974 Average	**30,729**	**21,282**	**1,551**	**571**	**2**	**8,774**	**1,315**	**8,856**	**3,862**	**45,021**	**55,660**
1975 Average	**27,154**	**18,934**	**1,430**	**705**	**12**	**8,375**	**1,490**	**9,472**	**4,139**	**41,338**	**52,777**
1976 Average	**30,737**	**21,514**	**1,314**	**831**	**245**	**8,132**	**1,670**	**9,985**	**4,355**	**45,132**	**57,269**
1977 Average	**31,299**	**21,725**	**1,321**	**981**	**768**	**8,245**	**1,874**	**10,485**	**4,616**	**46,745**	**59,589**
1978 Average	**29,875**	**20,606**	**1,316**	**1,209**	**1,082**	**8,707**	**2,082**	**10,950**	**4,782**	**46,497**	**60,003**
1979 Average	**30,998**	**21,066**	**1,500**	**1,461**	**1,568**	**8,552**	**2,122**	**11,187**	**5,089**	**48,725**	**62,477**
1980 Average	**26,985**	**17,961**	**1,435**	**1,936**	**1,622**	**8,597**	**2,114**	**11,460**	**5,204**	**45,355**	**59,353**
1981 Average	**22,843**	**15,245**	**1,285**	**2,313**	**1,811**	**8,572**	**2,012**	**11,552**	**5,390**	**41,784**	**55,778**
1982 Average	**19,145**	**12,156**	**1,271**	**2,748**	**2,065**	**8,649**	**2,045**	**11,615**	**5,646**	**39,069**	**53,184**
1983 Average	**17,891**	**11,081**	**1,356**	**2,689**	**2,291**	**8,688**	**2,120**	**11,684**	**6,248**	**38,703**	**52,967**
1984 Average	**17,857**	**10,784**	**1,438**	**2,780**	**2,480**	**8,879**	**2,296**	**11,576**	**6,897**	**39,893**	**54,203**
1985 Average	**16,634**	**9,630**	**1,471**	**2,745**	**2,530**	**8,971**	**2,505**	**11,250**	**7,540**	**39,463**	**53,646**
1986 Average	**18,734**	**11,696**	**1,474**	**2,435**	**2,539**	**8,680**	**2,620**	**11,540**	**7,850**	**41,282**	**55,872**
1987 Average	**18,846**	**12,103**	**1,535**	**2,548**	**2,406**	**8,349**	**2,690**	**11,690**	**8,242**	**41,507**	**56,306**
1988 Average	**20,785**	**13,457**	**1,616**	**2,512**	**2,232**	**8,140**	**2,730**	**11,823**	**8,669**	**43,562**	**58,507**
1989 January	21,049	13,702	1,580	2,538	1,829	7,937	2,787	11,595	9,155	43,695	58,470
February	20,861	13,543	1,570	2,507	1,779	7,788	2,787	11,595	9,104	43,216	57,991
March	21,189	13,715	1,540	2,548	1,824	7,575	2,787	11,595	9,335	43,617	58,393
April	21,838	14,242	1,555	2,533	1,723	7,772	2,687	11,480	9,237	44,254	58,825
May	21,919	14,342	1,560	2,533	1,567	7,816	2,697	11,480	9,175	44,185	58,746
June	22,512	14,754	1,600	2,533	1,377	7,624	2,697	11,425	9,018	44,278	58,784
July	22,561	14,737	1,535	2,528	1,767	7,444	2,737	11,425	9,307	44,757	59,302
August	23,086	15,220	1,540	2,528	1,854	7,544	2,767	11,425	9,451	45,613	60,194
September	23,168	15,355	1,580	2,462	1,965	7,548	2,801	11,314	9,440	45,773	60,279
October	23,609	15,749	1,525	2,523	2,061	7,453	2,826	11,239	9,614	46,390	60,850
November	24,303	16,198	1,595	2,523	1,980	7,536	2,767	11,239	9,668	47,210	61,610
December	24,486	16,400	1,545	2,482	1,890	7,337	2,742	11,239	9,533	46,878	61,253
Average	**22,558**	**14,837**	**1,560**	**2,520**	**1,802**	**7,613**	**2,757**	**11,420**	**9,338**	**44,999**	**59,568**
1990 January	23,643	15,683	1,477	2,520	1,911	7,546	2,796	11,296	9,578	46,297	60,767
February	24,340	16,066	1,498	2,520	1,811	7,497	2,776	10,933	9,655	46,944	61,030
March	24,658	16,420	1,604	2,510	1,935	7,433	2,746	11,296	9,744	47,507	61,927
April	24,655	16,315	1,548	2,510	1,916	7,407	2,746	11,109	9,766	47,420	61,657
May	24,402	16,245	1,528	2,485	1,886	7,328	2,746	10,940	9,774	47,021	61,089
June	24,173	15,997	1,508	2,465	1,831	7,106	2,756	10,766	9,659	46,364	60,264
July	24,453	16,245	1,543	2,485	1,743	7,173	2,716	10,679	9,577	46,597	60,370
August	20,936	12,333	1,543	2,535	1,624	7,287	2,751	10,560	9,593	43,140	56,830
September	23,162	14,256	1,548	2,626	1,753	7,224	2,811	10,472	9,795	45,730	59,391
October	23,194	14,061	1,599	2,646	1,857	7,542	2,776	10,205	9,921	46,395	59,740
November	23,957	14,798	1,568	2,666	1,820	7,387	2,801	10,153	10,211	47,239	60,562
December	24,433	15,201	1,594	2,666	1,671	7,338	2,761	10,181	10,141	47,470	60,784
Average	**23,828**	**15,295**	**1,547**	**2,553**	**1,813**	**7,355**	**2,765**	**10,715**	**9,785**	**46,505**	**60,361**
1991 January	23,770	14,532	1,580	2,660	1,675	E7,418	2,785	10,295	10,118	46,861	60,301
February	23,700	14,455	1,560	2,674	1,905	E7,548	2,795	9,600	10,152	47,177	59,934
March	23,550	14,383	1,560	2,669	2,069	E7,481	2,790	10,010	10,145	47,112	60,274
April	23,000	13,881	1,530	2,655	1,525	E7,467	2,795	9,955	10,036	45,854	58,963
May	22,930	13,832	1,545	2,695	1,395	E7,368	2,795	9,870	10,135	45,707	58,733
June	23,705	14,652	1,565	2,720	1,525	E7,282	2,805	9,470	9,873	46,308	58,945
July	24,290	15,168	1,620	2,690	1,805	E7,326	2,805	9,470	9,939	47,310	59,945
August	24,310	15,188	1,655	2,660	1,827	E7,272	2,805	9,095	9,602	46,967	59,226
September	24,240	R15,119	1,595	2,675	1,896	E7,332	2,800	9,545	R10,116	R47,497	R60,199
October	24,410	15,388	1,635	R2,680	1,990	E7,409	2,800	R9,165	R10,230	R47,994	R60,319
November	24,715	15,493	1,600	2,700	1,970	E7,307	2,800	9,100	10,297	48,229	60,489
11-Mo. Avg.	**23,876**	**14,737**	**1,586**	**2,680**	**1,780**	**E7,382**	**2,798**	**9,599**	**10,057**	**47,000**	**59,757**
1990 11-Mo. Avg.	**23,772**	**15,304**	**1,543**	**2,542**	**1,826**	**7,357**	**2,765**	**10,765**	**9,752**	**46,415**	**60,322**
1989 11-Mo. Avg.	**22,379**	**14,692**	**1,561**	**2,524**	**1,794**	**7,639**	**2,758**	**11,437**	**9,320**	**44,825**	**59,411**

Footnotes continued.

[f] "Market Economies" is "World" excluding Albania, Bulgaria, Cambodia, China, Cuba, Czechoslovakia, East Germany, Hungary, Laos, Mongolia, North Korea, Poland, Romania, U.S.S.R., Vietnam, Yugoslavia, and through 1990, East Germany. From 1991 forward, "Market Economies" includes unified Germany.

R=Revised data. E=Estimate.

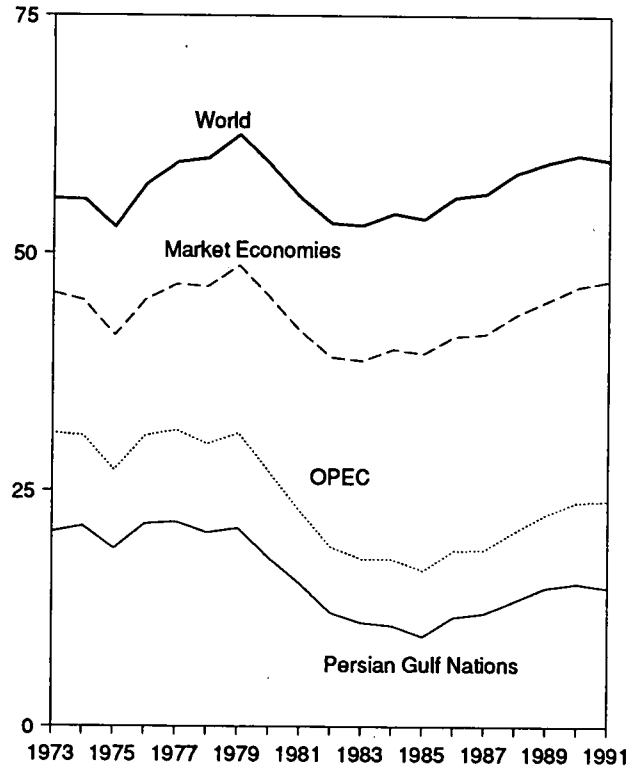
Notes: • Crude oil includes lease condensate but excludes natural gas plant liquids. • U.S. geographic coverage is the 50 States and the District of Columbia. • Monthly data are often preliminary figures and may not average to the annual totals because of rounding or because updates to the preliminary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

Sources: See end of section.

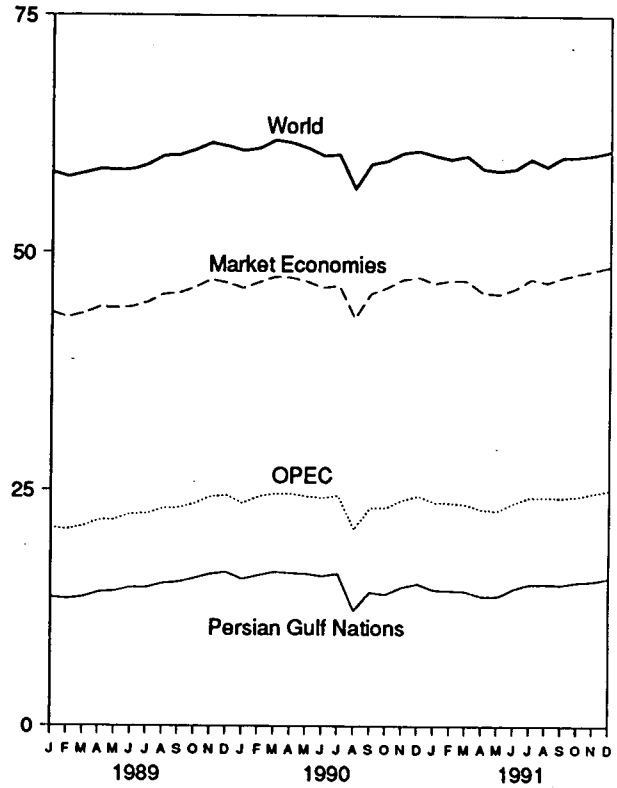
Figure 10.1 Crude Oil Production

(Million Barrels per Day)

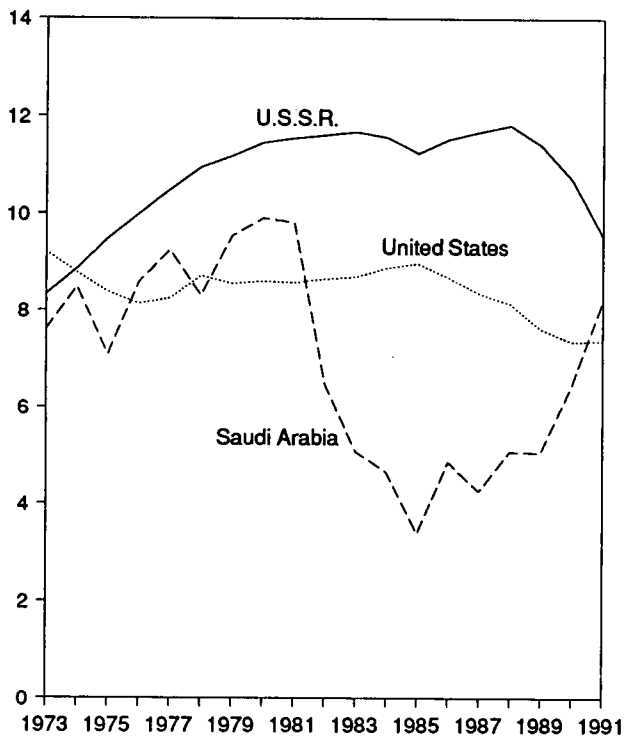
World Production, 1973-1991



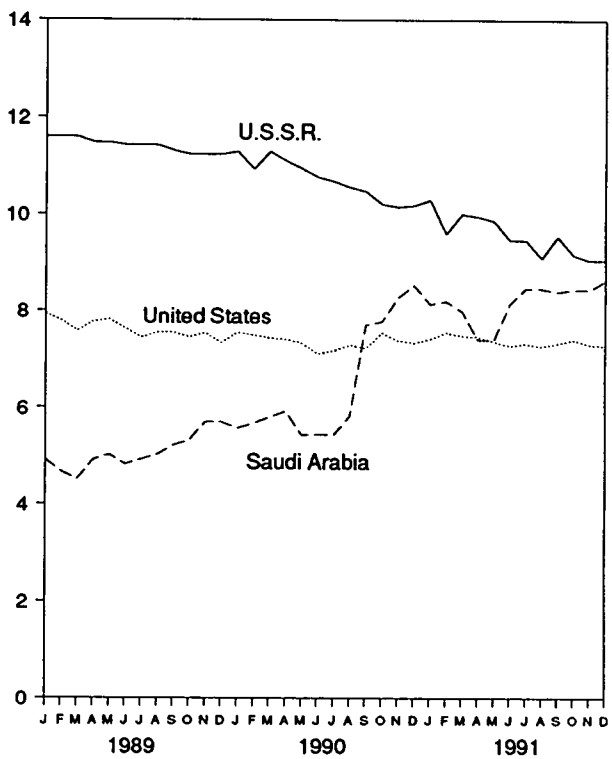
World Production, Monthly



Leading Producers, 1973-1991



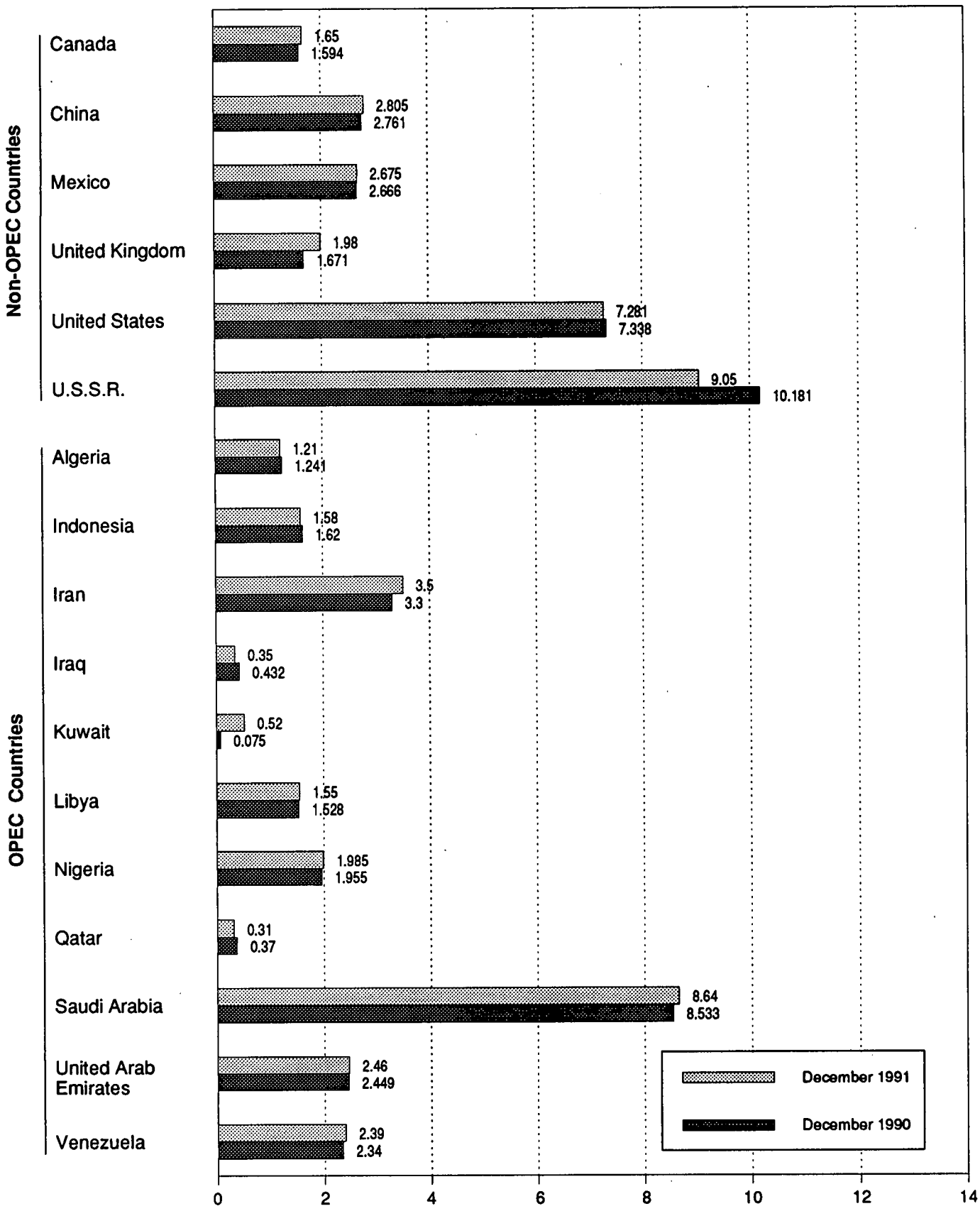
Leading Producers, Monthly



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

Figure 10.2 Crude Oil Production by Selected Country

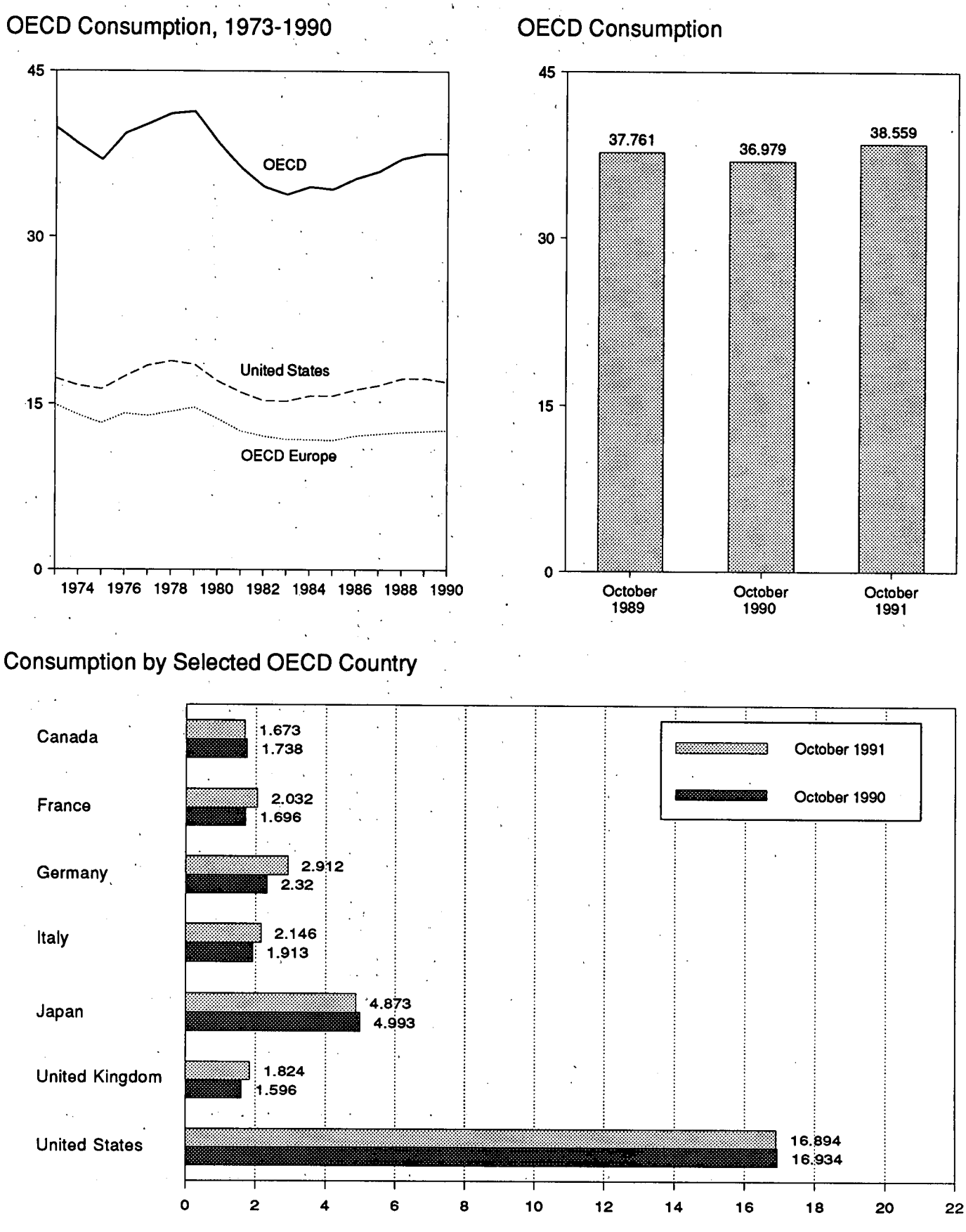
(Million Barrels per Day)



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

Figure 10.3 Petroleum Consumption in OECD Countries

(Million Barrels per Day)



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

Table 10.2 Petroleum Consumption in OECD Countries

(Thousand Barrels per Day)

	Canada	France	Germany[a]	Italy	Japan	United Kingdom	United States	OECD Europe[b]	Other OECD[c]	OECD
1973 Average	**1,729**	**2,601**	**3,055**	**2,068**	**4,949**	**2,341**	**17,308**	**14,925**	**988**	**39,900**
1974 Average	**1,779**	**2,447**	**2,748**	**2,004**	**4,864**	**2,210**	**16,653**	**13,988**	**1,095**	**38,379**
1975 Average	**1,779**	**2,252**	**2,650**	**1,855**	**4,621**	**1,911**	**16,322**	**13,217**	**1,041**	**36,980**
1976 Average	**1,818**	**2,420**	**2,877**	**1,971**	**4,837**	**1,892**	**17,461**	**14,124**	**1,119**	**39,358**
1977 Average	**1,850**	**2,294**	**2,865**	**1,897**	**4,880**	**1,905**	**18,431**	**13,916**	**1,160**	**40,237**
1978 Average	**1,902**	**2,408**	**2,927**	**1,952**	**4,945**	**1,938**	**18,847**	**14,290**	**1,204**	**41,187**
1979 Average	**1,971**	**2,463**	**3,003**	**2,039**	**5,050**	**1,971**	**18,513**	**14,667**	**1,178**	**41,379**
1980 Average	**1,873**	**2,256**	**2,707**	**1,934**	**4,960**	**1,725**	**17,056**	**13,634**	**1,072**	**38,595**
1981 Average	**1,768**	**2,023**	**2,449**	**1,874**	**4,848**	**1,590**	**16,058**	**12,515**	**1,080**	**36,269**
1982 Average	**1,578**	**1,880**	**2,372**	**1,781**	**4,582**	**1,590**	**15,296**	**12,053**	**1,008**	**34,517**
1983 Average	**1,448**	**1,835**	**2,324**	**1,750**	**4,395**	**1,531**	**15,231**	**11,765**	**954**	**33,793**
1984 Average	**1,472**	**1,754**	**2,322**	**1,646**	**4,576**	**1,649**	**15,726**	**11,736**	**989**	**34,500**
1985 Average	**1,504**	**1,775**	**2,338**	**1,717**	**4,384**	**1,634**	**15,726**	**11,681**	**976**	**34,271**
1986 Average	**1,506**	**1,772**	**2,498**	**1,738**	**4,439**	**1,649**	**16,281**	**12,102**	**951**	**35,279**
1987 Average	**1,548**	**1,789**	**2,424**	**1,855**	**4,484**	**1,603**	**16,665**	**12,255**	**958**	**35,911**
1988 Average	**1,693**	**1,797**	**2,422**	**1,836**	**4,752**	**1,697**	**17,283**	**12,427**	**939**	**37,093**
1989 January	1,690	1,924	1,880	2,029	5,225	1,702	17,269	12,204	915	37,303
February	1,771	2,090	2,173	2,133	5,607	1,770	17,920	12,976	1,063	39,336
March	1,701	1,946	2,256	1,929	5,571	1,796	17,989	12,848	971	39,080
April	1,643	1,719	2,150	1,743	4,583	1,733	16,624	11,883	999	35,732
May	1,692	1,623	2,129	1,782	4,361	1,651	16,546	11,713	1,046	35,358
June	1,672	1,763	2,238	1,874	4,457	1,694	17,497	12,319	1,064	37,009
July	1,652	1,669	2,326	1,655	4,570	1,602	16,453	11,625	1,007	35,308
August	1,841	1,652	2,503	1,727	4,586	1,723	17,360	12,355	1,051	37,193
September	1,693	1,847	2,440	1,907	4,632	1,713	16,795	12,611	922	36,653
October	1,741	1,956	2,439	2,049	4,747	1,780	17,304	13,021	948	37,761
November	1,790	2,015	2,521	2,158	5,321	1,886	17,311	13,582	995	38,999
December	1,908	2,096	2,306	2,194	6,162	1,808	18,858	13,230	1,003	41,161
Average	**1,733**	**1,857**	**2,280**	**1,930**	**4,983**	**1,738**	**17,325**	**12,531**	**998**	**37,570**
1990 January	1,671	R2,028	2,208	2,116	5,615	R1,736	16,964	R12,887	973	R38,110
February	1,771	1,982	2,390	1,969	5,942	R1,847	17,175	R13,039	R997	R38,925
March	1,708	R1,871	2,343	1,791	5,563	R1,934	17,087	R12,643	R1,082	R38,083
April	R1,604	R1,782	2,299	R1,548	4,737	R1,757	16,778	R12,130	966	R36,215
May	1,684	R1,606	2,382	1,714	4,542	R1,783	16,915	R12,169	1,039	R36,350
June	R1,643	1,761	2,504	R1,722	4,607	R1,828	17,165	R12,689	1,020	R37,124
July	1,721	R1,855	2,688	1,799	5,056	R1,842	17,084	R13,111	R1,012	R37,984
August	R1,856	1,820	2,383	R1,661	5,306	R1,764	18,050	R12,807	R1,128	R39,147
September	R1,689	R1,670	2,280	1,790	5,086	R1,630	16,512	R12,038	R1,014	R36,339
October	1,738	1,696	2,320	1,913	4,993	R1,596	16,934	R12,267	R1,048	36,979
November	1,688	1,832	2,434	2,023	5,245	R1,706	16,695	R12,777	R1,031	R37,435
December	1,594	1,967	2,353	2,021	5,986	R1,611	16,494	R12,798	R1,068	R37,940
Average	**1,697**	**1,823**	**2,382**	**1,839**	**5,221**	**R1,752**	**16,988**	**R12,616**	**1,032**	**R37,554**
1991 January	1,628	R2,137	R2,994	2,252	5,880	R1,778	16,882	R14,335	1,056	R39,781
February	1,623	R1,987	2,781	2,076	6,169	R1,792	16,284	R13,698	1,032	R38,806
March	1,472	R1,755	2,853	1,729	5,848	R1,684	16,100	R12,540	1,080	R37,040
April	R1,602	R1,766	2,949	1,860	R5,053	1,751	16,103	R12,921	R1,075	R36,753
May	R1,652	R1,741	2,909	1,745	R4,923	1,763	16,098	R12,818	R1,100	R36,591
June	R1,611	R1,814	3,264	1,630	R4,805	1,732	16,764	R13,125	R941	R37,245
July	R1,733	1,980	R2,267	R1,806	R5,053	R1,815	16,910	R12,663	R1,002	R37,361
August	R1,703	R1,717	R2,606	R1,745	R4,938	1,776	17,133	R12,739	R987	R37,500
September	R1,603	R1,800	R2,675	R1,971	R4,796	R1,717	16,704	R12,994	R1,033	R37,129
October	1,673	2,032	2,912	2,146	4,873	1,824	16,894	14,015	1,104	38,559
10-Mo. Average	**1,630**	**1,873**	**2,820**	**1,895**	**5,228**	**1,763**	**16,591**	**13,181**	**1,041**	**37,672**
1990 10-Mo. Average	**1,709**	**1,806**	**2,380**	**1,802**	**5,140**	**1,771**	**17,068**	**12,576**	**1,028**	**37,521**
1989 10-Mo. Average	**1,709**	**1,817**	**2,254**	**1,881**	**4,829**	**1,716**	**17,170**	**12,350**	**998**	**37,057**

[a] Through December 1990, the data for Germany are for the former West Germany only. Beginning with January 1991, the data for Germany are for the unified Germany, i.e., the former East Germany and West Germany.

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

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

R=Revised data.

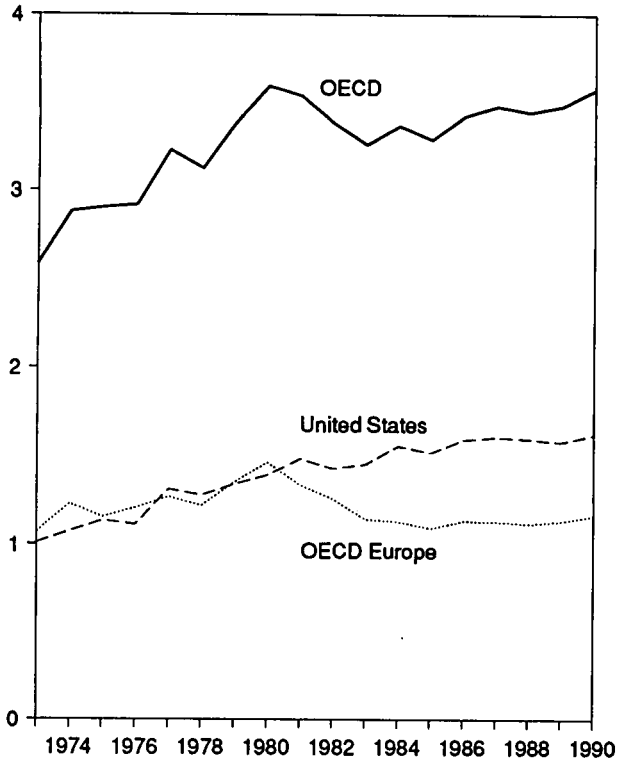
Notes: • The Organization for Economic Cooperation and Development (OECD) consists of Canada, Japan, and the United States, as well as "OECD Europe" and "Other OECD." • U.S. geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent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

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

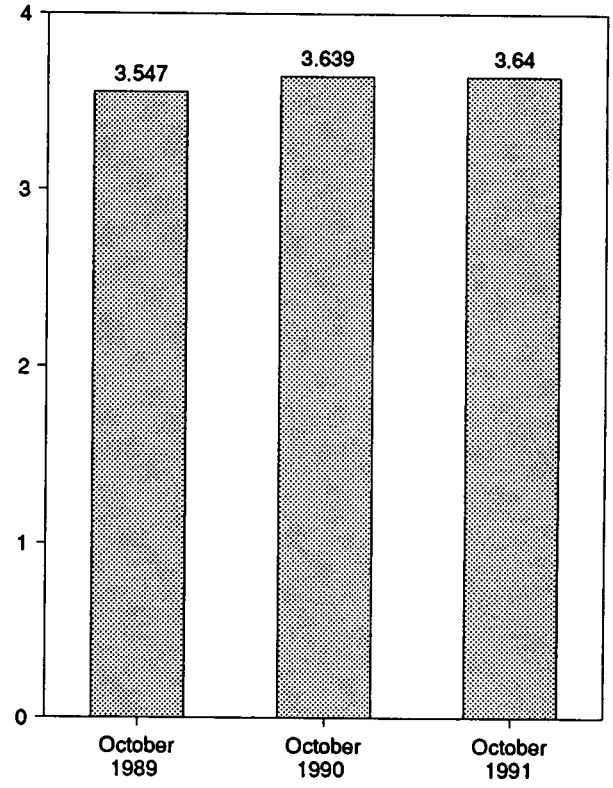
Figure 10.4 Petroleum Stocks in OECD Countries

(Billion Barrels)

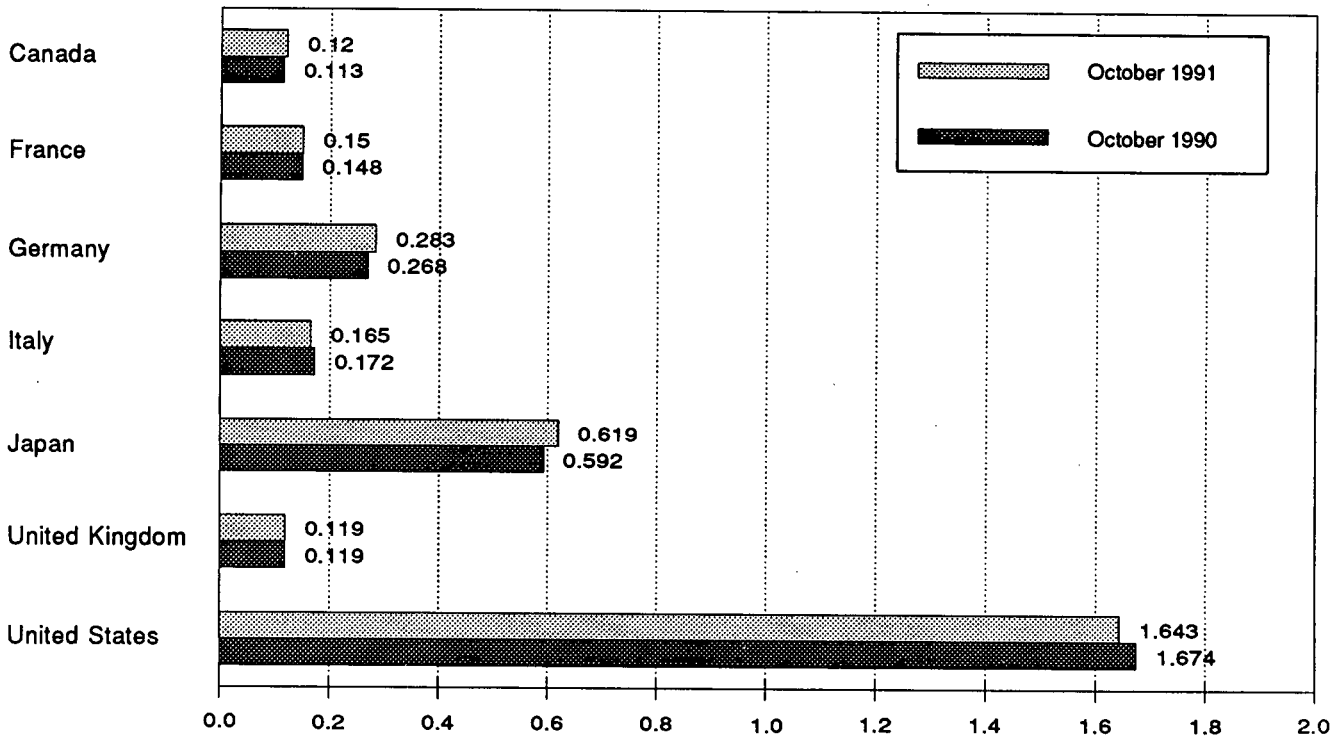
OECD Stocks, End of Year, 1973-1990



OECD Stocks, End of Month



Stocks by Selected Country, End of Month



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

Table 10.3 Petroleum Stocks in OECD Countries, End of Period

(Million Barrels)

	Canada	France	Germany[a]	Italy	Japan	United Kingdom	United States	OECD Europe[b]	Other OECD[c]	OECD
1973 Year	**140**	**201**	**181**	**152**	**303**	**156**	**1,008**	**1,070**	**67**	**2,588**
1974 Year	**145**	**249**	**213**	**167**	**370**	**191**	**1,074**	**1,227**	**64**	**2,880**
1975 Year	**174**	**225**	**187**	**143**	**375**	**165**	**1,133**	**1,154**	**67**	**2,903**
1976 Year	**153**	**234**	**208**	**143**	**380**	**165**	**1,112**	**1,205**	**68**	**2,918**
1977 Year	**167**	**239**	**225**	**161**	**409**	**148**	**1,312**	**1,268**	**68**	**3,224**
1978 Year	**144**	**201**	**238**	**154**	**413**	**157**	**1,278**	**1,219**	**68**	**3,122**
1979 Year	**150**	**226**	**272**	**163**	**460**	**169**	**1,341**	**1,353**	**75**	**3,379**
1980 Year	**164**	**243**	**319**	**170**	**495**	**168**	**1,392**	**1,464**	**72**	**3,587**
1981 Year	**161**	**214**	**297**	**167**	**482**	**143**	**1,484**	**1,337**	**67**	**3,531**
1982 Year	**136**	**193**	**272**	**179**	**484**	**125**	**1,430**	**1,258**	**68**	**3,376**
1983 Year	**121**	**153**	**249**	**149**	**470**	**118**	**1,454**	**1,142**	**68**	**3,255**
1984 Year	**128**	**152**	**239**	**159**	**479**	**112**	**1,556**	**1,130**	**69**	**3,362**
1985 Year	**113**	**139**	**233**	**157**	**494**	**123**	**1,519**	**1,092**	**66**	**3,284**
1986 Year	**111**	**127**	**252**	**155**	**509**	**124**	**1,593**	**1,133**	**72**	**3,418**
1987 Year	**126**	**127**	**259**	**169**	**540**	**121**	**1,607**	**1,130**	**72**	**3,474**
1988 Year	**116**	**140**	**266**	**155**	**538**	**112**	**1,597**	**1,118**	**71**	**3,440**
1989 January	117	138	277	159	547	121	1,620	1,133	69	3,486
February	116	129	272	154	548	121	1,601	1,103	69	3,437
March	111	123	270	148	552	115	1,568	1,085	68	3,384
April	118	131	271	152	549	114	1,596	1,091	71	3,425
May	117	132	272	152	553	121	1,623	1,111	73	3,476
June	119	128	269	154	557	112	1,608	1,096	71	3,450
July	125	133	270	155	557	119	1,649	1,120	70	3,521
August	123	135	271	165	567	118	1,654	1,133	72	3,549
September	121	135	274	165	572	120	1,667	1,137	66	3,563
October	117	134	272	165	580	117	1,658	1,121	70	3,547
November	121	139	267	163	588	117	1,663	1,125	75	3,571
December	**114**	**138**	**271**	**164**	**577**	**118**	**1,581**	**1,133**	**71**	**3,476**
1990 January	112	133	273	162	574	119	1,630	R1,128	68	3,513
February	116	134	267	158	569	116	1,635	1,134	74	3,528
March	121	131	268	163	581	121	1,642	1,126	71	3,542
April	126	135	270	159	578	114	1,640	R1,146	77	R3,567
May	121	146	268	155	590	125	1,672	1,174	77	R3,634
June	119	147	270	160	579	120	1,685	R1,179	75	R3,637
July	117	149	271	155	578	119	1,709	R1,169	71	R3,645
August	114	150	274	167	583	122	1,699	1,181	72	R3,649
September	R112	150	269	173	585	123	1,698	R1,177	73	R3,645
October	113	148	268	172	592	119	1,674	1,184	76	3,639
November	116	142	263	167	596	117	1,654	1,150	72	3,588
December	**121**	**R140**	**265**	**172**	**590**	**112**	**1,621**	**1,163**	**73**	**3,569**
1991 January	118	133	276	173	585	R115	1,587	R1,159	72	R3,521
February	115	136	276	169	567	R118	1,574	R1,154	71	R3,482
March	119	141	278	177	587	123	1,559	R1,176	74	R3,515
April	111	137	274	176	579	119	1,578	1,162	74	R3,505
May	108	137	277	173	580	112	1,628	R1,151	74	R3,541
June	108	R143	272	172	R585	R117	1,634	R1,154	71	R3,551
July	119	145	283	168	588	112	1,634	R1,165	72	R3,578
August	R116	R151	282	170	604	117	1,645	R1,180	76	R3,621
September	118	145	285	169	616	119	1,662	R1,183	76	R3,654
October	120	150	283	165	619	119	1,643	1,184	75	3,640

[a] Through December 1990, the data for Germany are for the former West Germany only. Beginning with January 1991, the data for Germany are for the unified Germany, i.e., the former East Germany and West Germany.

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

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

R=Revised data.

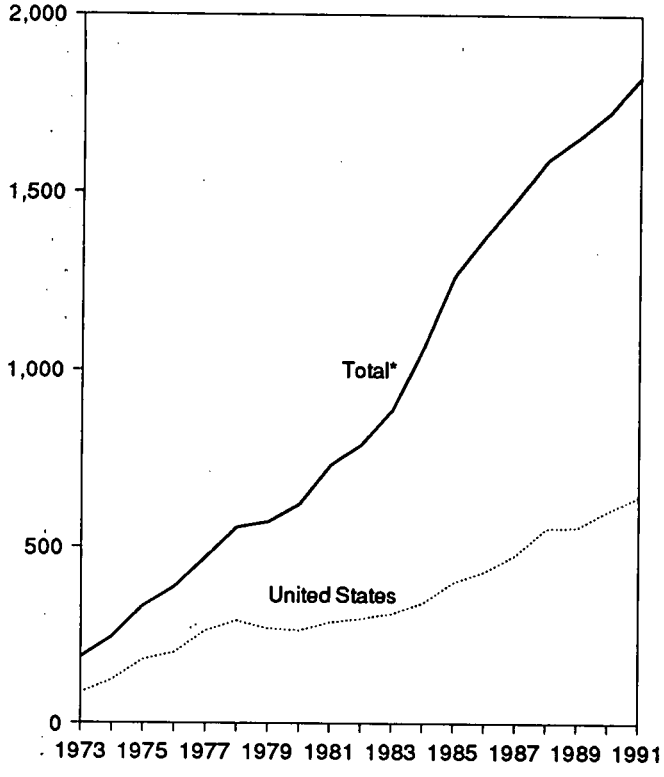
Notes: • Petroleum stocks include crude oil (including strategic reserves), unfinished oils, natural gas plant liquids, and refined products. Petroleum stocks include all nonmilitary petroleum held for storage, regardless of ownership, within each country in bulk terminals, refinery tanks, pipeline tankage, intercoastal tankers, tankers in port, and inland ship bunkers. Data exclude oil held in pipelines (except for the United States), rail and truck cars, sea-going ships' bunkers, service stations, retail stores, and tankers at sea. • The Organization for Economic Cooperation and Development (OECD) consists of Canada, Japan, and the United States, as well as "OECD Europe" and "Other OECD." • U.S. geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding. • In the United States in January 1975, 1981, and 1983, numerous respondents were added to bulk terminal and pipeline surveys, thereby affecting subsequent stocks reported. Using the new basis, the end-of-year U.S. stocks, in million barrels, would have been 1,121 in 1974, 1,425 in 1980, and 1,461 in 1982. • Data through 1989 are final. Subsequent data are preliminary.

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

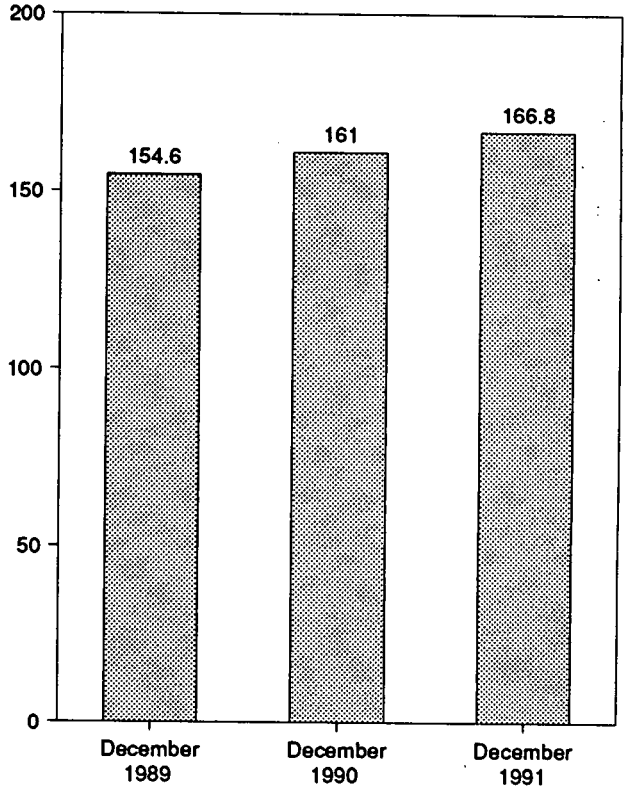
Figure 10.5 Nuclear Electricity Gross Generation

(Billion Kilowatthours)

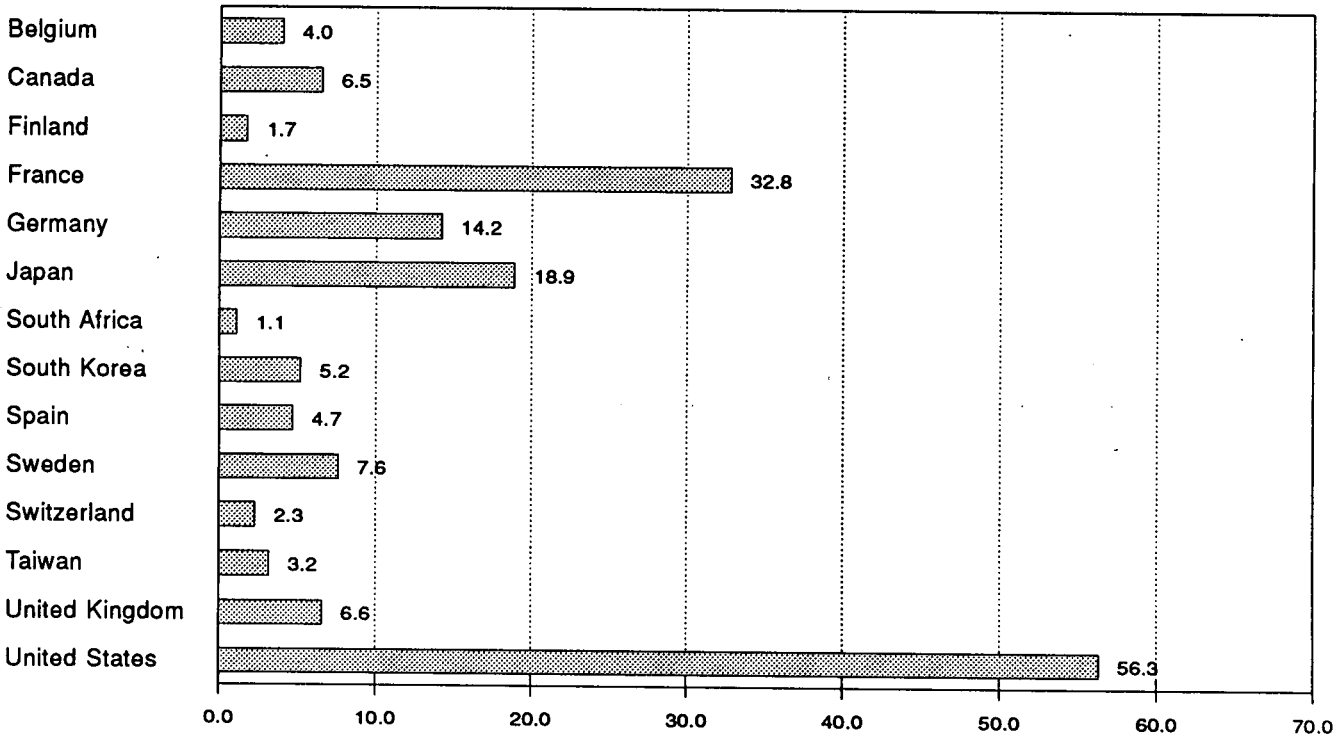
U.S. and Total* Generation, 1973-1991



Total* Generation



Generation by Selected Country, December 1991



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

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

Sources: Tables 10.4a-10.4c.

Table 10.4a Nuclear Electricity Gross Generation: Argentina Through India

(Billion Kilowatthours)

	Argentina	Belgium	Brazil	Canada	Finland	France	Germany[a]	India
1973 Total	0.0	0.0	0.0	15.3	0.0	14.7	11.9	2.5
1974 Total	1.0	.1	.0	15.4	.0	14.7	12.0	1.9
1975 Total	2.5	6.8	.0	13.2	.0	18.3	21.7	2.5
1976 Total	2.6	10.0	.0	18.0	.0	15.8	24.5	3.2
1977 Total	1.6	11.9	.0	26.6	2.7	17.9	36.0	2.8
1978 Total	2.9	12.5	.0	33.0	3.3	30.6	35.7	2.3
1979 Total	2.7	11.4	.0	38.4	6.7	39.9	42.2	3.2
1980 Total	2.3	12.5	.0	40.4	7.0	61.2	43.7	2.9
1981 Total	2.8	12.8	.0	43.3	14.5	105.2	53.4	3.1
1982 Total	1.9	15.6	.1	42.6	16.5	108.9	63.4	2.2
1983 Total	3.4	24.1	.2	53.0	17.4	144.2	65.8	2.9
1984 Total	4.5	27.7	2.1	53.8	18.5	191.2	92.6	4.1
1985 Total	5.8	34.5	3.4	62.9	18.8	224.0	125.8	4.5
1986 Total	5.7	38.6	.1	74.6	18.8	254.3	118.9	5.1
1987 Total	5.2	41.9	1.0	80.6	19.4	265.5	130.2	5.5
1988 Total	5.1	43.1	.3	85.6	19.3	274.9	145.2	6.1
1989 January	.5	4.1	.2	8.1	1.8	30.5	13.5	.3
February	.4	3.4	.2	6.9	1.6	27.1	13.5	.3
March	.5	3.6	.2	7.7	1.8	27.8	14.8	.3
April	.4	3.0	.3	7.3	1.7	25.5	13.4	.4
May	.5	3.0	(s)	6.2	1.2	23.2	11.1	.4
June	.5	3.0	.2	5.8	1.6	23.9	9.6	.4
July	.5	3.2	.2	7.1	1.4	23.7	8.7	.3
August	(s)	3.7	.0	6.9	1.5	21.0	11.4	.2
September	.5	3.3	.2	6.6	1.3	22.6	11.4	.3
October	.5	3.6	.0	6.6	1.4	24.6	13.5	.4
November	.5	3.6	.0	6.3	1.7	24.9	14.2	.5
December	.4	3.6	.0	7.6	1.8	27.8	14.4	.4
Total	5.0	41.2	1.6	83.2	18.8	302.5	149.6	4.0
1990 January	.5	3.9	.1	7.3	1.8	28.7	15.4	.4
February	.4	3.5	.2	5.8	1.6	23.5	12.8	.5
March	.7	4.2	.0	6.2	1.7	25.8	13.2	.5
April	.6	3.6	.1	5.8	1.7	26.6	12.8	.5
May	.6	2.9	.2	4.4	1.3	23.9	12.2	.4
June	.7	2.9	.2	5.1	1.3	23.3	9.8	.4
July	.7	3.5	.1	6.6	1.6	23.9	10.0	.5
August	.7	3.7	.3	6.2	1.2	23.3	9.3	.5
September	.5	3.3	.1	5.5	1.4	26.5	9.6	.5
October	.6	3.4	.2	7.1	1.8	27.6	13.0	.5
November	.7	3.6	.3	7.0	1.7	25.8	13.9	.5
December	.7	4.3	.2	7.2	1.8	30.4	15.2	.6
Total	7.4	42.7	2.0	75.8	18.9	316.4	147.2	5.9
1991 January	.5	4.2	.2	7.6	1.8	33.5	15.2	.5
February	.6	3.9	.2	7.4	1.6	30.0	13.6	.4
March	.6	4.2	.2	7.8	1.8	28.4	14.3	.6
April	.7	3.5	.2	6.7	1.4	25.3	12.5	.4
May	.7	3.4	.2	[R]7.2	1.5	25.3	10.6	.4
June	.7	2.9	.2	7.1	1.6	23.6	10.0	.4
July	.7	3.5	.2	7.7	1.7	23.9	11.7	.3
August	[E].7	3.8	.0	8.6	1.4	24.5	10.0	.4
September	[E].7	3.0	.0	6.7	1.3	25.8	10.8	.4
October	[E].8	3.2	.0	6.6	1.7	28.3	11.7	.5
November	[E].7	3.3	.0	6.3	1.7	29.8	12.9	.6
December	[E].5	4.0	.0	6.5	1.7	32.8	14.2	.5
Total	[E]8.1	42.9	1.4	86.2	19.2	331.2	147.3	5.4

See footnotes at end of Table 10.4c.

Table 10.4b Nuclear Electricity Gross Generation: Italy Through Spain

(Billion Kilowatthours)

	Italy	Japan	Mexico	Netherlands	Pakistan	South Africa	South Korea	Spain
1973 Total	3.1	9.4	0.0	1.1	0.5	0.0	0.0	6.5
1974 Total	3.4	18.9	.0	3.3	.6	.0	.0	7.2
1975 Total	3.8	21.3	.0	3.3	.5	.0	.0	7.5
1976 Total	3.8	36.6	.0	3.9	.5	.0	.0	7.6
1977 Total	3.4	28.2	.0	3.7	.3	.0	.1	6.5
1978 Total	4.5	53.1	.0	4.1	.2	.0	2.3	7.6
1979 Total	2.6	62.0	.0	3.5	(s)	.0	3.2	6.7
1980 Total	2.2	82.8	.0	4.2	.1	.0	3.5	5.2
1981 Total	2.7	86.0	.0	3.7	.2	.0	2.9	9.4
1982 Total	6.8	104.5	.0	3.9	.1	.0	3.8	8.8
1983 Total	5.8	109.1	.0	3.6	.2	.0	9.0	10.7
1984 Total	6.9	127.2	.0	3.8	.3	4.2	11.8	23.1
1985 Total	7.0	152.0	.0	3.9	.3	5.7	16.5	28.0
1986 Total	8.7	164.8	.0	4.2	.5	9.3	26.1	37.5
1987 Total	.2	182.8	.0	3.6	.3	6.6	37.8	41.2
1988 Total	.0	173.6	.0	3.7	.2	11.1	38.7	49.2
1989 January	.0	15.2	.0	.4	.0	1.1	3.4	4.9
February	.0	14.4	.0	(s)	.0	.5	3.7	4.2
March	.0	16.2	.0	.2	.0	.6	4.4	4.2
April	.0	13.3	.0	.4	.0	.7	3.7	4.8
May	.0	13.8	.0	.4	.0	.7	3.8	4.7
June	.0	14.3	.0	.4	.0	1.1	3.4	4.2
July	.0	17.4	.0	.4	.0	1.1	4.0	5.4
August	.0	18.1	.0	.4	.0	1.1	4.9	5.2
September	.0	15.5	.0	.4	.0	1.3	4.1	4.6
October	.0	14.8	.0	.4	(s)	1.3	4.5	4.7
November	.0	14.7	.0	.4	(s)	1.2	3.6	4.6
December	.0	16.0	.0	.4	(s)	1.1	3.6	4.7
Total	.0	183.7	.0	4.0	.1	11.7	47.2	56.1
1990 January	.0	15.0	.0	.3	(s)	.6	4.0	5.4
February	.0	12.0	.0	(s)	(s)	.5	4.6	4.5
March	.0	14.6	.0	(s)	(s)	.5	4.8	4.5
April	.0	15.6	.0	(s)	(s)	.6	4.3	4.8
May	.0	16.6	.0	.4	.1	1.2	4.0	4.1
June	.0	16.0	.0	.3	.1	1.2	4.4	3.5
July	.0	18.5	.0	.4	.1	1.1	5.1	4.4
August	.0	19.2	.4	.4	.1	.8	5.2	5.0
September	.0	15.8	.4	.4	(s)	.6	4.2	4.1
October	.0	15.8	.5	.4	.0	.6	4.4	3.9
November	.0	14.8	.4	.4	(s)	.5	4.0	4.7
December	.0	16.7	.4	.4	(s)	.6	3.8	5.4
Total	.0	191.9	2.1	3.5	.4	8.9	52.9	54.2
1991 January	.0	18.0	.5	.3	(s)	.6	4.1	5.3
February	.0	[R]15.2	.4	.2	(s)	.5	4.5	4.6
March	.0	15.6	.5	.1	(s)	1.1	4.5	4.3
April	.0	[R]12.8	.5	.2	(s)	.7	4.1	4.2
May	.0	12.6	.5	.4	.1	.7	4.1	4.8
June	.0	14.8	.4	.4	(s)	.6	4.8	4.4
July	.0	19.5	.4	.4	(s)	.7	5.5	4.7
August	.0	22.1	.4	.4	(s)	.7	5.2	5.2
September	.0	19.7	.0	.1	(s)	.8	4.7	4.5
October	.0	19.1	.0	(s)	.1	1.2	4.9	4.7
November	.0	17.6	.2	.4	(s)	1.1	4.8	4.4
December	.0	18.9	.5	.4	(s)	1.1	5.2	4.7
Total	.0	205.8	4.2	3.3	.4	9.7	56.3	55.6

See footnotes at end of Table 10.4c.

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

(Billion Kilowatthours)

	Sweden	Switzerland	Taiwan	United Kingdom[b]	Total[c] Excluding U.S.	United States	Total[c]
1973 Total	**2.1**	**6.2**	**0.0**	**28.2**	**101.4**	**87.8**	**189.3**
1974 Total	**2.3**	**7.0**	**.0**	**33.8**	**121.7**	**124.3**	**246.0**
1975 Total	**12.0**	**7.7**	**.0**	**30.5**	**151.8**	**182.3**	**334.1**
1976 Total	**16.0**	**7.9**	**.0**	**36.8**	**187.1**	**201.8**	**388.9**
1977 Total	**19.9**	**8.1**	**.1**	**38.1**	**207.8**	**264.2**	**472.0**
1978 Total	**23.8**	**8.3**	**2.7**	**36.6**	**263.5**	**292.4**	**555.9**
1979 Total	**21.0**	**11.8**	**6.3**	**38.5**	**300.1**	**270.6**	**570.7**
1980 Total	**26.7**	**14.3**	**8.2**	**37.2**	**354.3**	**265.4**	**619.8**
1981 Total	**37.7**	**15.2**	**10.7**	**38.9**	**442.4**	**288.5**	**730.9**
1982 Total	**38.8**	**15.0**	**13.1**	**44.1**	**489.9**	**298.6**	**788.5**
1983 Total	**40.4**	**15.5**	**18.9**	**49.6**	**573.9**	**313.6**	**887.5**
1984 Total	**51.3**	**16.3**	**24.3**	**54.1**	**717.7**	**343.8**	**1,061.5**
1985 Total	**58.6**	**22.4**	**28.7**	**59.6**	**862.4**	**402.6**	**1,265.0**
1986 Total	**69.9**	**22.5**	**26.9**	**58.2**	**944.8**	**432.9**	**1,377.8**
1987 Total	**67.2**	**23.0**	**33.1**	**56.2**	**1,001.2**	**479.5**	**1,480.7**
1988 Total	**69.4**	**22.7**	**29.9**	**59.4**	**1,037.5**	**554.1**	**1,591.6**
1989 January	7.2	2.3	2.4	6.8	102.7	48.7	151.4
February	6.5	2.1	1.8	6.3	92.9	40.8	133.7
March	6.7	2.3	1.7	6.7	99.8	41.8	141.6
April	5.6	2.2	2.2	5.9	90.9	35.3	126.2
May	3.9	2.0	2.1	5.7	82.7	40.8	123.5
June	3.3	1.2	2.0	6.7	81.6	45.1	126.7
July	2.6	1.1	2.7	4.8	84.4	55.2	139.7
August	3.3	1.0	2.9	4.8	86.4	57.6	144.0
September	5.0	1.9	2.5	6.6	88.2	47.0	135.2
October	6.8	2.3	2.7	5.2	93.2	45.7	138.8
November	7.0	2.2	2.6	5.3	93.2	45.6	138.8
December	7.5	2.3	2.8	6.9	101.3	53.3	154.6
Total	**65.6**	**22.8**	**28.3**	**71.6**	**1,097.1**	**557.0**	**1,654.1**
1990 January	7.4	2.3	2.6	6.0	101.7	57.7	159.4
February	6.6	2.1	2.1	5.8	86.6	52.3	138.8
March	6.4	2.3	2.6	6.2	94.2	48.4	142.6
April	5.4	2.2	2.2	5.2	92.1	40.6	132.7
May	4.8	2.1	2.8	5.2	87.2	45.1	132.3
June	4.3	1.3	2.9	5.2	82.9	48.5	131.4
July	2.7	1.7	3.5	4.3	88.9	54.7	143.6
August	4.2	1.0	3.4	4.9	89.7	57.9	147.6
September	5.2	1.9	3.0	5.9	88.9	51.1	140.0
October	6.7	2.3	3.0	4.8	96.4	45.6	142.0
November	7.0	2.2	2.3	6.4	96.3	47.4	143.7
December	7.4	2.3	2.4	6.9	106.8	54.2	161.0
Total	**68.2**	**23.6**	**32.9**	**66.6**	**1,121.5**	**603.4**	**1,724.9**
1991 January	7.6	2.3	2.4	6.6	111.2	56.6	167.8
February	6.9	2.1	2.2	6.8	R101.2	50.2	R151.4
March	7.6	2.3	2.9	6.7	103.3	51.6	154.9
April	6.9	2.2	2.5	5.0	R89.6	43.8	R133.4
May	5.7	2.0	2.8	4.5	R87.3	49.2	R136.6
June	4.7	1.1	3.2	6.1	87.0	56.9	143.9
July	4.6	1.5	3.2	5.1	95.4	63.7	159.1
August	5.2	1.0	3.6	5.4	E98.6	61.4	E160.0
September	5.5	1.8	3.1	6.6	E95.5	54.4	E150.0
October	7.2	2.3	3.1	5.9	E101.2	50.2	E151.4
November	7.3	2.2	3.0	5.2	E101.7	48.7	E150.4
December	7.6	2.3	3.2	6.6	E110.5	56.3	E166.8
Total	**76.8**	**22.9**	**35.3**	**70.4**	**E1,182.5**	**643.0**	**E1,825.6**

[a] Through December 1990, the data for Germany are for the former West Germany only. Beginning with January 1991, the data for Germany are for the unified Germany, i.e., the former East Germany and West Germany.

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

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

R=Revised data. E=Estimate. (s)=Less than 0.05 billion kilowatthours.

Notes: • Net figures are generally less than gross figures by about 5 percent, the difference being the energy consumed by the generating plants themselves. • U.S. geographic coverage is the 50 States and the District of Columbia. • Monthly data may not sum to annual totals due to independent rounding, and precommercial generation is included in the annual totals but not in the monthly data. • Data for countries may not sum to world totals due to independent rounding.

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

Sources for Table 10.1b

• **United States:** Table 3.1a.

• **Other Countries: Annual Data: 1973-1979**—Energy Information Administration (EIA), *International Energy Annual 1981*, Table 8. **1980**—EIA, *International Energy Annual 1989*, Table 1. **1981-1990**—EIA, *International Energy Annual 1990*, Table 1. **Monthly Data:** *Petroleum Intelligence Weekly*, the *Oil and Gas Journal*, and other industry sources.

• **World: Annual Data: 1973-1979**—EIA, *International Energy Annual 1981*, Table 8. **1980**—EIA, *International Energy Annual 1989*, Table 1. **1981-1990**—EIA, *International Energy Annual 1990*, Table 1. **Monthly Data: 1989**—EIA, Office of Energy Markets and End Use, International Energy Database. **1990 forward**—EIA, *International Petroleum Statistics Report*, sum of all countries' monthly data.

Appendix. Conversion Factors

Using Conversion Factors

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

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

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

Thermal conversion factors for hydrocarbon mixes (Table A2) are weighted averages of the thermal conversion factors for each hydrocarbon included in the mix. For example, in calculating the thermal conversion factor for a 60/40 butane/propane mixture, the thermal conversion factor for butane is weighted 1.5 times more heavily than the thermal conversion factor for propane.

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

Table A1. Physical Conversion Factors for Energy Units

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

Table A2. Approximate Heat Content of Petroleum Products

(Million Btu per Barrel)

Petroleum Product	Heat Content	Petroleum Product	Heat Content
Asphalt	6.636	Petrochemical Feedstocks	
Aviation Gasoline	5.048	Naphtha Less Than 401° F	5.248
Butane	4.326	Other Oils Equal to or Greater Than 401° F	5.825
Butane-Propane Mixture[a]	4.130	Still Gas	6.000
Distillate Fuel Oil	5.825	Petroleum Coke	6.024
Ethane	3.082	Plant Condensate	5.418
Ethane-Propane Mixture[b]	3.308	Propane	3.836
Isobutane	3.974	Residual Fuel Oil	6.287
Jet Fuel, Kerosene Type	5.670	Road Oil	6.636
Jet Fuel, Naphtha Type	5.355	Special Naphthas	5.248
Kerosene	5.670	Still Gas	6.000
Lubricants	6.065	Unfinished Oils	5.825
Motor Gasoline	5.253	Unfractionated Stream	5.418
Natural Gasoline and Isopentane	4.620	Waxes	5.537
Pentanes Plus	4.620	Miscellaneous	5.796

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

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

(Million Btu per Barrel)

	Crude Oil			Crude Oil and Products		Natural Gas Plant Liquids
	Production	Imports	Exports	Imports	Exports	
1973	5.800	5.817	5.800	5.897	5.752	4.049
1974	5.800	5.827	5.800	5.884	5.774	4.011
1975	5.800	5.821	5.800	5.858	5.748	3.984
1976	5.800	5.808	5.800	5.856	5.745	3.964
1977	5.800	5.810	5.800	5.834	5.797	3.941
1978	5.800	5.802	5.800	5.839	5.808	3.925
1979	5.800	5.810	5.800	5.810	5.832	3.955
1980	5.800	5.812	5.800	5.796	5.820	3.914
1981	5.800	5.818	5.800	5.775	5.821	3.930
1982	5.800	5.826	5.800	5.775	5.820	3.872
1983	5.800	5.825	5.800	5.774	5.800	3.839
1984	5.800	5.823	5.800	5.745	5.850	3.812
1985	5.800	5.832	5.800	5.736	5.814	3.815
1986	5.800	5.903	5.800	5.808	5.832	3.797
1987	5.800	5.901	5.800	5.820	5.858	3.804
1988	5.800	5.900	5.800	5.820	5.840	3.800
1989	5.800	5.906	5.800	5.833	5.857	3.826
1990	5.800	R5.934	5.800	R5.849	5.833	R3.822
1991[a]	5.800	R5.948	5.800	R5.878	R5.823	R3.805

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

Table A4. Approximate Heat Content of Petroleum Product Weighted Averages

(Million Btu per Barrel)

	Consumption							
	Residential and Commercial	Industrial	Transportation	Electric Utilities	Total	Imports	Exports	LPG Consumption
1973	5.387	5.568	5.395	6.245	5.515	5.983	5.752	3.746
1974	5.377	5.538	5.394	6.238	5.504	5.959	5.773	3.730
1975	5.358	5.528	5.392	6.250	5.494	5.935	5.747	3.715
1976	5.383	5.538	5.395	6.251	5.504	5.980	5.743	3.711
1977	5.389	5.555	5.400	6.249	5.518	5.908	5.796	3.677
1978	5.382	5.553	5.404	6.251	5.519	5.955	5.814	3.669
1979	5.471	5.418	5.428	6.258	5.494	5.811	5.864	3.680
1980	5.468	5.376	5.440	6.254	5.479	5.748	5.841	3.674
1981	5.409	5.313	5.432	6.258	5.448	5.659	5.837	3.643
1982	5.392	5.263	5.422	6.258	5.415	5.664	5.829	3.615
1983	5.286	5.273	5.415	6.255	5.406	5.677	5.800	3.614
1984	5.384	5.223	5.422	6.251	5.395	5.613	5.867	3.599
1985	5.326	5.221	5.423	6.247	5.387	5.572	5.819	3.603
1986	5.357	5.286	5.427	6.257	5.418	5.624	5.839	3.640
1987	5.318	5.253	5.430	6.249	5.403	5.599	5.860	3.659
1988	5.323	5.247	5.434	6.250	5.410	5.618	5.842	3.652
1989	5.260	5.233	5.440	6.241	5.410	5.641	5.869	3.683
1990	5.212	5.272	5.445	6.247	5.411	5.614	5.838	3.625
1991[a]	R5.167	R5.205	R5.440	R6.248	R5.387	R5.652	R5.826	R3.610

[a] Preliminary.
R=Revised data.
Note: Weighted averages of the products included in each category are calculated by using heat content values shown in Table A1.
Source: See "Thermal Conversion Factor Source Documentation," which follows Table A9.

Table A5. Approximate Heat Content of Natural Gas

(Btu per Cubic Foot)

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

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

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

	Production	Consumption					Imports	Exports
		Residential and Commercial	Coke Plants	Other Industrial[a]	Electric Utilities[b]	Total		
1973	23.376	22.831	26.780	22.586	22.246	23.057	25.000	26.596
1974	23.072	22.479	26.778	22.419	21.781	22.677	25.000	26.700
1975	22.897	22.261	26.782	22.436	21.642	22.506	25.000	26.562
1976	22.855	22.774	26.781	22.530	21.679	22.498	25.000	26.601
1977	22.597	22.919	26.787	22.322	21.508	22.265	25.000	26.548
1978	22.248	22.466	26.789	22.207	21.275	22.017	25.000	26.478
1979	22.454	22.242	26.788	22.452	21.364	22.100	25.000	26.548
1980	22.415	22.543	26.790	22.690	21.295	21.947	25.000	26.384
1981	22.308	22.474	26.794	22.585	21.085	21.713	25.000	26.160
1982	22.239	22.695	26.797	22.712	21.194	21.674	25.000	26.223
1983	22.052	22.775	26.798	22.691	21.133	21.576	25.000	26.291
1984	22.010	22.844	26.799	22.543	21.101	21.573	25.000	26.402
1985	21.870	22.646	26.798	22.020	20.959	21.366	25.000	26.307
1986	21.913	22.947	26.798	22.198	21.084	21.462	25.000	26.292
1987	21.922	23.404	26.799	22.381	21.136	21.517	25.000	26.291
1988	21.823	23.571	26.799	22.360	20.900	21.328	25.000	26.299
1989	21.765	23.650	26.800	22.347	20.848	21.272	25.000	26.160
1990	21.827	23.137	26.799	22.457	20.929	21.331	25.000	26.202
1991[c]	R21.690	R23.204	R26.800	R22.276	R20.801	R21.169	25.000	R26.188

[a] Includes transportation.
[b] Data shown in this column are not the same as those shown in the *Electric Power Monthly* (EPM). The EPM data report coal receipts; the data shown here represent coal consumption.
[c] Preliminary.
R=Revised data.
Source: See "Thermal Conversion Factor Source Documentation," which follows Table A9.

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

	Production	Consumption					Imports	Exports
		Residential and Commercial	Coke Plants	Other Industrial[a]	Electric Utilities	Total		
1973	23.391	22.887	26.800	22.585	22.262	23.073	25.000	26.612
1974	23.087	22.523	26.800	22.420	21.799	22.694	25.000	26.716
1975	22.910	22.258	26.800	22.439	21.659	22.522	25.000	26.573
1976	22.863	22.819	26.800	22.528	21.692	22.509	25.000	26.613
1977	22.597	22.594	26.800	22.290	21.521	22.266	25.000	26.561
1978	22.242	22.078	26.800	22.175	21.284	22.014	25.000	26.501
1979	22.449	21.884	26.800	22.436	21.372	22.100	25.000	26.570
1980	22.411	22.488	26.800	22.690	21.301	21.950	25.000	26.404
1981	22.301	22.010	26.800	22.572	21.091	21.710	25.000	26.176
1982	22.233	22.226	26.800	22.695	21.200	21.670	25.000	26.231
1983	22.048	22.438	26.800	22.680	21.141	21.576	25.000	26.300
1984	22.005	22.406	26.800	22.525	21.108	21.570	25.000	26.410
1985	21.867	22.568	26.800	22.013	20.965	21.368	25.000	26.320
1986	21.908	22.669	26.800	22.185	21.091	21.462	25.000	26.308
1987	21.918	22.800	26.800	22.360	21.143	21.514	25.000	26.304
1988	21.817	23.135	26.800	22.341	20.905	21.324	25.000	26.308
1989	21.759	22.917	26.800	22.324	20.854	21.268	25.000	26.166
1990	21.819	22.678	26.800	22.444	20.935	21.330	25.000	26.207
1991[b]	R21.687	R22.579	26.800	R22.260	R20.807	R21.167	25.000	R26.192

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

Table A8. Approximate Heat Content of Anthracite and Coal Coke

(Million Btu per Short Ton)

	Anthracite					Coal Coke Imports and Exports
		Consumption			Imports and Exports	
	Production	Non-Electric Utility Users	Electric Utilities	Total		
1973	22.132	22.674	17.920	21.464	25.400	24.800
1974	21.711	22.330	17.200	20.919	25.400	24.800
1975	21.582	22.272	17.064	20.762	25.400	24.800
1976	22.045	22.618	17.526	21.254	25.400	24.800
1977	22.661	24.101	17.244	22.066	25.400	24.800
1978	23.079	24.388	17.104	22.398	25.400	24.800
1979	23.170	24.272	17.454	22.069	25.400	24.800
1980	22.869	22.719	17.652	21.405	25.400	24.800
1981	23.291	23.749	18.168	22.080	25.400	24.800
1982	23.289	24.578	18.160	22.518	25.400	24.800
1983	22.734	24.536	16.516	21.583	25.400	24.800
1984	23.107	25.128	17.018	22.322	25.400	24.800
1985	22.428	23.031	16.784	20.817	25.400	24.800
1986	23.084	24.399	15.578	21.512	25.400	24.800
1987	23.108	26.293	15.962	22.435	25.400	24.800
1988	23.266	26.021	17.312	22.423	25.400	24.800
1989	23.385	27.196	16.310	22.623	25.400	24.800
1990	22.574	25.199	16.140	21.668	25.400	24.800
1991[a]	R22.572	R26.011	R15.858	R21.706	25.400	24.800

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

Table A9. Approximate Heat Rates for Electricity

(Btu per Kilowatthour)

	By Type of Generation			Electricity Consumption
	Fossil Fuel Steam-Electric Power Plant Generation[a]	Nuclear Power Plant Generation	Geothermal Energy Power Plant Generation	
1973	10,389	10,903	21,674	3,412
1974	10,442	11,161	21,674	3,412
1975	10,406	11,013	21,611	3,412
1976	10,373	11,047	21,611	3,412
1977	10,435	10,769	21,611	3,412
1978	10,361	10,941	21,611	3,412
1979	10,353	10,879	21,545	3,412
1980	10,388	10,908	21,639	3,412
1981	10,453	11,030	21,639	3,412
1982	10,454	11,073	21,629	3,412
1983	10,520	10,905	21,290	3,412
1984	10,323	10,843	21,303	3,412
1985	10,339	10,813	21,263	3,412
1986	10,261	10,799	21,263	3,412
1987	10,253	10,776	21,263	3,412
1988	10,235	10,743	21,096	3,412
1989	10,331	10,724	21,096	3,412
1990	R10,335	R10,680	21,096	3,412
1991[b]	R10,335	R10,680	21,096	3,412

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

Thermal Conversion Factor Source Documentation

Approximate Heat Content of Petroleum Products

Asphalt. The Energy Information Administration (EIA) adopted the thermal conversion factor of 6.636 million British thermal units (Btu) per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956.*

Aviation Gasoline. EIA adopted the Bureau of Mines thermal conversion factor of 5.048 million Btu per barrel as published for "Gasoline, Aviation" by the Texas Eastern Transmission Corporation in Appendix V of *Competition and Growth in American Energy Markets 1947-1985,* a 1968 release of historical and projected statistics.

Butane. EIA adopted the Bureau of Mines thermal conversion factor of 4.326 million Btu per barrel as published in the *California Oil World and Petroleum Industry,* First Issue, April 1942.

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

Distillate Fuel Oil. EIA adopted the Bureau of Mines thermal conversion factor of 5.825 million Btu per barrel as reported in a Bureau of Mines internal memorandum, *Bureau of Mines Standard Average Heating Value of Various Fuels, adopted January 3, 1950.*

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

Ethane-Propane Mixture. EIA calculated 3.308 million Btu per barrel based on an assumed mixture of 70 percent ethane and 30 percent propane. See "Ethane" and "Propane."

Isobutane. EIA adopted the Bureau of Mines thermal conversion factor of 3.974 million Btu per barrel as published in the *California Oil World and Petroleum Industry,* First Issue, April 1942.

Jet Fuel, Kerosene Type. EIA adopted the Bureau of Mines thermal conversion factor of 5.670 million Btu per barrel as published for "Jet Fuel, Commercial" by the Texas Eastern Transmission Corporation in Appendix V of *Competition and Growth in American Energy Markets 1947-1985,* a 1968 release of historical and projected statistics.

Jet Fuel, Naphtha Type. EIA adopted the Bureau of Mines thermal conversion factor of 5.355 million Btu per barrel as published for "Jet Fuel, Military" by the Texas Eastern Transmission Corporation in Appendix V of *Competition and Growth in American Energy Markets 1947-1985,* a 1968 release of historical and projected statistics.

Kerosene. EIA adopted the Bureau of Mines thermal conversion factor of 5.670 million Btu per barrel as reported in a Bureau of Mines internal memorandum, *Bureau of Mines Standard Average Heating Values of Various Fuels, adopted January 3, 1950.*

Lubricants. EIA adopted the thermal conversion factor of 6.065 million Btu per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956.*

Miscellaneous Products. EIA adopted the thermal conversion factor of 5.796 million Btu per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956.*

Motor Gasoline. EIA adopted the Bureau of Mines thermal conversion factor of 5.253 million Btu per barrel as published for "Gasoline, Motor Fuel" by the Texas Eastern Transmission Corporation in Appendix V of *Competition and Growth in American Energy Markets 1947-1985,* a 1968 release of historical and projected statistics.

Natural Gasoline. EIA adopted the thermal conversion factor of 4.620 million Btu per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956.*

Pentanes Plus. EIA assumed the thermal conversion factor to be 4.620 million Btu per barrel or equal to that for natural gasoline. See "Natural Gasoline."

Petrochemical Feedstocks, Naphtha Less Than 401 Degrees Fahrenheit. Assumed by EIA to be 5.248 million Btu per barrel, equal to the thermal conversion factor for special naphtha. See "Special Naphtha."

Petrochemical Feedstocks, Oils Equal to or Greater Than 401 Degrees Fahrenheit. Assumed by EIA to be 5.825 million Btu per barrel, equal to the thermal conversion factor for distillate fuel oil. See "Distillate Fuel Oil."

Petrochemical Feedstocks, Still Gas. Assumed by EIA to be 6.000 million Btu per barrel, equal to the thermal conversion factor for still gas. See "Still Gas."

Petroleum Coke. EIA adopted the thermal conversion factor of 6.024 million Btu per barrel as reported in Btu per short ton in the Bureau of Mines internal memorandum *Bureau of Mines Standard Average Heating Value of Various Fuels, adopted*

January 3, 1950. The Bureau of Mines calculated this factor by dividing the 30,120,000 Btu per short ton as given in the referenced Bureau of Mines internal memorandum by 5.0 barrels per short ton as given in the Bureau of Mines Form 6-1300-M and successor EIA forms.

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

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

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

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

Special Naphtha. EIA adopted the Bureau of Mines thermal conversion factor of 5.248 million Btu per barrel, which was assumed to be equal to that of total gasoline (aviation and motor) factor and was first published in the *Petroleum Statement, Annual, 1970.*

Still Gas. EIA adopted the Bureau of Mines estimated thermal conversion factor of 6.000 million Btu per barrel and first published in the *Petroleum Statement, Annual, 1970.*

Unfinished Oil. EIA assumed the thermal conversion factor to be 5.825 million Btu per barrel or equal to that for distillate fuel oil (see "Distillate Fuel Oil") and first published in the *Annual Report to Congress, Volume 3, 1977.*

Unfractionated Stream. EIA assumed the thermal conversion factor to be 5.418 million Btu per barrel or equal to that for plant condensate (see "Plant Condensate") and first published in the *Annual Report to Congress, Volume 2, 1981.*

Waxes. EIA adopted the thermal conversion factor of 5.537 million Btu per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956.*

Approximate Heat Content of Fuels

Petroleum

Crude Oil, Exports. Assumed by EIA to be 5.800 million Btu per barrel or equal to the thermal conversion factor for crude oil produced in the United States. See Crude Oil and Lease Condensate, Production.

Crude Oil, Imports. Calculated annually by EIA by weighting the thermal conversion factor of each type of crude oil imported by the quantity imported. Thermal conversion factors for each type were calculated on a foreign country basis, by determining the average American Petroleum Institute (API) gravity of crude imported from each foreign country from Form ERA-60 in 1977 and converting average API gravity to average Btu content by using National Bureau of Standards, Miscellaneous Publication No. 97, *Thermal Properties of Petroleum Products*, 1933.

Crude Oil and Lease Condensate, Production. EIA adopted the thermal conversion factor of 5.800 million Btu per barrel as reported in a Bureau of Mines internal memorandum *Bureau of Mines Standard Average Heating Values of Various Fuels*, adopted January 3, 1950.

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

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

Natural Gas Plant Liquids, Production. Calculated annually by EIA as the average of the thermal conversion factors of each natural gas plant liquid produced weighted by the quantity of each natural gas plant liquid produced.

Petroleum Products, Consumption. Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed, weighted by the quantity of each petroleum product consumed.

Petroleum Products, Consumption by Electric Utilities. Calculated annually by EIA as the average

of the thermal conversion factors for all petroleum products consumed at electric utilities, weighted by the quantity of each petroleum product consumed at electric utilities. The quantity of petroleum consumed is estimated in the State Energy Data System as documented in the *State Energy Data Report*.

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

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

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

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

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

Petroleum Products, Liquefied Petroleum Gases (LPG) Consumption. Calculated annually by EIA as the average of the thermal conversion factors of each liquefied petroleum gas consumed, weighted by the quantity of each liquefied petroleum gas consumed.

Natural Gas

Natural Gas, Consumption. 1973-1979: EIA adopted the thermal conversion factor calculated annually by the American Gas Association (AGA) and published in *Gas Facts*, an AGA annual publication. 1980 forward: Calculated annually by EIA by dividing the total heat content of natural gas consumed by the total quantity of natural gas consumed. The heat content and quantity consumed are from Form EIA-176. Published sources are: 1980-1990: EIA, *Natural Gas Annual 1990, Volume II*, Table 15. 1991 forward: 1990 value used as an estimate.

Natural Gas, Consumption by Electric Utilities. Calculated annually by EIA by dividing the total heat content of natural gas received at electric utilities by the total quantity received at electric utilities. The heat contents and receipts are from Form FERC-423 and predecessor forms.

Natural Gas, Consumption by Non-Electric Utility Users. Calculated annually by EIA by dividing the heat content of natural gas consumed by non-electric utility consumers by the quantity of non-electric utility natural gas consumed. Data are from Forms EIA-176, FERC-423, EIA-759, and predecessor forms.

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

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

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

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

Coal and Coal Coke

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

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

Anthracite, Consumption by Non-Electric Utility Users. Calculated annually by EIA by dividing the heat content of anthracite production less the heat content of the anthracite consumed at electric utilities,

net exports, and shipments to U.S. Armed Forces overseas by the quantity of non-electric utility anthracite consumption less the quantity of anthracite stock changes, losses, and unaccounted for.

Anthracite, Imports and Exports. EIA assumed the anthracite imports and exports to be freshly mined anthracite having an estimated heat content of 25.40 million Btu per short ton.

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

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

Bituminous Coal and Lignite, Consumption by Coke Plants. Estimated by EIA to be 26.800 million Btu per short ton on the basis of an input/output analysis of coal carbonization.

Bituminous Coal and Lignite, Consumption by Electric Utilities. Calculated annually by EIA by dividing the total heat content of bituminous coal and lignite received at electric utilities by the total quantity received at electric utilities. Heat contents and receipts are from Form FERC-423 and predecessor forms.

Bituminous Coal and Lignite, Consumption by Other Industrial and Transportation Users. 1973: Calculated by EIA through regression analysis measuring the difference between the average Btu value of coal consumed by other industrial users and that of coal consumed at electric utilities in the 1974-1982 period. 1974 forward: Calculated annually by EIA by assuming that the bituminous coal and lignite delivered to other industrial users from each coal-producing area (reported on Form EIA-6 and predecessor Bureau of Mines Form 6-1419-Q) contained a heat value equal to that of bituminous coal and lignite received at electric utilities from each of the same coal-producing areas (reported on Form FERC-423). The average Btu value of coal by coal-producing area was applied to the volume of deliveries to other industrial users from each coal-producing area, and the sum total of the heat content was divided by the total volume of deliveries. Coal-producing areas are the Bureau of Mines coal-producing districts for 1974 through 1989 and coal-producing States for 1990 forward.

Bituminous Coal and Lignite, Consumption by Residential and Commercial Users. 1973: Calculated by EIA through regression analysis measuring the difference between the average Btu value of coal consumed by residential and commercial users and that of coal consumed by electric utilities in the 1974-1982 period. 1974 forward: Calculated annually by EIA by assuming that the bituminous coal and lignite delivered to residential and commercial users from each coal-producing area (reported on Form EIA-6 and predecessor Bureau of Mines Form 6-1419-Q) contained a heat value equal to that of bituminous coal and lignite received at electric utilities from each of the same coal-producing areas (reported on Form FERC-423). The average Btu value of coal by coal-producing area was applied to the volume of deliveries to residential and commercial users from each coal-producing area, and the total of the heat value was divided by the total volume of deliveries. Coal-producing areas are the Bureau of Mines coal-producing districts for 1974 through 1989 and coal-producing States for 1990 forward.

Bituminous Coal and Lignite, Exports. Calculated annually by EIA by dividing the sum of the heat content of exported metallurgical coal (estimated to average 27.000 million Btu per short ton) and the heat content of exported steam coal (estimated to have an average thermal content of 25.000 million Btu per short ton) by the total quantity of bituminous coal and lignite exported.

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

Bituminous Coal and Lignite, Production. Calculated annually by EIA by dividing the sum of the heat content of bituminous coal and lignite consumption, net exports, stock changes, and unaccounted for by the sum of their respective tonnages. Consumers' stock changes by sectors were assumed to have the same conversion factor as that of the consumption sector. Producers' stock changes and unaccounted for were assumed to have the same conversion factor as that for consumption by all users.

Coal, Consumption. Calculated annually by EIA by dividing the sum of the heat content of bituminous coal and lignite and anthracite consumption by the sum of their respective tonnages.

Coal, Consumption by Electric Utilities. Calculated annually by EIA by dividing the sum of the heat content of bituminous coal and lignite and anthracite received at electric utilities by the sum of their respective tonnages received.

Coal, Consumption by Non-Electric Utility Users. Calculated annually by EIA by dividing the sum of the heat content of bituminous coal and lignite and

anthracite consumed by non-electric utility users by the sum of their respective tonnages.

Coal, Exports. Calculated annually by EIA by dividing the sum of the heat content of bituminous coal and lignite and anthracite exported by the sum of their respective tonnages.

Coal, Imports. Calculated annually by EIA by dividing the sum of the heat content of bituminous coal and lignite and anthracite imported by the sum of their respective tonnages.

Coal, Production. Calculated annually by EIA by dividing the sum of the total heat content of bituminous coal and lignite and anthracite production by the sum of their respective tonnages.

Coal Coke, Imports and Exports. EIA adopted the Bureau of Mines estimate of 24.800 million Btu per short ton.

Approximate Heat Rates for Electricity

Fossil Fuel Steam-Electric Power Plant Generation. There is no generally accepted practice for measuring the thermal conversion rates for power plants that generate electricity from hydroelectric, wood and waste, wind, photovoltaic, or solar thermal energy sources. EIA has selected a rate that is equal to the prevailing annual average heat rate factor for fossil-fueled steam-electric power plants in the United States. By using that factor, it is possible to evaluate fossil fuel requirements for replacing those sources during periods of interruption such as droughts. The heat content of a kilowatthour of electricity produced, regardless of the generation process, is 3,412 Btu per kilowatthour. 1973-1990: The weighted annual average heat rate for fossil-fueled steam-electric power plants in the United States, as published by EIA in *Electric Plant Cost and Power Production Expenses 1989*, Table 11. 1990: Prepublished data. 1991 forward: 1990 value used as an estimate.

Geothermal Energy Power Plant Generation. 1973-1981: Calculated annually by EIA by weighting the average annual heat rates of operating geothermal units by the installed nameplate capacities as reported on Form FPC-12. 1982 forward: Estimated annually by EIA on the basis of an informal survey of relevant plants.

Nuclear Power Plant Generation. Calculated annually by EIA by dividing the total heat content consumed in reactors at nuclear plants by the total (net) electricity generated by nuclear plants. The heat content and electricity generation are reported on Form FERC-1, Form EIA-412, and predecessor forms. The factors, beginning with 1982 data, are published in the following EIA reports—1982: *Historical Plant Cost and Annual Production Expenses for Selected Electric Plants 1982*, page 215. 1983-1989: *Electric Plant Cost and Power Production Expenses 1989*, Table 15. 1990: Prepublished data. 1991 forward: 1990 value used as an estimate.

Glossary

Anthracite: A hard, black, lustrous coal containing a high percentage of fixed carbon and a low percentage of volatile matter. Often referred to as hard coal. It conforms to ASTM Specification D388-84 for anthracite, meta-anthracite, and semianthracite.

Asphalt: A dark-brown-to-black cement-like material containing bitumens as the predominant constituents obtained by petroleum processing. The definition includes crude asphalt as well as the following finished products: cements, fluxes, the asphalt content of emulsions (exclusive of water), and petroleum distillates blended with asphalt to make cutback asphalts.

ASTM: The American Society for Testing and Materials.

Aviation Gasoline Blending Components: Naphthas that are used for blending or compounding into finished aviation gasoline (e.g., straight-run gasoline, alkylate, and reformate). Excluded are oxygenates (alcohols and ethers), butane, and pentanes plus.

Aviation Gasoline, Finished: All special grades of gasoline for use in aviation reciprocating engines, as given in ASTM Specification D910 and Military Specification MIL-G-5572. Excludes blending components that will be used in blending or compounding into finished aviation gasoline.

Barrel (petroleum): A unit of volume equal to 42 U.S. gallons.

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

Bituminous Coal: A dense black coal, often with well-defined bands of bright and dull material, with a moisture content usually less than 20 percent. Often referred to as soft coal. It is the most common coal and is used primarily for generating electricity, making coke, and space heating. It conforms to ASTM Specification D388-84 for bituminous coal.

British Thermal Unit (Btu): The quantity of heat needed to raise the temperature of 1 pound of water by 1° F at or near 39.2° F. See **Heat Content of a Quantity of Fuel, Gross** and **Heat Content of a Quantity of Fuel, Net.**

Butane: A normally gaseous straight-chain or branched-chain hydrocarbon (C_4H_{10}). It is extracted from natural gas or refinery gas streams. It includes isobutane and normal butane and is designated in ASTM Specification D1835 and Gas Processors Association Specifications for commercial butane.

Isobutane: A normally gaseous branched-chain hydrocarbon. It is a colorless paraffinic gas that boils at a temperature of 10.9° F. It is extracted from natural gas or refinery gas streams.
Normal Butane: A normally gaseous straight-chain hydrocarbon. It is a colorless paraffinic gas that boils at a temperature of 31.1° F. It is extracted from natural gas or refinery gas streams.

Butylene: An olefinic hydrocarbon (C_4H_8) recovered from refinery processes.

Capacity Factor: The ratio of the electrical energy produced by a generating unit for the period of time considered to the electrical energy that could have been produced at continuous full-power operation during the same period.

CIF: See **Cost, Insurance, Freight.**

City Gate: A point or measuring station at which a distribution gas utility receives gas from a natural gas pipeline company or transmission system.

Coal: A black or brownish-black solid, combustible substance formed by the partial decomposition of vegetable matter without access to air. The rank of coal, which includes anthracite, bituminous coal, subbituminous coal, and lignite, is based on fixed carbon, volatile matter, and heating value. Coal rank indicates the progressive alteration, or coalification, from lignite to anthracite. Lignite contains approximately 9 to 17 million Btu per ton. The heat contents of subbituminous and bituminous coal range from 16 to 24 million Btu per ton, and from 19 to 30 million Btu per ton, respectively. Anthracite contains approximately 22 to 28 million Btu per ton.

Coal Coke: A hard, porous product made from baking bituminous coal in ovens at temperatures as high as 2,000° F. It is used both as a fuel and as a reducing agent in smelting iron ore in a blast furnace.

Commercial Sector: The commercial sector, as defined economically, consists of business establishments that are not engaged in transportation or in manufacturing or other types of industrial activity (agriculture, mining, or construction). Commercial establishments include hotels, motels, restaurants, wholesale businesses, retail stores, laundries, and other service enterprises; religious and nonprofit organizations; health, social, and educational institutions; and Federal, State, and local governments. Street lights, pumps, bridges, and public services are also included if the establishment operating them is considered commercial. SIC codes used to classify an establishment as commercial are 50 through 87, 89, and 91 through 97.

Completion: The installation of permanent equipment for the production of oil or gas. If a well is equipped to produce only oil or gas from one zone or reservoir, the definition of a well (classified as an oil well or gas well) and the definition of a completion are identical. However, if a well is equipped to produce oil and/or gas separately from more than one reservoir, a well is not synonymous with a completion.

Conversion Factor: A number that translates units of one system into corresponding values of another system. Conversion factors can be used to translate physical units of measure for various fuels into Btu equivalents.

Cost, Insurance, Freight (CIF): A type of sale in which the buyer of the product agrees to pay a unit price that includes the f.o.b. value of the product at the point of origin plus all costs of insurance and transportation. This type of transaction differs from a "delivered" purchase in that the buyer accepts the quantity as determined at the loading port (as certified by the Bill of Loading and Quality Report) rather than pay on the basis of the quantity and quality ascertained at the unloading port. It is similar to the terms of an f.o.b. sale, except that the seller, as a service for which he is compensated, arranges for transportation and insurance.

Crude Oil f.o.b. Price: The crude oil price actually charged at the oil-producing country's port of loading. Includes deductions for any rebates and discounts or additions of premiums, where applicable. It is the actual price paid with no adjustment for credit terms.

Crude Oil (Including Lease Condensate): A mixture of hydrocarbons that exists in liquid phase in underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities. Included are lease condensate and liquid hydrocarbons produced from tar sands, gilsonite, and oil shale. Drip gases are also included, but topped crude oil (residual oil) and other unfinished oils are excluded. Where identifiable, liquids produced at natural gas processing plants and mixed with crude oil are likewise excluded.

Crude Oil Landed Cost: The price of crude oil at the port of discharge, including charges associated with the purchase, transporting, and insuring of a cargo from the purchase point to the port of discharge. Does not include charges incurred at the discharge port (e.g., import tariffs or fees, wharfage charges, and demurrage).

Crude Oil Refinery Input: The total crude oil put into processing units at refineries.

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

Crude Oil Used Directly: Crude oil consumed as fuel by crude oil pipelines and on crude oil leases.

Cubic Foot (natural gas): A unit of volume equal to 1 cubic foot at a pressure base of 14.73 pounds standard per square inch absolute and a temperature base of 60° F.

Degree-Day Normals: Simple arithmetic averages of monthly or annual degree-days over a long period of time (usually the 30-year period 1951-1980). The averages may be simple degree-day normals or population-weighted degree-day normals.

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

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

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

Design Electrical Rating, Net: The nominal net electrical output of a nuclear unit as specified by the electric utility for the purpose of plant design.

Development Well: A well drilled within the proved area of an oil or gas reservoir to the depth of a stratigraphic horizon known to be productive.

Distillate Fuel Oil: A general classification for one of the petroleum fractions produced in conventional distillation operations. Included are products known as No. 1, No. 2, and No. 4 fuel oils and No. 1, No. 2, and No. 4 diesel fuels. It is used primarily for space heating, on-and off-highway diesel engine fuel (including railroad engine fuel and fuel for agricultural machinery), and electric power generation.

Dry Hole: An exploratory or development well found to be incapable of producing either oil or gas in sufficient quantities to justify completion as an oil or gas well.

Dry Natural Gas Production (as a decrement from gas reserves): The volume of natural gas withdrawn from reservoirs during the report year less (1) the volume returned to such reservoirs in cycling, repressuring of oil reservoirs, and conservation operations; (2) shrinkage resulting from the removal of lease condensate and plant liquids; and (3) nonhydrocarbon gases, where they occur in sufficient quantity to render the gas unmarketable. Volumes of gas withdrawn from gas storage reservoirs and native gas that has been transferred to the storage category are not considered production. This is not the same as marketed production, since the latter also excludes vented and flared gas but contains liquids.

Dry Natural Gas Production (as an increment to gas supply): Gross withdrawals from production reservoirs less gas used in reservoir repressuring, amounts vented and flared, nonhydrocarbons removed, and various natural gas constituents, such as ethane, propane, and butane, removed at natural gas processing plants. The parameters for measurement are 60° F and 14.73 pounds standard per square inch absolute.

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

Electricity Generation: The process of producing electric energy or transforming other forms of energy into electric energy. Also the amount of electric energy produced or expressed in watthours (Wh).

Electricity Generation, Gross: The total amount of electric energy produced by the generating station or stations, measured at the generator terminals.

Electricity Generation, Net: Gross generation less electricity consumed at the generating plant for station use. Electricity required for pumping at pumped-storage plants is regarded as plant use and is deducted from gross generation.

Electricity Production: Net electricity (gross electricity output measured at generator terminals minus power plant use) generated by publicly and privately owned electric utilities. Excludes industrial electricity generation (except autogeneration of hydroelectric power).

Electricity Sales: The amount of kilowatthours sold in a given period of time; usually grouped by classes of service, such as residential, commercial, industrial, and other. "Other" sales include sales for public street and highway lighting and other sales to public authorities, sales to railroads and railways, and interdepartmental sales.

Electric Power Plant: A station containing prime movers, electric generators, and auxiliary equipment for converting mechanical, chemical, and/or fission energy into electric energy.

Electric Utilities: All privately owned companies and all publicly owned agencies engaged in the generation, transmission, or distribution of electric power for public use. Publicly owned agencies include municipal electric utilities; Federal power projects, such as the Tennessee Valley Authority (TVA); rural electrification cooperatives; power districts; and State power projects.

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

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

End-Use Sectors: The residential, commercial, industrial, and transportation sectors of the economy.

Energy: The capacity for doing work as measured by the capability of doing work (potential energy) or the conversion of this capability to motion (kinetic energy). Energy has several forms, some of which are easily convertible and can be changed to another form useful for work. Most of the world's convertible energy comes from fossil fuels that are burned to produce heat that is then used as a transfer medium to mechanical or other means in order to accomplish tasks. Electrical energy is usually measured in

kilowatthours, while heat energy is usually measured in British thermal units.

Energy Consumption: The use of energy as a source of heat or power or as an input in the manufacturing process.

Energy Consumption, End-Use: Primary end-use energy consumption is the sum of fossil fuel consumption by the four end-use sectors (residential, commercial, industrial, and transportation) and generation of hydroelectric power by nonelectric utilities. **Net end-use energy consumption** includes electric utility sales to those sectors but excludes electrical system energy losses. **Total end-use energy consumption** includes both electric utility sales to the four end-use sectors *and* electrical system energy losses.

Energy Consumption, Total: The sum of fossil fuel consumption by the five sectors (residential, commercial, industrial, transportation, and electric utility) plus hydroelectric power, nuclear electric power, net imports of coal coke, and electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy.

Energy Source: A substance, such as petroleum, natural gas, or coal, that supplies heat or power. In Energy Information Administration reports, electricity and renewable forms of energy, such as biomass, geothermal, wind, and solar, are considered to be energy sources.

Ethane: A normally gaseous straight-chain hydrocarbon (C_2H_6). It is a colorless, paraffinic gas that boils at a temperature of -127.48° F. It is extracted from natural gas and refinery gas streams.

Ethylene: An olefinic hydrocarbon (C_2H_4) recovered from refinery processes or petrochemical processes.

Exploratory Well: A well drilled to find and produce oil or gas in an unproved area, to find a new reservoir in a field previously found to be productive of oil or gas in another reservoir, or to extend the limit of a known oil or gas reservoir.

Exports: Shipments of goods from the 50 States and the District of Columbia to foreign countries and to Puerto Rico, the Virgin Islands, and other U.S. possessions and territories.

f.a.s.: See **Free Alongside Ship.**

Federal Energy Regulatory Commission (FERC): The Federal agency with jurisdiction over interstate electricity sales, wholesale electric rates, hydroelectric licensing, natural gas pricing, oil pipeline rates, and gas pipeline certification. FERC is an independent regulatory agency within the Department of Energy and is the successor to the Federal Power Commission.

Federal Power Commission (FPC): The predecessor agency of the Federal Energy Regulatory Commission. The Federal Power Commission was created by an Act of Congress under the Federal Water Power Act on June 10, 1920. It was charged originally with regulating the electric power and natural gas industries. It was abolished on September 30, 1977, when the Department of Energy was created. Its functions were divided between the Department of Energy and the Federal Energy Regulatory Commission, an independent regulatory agency.

First Purchase Price: The marketed first sales price of domestic crude oil, consistent with the removal price defined by the provisions of the Windfall Profits Tax on Domestic Crude Oil (Public Law 96-223, Sec. 4998 (c)).

Flared Natural Gas: Natural gas burned in flares on the base site or at gas processing plants.

f.o.b.: See **Free On Board.**

Footage Drilled: Total footage for wells in various categories, as reported for any specified period, includes (1) the deepest total depth (length of well bores) of all wells drilled from the surface, (2) the total of all bypassed footage drilled in connection with reported wells, and (3) all new footage drilled for directional sidetrack wells. Footage reported for directional sidetrack wells does not include footage in the common bore, which is reported as footage for the original well. In the case of old wells drilled deeper, the reported footage is that which was drilled below the total depth of the old well.

Fossil Fuel: Any naturally occurring organic fuel, such as petroleum, coal, and natural gas.

Fossil Fuel Steam-Electric Power Plant: An electricity generation plant in which the prime mover is a turbine rotated by high-pressure steam produced in a boiler by heat from burning fossil fuels.

Free Alongside Ship (f.a.s.): The value of a commodity at the port of exportation, generally including the purchase price, plus all charges incurred in placing the commodity alongside the carrier at the port of exportation.

Free on Board (f.o.b.): A transaction whereby the seller makes the product available within an agreed-on period at a given port at a given price. It is the responsibility of the buyer to arrange for the transportation and insurance.

Full-Power Operation: Operation of a nuclear generating unit at 100 percent of its design capacity. Full-power operation precedes commercial operation.

Gasohol: A blend of finished motor gasoline (leaded or unleaded) and alcohol (generally ethanol but sometimes methanol) limited to 10 percent by volume of alcohol. Gasohol is included in finished leaded and unleaded motor gasoline.

Gas-Turbine Electric Power Plant: A plant in which the prime mover is a gas turbine. A gas turbine typically consists of an axial-flow air compressor, one or more combustion chambers where liquid or gaseous fuel is burned and the hot gases expand to drive the generator and then are used to run the compressor.

Gas Well: A well completed for the production of natural gas from one or more gas zones or reservoirs. (Wells producing both crude oil and natural gas are classified as oil wells.)

Geothermal Energy: Energy from the internal heat of the Earth, which may be residual heat, friction heat, or a result of radioactive decay. The heat is found in rocks and fluids at various depths and can be extracted by drilling and/or pumping.

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

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

Heat Content of a Quantity of Fuel, Gross: The total amount of heat released when a fuel is burned. Coal, crude oil, and natural gas all include chemical compounds of carbon and hydrogen. When those fuels are burned, the carbon and hydrogen combine with oxygen in the air to produce carbon dioxide and water. Some of the energy released in burning goes into transforming the water into steam and is usually lost. The amount of heat spent in transforming the water into steam is counted as part of gross heat content but is not counted as part of net heat content. Also referred to as the higher heating value. Btu conversion factors typically used in EIA represent gross heat content.

Heat Content of a Quantity of Fuel, Net: The amount of useable heat energy released when a fuel is burned under conditions similar to those in which it is normally used. Also referred to as the lower heating value. Btu conversion factors typically used in EIA represent gross heat content.

Heavy Oil: The fuel oils remaining after the lighter oils have been distilled off during the refining process. Except for start-up and flame stabilization, virtually all petroleum used in steam-electric power plants is heavy oil.

Hydrocarbon: An organic chemical compound of hydrogen and carbon in the gaseous, liquid, or solid phase. The molecular structure of hydrocarbon compounds varies from the simplest (methane, the primary constituent of natural gas) to the very heavy and very complex.

Hydroelectric Power: The production of electricity from the kinetic energy of falling water.

Hydroelectric Power Plant: A plant in which the turbine generators are driven by falling water.

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

Industrial Sector: The industrial sector comprises manufacturing industries, which make up the largest part of the sector, along with mining, construction, agriculture, fisheries, and forestry. Establishments in the sector range from steel mills, to small farms, to companies assembling electronic components. The SIC codes used to classify establishments as industrial are 1 through 39.

Internal Combustion Electric Power Plant: A power plant in which the prime mover is an internal combustion engine. Diesel or gas-fired engines are the principal types used in electric power plants. The plant is usually operated during periods of high demand for electricity.

Jet Fuel: The term includes kerosene-type jet fuel and naphtha-type jet fuel. Kerosene-type jet fuel is a kerosene-quality product used primarily for commercial turbojet and turboprop aircraft engines. Naphtha-type jet fuel is a fuel in the heavy naphthas range used primarily for military turbojet and turboprop aircraft engines.

Kerosene: A petroleum distillate that has a maximum distillation temperature of 401° F at the 10-percent recovery point, a final boiling point of 572° F, and a minimum flash point of 100° F. Included are the two grades designated in ASTM D3699 (No. 1-K and No. 2-K) and all grades of kerosene called range or stove oil. Kerosene is used in space heaters, cook stoves, and water heaters; it is suitable for use as an illuminant when burned in wick lamps.

Lease and Plant Fuel: Natural gas used in well, field, and lease operations (such as gas used in drilling operations, heaters, dehydrators, and field compressors), and as fuel in natural gas processing plants.

Lease Condensate: A natural gas liquid recovered from gas well gas (associated and non-associated) in lease separators or natural gas field facilities. Lease condensate consists primarily of pentanes and heavier hydrocarbons.

Light Oil: Lighter fuel oils distilled off during the refining process. Virtually all petroleum used in internal combustion and gas-turbine engines is light oil.

Lignite: A brownish-black coal of low rank with a high content of moisture and volatile matter. Often referred to as brown coal. It is used almost exclusively for electric power generation. It conforms to ASTM Specification D388-84 for lignite.

Liquefied Natural Gas (LNG): Natural gas (primarily methane) that has been liquefied by reducing its temperature to -260° F at atmospheric pressure.

Liquefied Petroleum Gases (LPG): Ethane, ethylene, propane, propylene, normal butane, butylene, and isobutane produced at refineries or natural gas processing plants, including plants that fractionate new natural gas plant liquids.

Low-Power Testing: The period of time between a nuclear generating unit's initial fuel loading date and the issuance of its operating (full-power) license. The maximum level of operation during that period is 5 percent of the unit's design thermal rating.

Lubricants: Substances used to reduce friction between bearing surfaces or as process materials either incorporated into other materials used as processing aids in the manufacturing of other products or as carriers of other materials. Petroleum lubricants may be produced either from distillates or residues. Other substances may be added to impart or improve certain required properties. Excluded are byproducts of lubricating oil refining, such as aromatic extracts derived from solvent extraction or tars derived from deasphalting. Included are all grades of lubricating oils from spindle oil to cylinder oil and those used in greases. Lubricants categories are paraffinic and naphthenic.

Miscellaneous Petroleum Products: All finished petroleum products not classified elsewhere—for example, petrolatum, lube refining byproducts (aromatic extracts and tars), absorption oils, ram-jet fuel, petroleum rocket fuels, synthetic natural gas feedstocks, and specialty oils.

Motor Gasoline Blending Components: Naphthas that will be used for blending or compounding into finished motor gasoline (e.g., straight-run gasoline, alkylate, and reformate). Excluded are oxygenates (alcohols and ethers), butane, and pentanes plus.

Motor Gasoline, Finished: A complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives, that has been blended to form a fuel suitable for use in spark-ignition engines. Motor gasoline, as given in ASTM Specification D439 or Federal Specification VV-G-1690B, includes a range in distillation temperatures from 122 to 158° F at the 10-percent recovery point and from 365 to 374° F at the 90-percent recovery point. The Reid Vapor Pressure ranges from 9 to 15 pounds per square inch. Motor gasoline includes finished leaded gasoline, finished unleaded gasoline, and gasohol. Blendstock is excluded until blending has been completed. Alcohol that is to be used in the blending of gasohol is also excluded.

Motor Gasoline, Finished Gasohol: A blend of finished motor gasoline (leaded or unleaded) and alcohol (generally ethanol, but sometimes methanol) in which 10 percent or more of the product is alcohol.

Motor Gasoline, Finished Leaded: Motor gasoline that contains more than 0.05 gram of lead per gallon or more than 0.005 gram of phosphorus per gallon. Premium and regular grades are included, depending on the octane rating. Includes leaded gasohol. Blendstock is excluded until blending has been completed. Alcohol that is to be used in the blending of gasohol is also excluded.

Motor Gasoline, Finished Leaded Premium: Motor gasoline having an antiknock index, calculated as (R+M)/2, greater than 90 and containing more than 0.05 gram of lead per gallon or more than 0.005 gram of phosphorus per gallon.

Motor Gasoline, Finished Leaded Regular: Motor gasoline having an antiknock index, calculated as (R+M)/2, greater than or equal to 87 and less than or equal to 90 and containing more than 0.05 gram of lead or 0.005 gram of phosphorus per gallon.

Motor Gasoline, Finished Unleaded: Motor gasoline containing not more than 0.05 gram of lead per gallon and not more than 0.005 gram of phosphorus per gallon. Premium and regular grades are included, depending on the octane rating. Includes unleaded gasohol. Blendstock is excluded until blending has been completed. Alcohol that is to be used in the blending of gasohol is also excluded.

Motor Gasoline, Finished Unleaded Midgrade: Motor gasoline having an antiknock index, calculated as (R+M)/2, greater than or equal to 88 and less than or equal to 90 and containing not more than 0.05 gram of phosphorus per gallon.

Motor Gasoline, Finished Unleaded Premium: Motor gasoline having an antiknock index, calculated as (R+M)/2, greater than 90 and containing not more than 0.05 gram of lead or 0.005 gram of phosphorus per gallon.

Motor Gasoline, Finished Unleaded Regular: Motor gasoline having an antiknock index, calculated as (R+M)/2, of 87 containing not more than 0.05 gram of lead per gallon and not more than 0.005 gram of phosphorus per gallon.

Motor Gasoline Retail Prices: Motor gasoline prices calculated each month by the Bureau of Labor Statistics (BLS) in conjunction with the construction of the Consumer Price Index (CPI). Those prices are collected in 85 urban areas selected to represent all urban consumers—about 80 percent of the total U.S. population. The service stations are selected initially, and on a replacement basis, in such a way that they represent the purchasing habits of the CPI population. Service stations in the current sample include those providing all types of service (i.e., full-, mini-, and self-service).

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

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

Natural Gas, Dry: The marketable portion of natural gas production, which is obtained by subtracting extraction losses, including natural gas liquids removed at natural gas processing plants, from total production.

Natural Gas Marketed Production: Gross withdrawals of natural gas from production reservoirs, less gas used for reservoir repressuring; nonhydrocarbon gases removed in treating and processing operations; and quantities vented and flared.

Natural Gas Plant Liquids (NGPL): Natural gas liquids recovered from natural gas in processing plants and, in some situations, from natural gas field facilities, as well as those extracted by fractionators. Natural gas plant liquids are defined according to the published specifications of the Gas Processors Associations and the American Society for Testing and Materials as follows: ethane, propane, normal butane, isobutane, pentanes plus, and other products from natural gas processing plants (i.e., products meeting the standards for finished petroleum products produced at natural gas processing plants, such as finished motor gasoline, finished aviation gasoline, special naphthas, kerosene, distillate fuel oil, and miscellaneous products).

Natural Gas Wellhead Price: The wellhead price of natural gas is calculated by dividing the total reported value at the wellhead by the total quantity produced as reported by the appropriate agencies of individual producing States and the U.S. Minerals Management Service. The price includes all costs prior to shipment from the lease, including gathering and compression costs, in addition to State production, severance, and similar charges.

Natural Gas, Wet: Natural gas prior to the extraction of liquids and other miscellaneous products.

Net Consumption: See **Energy Consumption, End-Use.**

Nuclear Electric Power: Electricity generated by an electric power plant whose turbines are driven by steam generated in a reactor by heat from the fissioning of nuclear fuel.

Nuclear Electric Power Plant: A single-unit or multiunit facility in which heat produced in one or more reactors by the fissioning of nuclear fuel is used to drive one or more steam turbines.

Nuclear Reactor: An apparatus in which the nuclear fission chain can be initiated, maintained, and controlled so that energy is released at a specific rate. The reactor includes fissionable material (fuel), such as uranium or plutonium; fertile material; moderating material (unless it is a fast reactor); a heavy-walled pressure vessel; shielding to protect personnel; provision for heat removal; and control elements and instrumentation.

Offshore: That geographic area that lies seaward of the coastline. In general, the coastline is the line of ordinary low water along with that portion of the coast that is in direct contact with the open sea or the line marking the seaward limit of inland water.

Oil: See **Crude Oil (Including Lease Condensate).**

Oil Well: A well completed for the production of crude oil from one or more oil zones or reservoirs. Wells producing both crude oil and natural gas are classified as oil wells.

Operable (nuclear): A U.S. nuclear generating unit is considered operable after it completes low-power testing and is issued a full-power operating license by the Nuclear Regulatory Commission. A foreign nuclear generating unit is considered operable once it has generated electricity to the grid.

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

Organization of Petroleum Exporting Countries (OPEC): Countries that have organized for the purpose of negotiating with oil companies on matters of oil production, prices, and future concession rights. Current members are Algeria, Ecuador, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.

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

Petroleum: A generic term applied to oil and oil products in all forms, such as crude oil, lease condensate, unfinished oils, petroleum products, natural gas plant liquids, and nonhydrocarbon compounds blended into finished petroleum products.

Petroleum Coke: A residue that is the final product of the condensation process in cracking. The product is either marketable petroleum coke or catalyst petroleum coke.

Petroleum Coke, Catalyst: The carbonaceous residue that is deposited on and deactivates the catalyst used in many catalytic operations (e.g., catalytic cracking). Carbon is deposited on the catalyst, thus deactivating the catalyst. The catalyst is reactivated by burning off the carbon, which is used as a fuel in the refining process. That carbon or coke is not recoverable in a concentrated form.

Petroleum Coke, Marketable: Those grades of coke produced in delayed or fluid cokers that may be recovered as relatively pure carbon. Marketable petroleum coke may be sold as is or further purified by calcining.

Petroleum Consumption: The sum of all refined petroleum products supplied. For each refined petroleum product, the amount supplied is calculated by adding production and imports, then subtracting changes in primary stocks (net withdrawals are a plus quantity and net additions are a minus quantity) and exports.

Petroleum Imports: Imports of petroleum into the 50 States and the District of Columbia from foreign countries and from Puerto Rico, the Virgin Islands, and other U.S. territories and possessions. Included are imports for the Strategic Petroleum Reserve and withdrawals from bonded warehouses for onshore consumption, offshore bunker use, and military use. Excluded are receipts of foreign petroleum into bonded warehouses and into U.S. territories and U.S. Foreign Trade Zones.

Petroleum Products: Products obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds. Petroleum products include unfinished oils, liquefied petroleum gases, pentanes plus, aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, petrochemical feedstocks, special naphthas, lubricants, waxes, petroleum coke, asphalt, road oil, still gas, and miscellaneous products.

Petroleum Products Supplied: See **Petroleum Consumption.**

Petroleum Stocks, Primary: For individual products, quantities that are held at refineries, in pipelines, and at bulk terminals that have a capacity of 50,000 barrels or more, or that are in transit thereto. Stocks held by product retailers and resellers, as well as tertiary stocks held at the point of consumption, are excluded. Stocks of individual products held at gas processing plants are excluded from individual product estimates but are included in other oils estimates and total.

Photovoltaic and Solar Thermal Energy (as used at electric utilities): Energy radiated by the sun as electromagnetic waves (electromagnetic radiation) that is converted at electric utilities into electricity by means of solar (photovoltaic) cells or concentrating (focusing) collectors.

Primary Consumption: See **Energy Consumption, End-Use.**

Propane: A normally gaseous straight-chain hydrocarbon (C_3H_8). It is a colorless paraffinic gas that boils at a temperature of -43.67° F. It is extracted from natural gas or refinery gas streams. It includes all products designated in ASTM Specification D1835 and Gas Processors Association Specifications for commercial propane and HD-5 propane.

Propylene: An olefinic hydrocarbon (C_3H_6) recovered from refinery or petrochemical processes.

Refiner Acquisition Cost of Crude Oil: The cost of crude oil to the refiner, including transportation and fees. The composite cost is the weighted average of domestic and imported crude oil costs.

Refinery (petroleum): An installation that manufactures finished petroleum products from crude oil, unfinished oils, natural gas liquids, other hydrocarbons, and alcohol.

Renewable Energy: Energy obtained from sources that are essentially inexhaustible (unlike, for example, the fossil fuels, of which there is a finite supply). Renewable sources of energy include wood, waste, photovoltaic, and solar thermal energy.

Reservoir Repressuring: The injection of a pressurized fluid (such as air, gas, or water) into oil and gas reservoir formations to effect greater ultimate recovery.

Residential Sector: The residential sector is considered to consist of all private residences, whether occupied or vacant, owned or rented, including single-family homes, multifamily housing units, and mobile homes. Secondary homes, such as summer homes, are also included. Institutional housing, such as school dormitories, hospitals, and military barracks, generally are not included in the residential sector; they are included in the commercial sector. The SIC code used to classify an establishment as residential is 88 (Household).

Residual Fuel Oil: The heavier oils that remain after the distillate fuel oils and lighter hydrocarbons are distilled away in refinery operations and that conform to ASTM Specifications D396 and 975. Included are No. 5, a residual fuel oil of medium viscosity; Navy Special, for use in steam-powered vessels in government service and in shore power plants; and No. 6, which includes Bunker C fuel oil and is used for commercial and industrial heating, electricity generation, and to power ships. Imports of residual fuel oil include imported crude oil burned as fuel.

Road Oil: Any heavy petroleum oil, including residual asphaltic oil used as a dust palliative and surface treatment on roads and highways. It is generally produced in six grades, from 0, the most liquid, to 5, the most viscous.

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

Short Ton (coal): A unit of weight equal to 2,000 pounds.

SIC: See **Standard Industrial Classification.**

Solar Energy: The radiant energy of the sun, which can be converted into other forms of energy, such as heat or electricity.

Standard Industrial Classification (SIC): A set of codes developed by the Office of Management and Budget which categorizes industries into groups with similar economic activities.

Startup Test Phase of Nuclear Power Plant: A nuclear power plant that has been licensed by the Nuclear Regulatory Commission to operate but is still in the initial testing phase, during which the production of electricity may not be continuous. In general, when the electric utility is satisfied with the plant's performance, it formally accepts the plant from the manufacturer and places it in commercial operation status. A request is then submitted to the appropriate utility rate commission to include the power plant in the rate base calculation.

Steam-Electric Power Plant: A plant in which the prime mover is a steam turbine. The steam used to drive the turbine is produced in a boiler where fossil fuels are burned.

Strategic Petroleum Reserve (SPR): Petroleum stocks maintained by the Federal Government for use during periods of major supply interruption.

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

Supplemental Gaseous Fuels: Any gaseous substance that, introduced into or commingled with natural gas, increases the volume available for disposition. Such substances include, but are not limited to, propane-air, refinery gas, coke oven gas, still gas, manufactured gas, biomass gas, or air or inert gases added for Btu stabilization.

Synthetic Natural Gas (SNG): A manufactured product chemically similar in most respects to natural gas, resulting from the conversion or reforming of petroleum hydrocarbons. It may easily be substituted for or interchanged with pipeline quality natural gas. Also referred to as substitute natural gas.

Total Consumption: See **Energy Consumption, End-Use.**

Transportation Sector: Private and public vehicles that move people and commodities. Included are automobiles, trucks, buses, motorcycles, railroads and railways (including streetcars), aircraft, ships, barges, and natural gas pipelines. The SIC codes used to classify establishments as belonging to the transportation sector are 40 through 49.

Unaccounted-for Crude Oil: Arithmetic difference between the calculated supply and the calculated disposition of crude oil. The calculated supply is the sum of crude oil production phase imports, less changes in crude oil stocks. The calculated disposition of crude oil is the sum of crude oil input to refineries, crude oil exports, crude oil burned as fuel, and crude oil losses.

Underground Storage: The storage of natural gas in underground reservoirs at a different location from which it was produced.

United States: Unless otherwise noted, "United States" in this publication means the 50 States and the District of Columbia. U.S. exports include shipments to U.S. territories, and imports include receipts from U.S. territories.

Vented Natural Gas: Gas released into the air on the base site or at processing plants.

Wellhead Price: The value of crude oil or natural gas at the mouth of the well.

Wind Energy (as used at electric utilities): The kinetic energy of wind converted at electric utilities into mechanical energy by wind turbines (i.e., blades rotating from a hub) that drive generators to produce electricity for distribution.

Wood and Waste (as used at electric utilities): Wood energy, garbage, bagasse, sewerage gas, and other industrial, agricultural, and urban refuse used to generate electricity for distribution.

Wood Energy: Wood and wood products used as fuel, including round wood (cord wood), limb wood, wood chips, bark, sawdust, forest residues, charcoal, pulp waste, and spent pulping liquor.

Working Gas: The gas in a reservoir that is in addition to the base (cushion) gas. It may or may not be completely withdrawn during any particular withdrawal season. Conditions permitting, the total working capacity could be used more than once during any given season.

Other EIA Multifuel Historical Energy Data Reports

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

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

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

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

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

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

For further information, contact the:

National Energy Information Center, EI-231
Energy Information Administration
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Washington, DC 20585
202-586-8800 (TDD 202-586-1181)
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Petroleum Marketing Monthly	the 20th of each month
Natural Gas Monthly	the 20th of each month
Weekly Coal Production	Fridays, 5 p.m.
Quarterly Coal Report	60 days after end of quarter
Electric Power Monthly	the 1st of each month
Monthly Energy Review	the last week of each month
Short-Term Energy Outlook	60 days after end of quarter

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