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## **March 1982**

# Monthly Energy Review



#### **U.S. Department of Energy**

**Energy Information Administration** 

The Monthly Energy Review is prepared in the Statistics Branch of the Office of Energy Markets and End Use, Energy Information Administration, U.S. Department of Energy, under the direct supervision of Samuel O. Wood, Jr.

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The Monthly Energy Review presents current data and trends for production, consumption, stocks, imports, exports, and prices for the principal energy commodities in the United States. Also included are data on international production of crude oil, consumption of petroleum products, petroleum stocks, and production of electricity from nuclear powered facilities. This report is published to keep the public and other interested parties fully informed with respect to current energy production, consumption, stocks, and prices.

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

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

From time-to-time an article that addresses some facet of energy is included in this publication. Feature articles that have appeared in previous issues are as follows:

Energy Consumption	March 1975
Nuclear Power	April 1975
The Price of Crude Oil	June 1975
U.S. Coal Resources and Reserves	July 1975
Propane, A National Energy	
Resource	. September 1975
Short-Term Energy Supply and	
Demand Forecasting at FEA	October 1975
Curtailments of Natural Gas Service	

Home Heating Conservation Alternatives and the Solar Collector Industry : ..... March 1976 Trends in United States Petroleum Imports. . . . . . . . . . . . . . . . . . September 1976 Crude Oil Entitlements Program ..... January 1977 Motor Gasoline Supply and Demand . . . . . . . . . July 1977 Short-Term Petroleum Supply and Demand . . . . . . May 1978 The Energy Requirements of U.S. Agriculture ......July 1979 Three Mile Island -Possible Regulatory Responses and Their Impacts on the Nation's Short-Term Electric Utility Fuel Outlook ..... October 1979 Reduction in Natural Gas Requirements Due to Fuel Switching ..... December 1979 The Solar Collector Industry and Solar Energy..... February 1980 Trends in the Installation of Energy Using Equipment in New Residential Buildings ..... March 1980 The Energy Information Administration's Oil and Gas Reserves Program -The First Year's Report . . . . . . . . . . . . . . . June 1980 Energy From Urban Waste ..... August 1980 Natural Gas Liquids: Revisions to 1979 Data..... October 1980 EIA Weekly Petroleum Data: Data Collection and Methods of Estimation . . . . . . . . . . . . . . . . . November 1980 The Department of Energy Disclosure Policy for Individually Identifiable Information Maintained by the Energy Information Administration ..... December 1980 Changes in 1981 Petroleum Data Series ...... May 1981 Information Services of the Energy Information Administration . . . . . . . . . . September 1981 An Overview of Natural Gas The Interstate and Intrastate Natural Gas Markets ..... January 1982 Natural Gas Drilling and Production Under the Natural Gas Policy Act ..... February 1982

#### **Overview**

#### Production

Energy production during 1981 totaled 64.9 quadrillion Btu, 0.6 percent\* below the 1980 level. Decreases in production occurred for petroleum (0.4 percent) and coal (2.4 percent). Natural gas production increased 0.2 percent, while other forms of energy production combined were up by 1.5 percent.

#### Consumption

During 1981, energy consumption totaled 73.9 guadrillion Btu, a 2.4 percent de-

\*All percentage increases/decreases are on a daily rate basis to remove impact of 1980 leap year. crease compared to consumption during 1980. Decreases in the consumption of petroleum (6.2 percent) and natural gas (2.0 percent) contributed to the overall decline in energy consumption during this period. Coal consumption increased by 3.8 percent and consumption of other energy sources combined increased 2.4 percent over the 1980 level.

#### Imports

Net imports of energy during 1981 totaled 9.5 quadrillion Btu, 22.0 percent below the level for 1980. By energy source, the decreases in net imports were petroleum (15.4 percent) and natural gas (11.4 percent). Other (net electricity and coal coke combined) increased 23.5 percent. Net exports of coal during 1981 were 23.5 percent higher than the 1980 level.

**Cumulative January through December** 

1980

Daily

Percent

Change\*

-0.6\*

-0.4

+0.2

- 2.4

+1.5

-- 2.4

- 6.2

- 2.0

+3.8

+2.4

- 22.0

- 15.4

- 11.4

(+ 23.5)

+23.5

1981

Daily

#### ENERGY SUMMARY (Quadrillion (10<sup>15</sup>) Btu)

1981 1980 1981 Rate 1980 Rate Change **Total Production** 5.613 5.678 64.949 0.178 65.499 0.179 - 1.1 18.125 0.050 18.249 0.050 Petroleum<sup>1</sup> 1.551 1.547 +0.2Natural Gas 1.765 1.792 - 1.5 20.098 0.055 20.112 0.055 1.567 1.670 18,700 0.051 19.209 0.052 Coal -6.2Other<sup>2</sup> 0.731 0.668 + 9.3 8.026 0.022 7.930 0.022 73.915 0.203 **Total Consumption** 6.951 7.221 - 3.7 75.913 0.207 31.998 0.088 34.202 0.093 Petroleum<sup>3</sup> 2.820 3.127 - 9.8 19.927 0.055 20.394 0.056 Natural Gas 2.165 2.204 - 1.8 1.394 Coal 1.413 +1.416.011 0.044 15.461 0.042 5.979 0.016 5.856 0.016 Other<sup>4</sup> 0.496 0.553 +11.40.749 1.025 9.536 0.026 12.265 0.034 Net Imports - 26.9 Petroleum<sup>8</sup> 0.940 1.126 - 16.5 11.388 0.031 13.499 0.037 0.846 0.957 0.003 Natural Gas 0.091 0.095 0.002 - 4.3 \$(0.299) £2.918 £0.008 £(2.37) -th one -70.214 Coal (+ 40.2) 0.017 0.222 0.001 0.180 0.000 Other<sup>e</sup> 0.017 - 0.8

Percent

December

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

Parentheses indicate exports are greater than imports.

\* Based on daily rates in order to remove the influence of leap year.

1 Includes crude oil and lease condensate.

<sup>a</sup> Includes hydroelectric, nuclear, natural gas plant liquids, and geothermal power and electricity produced from wood and waste.

<sup>a</sup> Includes refined petroleum products and natural gas plant liquids.

<sup>4</sup> Includes hydroelectric, nuclear, and geothermal power, electricity produced from wood and waste, and net imports of electricity and coal coke.

<sup>5</sup> Includes crude oil, lease condensate, refined petroleum products, unfinished oils, natural gasoline, plant condensate, and imports of crude oil for the Strategic Petroleum Reserve.

Includes net imports of electricity and coal coke.

#### **Energy Summary**

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		Energy Production <sup>1</sup>	Energy Consumption <sup>2</sup>	Energy Imports <sup>3</sup>	Energy Exports•
			Quadrillion	(10¹⁵) Btu	
1973	TOTAL	62.433	74.609	14.732	2.073
1974	TOTAL	61.229	72.759	14.417	2.241
1975	TOTAL	60.059	70.707	14.113	2.389
1976	TOTAL	60.091	74.510	16.838	2.213
1977	TOTAL	60.293	76.332	20.092	2.097
1978	TOTAL	R61.231	R78.175	R19.261	1.952
1979	TOTAL	R63.851	R78.910	R19.620	2.900
1980	January	R5.668	R7.426	R1.695	R0.227
	February	R5.308	R6.988	R1.473	R0.210
	March	R5.696	R6.878	R1.476	R0.264
	April	R5.458	R5.988	R1.339	R0.287
	May	R5.591	R5.815	R1.281	R0.344
	June	R5.398	R5.670	R1.287	R0.359
	July	R5.242	R5.929	R1.210	R0.323
	August	R5.335	R5.818	R1.203	R0.313
	September	R5.301	R5.773	R1.168	R0.330
	October	R5.491	R6.148	R1.248	R0.370
	November	R5.333	R6.261	R1.227	R0.341
	December	R5.678	R7.221	R1.363	R0.338
	TOTAL	R65.499	R75.913	R15.971	R3.706
1981	January	R5.489	R7.382	1.339	R0.264
	February	R5.241	R6.319	1.205	R0.278
	March	R5.725	R6.415	1.184	R0.371
	April	R4.637	R5.680	R1.099	R0.326
	May	R4.757	、R5.736	R1.116	R0.278
	June	R5.287	R5.808	R1.035	R0.249
	July	R5.612	R6.086	R1.136	R0.393
	August	R5.806	R5.901	R1.124	R0.422
	September	R5.590	R5.654	1.194	R0.412
	Uctober	R5.723	R5.970	R1.174	R0.469
	November	H5.471	H6.014	H1.086	H0.442
	December	H5.613	H6.951	H1.183	H0.434
	TOTAL	R64.949	R73.915	R13.873	R4.336

Revisions result primarily from updates to Btu conversion factors.

Geographic coverage: the 50 United States and District of Columbia.

Totals may not equal sum of components due to independent rounding. See Explanatory Note 1. See Explanatory Note 2. See Explanatory Note 3. See Explanatory Note 4.

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R=Revised datá.

Note: 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. *Source:* •Energy Information Administration calculations based on data appearing elsewhere in this publication.







Monthly



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**Production of Energy by Type** 

		Coal	Crude Oil <sup>2</sup>	NGPL <sup>3</sup>	Natural Gas (Dry)	Hydro- electric Power	Nuclear Electric Power	Other <sup>s</sup>	Total Energy Produced	Yearly Cumulative Energy Produced
					Quadrillion	(1016) Btu				
1973	TOTAL	14.366	19.493	2.569	22.187	2.861	0.910	0.046	62.433	
1974	TOTAL	14.468	18.575	2.471	21.210	3.177	1.272	0.056	61.229	
1975	TOTAL	15.189	17.729	2.374	19.640	3.155	1.900	0.072	60.059	
1976	TOTAL	15.853	17.262	2.327	19.480	2.976	2.111	0.081	60.091	
1977	TOTAL	15.829	17.454	2.327	19.565	2.333	2.702	0.082	60.293	
1978	TOTAL	15.037	18.434	2.245	19.485	R2.937	R3.024	0.068	R61.231	
19 <b>79</b>	TOTAL	17.651	18.104	2.286	20.07 <del>6</del>	R2.931	R2.715	0.08 <del>9</del>	R63.851	
1980	January	<b>B1.611</b>	1.560	R0.200	R1.814	R0.265	R0.210	0.008	R5.668	R5.668
	February	R1.517	1.464	R0.188	R1.702	R0.224	R0.205	0.008	R5.308	R10.976
	March	R1.643	1.564	R0.190	R1.823	R0.255	R0.213	0.008	R5.696	R16.672
	April	R1.613	1.511	R0.191	R1.664	R0.270	R0.200	0.008	R5.458	R22.130
	May	R1.645	1.553	R0.196	R1.690	R0.302	R0.196	0.010	R5.591	R27.720
	June	R1.652	1.488	R0.183	R1.581	R0.290	R0.195	0.009	R5.398	R33.119
	July	R1.419	1.537	R0.185	R1.612	R0.256	R0.224	0.010	R5.242	R38.361
	August	R1.584	1.513	R0.184	R1.571	R0.214	R0.259	0.011	R5.335	R43.696
	September	R1.593	1.500	R0.178	R1.576	R0.194	R0.251	0.010	R5.301	R48.997
	October	R1.674	1.534	R0.184	R1.641	R0.187	R0.261	0.011	R5.491	R54.489
	November	R1.589	1.478	R0.184	R1.646	R0.201	R0.223	0.011	R5.333	R59.822
	December	R1.670	1.547	R0.189	R1.792	R0.233	R0.235	0.011	R5.678	R65.499
	TOTAL	R 19.209	18.249	R2.254	R20.112	R2.890	R2.672	0.114	R65.499	
1981	January	R1.519	1.534	R0.194	R1.748	R0.234	R0.249	0.011	R5.489	R5.489
	February	R1.632	1.396	R0.177	R1.574	R0.221	R0.230	0.010	R5.241	R10.730
	March	R1.803	1.546	R0.192	R1.723	R0.216	R0.234	0.011	R5.725	R16.455
	April	R0.864	1.486	R0.182	R1.656	R0.218	R0.220	0.010	R4.637	R21.091
	May	R0.869	1.528	R0.189	R1.699	R0.253	R0.210	0.010	R4.757	R25.848
	June	R1.444	1.499	R0.185	R1.647	R0.276	R0.225	0.010	R5.287	R31,135
	Juty	R1.711	1.514	R0.188	R1.679	R0.263	R0.246	0.011	R5.612	R36.747
	August	R1.823	1.542	R0.192	R1.726	R0.226	R0.287	0.011	R5.806	R42.553
	September	R1.858	R1.496	R0.191	R1.587	R0.187	R0.260	0.011	R5.590	R48.143
	October	R1.929	R1.537	R0.194	1.644	R0.190	R0.219	0.011	R5.723	R53.866
	November	R1.683	R1.496	R0.190	R1.652	R0.199	R0.242	0.010	R5.471	R59.337
	December	R1.567	R1.551	R0.195	R1.765	R0.250	R0.277	R0.010	R5.613	R64.949
	TOTAL	R18.700	18.125	R2.268	R20.098	R2.734	R2.897	R0.127	R64.949	

Revisions result primarily from updates to Btu conversion factors.

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Geographic coverage: the 50 United States and District of Columbia. Totals may not equal sum of components due to independent rounding. Includes bituminous coal, lignite, and anthracite. Includes lease condensate.

Includes lease condensate.
 Natural gas plant liquids.
 Includes industrial and utility production of hydropower.
 Includes geothermal power and electricity produced from wood and waste.
 R = Revised data.
 Source: •Energy Information Administration calculations based on data reported elsewhere in this publication.

#### **Production of Energy by Type**



Monthly 10 9 8 7 Total\* **Quadrillion Btu** 6 Coal (Includes Other) 5 4 Hydroelectric Crude Oil 3 2 Natural Gas & NGPL Nuclear 1 0 J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D 1982 1981 1980

\*Btu equivalents for all fuels are cumulated to create total.

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#### Consumption of Energy by Type

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	•	Coal	Natural Gas (Dry)	Petro- leum	Hydro- electric Power <sup>2</sup>	Nuclear Electric Power	Net Imports of Coal Coke <sup>3</sup>	Other <sup>4</sup>	Total Energy Con- sumed	Yearly Cumulative Energy Consumed
					Quadrillion	n (10⁵) Btu				
1973	TOTAL	13.300	22.512	34.840	3.010	0.910	(0.008)	0.046	74.609	
1974	TOTAL	12.876	21.732	33.455	3.309	1.272	0.059	0.056	72.759	
1975	TOTAL	12.823	19.948	32.731	3.219	1.900	0.014	0.072	70.707	
1976	TOTAL	13.733	20.345	35.175	3.066	2.111	0.000	0.081	74.510	
1977	TOTAL	R13.964	19.931	37.122	2.515	2.702	0.015	0.082	76.332	
1978	TOTAL	13.846	20.000	37.965	R3.141	R3.024	0.131	0.068	R78.175	
1979	TOTAL	15.109	20.666	37.123	R3.141	R2.715	0.066	0.089	R78.910	
1980	January	R1.398	R2.322	R3.202	R0.283	R0.210	0.003	0.008	R7.426	R7.426
	February	R1.313	R2.232	R2.990	R0.241	R0.205	(0.001)	0.008	R6.988	R14.413
	March	R1.295	R2.140	R2.951	R0.273	R0.213	(0.003)	0.008	R6.878	R21.291
	April	R1.158	R1.580	R2.759	R0.287	R0.200	(0.005)	0.008	R5.988	R27.279
	May	R1.162	R1.374	R2.758	R0.321	R0.196	(0.006)	0.010	R5.815	R33.093
	June	R1.234	R1.267	R2.661	R0.307	R0.195	(0.004)	0.009	R5.670	R38.763
	July	H1.389	R1.317	R2.719	R0.275	R0.224	(0.004)	0.010	R5.929	R44.692
	August	R1.381	R1.263	R2.676	R0.232	R0.259	(0.003)	0.011	R5.818	R50.510
	September	R1.261	R1.316	R2.728	R0.211	R0.251	(0.004)	0.010	R5.773	R56.283
	October	R1.227	R1.564	R2.887	R0.205	R0.261	(0.006)	0.011	R6.148	R62.431
	November	R1.250	R1.815	R2.745	R0.219	R0.223	(0.002)	0.011	R6.261	R68.692
	December	R1.394	R2.204	R3.127	R0.252	R0.235	(0.001)	0.011	R7.221	R75.913
	TOTAL	R15.461	R20.394	R34.202	R3.107	R2.672	(0.037)	0.114	R75.913	
1981	January	R1.477	R2.284	R3.106	R0.255	R0.249	0.000	0.011	R7.382	R7.382
	February	R1.310	R1.934	R2.597	R0.240	R0.230	(0.001)	0.010	R6.319	R13.701
	March	R1.321	R1.925	R2.690	0.236	R0.234	(0.003)	0.011	R6.415	R20.116
	April	R1.196	R1.506	R2.512	0.237	R0.220	(0.001)	0.010	R5.680	R25.796
	May	R1.202	R1.460	R2.581	0.273	R0.210	0.000	0.010	R5.736	R31.532
	June	R1.305	R1.347	R2.629	0.296	R0.225	(0.004)	0.010	R5.808	R37.340
	July	R1.476	R1.400	R2.669	0.283	R0.246	0.000	0.011	R6.086	R43.426
	August	R1.438	R1.330	R2.588	R0.247	R0.287	0.000	0.011	R5.901	R49.326
	September	R1.306	R1.305	R2.567	R0.207	R0.260	(0.002)	0.011	R5.654	R54.980
	October	R1.285	R1.557	R2.690	R0.210	R0.219	(0.003)	0.011	R5.970	R60.950
	November	R1.280	R1.713	R2.549	R0.219	R0.242	0.000	0.010	R6.014	R66.964
	December	R1.413	R2.165	R2.820	R0.270	R0.277	R(0.003)	R0.010	R6.951	R73.915
	TOTAL	R16.011	R19.927	R31.998	R2.972	R2.897	R(0.017)	R0.127	R73.915	

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Revisions result primarily from updates to Btu conversion factors.

Geographic coverage: the 50 United States and District of Columbia. Totals may not equal sum of components due to independent rounding. Includes bituminous coal, lignite, and anthracite. Includes industrial and utility production, and net imports of electricity. Parentheses indicate exports are greater than imports. Includes geothermal power and electricity produced from wood and waste.

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R=Revised data. Source: •Energy Information Administration calculations based on data reported elsewhere in this publication.

**Consumption of Energy by Type** 





\*Btu equivalents for all fuels were cumulated to create total. \*\*Includes net imports of coal coke and other.

#### Net Imports of Energy by Type<sup>1</sup>

		Coal <sup>2</sup>	Crude Oil <sup>3</sup>	Refined Petro- leum Products <sup>1</sup>	Natural Gas (Dry)	Electri- city	Coal Coke	Net Imports	Yearly Cumulative Net Imports of Energy
				Qua	drillion (1015	) Btu			
1973	TOTAL	(1.443)	6.883	6.097	0.981	0.148	(0.008)	12.659	
1974	TOTAL	(1.585)	7.389	5.273	0.907	0.133	0.059	12.175	
1975	TOTAL	(1.766)	8.708	3.800	0.904	0.064	0.014	11.725	
1976	TOTAL	(1.590)	11.221	3.982	0.922	0.089	0.000	14.625	
1977	TOTAL	(1.424)	13.921	4.321	0.981	0.182	0.015	17.995	
1978	TOTAL	(1.024)	13.125	3.932	0.941	R0.204	0.131	R17.309	
1979	TOTAL	(1.730)	13.328	3.603	1.243	R0.211	0.066	R16.720	
1980	January February March April May June July August September October November December <b>TOTAL</b>	R(0.114) R(0.101) R(0.145) R(0.220) R(0.220) R(0.230) R(0.215) R(0.238) R(0.219) R(0.244) R(0.235) R(0.214) <b>R(2.371)</b>	1.096 R0.958 0.967 R0.943 0.861 0.892 0.830 0.851 0.765 0.803 R0.766 0.854 R10.586	R0.349 R0.284 R0.269 R0.218 R0.214 R0.193 R0.199 R0.204 R0.223 R0.235 R0.235 R0.252 R0.272 <b>R2.912</b>	R0.115 R0.105 R0.076 R0.069 R0.059 R0.059 R0.058 R0.056 R0.072 R0.087 R0.095 <b>R0.957</b>	0.018 0.017 0.018 R0.018 0.018 R0.018 0.018 R0.018 R0.018 R0.018 R0.018 R0.018 R0.018	0.003 (0.001) (0.003) (0.005) (0.004) (0.004) (0.004) (0.004) (0.006) (0.002) (0.001) <b>(0.037)</b>	R1.468 R1.262 1.212 R1.053 R0.937 R0.928 R0.887 R0.890 R0.839 R0.878 R0.885 R1.025 <b>R12.265</b>	R1.468 R2.731 R3.943 4.995 R5.933 R6.861 R7.748 R8.638 R9.477 R10.355 R11.240 R12.265
1981	January February March April May June July August September October November December <b>TOTAL</b>	R(0.151) R(0.175) R(0.252) R(0.215) R(0.157) R(0.158) R(0.281) R(0.292) R(0.310) R(0.321) R(0.308) R(0.299) <b>R(2.918)</b>	0.826 0.761 R0.777 R0.743 R0.713 R0.691 0.735 R0.714 0.788 0.749 R0.648 R0.721 <b>R8.864</b>	R0.297 R0.246 R0.200 R0.161 R0.205 R0.179 R0.206 R0.200 R0.221 R0.185 R0.205 R0.220 <b>R2.524</b>	R0.083 R0.078 R0.071 R0.066 R0.057 R0.059 R0.062 R0.059 R0.064 R0.075 R0.080 R0.080 R0.091 <b>R0.846</b>	R0.020 R0.018 R0.020 R0.020 R0.020 R0.020 R0.020 R0.020 R0.020 R0.020 R0.020 R0.020 R0.020 R0.020 R0.020	0.000 (0.001) (0.003) (0.001) 0.000 (0.004) 0.000 (0.002) (0.003) 0.000 R(0.003) <b>R(0.017)</b>	R1.075 R0.927 R0.813 R0.773 R0.838 R0.786 R0.742 R0.702 R0.762 R0.705 R0.644 R0.749 <b>R9.536</b>	R1.075 R2.002 R2.815 R3.589 R4.427 R5.213 R5.955 R6.657 R7.439 R8.143 R8.787 R9.536

Revisions result primarily from updates to Btu conversion factors.

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- Geographic coverage: the 50 United States and District of Columbia. Totals may not equal sum of components due to independent rounding. Net imports = imports minus exports. Parentheses indicate exports are greater than imports. \*Includes bituminous coal, lignite, and anthracite. \*Includes redined petroleum products, unfinished oils, natural gasoline, and plant condensate. Pare Breiserd date.

R=Revised data. Source: •Energy Information Administration calculations based on data reported elsewhere in this publication.

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



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#### **Merchandise Trade Value**

			Exports			Imports			Trade Balance		
		Energy	All Other	Total	Energy	All Other	Total	Energy	All Other	Total	
						Million dolla	ars				
1973	TOTAL	1,671	69,202	70,873	8,173	61,659	69,832	-6,502	+7,543	+ 1,041	
1974	TOTAL	3,444	94,553	97,997	25,454	75,194	100,648	-22,010	+ 19,360	-2,650	
1975	TOTAL	4,470	103,119	107,589	26,476	70,094	96,570	-22,006	+ 33,025	+11,019	
1976	TOTAL	4,226	110,924	115,150	33,996	87,013	121,009	-29,770	+ 23,911	-5,859	
1977	TOTAL	4,184	116,966	121,150	44,537	103,148	147,685	-40,353	+ 13,818	-26,535	
1978	TOTAL	3,881	139,696	143,577	42,096	129,882	171,978	-38,215	+9,814	-28,401	
1979	TOTAL	5,621	176,030	181,651	59,998	146,258	206,256	-54,377	+ 29,772	-24,605	
1980	January February March April May June July August September October November December <b>TOTAL</b>	619 584 636 607 650 656 695 702 710 662 709 706 <b>7,982</b>	16,801 16,400 17,629 17,960 16,987 17,784 17,572 18,385 18,119 18,552 18,006 18,545 <b>212,644</b>	17,419 16,984 18,265 18,567 17,647 18,440 18,267 19,087 18,828 19,214 18,715 19,251 <b>220,626</b>	7,118 8,152 7,564 6,797 7,150 7,276 5,986 6,461 6,278 6,601 6,128 7,413 <b>82,924</b>	14,024 13,626 13,384 12,969 13,437 13,077 13,153 13,252 13,662 13,747 13,732 14,023 <b>161,947</b>	21,142 21,779 20,947 19,766 20,587 20,353 19,139 19,713 19,941 20,347 19,860 21,436 <b>244,871</b>	-6,499 -7,568 -6,928 -6,190 -6,490 -6,620 -5,291 -5,759 -5,568 -5,939 -5,419 -6,707 <b>-74,942</b>	+2,776 +2,774 +4,246 +4,992 +3,549 +4,708 +4,419 +5,133 +4,456 +4,805 +4,274 +4,522 +50,698	-3,723 -4,794 -2,682 -1,198 -2,941 -1,912 -872 -626 -1,112 -1,134 -1,145 -2,185 <b>-24,244</b>	
1981	January February March April May June July August September October November December <b>TOTAL</b>	R756 R999 R738 R593 R565 R847 R884 R939 R991 R997 R1,067 <b>R10,315</b>	R18,146 R18,789 R20,339 R19,048 R18,306 R19,185 R18,442 R18,147 R18,612 R18,172 R18,172 R18,156 R17,818 <b>R223,160</b>	R18,902 R19,788 R21,278 R19,786 R18,899 R19,750 R19,289 R19,031 R19,031 R19,153 R19,153 R18,885 <b>R233,475</b>	R8,007 R7,939 R6,471 R7,831 R6,075 R7,252 R5,687 R6,876 R6,555 R6,638 R6,638 R6,608 R5,422 <b>R81,361</b>	R14,609 R13,977 R14,558 R14,418 R15,157 R14,753 R14,427 R16,366 R14,719 R16,439 R15,900 R14,324 <b>R179,647</b>	R22,616 R21,916 R21,029 R22,249 R21,232 R22,005 R20,114 R23,242 R21,274 R23,077 R22,508 R19,746 <b>R261,008</b>	R-7,251 R-6,940 R-5,532 R-5,482 R-6,687 R-4,840 R-5,992 R-5,616 R-5,647 R-5,611 R-4,355 <b>R-71,046</b>	R+3,537 R+4,813 R+5,781 R+4,630 R+3,149 R+4,432 R+4,015 R+1,780 R+3,892 R+1,733 R+2,255 R+3,494 <b>\$</b> +43,511	R-3,714 R-2,127 R+249 R-2,463 R-2,255 R-825 R-825 R-4,212 R-1,724 R-3,914 R-3,356 R-861 <b>R-27,535</b>	
1982	January	1,269	17,468	18,737	7,439	15,390	22,829	-6,170	+ 2,078	-4,092	

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

Totals may not equal sum of components due to independent realisting.
R = Revised.
Note: The U.S. import statistics reflect both government and nongovernment imports of merchandise from foreign countries into the U.S.
Customs territory which includes the 50 United States, the District of Columbia, and Puerto Rico. See Note at the end of this section.
Sources: • 1973 through 1978: U.S. Department of Commerce, International Trade Administration, Overseas Business Reports, "United States Foreign Trade Annual", 1973-1979;
• 1979 forward: U.S. Department of Commerce, Bureau of the Census, "Summary of U.S. Export and Import Merchandise Trade," December 1980 issue for 1979 data and most recent monthly issue for 1980 and forward.

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**Merchandise Trade Value** 





Monthly



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#### Heating Degree-Days<sup>1</sup>

Petroleum Administration	February 1 through February 28						Cumulative July 1 through February 28				
Districts	1982		81²	Norma	I (1941-70) <sup>2</sup>	1981-82	198	D-81²	Norma	ul (1941-70) <sup>2</sup>	
PAD District I New England Conn., Maine, Mass., N.H., R.I., Vt.	758 1,017	678 832	(11.8) (22.3)	803 1,039	(-5.6) (-2.1)	3,655 4,741	3,660 4,774	( - 0.1) ( - 0.7)	3,398 4,451	(7.6) (6.5)	
Middle Atlantic Del., Md., N.J., N.Y., Pa.	918	791	(16.0)	946	( - 3.0)	4,305	4,273	(0.8)	3,983	(8.1)	
Lower Atlantic Fla., Ga., N.C., S.C., Va., W. Va.	405	441	( - 8.3)	484	( - 16.3)	2,200	2,250	( – 2.2)	2,055	(7.1)	
PAD District II III., Ind., Iowa, Kans., Ky., Mich., Minn., Mo., Nebr., N. Dak., Ohio, Okla., S. Dak., Tenn., Wisc.	1,102	931	(18.4)	1,017	(8.4)	4,905	4,548	(7.9)	4,514	(8.7)	
PAD District III Ala., Ark., La., Miss., N. Mex., Tex.	469	409	(14.6)	427	(9.7)	1,880	1,996	( – 4.4)	1,873	(0.4)	
PAD District IV Colo., Idaho, Mont., Utah, Wyo.	988	827	(19.5)	934	(5.8)	4,374	3,976	(10.0)	4,612	( - 5.2)	
PAD District V Ariz., Calif., Nev., Oreg., Wash.	338	300	(12.4)	399	( 15.4)	1,742	1,525	(14.2)	2,007	( - 13.2)	
U.S. AVERAGE'	782	679	(15.2)	774	· (1.0)	3,600	3,455	(4.2)	3,415	(5.4)	

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See Explanatory Note 6 for explanation of degree-days.
 Percentage change in parentheses.
 Excludes Alaska and Hawaii.

**Departure from Previous Heating Season** 



#### **Departure from Normal**



Source: • Department of Commerce – National Oceanic and Atmospheric Administration.

#### **Energy Indicators**—

#### **Energy Consumption per GNP Dollar**

#### U.S. Dependence on Petroleum Imports<sup>3</sup>

		Fnerav	Yearly	Gross National Product Yearly (Annual rate)			Direct Imports			
		Consumption per GNP Dollar <sup>2</sup>	Rate of Energy Consumption	Current Dollars	1972 Dollars <sup>3</sup>	From Arab/OPEC Countries	From OPEC Countries	Total All Countries	Petroleum Products Supplied	
ANNUA	L RATE		Quadrillion Btu	Trillion	Dollars		Million barro	els per day		
1973	AVERAGE	59.4	74.609	1.326	1.255	0.92	2.99	6.26	17.31	
1974	AVERAGE	58.3	72.759	1.434	1.248	0.75	3.28	6.11	16.65	
1975	AVERAGE	57.3	70.707	1.549	1.234	1.38	3.60	6.06	16.32	
1976	AVERAGE	57.3	74.510	1.718	1.300	2.42	5.07	7.31	17.46	
1977	AVERAGE	55. <del>6</del>	76.332	1.918	1.372	3.19	6.19	8.81	18.43	
1978	AVERAGE	54.4	R78.175	2.156	1.437	2.96	5.75	8.36	18.85	
1979	AVERAGE	53.2	R78.910	2.414	1.483	3.06	5.64	8.46	18.51	
1980	1st Qtr 2nd Qtr 3rd Qtr 4th Qtr AVERAGE	R57.0 R48.0 R47.3 R52.6 <b>R51.3</b>	R85.632 R70.272 R69.699 R78.093 <b>R75.913</b>	2.572 2.565 2.637 2.731 <b>2.626</b>	1.502 1.463 1.472 1.486 <b>1.481</b>	R2.99 2.59 R2.28 R2.35 <b>R2.55</b>	R5.05 R4.29 R3.80 R4.06 <b>R4.30</b>	R8.00 R6.86 R6.23 R6.56 <b>R6.91</b>	R18.34 R16.40 R16.11 R17.38 <b>R17.06</b>	
1981	1st Qtr 2nd Qtr 3rd Qtr 4th Qtr AVERAGE	R53.8 R45.8 R46.2 50.1 <b>49.0</b>	R81.582 R69.085 R69.985 75.123 <b>73.915</b>	2.853 2.886 R2.965 2.995 <b>2.925</b>	1.516 1.510 R1.516 1.498 <b>1.510</b>	2.06 R1.82 R1.85 1.67 <b>1.85</b>	3.81 R3.14 R3.18 3.15 <b>3.32</b>	6.53 R5.63 R5.95 5.82 <b>5.98</b>	17.02 R15.49 R15.52 15.99 <b>16.00</b>	

Geographic coverage: the 50 United States and District of Columbia.

H = Revised. <sup>1</sup>Beginning in October 1977 Strategic Petroleum Reserve imports are included. <sup>2</sup>Thousand Btu per 1972 constant dollar. <sup>3</sup>Current dollars are converted to 1972 constant dollars by the Department of Commerce, Bureau of Economic Analysis. Gross National Product rates are from the *Business Conditions Digest* published by the Bureau of Economic Analysis. Note: This page is updated every quarter, during the months of March, June, September, and December. In other months, data appearing elsewhere in this publication are more current.

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Energy Consumption per GNP Dollar



#### **U.S. Dependence on Petroleum Imports**



#### Energy Indicator—Cost of Fuels to End Users (1972 Dollars)

		Leaded Regular Motor Gasoline		Residential Heating Oil		Residential Natural Gas		Residential Electricity	
		cent/gal	\$/MMBtu	cent/gal	\$/MMBtu	cent/Mcf	\$/MMBtu	cent/kWh	\$/MMBtu
1973	AVERAGE	NA	NA	NA	NA	121.2	1.19	2.39	7.00
1974	AVERAGE	45.1	3.61	29.4	2.12	121.4	1.19	2.63	7.71
1975	AVERAGE	44.1	3.53	29.3	2.11	132.8	1.30	2.73	8.00
1976	AVERAGE	43.4	3.47	29.8	2.15	145.4	1.43	2.74	8.03
1977	AVERAGE	42.9	3.43	31.8	2.29	162.2	1.59	2.80	8.21
1978	AVERAGE	40.1	3.21	31.7	2.29	164.4	1.62	2.76	8.09
1979	AVERAGE	49.4	3.95	37.8	2.73	171.5	1.68	2.67	7.83
1 <del>9</del> 80	1st Qtr 2nd Qtr 3rd Qtr 4th Qtr	60.9 62.1 60.6 58.2	4.87 4.97 4.85 4.65	49.8 49.8 49.2 50.7	3.59 3.59 3.55 3.66	190.9 197.2 207.6 198.9	R1.86 R1.93 R2.03 R1.94	2.53 2.75 2.86 2.73	7.42 8.06 8.38 8.00
	AVERAGE	60.5	4.84	49.7	3.58	R186.9	R1.83	2.72	7.97
1981	1st Qtr 2nd Qtr 3rd Qtr 4th Qtr AVERAGE	62.1 62.1 59.3 57.9 <b>60.4</b>	4.97 4.97 4.74 4.63 <b>4.83</b>	57.0 57.2 54.4 54.0 <b>55.7</b>	4.11 4.12 3.92 3.89 <b>4.0</b> 1	196.0 207.5 213.3 213.1 <b>207.6</b>	R1.91 R2.03 2.08 2.08 <b>2.03</b>	2.65 2.91 2.99 2.87 <b>2.85</b>	7.77 8.53 8.76 8.41 8.35

Average Cost of Fuels to End Users (1972 constant dollars)



Geographic coverage: the 50 United States and District of Columbia.
NA=Not available. R=Revised.
Note: This page is updated every quarter, during the months of March, June, September, and December. In other months, data appearing elsewhere in this publication are more current.
Sources: • Motor Gasoline—Bureau of Labor Statistics.
• Heating Oil—1974 and 1975: Form CLC-92, "No. 2 Heating Oil Monthly Price Adjustment Report"; 1976 forward: FEA Form P112-M-1 and EIA-9, "No. 2 Heating Oil Supply/Price Monitoring Report."
• Natural Gas—1973 through 1980 annual numbers: Bureau of Mines and Energy Information Administration, Form 1340-A, "Supply and Disposition of Natural Gas to Non-Producing Distributors" and Form 1341-A, "Supply and Disposition of Natural Gas to Producers and Pipelines"; 1980 and 1981 quarterly numbers and 1981 annual numbers: Bureau of Labor Statistics.
• Electricity—1973 through February 1980: FPC Form 5, "Monthly Statement of Electric Operating Revenue and Income"; March 1980 forward: FERC Form 5, "Electric Utility Company Monthly Statement."
• Deflator—The Consumer Price Index.

Deflator—The Consumer Price Index.

#### Energy Indicator—U.S. Passenger Car Efficiency

	Averag Consume	le Fuel d per Car	Averag Traveled	je Miles I per Car	Average Miles Traveled per Gallon of Fuel Consumed		
	Gallons	Index	Miles	Index	Miles	Index	
1967	684	100.0	9,531	100.0	13.93	100.0	
1968	698	102.0	9,627	101.0	13.79	99.0	
1969	718	105.0	9,782	102.6	13.63	97.8	
1970	735	107.5	9,978	104.7	13.57	97.4	
1971	746	109.1	10,121	106.2	13.57	97.4	
1972	755	110.4	1 <b>0,184</b>	106.9	13.49	96.8	
1973	763	111.5	9,992	104.8	13.10	94.0	
1974	704	102.9	9,448	99.1	13.43	96.4	
1975	712	104.1	9,634	101.1	13.53	97.1	
1976	711	103.9	9,763	102.4	13.72	98.5	
1977	706	103.2	9,839	103.2	13.94	100.1	
1978	715	104.5	10,046	105.4	14.06	100.9	
19 <b>79</b>	664	97.1	9,485	99.5	14.29	102.6	
1980	603	88.2	9,135	95.8	15.15	108.8	

#### **U.S. Passenger Car Efficiency Index**



Geographic coverage: the 50 United States and District of Columbia. Source: • U.S. Department of Transportation, Federal Highway Administration, Federal Highway Statistics Division, "Highway Statistics," Table VM-1.

#### Note for the Executive Summary Section

•Merchandise Trade Value Table: The U.S. import statistics reflect both government and nongovernment imports of merchandise from foreign countries into the U.S. Customs territory which includes the 50 United States, the District of Columbia, and Puerto Rico. The statistics exclude imports into Guam, American Samoa, and other U.S. possessions; as well as shipments between the United States and Puerto Rico, between the United States and U.S. possessions, and between any of these outlying areas. Also, U.S. Virgin Island trade with foreign countries is included in all import data and total export data beginning with January 1980 and is included in energy export data beginning with January 1981. Data presented are on a customs value basis (i.e., the value of imports as appraised by the U.S. Customs Service in accordance with the legal requirements of the Tariff Act of 1930) for 1973, 1981 and foward. Values for all other years are on a free alongside ship (I.a.s.) basis. Monthly data are adjusted for seasonal and working-day variation; annual data are unadjusted. Statistics include nonmonetary gold. Statistics exclude Department of Defense (DOD) Military Program Grant-Aid shipments. "All Other" and "Total" columns include foreign exports (i.e., reexports). The "Energy" columns include mineral fuels, lubricants, and related material. "Imports" represent general imports (i.e., entries for immediate consumption, entries into Customs bonded warehouses, and entries for the Strategic Petroleum Reserve). "Trade Balance" is exports minus imports: positive indicates surplus trade value and negative indicates deficit trade value. The "All Other" columns are calculated by subtracting "energy" from "total." Totals may not equal sum of components due to independent rounding.

#### **Energy Consumption**

Total U.S. energy consumption in 1981 dropped to 73.9 quadrillion Btu, 2.6 percent below 1980 and a 6.3 percent decrease from the 1979 consumption level.

The Residential and Commercial Sector consumption was 25.6 quadrillion Btu in 1981, a 0.9 percent decrease from the amount consumed last year and 1.7 percent below the 1979 level. The Residential and Commercial Sector consumed 34.7 percent of the 1981 total, as compared to the sector's 34.1 percent share in 1980.

The Industrial Sector consumption was 29.0 quadrillion Btu in 1981, down 4.4 percent from 1980, and down 10.4 percent from the consumption level in 1979. The Industrial Sector consumed 39.3 percent of the 1981 total, as compared to the sector's 40.0 percent share in 1980.

The Transportation Sector consumption was 19.2 quadrillion Btu in 1981, down 2.3 percent from 1980 and down 5.9 percent from the consumption level in 1979. This sector consumed 26.0 percent of the 1981 total, as compared to the sector's 25.9 percent share in 1980.

The Electric Utilities consumption was an estimated 24.6 quadrillion Btu of energy in 1981, 0.7 percent higher than in the previous year, and 2.0 percent higher than the energy consumed in 1979. Coal contributed 51.6 percent of the energy consumed by Electric Utilities in 1981, while natural gas contributed 15.3 percent, petroleum 8.9 percent, hydroelectric power 11.9 percent, nuclear power 11.8 percent, and geothermal, wood, and waste 0.5 percent.

#### Consumption

#### Energy Consumption Summary for December 1981 Quadrillion (10<sup>15</sup>) Btu

	Sector							
Primary Energy Source	Residential and Commercial	Industrial	Transportation	Electric Utilities	TOTAL			
Coal	0.020	0.259	0.000	1.131	1.413			
Natural Gas (dry)	0.962	0.885	0.069	0.248	2.165			
Petroleum	0.304	0.684	1.632	0.200	2.820			
Hydroelectric	0.000	0.002	0.000	0.267	0.270			
Nuclear	0.000	0.000	0.000	0.277	0.277			
Net Coke Imports	0.000	(0.003)	0.000	0.000	(0.003)			
Other	0.000	0.000	0.000	0.010	0.010			
TOTAL PRIMARY ENERGY	1.285	1.826	1.701	2.132	6.951			
Electricity Sales	0.368	0.219	0.001	(0.588)				
Net Energy Consumption	1.654	2.045	1.702		5.407			
Electrical Energy Losses	0.967	0.574	0.002	(1.544)	1.544			
TOTAL ENERGY CONSUMED	2.621	2.619	1.705		6.951			

Consumption

Totals may not equal sum of components due to independent rounding and, in the case of coal, the use of preliminary conversion factors. Notes and sources for this table and all other tables in this section are provided on the last page of this section. mar 82

#### Consumption of Energy by End-Use Sector<sup>1</sup>

		Residential and Commercial	Industrial	Transportation	Total Energy Consumed
	,	oommerena	Quadrillior	n (10 <sup>35</sup> ) Btu	Consumed
1072	TOTAL	B24 407	D21 000	<b>D</b> 10 500	74 000
1973	IUIAL	N24.19/	NJ 1.800	R 18.320	/4.609
1974	TOTAL	R23.774	R30.943	R18.035	72.759
1975	TOTAL	R23.920	R28.608	18.177	70.707
1976	TOTAL	R25.004	R30.435	R 19.064	74.510
1977	TOTAL	R25.405	R31.186	R19.736	76.332
1978	TOTAL	* <b>R25.990</b>	R31.570	R20.614	R78.175
1979	TOTAL	R26.073	R32.399	R20.434	R78.910
1980	January	. R2.822	R2.857	R1.749	R7.426
	February	R2.752	R2.562	R1.676	R6.988
	March	R2.568	R2.618	R1.694	R6.878
	April	R2.028	R2.337	R1.631	R5.988
	May	R1.760	R2.443	R1.618	R5.815
	June	R1.761	R2.349	R1.559	R5.670
	July	R1.966	R2.332	R1.624	R5.929
	August	R1.947	R2.278	R1.586	R5.818
	September	R1.809	R2.397	R1.562	R5.773
	October	R1.813	R2.673	R1.663	R6.148
	November	H2.028	R2.674	R1.559	R6.261
	December	H2.618	H2.841	H1.761	H7.221
	TOTAL	R25.870	R30.361	R19.682	R75.913
1981	January	R3.080	R2.531	R1.769	R7.382
	February	R2.645	R2.164	R1.510	R6.319
	March	R2.389	R2.416	R1.610	R6.415
	April	R1.912	R2.231	R1.538	R5.680
	May	R1.768	R2.403	R1.563	R5.736
	June	R1.818	R2.379	R1.605	R5.808
	July	R1.964	R2.483	R1.634	R6.086
	August	H1.905	H2.405	R1.586	R5.901
	September	H1./2/	H2.375	H1.551	R5.654
	Uctober	H1.817	H2.545	H1.607	H5.970
	November	H1.995	H2.476	H1.543	H6.014
	December	<b>TIZ.02</b>	H2.019	H1.705	H0.951
	TOTAL	R25.642	R29.027	R19.220	R73.915

See page 28 for summary of revisions in Part 2.

Geographic coverage: the 50 United States and District of Columbia. Totals may not equal sum of components due to independent rounding and the use of preliminary conversion factors after 1980. 'See Explanatory Note 5 for definitions of the Residential and Commercial, Industrial, and Transportation Sectors. The methodology used for sector calculations is provided in the Notes and Sources at the end of this section. R=Revised data. Source: •See Notes and Sources at the end of this section.

#### Consumption of Energy by End-Use Sector-









\*Btu consumption for all sectors were cumulated to create total.

#### Consumption of Energy by the Residential and Commercial Sector<sup>1</sup>

		Coal	Natural Gas (Dry)	Petroleum	Electricity Sales	Electrical Energy Losses <sup>2</sup>	Total Energy Consumed	Yearly Cumulative Energy Consumed
					Quadrillion (10)	15) Btu		
1973	TOTAL	0.291	7.626	R4.321	3.495	R8.464	R24.197	
1974	TOTAL	0.292	7.518	R3.932	3.475	R8.558	R23.774	
1975	TOTAL	0.238	7.581	R3.760	R3.604	R8.736	R23.920	
1976	TOTAL	0.227	7.866	R4.160	R3.747	R9.005	R25.004	
1977	TOTAL	0.225	7.461	R4.148	R3.955	R9.615	R25.405	
1978	TOTAL	0.239	7.624	R4.062	R4.116	R9.950	R25.990	
1979	TOTAL	0.210	7.891	R3.687	4.184	R10.101	R26.073	
1 <b>980</b>	January	R0.021	1.114	R0.358	0.381	R0.947	R2.822	R2.822
•	February	0.019	R1.176	R0.329	0.375	R0.853	R2.752	R5.574
	March	R0.013	R1.040	R0.300	0.358	R0.857	R2.568	R8.142
	April	R0.014	R0.707	R0.245	0.319	R0.742	R2.028	R10.170
	May	0.009	R0.443	R0.238	0.298	R0.772	R1.760	R11.929
	June	0.007	R0.324	R0.224	0.334	R0.872	R1.761	R13.690
	July	R0.008	R0.255	R0.225	0.410	R1.068	R1.966	R15.656
	August	0.008	R0.239	R0.221	0.439	R1.039	R1.947	R17.603
	September	0.011	R0.248	R0.246	0.410	R0.895	R1.809	R19.412
	October	R0.014	R0.369	R0.279	0.343	R0.808	R1.813	R21.225
	November	R0.015	R0.634	R0.271	0.322	R0.785	R2.028	R23.252
•	December	0.020	R0.992	R0.343	0.364	R0.899	R2.618	R25.870
	TOTAL	R0.160	R7.540	R3.280	4.355	R10.536	R25.870	
1981	January	R0.021	R1.292	R0.373	0.413	R0.981	R3.080	R3.080
	February	0.014	R1.140	R0.288	0.379	R0.825	R2.645	R5.725
	March	0.012	R0.929	R0.270	0.344	R0.833	R2.389	R8.114
	April	0.014	0.605	R0.230	0.315	R0.749	R1.912	R10.027
	Мау	0.009	R0.430	R0.226	0.313	R0.790	R1.768	R11.794
	June	R0.007	0.302	R0.227	0.355	R0.926	R1.818	R13.612
	July	R0.010	0.251	R0.229	0.420	R1.054	R1.964	R15.576
	August	0.010	0.243	R0.222	0.421	R1.010	R1.905	R17.482
	September	0.013	0.253	R0.233	0.383	R0.845	R1.727	R19.209
	October	0.014	0.399	R0.264	0.339	R0.802	R1.817	R21.026
	November	0.015	R0.596	R0.261	0.327	R0.797	R1.995	R23.021
	December	R0.020	R0.962	R0.304	0.368	R0.967	R2.621	R25.642
	TOTAL	R0.158	R7.404	R3.125	R4.376	R10.579	R25.642	

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See page 28 for summary of revisions in Part 2.

R=Revised data.

Source: . See Notes and Sources at the end of this section.

Geographic coverage: the 50 United States and District of Columbia. Totals may not equal sum of components due to independent rounding. <sup>1</sup>The Residential and Commercial Sector consists of housing units, non-manufacturing business establishments (e.g., wholesale and retail businesses), health and educational institutions, and government office buildings. Notes on the methodology used for sector calculations are provided in the Notes and Sources at the end of this section. <sup>2</sup>Incurred in the generation and transmission of electricity plus plant use and unaccounted for electrical energy losses that are attributed to each sector in proportion to the sector's share of total electricity sales in the United States.

#### Consumption of Energy by the Industrial Sector<sup>1</sup>

		Coal	Natural Gas (Dry)	Petro- leum	Hydro- electric	Net Coke Imports²	Electricity Sales	Electrical Energy Losses <sup>3</sup>	Total Energy Consumed	Cumulative Energy Consumed
					G	uadrillion (10	)י≉) Btu			
1973	TOTAL	4.349	R10.388	R9.103	0.035	(0.008)	2.341	R5.679	R31.886	
1974	TOTAL	4.048	R10.003	R8.707	0.033	0.059	2.337	R5.756	R30.943	
1975	TOTAL	3.797	R8.532	R8.192	0.032	0.014	R2.346	R5.694	R28.608	
1976	TOTAL	3.786	R8.761	R9.092	0.033	0.000	R2.573	R6.189	R30.435	
1977	TOTAL	3.498	R8.636	R9.789	0.033	0.015	R2.682	R6.533	R31.186	
1978	TOTAL	3.372	R8.539	R10.046	0.032	0.131	R2.761	R6.691	R31.570	
1979	TOTAL	3.636	R8.549	R10.294	0.034	0.066	2.873	R6.948	R32.399	
1980	January	B0.308	R0.845	R0.895	0.003	0.003	0.230	R0.572	R2.857	R2.857
1000	February	R0.286	R0.710	R0.798	0.003	(0.001)	0.234	R0.532	R2.562	R5.419
	March	R0.291	R0.738	R0.790	0.003	(0.003)	0.236	R0.564	R2.618	R8.037
	April	R0.285	R0.557	R0.726	0.003	(0.005)	0.232	R0.539	_R2.337	R10.373
	May	R0.276	R0.595	R0.750	0.003	(0.006)	0.229	R0.594	R2.443	R12.816
	June	R0.250	R0.556	R0.721	0.003	(0.004)	0.228	R0.595	R2.349	R15.165
	July	R0.229	R0.588	R0.710	0.003	(0.004)	0.224	R0.583	R2.332	R17.496
	August	R0.231	R0.566	R0.708	0.002	(0.003)	0.230	R0.544	R2.278	R19.774
	September	R0 225	R0.658	R0.762	0.002	(0.004)	0.237	R0.517	R2.397	R22.172
	October	R0.253	R0.833	R0.796	0.002	(0.006)	0.237	R0.558	R2.673	R24.845
	November	R0.263	R0.858	R0.761	0.002	(0.002)	0.231	R0.563	R2.674	R27.520
	December	R0.286	R0.890	R0.854	0.002	(0.001)	0.234	R0.577	R2.841	R30.361
	TOTAL	R3.181	<b>R8.395</b>	R9.272	0.033	(0.037)	2.781	R6.736	R30.361	
1001	laguan	B0 200	<b>B</b> 0.677	B0 779	0.003	0.000	0.229	R0.544	R2.531	R2.531
1901	Echrupry	P0 277	80.499	B0 656	0.003	(0.001)	0.230	R0.501	R2.164	R4.695
	Marab	P0.280	B0 651	80 684	0.003	(0.003)	0.234	R0.566	R2.416	R7.111
	April	B0 253	R0 556	B0 635	0.003	(0.001)	0.232	R0.553	R2.231	R9.342
	Mov	B0 232	R0 659	R0 681	0.003	0.000	0.235	R0.593	R2.403	R11.746
	huno	PO 226	B0 603	B0 670	0.003	(0.004)	0.244	R0.637	R2.379	R14.125
	Julie	P0.264	R0 682	R0 674	0.003	0.000	0.245	R0.615	R2.483	R16.607
	August	R0.267	R0 641	B0 659	0.002	0.000	0.246	R0.590	R2.405	R19.012
	Sontember	BU 250	R0 675	R0 664	0.002	(0.002)	0.242	R0.534	R2.375	R21.387
	October	R0.259	R0 707	B0 702	0.002	(0.003)	0.236	R0.558	R2.545	R23.932
	Novomber	R0.202	80.795	B0 637	0.002	0.000	0.226	R0.551	R2.476	R26.408
	December	R0 259	R0.885	R0.684	0.002	R(0.003)	R0.219	R0.574	R2.619	R29.027
	TOTAL	R3.134	R8.120	R8.123	0.033	R(0.017)	R2.817	R6.816	R29.027	

See page 28 for summary of revisions in Part 2.

Geographic coverage: the 50 United States and District of Columbia. Totals may not equal sum of components due to independent rounding. <sup>1</sup>The Industrial Sector is made up of construction, manufacturing, agriculture, and mining establishments. Notes on the methodology used for sector calculations are provided in the Notes and Sources at the end of this section. <sup>2</sup>Net imports equals imports minus exports. Parentheses indicate exports are greater than imports. <sup>3</sup>Incurred in the generation and transmission of electricity plus plant use and unaccounted for electrical energy losses that are attributed to each sector in proportion to the sector's share of total electricity sales in the United States. R = Revised data. Source: •See Notes and Sources at the end of this section

Source: •See Notes and Sources at the end of this section.

Consumption of Energy by the Transportation Sector<sup>1</sup>

		Coal	Naturai Gas (Dry)	Petroleum	Electricity Sales	Electrical Energy Losses <sup>2</sup>	Total Energy Consumed	Yearly Cumulative Energy Consumed
				Qua	drillion (1019) Btu			
1973	TOTAL	0.003	0.743	17.745	0.009	R0.021	R18.520	
1974	TOTAL	0.002	0.685	R17.317	0.009	R0.022	R18.035	
1975	TOTAL	0.001	0.595	17.547	0.010	R0.025	18.177	
1976	TOTAL	(3)	0.559	18.469	0.010	0.025	R19.064	
1977	TOTAL	(3)	0.543	19.157	0.010	R0.025	R19.736	
1978	TOTAL	(3)	0.539	20.044	0.009	R0.022	R20.614	
1979	TOTAL	(3)	0.612	R19.786	0.010	R0.025	R20.434	
1980	January	(3)	R0.074	R1.671	0.001	0.002	R1.749	R1.749
	February	• ( <sup>3</sup> )	R0.071	R1.602	0.001	0.002	R1.676	R3.424
	March	( <sup>3</sup> )	R0.068	R1.623	0.001	0.002	R1.694	R5.119
	April	(°)	R0.050	R1.578	0.001	0.002	R1.631	R6.749
	May	(3)	R0.044	R1.571	0.001	0.002	R1.618	B8.367
	June	( <sup>3</sup> )	R0.040	R1.516	0.001	0.002	R1.559	<b>R9.927</b>
	July	(°)	R0.042	R1.579	0.001	0.002	R1.624	B11.551
	August	(3)	R0.040	R1.543	0.001	0.002	B1.586	B13 137
	September	(3)	R0.042	R1.517	0.001	0.002	B1 562	B14 699
	October	(3)	R0.050	R1.610	0.001	0.002	B1 663	R16 361
	November	(3)	R0.058	R1.498	0.001	0.002	R1 550	P17 021
	December	(3)	R0.070	R1.688	0.001	0.002	B1 761	R19 682
	TOTAL	(*)	R0.650	R 18.996	0.011	R0.026	R19.682	1110.002
1981	January	(°)	R0.073	R1.693	0.001	0.002	R1.769	B1.769
	February	(3)	R0.062	R1.445	0.001	0.002	R1.510	B3.279
	March	(3)	R0.061	R1.546	0.001	0.002	R1.610	B4.889
	April	(ª)	R0.048	R1.487	0.001	0.002	R1.538	R6.427
	May	(°)	R0.047	R1.513	0.001	0.002	R1.563	B7.989
	June	(3)	R0.043	R1.559	0.001	0.002	R1.605	89 594
	July	(3)	R0.045	R1.586	0.001	0.002	B1.634	B11 229
	August	( <sup>3</sup> )	R0.042	R1.541	0.001	0.002	R1.586	B12 815
	September	(3)	R0.042	R1.506	0.001	0.002	B1.551	B14 366
	October	( <sup>3</sup> )	R0.050	R1.554	0.001	0.002	B1.607	R15 973
	November	(3)	R0.055	R1.485	0.001	0.002	B1.543	R17 515
	December	(3)	R0.069	R1.632	0.001	0.002	B1.705	B19 220
	TOTAL	(°)	R0.635	R18.548	0.011	R0.027	R19.220	
						110.027	N 13.220	

See page 28 for summary of revisions in Part 2.

Geographic coverage: the 50 United States and District of Columbia. Totals may not equal sum of components due to independent rounding. <sup>1</sup>The Transportation Sector consists of both private and public passenger and freight transportation, as well as government transporta-tion, including military operations. Notes on the methodology used for sector calculations are provided in the Notes and Sources at the part of this portion. end of this section.

The of this section. Incurred in the generation and transmission of electricity plus plant use and unaccounted for electrical energy losses that are attributed to each sector in proportion to the sector's share of total electricity sales in the United States. Since 1976 the amount of coal consumed by the Transportation Sector has been negligible.

R=Revised data.

Source: •See Notes and Sources at the end of this section.

#### **Energy Input at Electric Utilities**

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		_ Coal <sup>1</sup>	Natural Gas (Dry)	Petro- leum <sup>a</sup>	Hydro- electric power³	Nuclear Electric Power	Other	Total Energy Input	Yearly Cumulative Energy Input		
			Quadrillion (101) Btu								
1973	TOTAL	8.658	3.748	3.671	2.975	0.910	0.046	20.008			
1974	TOTAL	8.535	3.519	3.499	3.276	1.272	0.056	20.156			
1975	TOTAL	8.786	3.240	3.231	3.187	1.900	0.072	20.416			
1976	TOTAL	<del>9</del> .720	3.152	3.454	3.032	2.111	0.081	21.549			
1977	TOTAL	10.243	. 3.284	4.028	2.482	2.702	0.082	22.821			
1978	TOTAL	10.236	3.297	3.813	R3.110	R3.024	0.068	R23.548			
1979	TOTAL	11.264	3.609	3.357	R3.107	R2.715	0.089	R24.141			
1980	January	1.073	R0.286	R0.277	R0.280	R0.210	0.008	R2.134	R2.134		
	February	1.012	R0.273	R0.261	R0.238	R0.205	0.008	R1.997	H4.131		
	March	R0.994	R0.294	R0.238	R0.270	R0.213	0.008	H2.017	H6.148		
	April	R0.866	R0.265	R0.210	R0.284	R0.200	0.008	H1.835	H7.983		
	May	0.883	R0.291	R0.199	R0.317	R0.196	0.010	H1.896	H9.879		
	June	0.976	R0.348	R0.199	R0.304	R0.195	0.009	R2.031	R11.910		
	July	1.143	R0.435	R0.204	R0.272	R0.224	0.010	H2.287	H14.197		
	August	R1.133	R0.419	R0.203	R0.230	R0.259	0.011	H2.255	H16.452		
	September	R1.020	R0.369	R0.203	R0.209	R0.251	0.010	R2.063	H18.515		
	October	R0.960	R0.312	R0.201	R0.203	R0.261	0.011	H1.948	H20.463		
	November	R0.973	R0.264	R0.215	R0.217	R0.223	0.011	H1.903	H22.366		
	December	R1.089	R0.250	R0.243	R0.249	R0.235	0.011	H2.077	H24.444		
	TOTAL	R12.122	R3.807	R2.654	R3.074	R2.672	0.114	R24.444			
1981	January	1.158	0.239	R0.262	R0.252	R0.249	0.011	R2.170	R2.170		
	February	R1.020	R0.232	R0.208	0.237	R0.230	0.010	R1.937	H4,108		
	March	1.031	R0.282	R0.190	0.233	R0.234	0.011	R1.981	H6.088		
	April	0.930	R0.297	R0.160	0.234	R0.220	0.010	R1.852	R7.940		
	May	R0.958	R0.325	R0.161	R0.270	R0.210	0.010	R1.934	R9.874		
	June	R1.064	R0.400	R0.173	0.293	R0.225	0.010	R2.166	H12.040		
	July	1.196	R0.424	R0.180	0.280	R0.246	0.011	R2.337	R14.377		
	August	1.157	R0.404	R0.167	0.244	R0.287	0.011	R2.269	R16.646		
	September	R1.032	R0.336	R0.165	0.204	R0.260	0.011	R2.008	R18.654		
	October	1.018	R0.312	R0.170	R0.208	R0.219	0.011	R1.937	R20.591		
	November	1.001	R0.268	R0.166	R0.217	R0.242	0.010	R1.903	R22.495		
	December	R1.131	R0.248	R0.200	R0.267	R0.277	R0.010	R2.132	<b>Fi24.626</b>		
	TOTAL	R12.695	R3.766	R2.202	R2.939	R2.897	R0.127	R24.626			

See page 28 for summary of revisions in Part 2.

Geographic coverage: the 50 United States and District of Columbia. Totals may not equal sum of components due to independent rounding. Includes bituminous coal, lignite, and anthracite. Based on deliveries to utilities. Includes net imports of electricity. Includes geothermal power and electricity produced from wood and waste. R = Revised data. Source: \*See Notes and Sources at the end of this section.

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## Notes and Sources for the Consumption Section

1. See Explanatory Note 5 in the Explanatory Notes Section located at the end of this publication for definitions of the Residential and Commercial, Industrial, Transportation, and Electric Utilities Sectors. See the inside back cover for factors applied in converting physical unit data into Btu.

- 2. Coal: Coal is anthracite, bituminous coal, and lignite.
   Sources: 

   Anthracite 1973 through 1976; U.S. Department of the Interior (DOI), Bureau of Mines (BOM), Minerals Yearbook,

   'Coal-Pennsylvania Anthracite, Annual.
  - 1977 forward: U.S. Department of Energy (DOE), Energy Information Administration (EIA), Energy Data Reports, "Weekly Coal Report."
  - · Bituminous coal and lignite 1973 through 1975: U.S. DOI, BOM, Minerals Yearbook, "Bituminous Coal and Lignite, Annual," Federal Power Commission (FPC), Form 4, "Monthly Power Plant Report." 1976 forward: DOE, EIA, Energy Data Reports, "Weekly Coal Report."
  - Electric Utilities consumption of coal same as Note 6 below.

3. Natural Gas: Total natural gas consumption is estimated monthly based on a supply disposition balance calculation. Residential and Commercial Sector monthly consumption is estimated by allocating the EIA annual Residential and Commercial Sectors consumption to the months in proportion to the American Gas Association (AGA) monthly sales to the Residential and Commercial Sectors. For incomplete years, the AGA monthly sales data are used temporarily. Monthly Transportation consumption (which is natural gas for pipeline use) for complete years is estimated by allocating the EIA annual Transportation total to the months based on each month's total natural gas consumption as a share of the annual total natural gas consumption. For incomplete years, each month's Transportation total is estimated by applying the percentage of total natural gas accounted for by the Transportation Sector in the same month a year ago to the current month's total natural gas consumption. Electric Utilities consumption of natural gas is available monthly from FPC Form 4, "Monthly Power Plant Re-'Each month's Industrial Sector consumption is estimated by subtracting the Residential and Commercial, Transportation, and Electric port." Each month's industrial Sector consumption is estimated by subfacting the residential and contracted, induced, in

- · American Gas Association, "Monthly Gas Utility Statistical Report."

4. Petroleum: Petroleum consumption by end-use is the sum of all individual petroleum products consumed in each end-use sector, First, total consumption by product is determined. Petroleum consumption in this section of the Monthly Energy Review uses the series called products supplied" in the Petroleum Section.

- Sources for petroleum products supplied by individual products are:
- Sources for performent products supplied by individual products and.
   1973 through 1975: DOI, BOM, Mineral Industry Surveys, "Petroleum Statement, Annual."
   1976 through 1980: DOE, EIA, Energy Data Reports, "Petroleum Statement, Annual."
   1981: DOE, EIA, Energy Data Reports, "Petroleum Statement, Monthly,"
   Notes regarding specific petroleum products' end-use allocations follow:

- Aviation Gasoline All product supplied is assigned to the Transportation Sector.
   Asphalt and Road Oil All product supplied is assigned to the Industrial Sector.
- Distillate Fuel Total product supplied 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" reports as follows: — Residential deliveries are presented for 1979 and 1980. Prior to 1979, each year's subtotal of heating plus industrial is split
  - into residential, commercial, and industrial (including farm) in proportion to the 1979 shares:
    - Commercial deliveries are presented for 1979 and 1980. Prior to 1979, each year's subtotal of heating plus industrial is split into residential, commercial, and industrial (including farm) in proportion to the 1979 shares;
  - Industrial sector deliveries for 1979 and 1980 are the sum of deliveries for industrial, farm, oil company, off-highway diesel, and all other uses. Prior to 1979, each year's heating plus industrial subtoral 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 railroad, vessel bunkering, on-highway diesel, and military uses for all years; and - Electric utility deliveries are presented for all years.
  - The 1980 shares are used as estimates for succeeding periods until deliveries for more recent periods are available
- Jet Fuel Small amounts in 1975 through 1977 are used by the Industrial Sector, and small amounts in all periods are con-sumed by the Electric Utility Sector. All remaining jet fuel is consumed by the Transportation Sector.
- Kerosene Total product supplied 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" reports as follows:
  - Residential deliveries are presented for 1979 and 1980. Prior to 1979, each year's category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares;
  - Commercial deliveries are presented for 1979 and 1980. Prior to 1979, each year's category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares; and
  - Industrial sector deliveries for 1979 and 1980 are the sum of deliveries for industrial, farm, and all other uses. Prior to 1979, each year's category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares, and this estimated industrial portion is added to all other uses.

The 1980 shares are used as estimates for succeeding periods until deliveries for more recent periods are available

- · Liquefied Petroleum Gases (LPG) Total product supplied is allocated to the major end-use sectors in proportion to aggregations of sales categories formed from EIA's "Sales of Liquefied Petroleum Gases and Ethane." Year-specific categorizations are developed for 1973 through 1978 but, due to potential discontinuities with the sales data from the sales reports after 1978, the 1978 sales aggregations are continued for all following periods. Sales categories are formed as follows: — Residential and Commercial sales represent the Residential and Commercial Sector;
  - Industrial sales are the sum of industrial use, miscellaneous use, utility gas company use, chemical plant use, and an estimated 84 percent of the internal combustion engine fuel use; and
- Transportation sales are estimated to be the remaining 16 percent of sales for internal combustion engine fuel use.
- Lubricants Total product supplied is allocated to the Industrial Sector and the Transportation Sector for all months according to proportions developed from annual sales of lubricants to those two sectors from U.S. Department of Commerce, Bureau of the Census, Current Industrial Reports, "Sales of Lubricating and Industrial Oils and Greases." The 1973 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 is allocated to the major end-use sectors in proportion to aggregations of sales categories formed from the U.S. Department of Transportation, Federal Highway Administration, Highway Statistics, Tables MF-21, MF-24, and MF-25, as follows:
  - Commercial sales are the sum of sales for public non-highway use, miscellaneous use, and unclassified use;
  - Industrial sales are the sum of sales for agriculture, construction and industrial and commercial use as classified in the Highway Statistics; and

## Notes and Sources for the Consumption Section (continued)

#### 4. Petroleum (continued):

- Transportation sales are the sum of sales for highway use (minus the sales of special fuels which are primarily diesel fuel and accounted for in the Transportation Sector of distillate fuel) and sales for marine use. • Petroleum Coke – The portion consumed by the Electric Utility Sector is from FPC, Form 4, "Monthly Power Plant Report."
- The remaining portion is assigned to the Industrial Sector.
- Residual Fuel Total product supplied 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" reports as follows: — Commercial deliveries are presented for 1979 and 1980. Prior to 1979, each year's subtotal of heating plus industrial is
  - split into commercial and industrial in proportion to the 1979 shares;
  - -Industrial sector deliveries for 1979 and 1980 are the sum of industrial, oil company, and all other uses. Prior to 1979, each year's heating plus industrial subtotal 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 railroad, vessel bunkering, and military uses for all years; and
  - Electric utility deliveries are presented for all years.
  - The 1980 shares are used as estimates for succeeding periods until deliveries for more recent periods are developed.
- All Other Petroleum Products The product supplied of all remaining petroleum products is assigned to the Industrial Sector.

#### 5. Hydroelectric: Includes electricity generated by hydropower at electric utilities, small amounts in the Industrial Sector, and net imports

- of electricity, which are assumed to be generated by hydropower and are included in the hydroelectricity in the Electric Utilities Sector.
  - Sources for Electric Utilities Sector:
    - 1973 through 1976, FPC, Form 4, "Monthly Power Plant Report."
    - 1977 forward: DOE, EIA, FPC, Form 4, "Monthly Power Plant Report."
  - Sources for Industrial Sector
    - 1973 through 1978: FPC Forms 4 and 12-C.
    - 1979: FPC Form 4 and EIA estimates.
    - 1980 forward: EIA estimates.

Note: For 1977 forward, monthly data are not available from above sources and were estimated by seasonalizing the annual

Note: For 1977 forward, monthly data are not available from above sources and were estimated by seasonalizing the annual numbers in proportion to each month's hydroelectricity generation in the Electric Utility Sector.
 Sources for Imports and Exports of Electricity: Annual data from DOE, Economic Regulatory Administration, "Report on Electric Energy Exchanges with Canada and Mexico." Monthly estimates are derived from annual data by dividing by the number of days in the year and multiplying by the number of days in the month. 1981 is estimated by assuming 10 percent growth over 1980.
 Nuclear: Sources: 1973 through 1976: FPC, Form 4, "Monthly Power Plant Report."
 1977 forward: DOE, ELA, FPC, Form 4, "Monthly Power Plant Report."

7. Net Coke Imports: Net coke imports is coke made from coal.
 Sources: • 1973 through 1975, DOI, BOM, Minerals Yearbook, "Coke and Coal Chemicals, Annual."
 • 1976 forward: DOE, EIA, Energy Data Reports, "Coke and Coal Chemicals, Monthly."
 8. Other Energy: "Other" is electricity produced from geothermal power and from wood and waste.

Sources: same as Note 6 above, for Nuclear.

9. Electricity Sales: From the sources cited below the following sales categories are available: residential, commercial, industrial, and other. For the end-use estimates in this section, the "other" category (which is primarily sales for use in government buildings) is added to the Commercial Sector except for approximately 4.2 percent which represents the Transportation Sector use of electricity. Sales of electricity are converted into Btu at the rate of 3,412 Btu per kilowatt-hour.

Sources of sales data: 1973 through February 1980: FPC, Form 5, "Monthly Statement of Electric Operating Revenue and Income."

March 1980 forward: FERC Form 5, "Electric Utility Company Monthly Statement," 10. Electrical Energy Losses: Total electrical energy losses (i.e., incurred in the generation and transmission of electricity plus plant use and unaccounted for) are estimated as the difference between total energy input at utilities and electricity sold to the end-users. Total losses are disaggregated to each end-use sector in proportion to each sector's share of total electricity sales. In general, about 65 percent of total energy input at utilities is lost in the form of heat, and an additional 3 percent is lost in the transmission and distribution of the electricity to the end-user.

## **Summary of Revisions to the Consumption Section**

Revisions in end-use consumption estimates in this month's Monthly Energy Review result from:

- The implementation of updated factors for converting physical unit data into Btu data. (See "Conversion Factors" on inside back cover).
- The implementation of revisions in several assumptions regarding the end-use of petroleum products:
  - Distillate fuel, residual fuel, and kerosene product supplied totals are disaggregated into the major end-use sectors in proportion to their deliveries to the sectors. A new survey (EIA-172) was implemented for deliveries data beginning with 1979, and some end-use information was no longer comparable with previous surveys. Where discontinuities occurred, the pre-1979 years have been adjusted in proportion to the 1979 data. For example, for residual fuel deliveries in 1979, the categories "commercial" and "industrial" are available; in prior years, the categories "heating" and "industrial" are available. The pre-1979 categories individually are not continuous with the 1979 categories; however, their subtotals are continuous. That is, commercial plus industrial deliveries in 1979 is continuous with heating plus industrial from the prior years. Therefore, the 1979 shares of commercial and industrial of their sum is applied to each prior year's sum of heating plus industrial to estimate those years' commercial and industrial deliveries. Similar assumptions have been applied to distillate fuel and kerosene. The general impact of these alterations has been to lower the Residential and Commercial Sector and to raise the Industrial Sector estimated petroleum consumption for all years prior to 1979. More information is available on pages 26 and 27.
  - Asphalt and road oil consumption has been moved from the Residential and Commercial Sector to the Industrial Sector in all time periods;
  - A small portion of motor gasoline used for construction purposes has been moved from the Commercial Sector to the Industrial Sector in all time periods; and
  - The "Sales of Liquefied Petroleum Gases and Ethane" reports for 1973 through 1978 are used for disaggregating each year's total product supplied into estimated end-uses. Because of survey alterations for collecting the sales data since 1979, the 1978 end-use shares are used for 1978 forward.

#### Crude Oil and Refined Petroleum Products\*

Domestic crude oil production during January 1982 was estimated to be 8.7 million barrels per day. This estimated production rate was 1.7 percent above the rate in January 1981 and 0.7 percent higher than in December 1981.

Total petroleum imports averaged 5.5 million barrels per day in January 1982, 17.9 percent less than the January 1981 rate and 3.9 percent lower than in December 1981.

In January 1982, 16.5 million barrels per day of petroleum products were supplied for domestic use. Motor gasoline accounted for 36.9 percent of the total, distillate fuel oil 22.1 percent, and residual fuel oil 14.4 percent.

Motor gasoline supplied during January 1982 averaged 6.1 million barrels per day, 9.5 percent lower than in December 1981.

In January 1982, 3.6 million barrels of distillate fuel oil were supplied per day, 11.6 percent higher than the December 1981 rate. Distillate fuel oil stocks were 162.6 million barrels at the end of January 1982, 14.5 percent lower than at the end of the previous month.

Residual fuel oil supplied in January 1982 averaged 2.4 million barrels per day, 8.1 percent higher than in December 1981. Residual fuel oil stocks measured 68.7 million barrels at the end of January 1982, 12.3 percent lower than during the previous month.

\*Estimates for the most current month are based on Energy Information Administration (EIA) weekly data (except crude production) and will be revised to conform with data from the EIA Petroleum Reporting System as available. For the most recent month, crude production is an EIA estimate based on provisional data for October 1981. The total petroleum import data excludes imports into the Strategic Petroleum Reserve.

## Petroleum

Crude Oil

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		Crude Input to Refineries	Total Domestic Production <sup>1</sup> <sup>2</sup>	Alaskan Production	Crude Oil Imports <sup>3</sup>	Strategic Petroleum Reserve (SPR) Imports	Crude Oil Exports	Primary Crude Oił Stocks <sup>1 3</sup>	Strategic Petroleum Reserve (SPR) Stocks
				Thousand barro	eis per day			Thousar	nd barrels
1973	AVERAGE	12,431	9,208	198	3,244		2	<b>‡242,478</b>	
1974	AVERAGE	12,133	8,774	193	3,477		3	‡ <b>265,020</b>	
1975	AVERAGE	12,442	8,375	191	4,105		. 6	‡ <b>271,354</b>	
1976	AVERAGE	13,416	8,132	173	5,287		8	‡ <b>285,471</b>	
1977	AVERAGE	14,602	8,245	464	6,594	R21	50	‡R340,228	‡ <b>R7,4</b> 55
1978	AVERAGE	14,739	8,707	1,229	6,195	162	158	‡309,421	<b>‡66,860</b>
1979	AVERAGE	14,648	8,552	1,401	6,452	67	235	‡ <b>339,074</b>	<b>‡91,191</b>
1980	January	14,301	8,675	1,634	6,406	0	322	357,500	91,191
	February	14,187	8,705	1,630	6,013	0	332	365,965	91,191
	March	13,709	8,698	1,647	5,695	0	330	367,420	91,191
	April	13,484	8,685	1,649	5,598	0	192	379,788	91,191
	May	13,326	8,635	1,627	5,106	0	326	383,420	91,191
	June	13,705	8,554	1,626	5,480	0	365	381,472	91,191
	July	13,264	8,547	1,612	4,843	0	238	378,742	91,191
	August	12,984	8,414	1,612	4,803	0	78	387,223	91,191
	September	13,313	8,619	1,610	4,653	54	322	376,388	92,824
	October	12,772	8,532	1,588	4,637	131	309	378,503	96,645
	November	13,119	8,495	1,561	4,538	142	289	373,077	102,320
	December	13,648	8,606	1,602	4,884	198	343	358,166	107,800
	AVERAGE	13,481	8,597	1,617	5,219	44	R287		
1981	January	13,248	8,533	1,606	4,817	106	339	R381,456	112,490
	February	12,903	8,598	1,619	4,793	80	198	386,793	116,057
	March	12,383	8,601	1,618	4,382	140	210	397,191	120,860
	April	12,090	8,543	1,608	4,185	272	198	407,182	134,170
	May	12,309	8,496	1,580	3,881	386	312	402,273	150,068
	June	12,415	8,616	1,632	3,766	318	123	392,211	163,081
	July	12,267	8,422	1,605	4,161	175	257	392,514	173,128
	August	12,911	R8,574	1,602	3,908	257	204	365,219	184,674
	September	12,510	R8,598	R1,607	4,279	435	194	361,428	199,247
	Uctober	12,065	H8,547	H1,596	3,929	453	226	369,496	214,777
	November	H12,260	H8,595	H1,618	H3,720	R271	278	R372,277	222,542
	December	jH12,383	H0,024	на,630	H4,024	H165	189	H368,500	H230,341
	AVERAGE	R12,477	8,562	R1,610	R4,150	R256	228		
1982	January†	11,943	8,682	1,715	3,974	140	NA	388,865	235,041

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Geographic coverage: the 50 United States and District of Columbia. Includes lease condensate. Includes Alaskan production. Excludes Strategic Petroleum Reserve storage that began in October 1977. Total as of December 31. †Preliminary data. R=Revised data. NA=Not available. Note: Estimated data are in italics and are likely to be revised. Sources: •See Sources at the end of this section.

## Petroleum

#### Overview

Production of Crude Oil and Natural Gas Plant Liquids



Stocks



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## Petroleum

		т	otal Petroleu Products <sup>1</sup>	m					
		Products Supplied'	Product Imports <sup>2</sup>	Product Exports	Total Imports (Excluding SPR)	SPR Imports <sup>3</sup>	Total Imports (Including SPR) <sup>3</sup>	Total Exports	Net Imports
		Thous	and barrels p	er day		Thou	sand barrels per d	ay	
1973	AVERAGE	17,308	3,012	229	6,256			231	6,025
1974	AVERAGE	16,653	2,635	218	6,112			221	5,892
1975	AVERAGE	16,322	1,951	204	6,056			209	5,846
1976	AVERAGE	17,461	2,026	215	7,313			223	7,090
1977	AVERAGE	18,431	2,193	193	8,787	R21	8,807	243	8,565
1978	AVERAGE	18,847	2,008	204	8,202	162	8,363	362	8,002
1979	AVERAGE	18,513	1,937	236	8,389	67	8,456	. 471	7,985
1980	January	18,851 19,817	2,192	228 227	8,598 7,945	0	8,598 7,945	550 558	8,048 7,386
	March	17,377	1,757	243	7,452	ō	7,452	573	6,879
	April	16,784	1,508	241	7,106	0	7,106	434	6,672
	May	16,238	1,472	266	6,579	0	6,579	591	5,987
	June	16,187	1,414	289	6,894	0	6,894	654	6,240
	July	16,008	1,414	293	6,257	0	6,257	531	5,727
	August	·15,753	1,389	241	6,192	0	6,192	319	5,873
	September	16,598	1,532	235	6,185	54	6,239	557	5,082
	October	16,995	1,611	288	6,248	131	6,379	540	5,701
	November	16,702	1,728	260	0,200	142	6 904	622	6 272
	AVERAGE	18,410 17,056	1,612 1,646	275 258	6,865	44	6,909	544	6,385
1981	January	18,288	1,892	219	6,709	106	6,814	558	6,257
	February	16,930	1,904	371	6,697	80	6,777	569	6,208
	March	15,838	1,505	376	5,886	140	6,026	586	5,440
	April	15,280	1,310	372	5,495	2/2	5,707	570	5,195
	May	15,196	1,436	283	5,317	386	5,702	393	5,107
	June	15,996	1,338	297	5,104	175	5,422	571	5 238
	July	15,713	1,473	314	5,034	257	5 737	644	5,093
	AUGUST	15,230	1,072	225	5,400	435	6 3 2 6	519	5.807
	October	15,019	1 557	512	5.486	453	5,939	738	5,202
	November	B15 508	B1 619	423	R5.339	271	R5.610	701	R4,909
	December	R16.602	R1.707	467	R5.730	R165	R5,896	656	5,240
	AVERAGE	R16,001	R1,576	367	R5,726	R256	R5,981	595	5,387
	January†	16,460	1,531	NA	5,505	140	5,645	NA	NA

Geographic coverage: 50 United States and District of Columbia. Totals may not equal sum of components due to independent rounding. \*See Definitions. \*Includes plant condensate, natural gasoline, and unfinished oils. \*Strategic Petroleum Reserve storage began in October 1977. †Preliminary data. R = Revised data. NA = Not available. Note: Estimated data are in italics and are likely to be revised. *Sources:* \*See Sources at the end of this section.

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### **Products Supplied and Imports**





#### Petroleum Imports by Source



### Petroleum Imports from OPEC Sources

								United				Arab
		Algeria	indo- nesia	Iran	Libya	Nigeria	Saudi Arabia	Arab Emirates	Vene- zuela	Other OPEC <sup>1</sup>	Totai OPEC	Members of OPEC <sup>2</sup>
						· Thous	and barre	ls per day				
1973	AVERAGE	136	213	223	164	459	486	71	1,135	106	2,993	915
1974	AVERAGE	190	300	469	4	713	461	74	979	88	3,280	752
1975	AVERAGE	282	390	280	232	762	715	117	702	122	3,601	1,383
1976	AVERAGE	432	539	298	453	1,025	1,230	254	700	134	5,066	2,424
1977	AVERAGE	559	541	535	723	1,143	1,380	335	690	287	6,193	3,185
1978	AVERAGE	649	573	555	654	919	1,144	385	645	226	5,751	2,963
1979	AVERAGE	636	420	304	658	1,080	1,356	281	690	212	5,637	3,056
1980	January February March April May June July August September October November December <b>AVERAGE</b>	503 656 472 546 441 497 557 432 375 465 493 423 <b>488</b>	454 317 405 374 360 331 365 289 299 348 348 288 348 348	95 9 0 0 0 0 0 0 0 9	618 603 654 683 468 561 492 431 505 478 500 658 <b>554</b>	1,054 1,036 924 734 955 998 752 792 735 728 624 958 <b>857</b>	1,576 1,412 1,380 1,300 1,149 1,328 1,192 1,139 1,112 1,044 1,201 1,301 <b>1,26</b> 1	202 304 289 150 172 178 158 142 107 182 105 83 <b>172</b>	786 543 352 405 409 417 406 425 482 595 610 <b>481</b>	179 152 175 240 147 106 62 112 111 95 78 101 <b>130</b>	5,467 5,031 4,652 4,369 4,098 4,408 3,995 3,743 3,670 3,821 3,944 4,423 <b>4,300</b>	3,034 3,058 2,889 2,862 2,329 2,598 2,418 2,222 2,185 2,226 2,338 2,484 <b>2,551</b>
1981	January February March April May June July August September October November December <b>AVERAGE</b>	324 381 352 263 393 390 333 348 336 242 185 176 <b>310</b>	424 407 328 314 277 355 340 377 371 427 R353 395 <b>364</b>	00000000000000000000000000000000000000	500 468 485 496 443 380 251 274 154 147 132 122 <b>320</b>	908 866 771 826 664 519 651 321 323 412 517 698 <b>622</b>	1,297 1,122 1,027 1,056 929 865 1,073 1,068 1,451 1,342 1,236 1,075 <b>1,128</b>	93 93 47 85 17 60 80 61 96 90 112 158 <b>83</b>	556 466 360 237 317 248 502 514 359 383 R487 415 <b>404</b>	27 92 54 42 124 118 38 84 149 172 55 102 <b>88</b>	4,129 3,895 3,425 3,317 3,164 2,934 3,269 3,047 3,238 3,214 R3,077 3,141 <b>3,318</b>	2,214 2,064 1,911 1,792 1,796 1,757 1,751 2,036 1,820 1,665 1,532 <b>1,848</b>

Geographic coverage: the 50 United States and District of Columbia. Totals may not equal sum of components due to independent rounding. Includes Ecuador, Gabon, Iraq, Kuwait, and Qatar. Includes Algeria, Libya, Saudi Arabia, United Arab Emirates, Iraq, Kuwait, and Qatar. R Revised data. Note: Beginning in October 1977, Strategic Petrolem Reserve imports are included. Sources: • See Sources at the end of this section.

#### **Petroleum Imports from Non-OPEC Sources**

		Bahamas	Canada	Mexico	Netherlands Antilles	Puerto Rico	Trinidad and Tobago	Virgin Islands	Other	Total
					Thousan	d barrels	per day			
1973	AVERAGE	174	1,325	16	585	99	255	329	480	3,263
1 <del>9</del> 74	AVERAGE	, 164	1,070	8	511	90	251	391	347	2,832
1975	AVERAGE	152	846	71	332	90	242	406	314	2,454
1976	AVERAGE	118	599	87	275	88	274	422	382	2,247
1977	AVERAGE	171	517	179	211	105	289	466	676	2,614
1978	AVERAGE	160 .	467	318	229	94	253	429	663	2,613
1979	AVERAGE	147	538	439	231	92	190	- 431	751	2,819
1980	January	175	570	545	289	57	239	467	788	3,131
	February	111	540	477	205	95	192	536	757	2,914
	March	124	460	. 460	184	101	189	449	833	2,800
	April	56	459	546	231	76	143	425	801	2,737
	May	77	419	576	176	88	221	303	621	2,481
	June	17	409	627	197	91	162	314	610	2,486
	July	43	378	460	242	90	180	378	491	2,262
	August	62	319	646	255	85	159	264	659	2,449
	September	58	458	550	213	52	205	343	691	2,569
	October	70	4/5	605	230	107	114	372	585 .	2,357
	November	<u> </u>	4/0	409	204	100	130	391	581	2,404
	December	54	502	440	212	109	149	423	570	2,471
	AVERAGE	78	455	533	225	88	176	388	666	2,609
1981	January	39	543	401	197	89	150	494	771	2,686
	February	84	546	437	227	46	163	481	897	2,881
	March	74	471	488	227	45	93	370	832	2,601
	April	68	410	440	198	40	139	365	R789	R2,450
	May	122	366	522	213	58	105	344	807	2,538
	June	51	352	537	196	67	124	262	898	2,488
	July	77	381	384	212	50	177	206	1,053	2,540
	August	69	378	489	255	68	123	184	1,125	2,691
	September	111	419	708	163	72	169	265	1,181	3,088
	October	63	446	668	153	60	121	303	910	2,726
	November	H53	R540	R612	168	76	108	294	681	R2,533
	December	70	499	588	148	73	125	367	885	2,755
	AVERAGE	73	445	523	196	62	133	327	903	2,663

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Geographic coverage: the 50 United States and District of Columbia. Totals may not equal sum of components due to independent rounding. Includes Non-OPEC Arab, Western Europe, Angola, U.S.S.R., Rumania, other Western Hemisphere and other Eastern Hemisphere. R = Revised data. Note: Beginning in October 1977, Strategic Petroleum Reserve imports are included. Sources: •See Sources at the end of this section.

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#### **Motor Gasoline**

		P	roduct Suppl	ied	l		Imports <sup>1</sup> <sup>2</sup>		Stocks <sup>1 2 3</sup>		
		Total	Unleaded	Unleaded Percent of Total	Refinery Production <sup>3</sup>	Total Motor Gasoline	Finished Motor Gasoline	Exports	Total Motor Gasoline	Finished Motor Gasoline	
				Thous	and barrels per	day			Thousan	d barrels	
1973	AVERAGE	6,674	NA	NA	6,527	134		4	<b>‡209,395</b>		
1974	AVERAGE	6,537	NA	NA	6,358	204		2	‡ <b>218,34</b> 6		
1975	AVERAGE	6,675	NA	NA	6,518	184		2	‡234, <del>9</del> 25		
1976	AVERAGE	6,978	NA	NA	6,838	131		. 3	‡231,3 <b>8</b> 7	,	
1977	AVERAGE	7,177	1,976	27.5	7,031	217		2	‡ <b>257,578</b>		
1978	AVERAGE	7,412	2,521	34.0	7,167	190		1	‡ <b>237,956</b>		
1979	AVERAGE	7,034	2,798	39.8	6,837	181		(\$)	‡ <b>237,082</b>		
1980	January	6,323	2,718	43.0	6,977	141		1	262,137		
	February	6,596	2,969	45.0	6,851	154		(s)	274,390		
	March	6,406	3,032	47.3	6,509	155		(s)	282,720		
	April	6,800	3,021	44.4	6,268	155		<u></u> 1	271,799		
	Мау	6,729	2,980	44.3	6,299	132		1	263,071		
	June	6,657	3,099	46.6	6,552	148		1	264,823		
	July	6,743	3,131	46.4	6,446	149		3	260,731		
	August	6,648	3,135	47.2	6,438	141		1	258,986		
	September	6,510	3,054	46.9	6,369	106		7	258,140		
	October	6,662	3,110	46.7	6,124	152		1	246,422		
	November	6,234	3,123	50.1	6,456	126	•	(s)	257,176		
	December	6,632	3,421	51.6	6,632	122		1	261,327		
	AVERAGE	6,579	3,067	46.6	6,492	140		1			
1981	January	6,389	3,113	48.7	6.677	152	138	(s)	276 511	226 686	
	February	6,293	3,100	49.3	6,269	121	111	1	283,983	229 465	
	March	6,303	3,095	49.1	6,202	200	170	(s)	284.859	231.977	
	April	6,585	3,278	49.8	6,110	195	174	(s)	271,782	223,240	
	May	6,608	3,117	47.2	6,119	159	146	1	258,187	212,729	
	June	7,001	3,418	48.8	6,219	195	161	1	241,671	194,200	
	July	6,817	3,417	50.1	6,415	124	118	(s)	227,131	185,451	
	August	6,645	3,343	50.3	6,614	167	125	3	232,474	188,333	
	September	6,660	3,334	50.1	6,565	193	169	2	237,015	190,558	
	Uctober	6,598	3,250	49.3	6,446	161	143	3	234,983	190,240	
	November	H6,395	H3,200	50.0	6,582	185	145	1	R247,414	R200,227	
	December	H0,/15	3,440	51.2	H6,618	. R211	196	11 ·	R251,384	203,031	
	AVERAGE	R6,586	3,260	49.5	R6,404	R172	150	2			
1982	January†	6,079	NA	NA	6,233	99	NA	NA	257,460	NA	

Geographic coverage: the 50 United States and District of Columbia. <sup>1</sup>Beginning in January 1981, the Energy Information Administration modified its monthly petroleum surveys. Non-refinery blenders were added to the reporting universe and gasohol was included as a motor gasoline component. On the new basis motor gasoline production and product supplied during the last half of 1980 would have averaged 289,000 barrels per day higher than shown. <sup>a</sup>Total motor gasoline includes finished motor gasoline and blending components. <sup>a</sup>See Definitions. <sup>‡</sup>Total as of December 31. †Preliminary data. R=Revised data. NA=Not available. (s)=Less than 500 barrels per day. Note: Estimated data are in italics and are likely to be revised. Note: Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with 1975.

coverage begins here with 1975. Sources: •See Sources at the end of this section.

### **Motor Gasoline**

Product Supplied, Refinery Production and Imports





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Jet Fuel

		Product Supplied	Refinery Production	Imports	Exports	Stocks
			Thousand ba	rrels per day		Thousand barrels
1973	AVERAGE	1,059	. 859	212	4	<b>‡28,544</b>
1974	AVERAGE	993	836	163 ·	3	<b>‡29,435</b>
1975	AVERAGE	1,001	871	133	2	<b>‡30,380</b>
1976	AVERAGE	987	918	76	2	<b>‡32,085</b>
1977	AVERAGE	1,039	973	75	2	‡ <b>34,548</b>
1978	AVERAGE	1,057	970	86	1	‡ <b>33,665</b>
1979	AVERAGE	1,076	1,012 .	78	1	<b>‡38,520</b>
1980	January	1,103	1,004	96	1	38,412
	February	1,072	1,026	43	2	38,258
	March	1,116	1,031	100	2	38,674
	April	1,108	1,023	110	3	39,339
	lupo	1,008	1,002	73	2	41,346
	June	1,056	074	00	1	42,283
	August	1,043	974	53 67	2	40,904
	September	1.055	1 041	77	1	40,331
	October	1.031	976	86	1	42,170
	November	1.025	988	63	1	43 904
•	December	1,082	962	60	1	42.031
	AVERAGE	1,068	999	R80	1	
1981	January	1,060	956	12	1	39,478
	February	1,016	949	41	1	38,726
	March	1,055	995	76	(s)	39,206
	April	, 965	960	55	1	40,690
	May	924	1,006	47	1	44,668
	June	1,038	993	68	(S)	45,372
	August	1,000	1,038	35	1	44,926
	Sentember	1,025	977	47	1	44,899
	October	074	904	40	(c)	43,313
	November	B993	B964	RQ	(5)	42,772 R/1 000
	December	R991	R944	R7	7	R40 470
	AVERAGE	R1,010	R968	38	2	
1982	January†	<i>996</i>	899	3	NA	36,996

Geographic coverage: the 50 United States and District of Columbia. ‡Total as of December 31. †Preliminary data. R=Revised data. NA=Not available. (s)=Less than 500 barrels per day. Note: Estimated data are in italics and are to be revised. Note: Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with 1975. *Sources:* •See Sources at the end of this section:

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Jet Fuel

Product Supplied, Refinery Production and Imports







#### **Distillate Fuel Oil**

		Product Supplied <sup>1</sup>	Refinery Production <sup>1</sup> <sup>2</sup>	Imports	Exports	Stocks <sup>2</sup>
•			Thousand bar	rels per day		Thousand barrels
1973	AVERAGE	3,092	2,820	392	9	‡1 <del>9</del> 6,421
1974	AVERAGE	2,948	2,668	289	2	<b>‡200,029</b>
1975	AVERAGE	2,851	2,653	155	1	<b>‡208,787</b>
1976	AVERAGE	3,133	2,924	146	1	‡ <b>185,948</b>
1977	AVERAGE	3,352	3,277	250	1	<b>‡250,260</b>
1978	AVERAGE	3,432	3,167	173	3	‡216,43 <b>9</b>
1979	AVERAGE	3,311	3,152	193	3	‡ <b>228,712</b>
1980	January	3.714	3,013	179	7	212,394
	February	3,712	2,766	237	8	191,657
	March	3,179	2,557	193	19	177,866
	April	2,635	2,460	154	2	177,241
	May	2,402	2,474	126	1	183,405
	June	2,317	2,646	108	(s)	196,566
	July	2,249	2,689	117	3	213,835
	August	2,137	2,461	77	(S)	226,331
	September	2,587	2,686	101	(s)	232,373
	October	2,920	2,589	115	(s)	225,707
	November	2,949	2,703	133	(s)	222,365
	December	3,615	2,891	166	(s)	R205,113
	AVERAGE	2,866	2,661	142	3	
1981	January	4,090	2,987	273	(S)	180,004
	February	3,395	2,809	325	17	172,528
	March	2,891	2,484	144	(S)	164,638
	Apríl	2,541	2,418	116	3	164,634
	May	2,395	2,454	165	(s)	171,918
	June	2,437	2,501	201	(s)	180,176
	July	2,381	2,403	179	2	186,675
	August	2,384	2,656	159	(s)	200,268
	September	2,532	2,610	129	1	206,766
	October	2,792	2,490	117	5	201,132
	November	R2,886	2,729	114	6	R199,996
	December	R3,258	R2,862	R95	26	R190,164
	AVERAGE	R2,830	R2,616	R167	5	
1982	January†	3,635	2,691	116	NA	162,581

Geographic coverage: the 50 United States and District of Columbia. Beginning in January 1981, the Energy Information Administration modified its monthly petroleum surveys. On the new basis distillate fuel oil production and product supplied in 1980 would have been an average of 105,000 barrels per day higher than shown.

<sup>2</sup>See Definitions.
<sup>2</sup>Total as of December 31, †Preliminary data. R=Revised data. NA=Not available. (s)=Less than 500 barrels per day.
Note: Estimated data are in italics and are likely to be revised.
Note: Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with 1975.
Sources: •See Sources at the end of this section.

## **Distillate Fuel Oil**

Product Supplied, Refinery Production and Imports







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**Residual Fuel Oil** 

		Product Supplied <sup>1</sup>	Refinery Production <sup>1</sup>	Imports	Exports	Stocks
			Thousand bar	rrels per day		Thousand barrels
1973	AVERAGE	2,822	971	1,853	23	<b>‡53,480</b>
1974	AVERAGE	2,639	1,070	1,587	14	<b>‡59,694</b>
1975	AVERAGE	2,462	1,235	1,223	15	‡ <b>74,126</b>
1976	AVERAGE	2,801	1,377	1,413	12	‡ <b>72,34</b> 4
1977	AVERAGE	3,071	1,754	1,359	6	‡ <b>89,99</b> 3
1978	AVERAGE	3,023	1,667	1,355	13	<b>‡90, 194</b>
1979	AVERAGE	2,826	1,687	1,151	9	<b>‡95,598</b>
1980	January	3,067	1,771	1,338	5	97,187
	February	3,105 .	1,773	1,122	17	90,993
	March	2,658	1,584	976	2	88,302
	April	2,444	1,595	775	²40	85,252
	Мау	2,235	1,509	812	20	87,671
	June	2,321	1,575	749	14	87,792
	July	2,291	1,480	787	60	85,603
	August	2,286	1,444	875	2	86,944
	September	2,359	1,495	906	21	87,868
	October	2,227	1,512	875	70	90,975
	November	2,451	1,579	1,024	88	93,208
	December	2,679	1,660	1,025	62	91,786
	AVERAGE	2,508	1,580	939	33	
1981	January	2,870	1,611	1,015	65	82,267
	February	2,549	1,565	956	125	78,230
	March	2,098	1,423	699	145	74,920
	April	1,829	1,320	584	151	73,045
	May	1,769	1,222	735	25	78,542
	June	1,993	1,232	540	76	70,064
	July	1,995	1,174	830	82	69,264
	August	1,849	1,230	819	69	74,813
	September	1,878	1,286	841	126	80,041
	October	1,865	1,232	//3	202	/9,782
	November	H1,878	H1,218	844	203	H80,836
	December	H2,191	H1,295	H920	157	H78,348
	AVERAGE	R2,062	R1,316	R796	118	
1982	January†	2,369	1,276	921	NA	68,677

Geographic coverage: the 50 United States and District of Columbia. 'Beginning in January 1981, the Energy Information Administration modified its monthly petroleum surveys. On the new basis residual fuel oil production and product supplied in 1980 would have been an average of 54,000 barrels per day higher than shown. "Beginning in April 1980, residual fuel oil exports increased due to shipments of high sulfur fuel to the Carribean to be desulfurized and returned to the United States. In July 1980, additional exports of high sulfur fuel oil began to be shipped to Asia. ‡Total as of December 31. †Preliminary data. R=Revised data. NA=Not available. Note: Estimated data are in italics and are likely to be revised. Note: Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with 1975. Sources: •See Sources at the end of this section

Sources: •See Sources at the end of this section.

### **Residual Fuel Oil**

Product Supplied, Refinery Production and Imports



Stocks

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#### Natural Gas Plant Liquids, Including Liquefied Refinery Gases

		Products Supplied <sup>1</sup>	Production		Used at Refineries <sup>,</sup>	Imports	Stocks <sup>1</sup>
			At processing plants	At refinerles			<b>-</b> 1
			Thousa	and barrels per d	ay		l housand barreis
1973	AVERAGE	1,454	1,738	375	815	239	‡106,65 <b>9</b>
1974	AVERAGE	1,422	1,688	338	746	212	‡1 <b>20,1</b> 75
1975	AVERAGE	1,352	1,633	311	710	185	‡132,653
1976	AVERAGE	1,407	1,603	340	725	196	‡124,518
1977	AVERAGE	1,427	1,618	352	673	203	‡144,902
1978	AVERAGE	1,416	1,567	355	639	139	²‡140,052
1979	AVERAGE	1,695	1,584	340	504	230	‡125 <b>,</b> 289
1980	January	2,174	1,648	338	547	282	110,107
	February	1,924	1,656	353	483	265	105,260
	March	1,669	1,568	342	412	224	105,973
	April	1,359	1,630	335	400	196	117,261
	Мау	1,470	1,615	325	410	189	124,318
	June	1,370	1,561	335	386	193	133,586
	July	1,217	1,524	329	441	178	144,450
	August	1,262	1,519	323	428	166	153,771
	September	1,515	1,515	314	460	223	155,380
	October	1,681	1,516	299	501	262	151,249
	November	1,641	1,571	324	R528	240	149,226
	December	2,009	1,560	346	545	299	*137,460
	AVERAGE	1,607	1,573	330	462	226	
1981	January	2,010	1,595	324	611	319	134.010
	February	1,893	1,615	332	560	338	128,722
	March	1,696	1,581	313	484	260	127,279
	April	1,405	1,551	322	462	222	133,375
	May	1,384	1,554	325	443	197	140,492
	June	1,424	1,579	326	471	209	146,376
	July -	1,349	1,547	307	465	218	153,841
	August	R1,249	1,582	341	466	201	161,934
	September	1,470 ،	1,630	326	530	205	166,185
	October	1,683	1,601	298	569	313	162,602
	November	R1,611	R1,615	R299	R596	R302	R161,117
	December	1,709	1,605	288	650	261	153,253
	AVERAGE	1,572	1,588	317	525	253	

Geographic coverage: the 50 United States and District of Columbia. 'See Explanatory Note 7 and Definitions. \*Energy Information Administration (EIA) natural gas plant coverage was expanded in January 1979 to include approximately 80 more plants. Calculated on the new basis, December 1978 closing stocks totaled 147,548 thousand barrels. \*EIA natural gas liquids operations coverage was expanded in January 1981 to include additional storage terminals. Calculated on the new basis, December 1980 closing stocks totaled 146,544 thousand barrels. ‡Total as of December 31. R=Revised data. *Sources:* • See Sources at the end of this section.

### **Natural Gas Plant Liquids**







\*At processing plants.

#### **Petroleum Primary Supply Balance**

			1980		
	1st Qtr.	2nd Otr.	3rd Qtr.	4th Qtr.	Year
		Thou	usand barrels p	er day	
Primary Supply					
Crude oil and lease condensate production Natural gas plant liquids production Other hydrocarbon supply Crude oil imported <sup>1</sup> Petroleum products imported <sup>2</sup>	R8,693 R1,623 R44 R6,039 R1,961	8,625 R1,602 R46 R5,392 <u>R1,465</u>	R8,526 R1,520 44 R4,785 R1,444	R8,545 R1,548 42 R4,845 <u>R1,717</u>	8,597 R1,573 R44 R5,263 <u>R1,646</u>
Total new primary supply Processing gain Stock change—all oils <sup>3</sup>	R18,359 R627 <u>R+74</u>	R17,129 R575 <u>R+693</u>	R16,319 R595 R+394	R16,697 R592 <u>R-597</u>	R17,123 R597 R+140
Total net primary supply	R18,912	R17,011	R16,520	R17,886	R17,580
Unaccounted for crude oil*	R+1	R-35	R+76	R+94	R+34
Disposition					
Crude oil and petroleum products exported Crude oil losses Total products supplied <sup>s</sup>	R560 15 R <u>18,338</u>	R560 14 R <u>16,401</u>	468 14 R <u>16,114</u>	590 14 R <u>17,376</u>	R544 - 14 R <u>17,056</u>
Total disposition	R18,914	R16,976	R16,596	R17,980	R17,615
			1981		
	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Year
Primary Supply					
Crude oil and lease condensate production Natural gas plant liquids production Other hydrocarbon supply Crude oil imported <sup>1</sup> Petroleum products imported <sup>2</sup>	8,577 1,596 37 4,769 1,762	R8,551 R1,561 57 R4,269 <u>R1,362</u>	R8,531 R1,586 R54 R4,402 <u>R1,552</u>	8,588 1,607 54 4,190 <u>1,628</u>	8,562 1,588 50 4,406 <u>1,576</u>
Total new primary supply Processing gain Stock change—all oils <sup>3</sup>	16,741 528 219	R15,800 R476 <u>R+357</u>	R16,124 R474 <u>R+464</u>	16,067 539 <u>+86</u>	16,181 504 <u>+173</u>
Total net primary supply	17,489	R15,920	R16,134	16,521	16,512
Unaccounted for crude oil	+ 109	R+101	R-29	+ 170	+ 88
Disposition				,	
Crude oil and petroleum products exported Crude oil losses Total products supplied <sup>®</sup>	571 5 <u>17,021</u>	R529 R5 R <u>15,487</u>	579 R4 R <u>15,522</u>	698 4 <u>15,988</u>	595 4 <u>16,001</u>
Total disposition	17,598	R16,021	R16,105	16,690	16,600

Geographic coverage: the 50 United States and District of Columbia. Totals may not equal sum of components due to independent rounding. 'Includes crude oil imported for the Strategic Petroleum Reserve. <sup>a</sup>Includes plant condensate, natural gasoline and unfinished oils. <sup>a</sup>Includes petroleum stored in the Strategic Petroleum Reserve. <sup>a</sup>Balancing item resulting from statistical inconsistencies. <sup>a</sup>Includes international bunkers. R=Revised data. *Sources:* • 1980: Energy Information Administration (EIA) *Energy Data Reports*, "Petroleum Statement, Annual." • 1981: EIA, *Energy Data Reports*, "Petroleum Statement, Monthly."

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### Sources for the Petroleum Section

1973 through 1976: Bureau of Mines, *Mineral Industry Surveys*, "Petroleum Statement, Annual" (except unleaded gasoline) and "PAD Districts Supply/Demand, Annual."
Unleaded gasoline—1977 through 1980: Energy Information Administration (EIA), "Monthly Petroleum Statistics Report."
1977 through 1980: EIA, *Energy Data Reports*, "Petroleum Statement, Annual" and "PAD Districts Supply/Demand, Annual."

Annual'

1981: EIA, Energy Data Reports, "Petroleum Statement, Monthly."
 Data for the most recent month are estimates based on EIA weekly data (except domestic production).

Domestic production for the most recent month is an EIA estimate based on historical data from State Conservation

Domestic production for the most recent month is an EIA estimate based on historical data from State Conservation Agencies and the U.S. Geological Survey.
 Sources for the *Energy Data Reports* and the "Monthly Petroleum Statistics Report" are: EIA Forms EIA-64 (Natural Gas Liquids Operations Report), EIA-87 (Refinery Report), EIA-88 (Bulk Terminals Report), EIA-89 (Pipeline Report), and EIA-90 (Crude Oil Stock Report); Economic Regulatory Administration (ERA) Forms ERA-60 (Imports) and FEA P133 (Imports from Puerto Rico); Bureau of the Census IM 145 (Imports), EM 522 (Exports), and EM 594 (Exports); U.S. Geological Survey (Crude Production); and State Conservation Agencies (Crude Production).

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Consumption of natural and supplemental gas in the United States during January 1982 was an estimated 2.4 trillion cubic feet (Tcf). This was 13.3 percent higher than in December 1981 and 7.4 percent more than in January 1981.

Dry natural gas production in January 1982, including nonhydrocarbon gases, was an estimated 1.7 Tcf, the same as in December 1981 and 0.9 percent higher than in January 1981.

Imports of natural gas in January 1982 were an estimated 95 billion cubic feet (Bcf), 10.5 percent more than in the previous January. Receipts of foreign gas in January 1982 included Algerian liquefied natural gas (LNG) equivalent to approximately 3 Bcf.

Domestic producer sales to major interstate pipelines in November 1981 (latest data available) totaled 904 Bcf, almost the same as sales during the previous November. Total sales during the first 11 months of 1981 were 9.9 Tcf, approximately 2.6 percent above sales during the comparable 1980 period.

Stocks of working gas\* in underground natural gas storage reservoirs at the end of January 1982 totaled 2.2 Tcf, according to preliminary data. This was 1.3 percent above stocks available a year earlier. Net withdrawals from storage during January 1982 were 632 Bcf, 25.9 percent higher than during the previous January.

Natural Gas

		-	Produ	uction	Domestic — Producer			
		Domestic Consumption <sup>1</sup>	Marketed <sup>2</sup>	Dry <sup>2</sup>	Sales to Major Interstate Pipelines	Imports	Exports	
				Billion	cubic feet			
1973	TOTAL	22,049	22,648	21,731	12,067	1,033	77	
1974	TOTAL	21,223	21,601	20,713	11,462	959	77	
1975	TOTAL	19,538	20,109	19,236	10,652	953	73	
1976	TOTAL	19,946	19,952	19,098	10,140	964	65	
1977	TOTAL	19,521	20,025	19,163	9,883	1,011	56	
1978	TOTAL	19,627	19,974	19,122	9,911	966	53	
1979	TOTAL	20,241	20,471	19,663	10,496	1,253	56	
1980	January February March April May June July August September October November December	R2,263 R2,175 R2,086 R1,540 R1,339 R1,235 R1,284 R1,283 R1,283 R1,524 R1,769 R2,148 <b>B19,877</b>	R1,838 R1,725 R1,847 R1,686 R1,712 R1,602 R1,633 R1,592 R1,597 R1,663 R1,668 R1,816 <b>B20,379</b>	R1,768 R1,659 R1,777 R1,622 R1,647 R1,541 R1,571 R1,536 R1,536 R1,599 R1,604 R1,747 <b>R19,602</b>	981 898 960 897 859 794 825 828 800 894 906 963 10.605	118 108 109 77 70 61 61 60 60 75 88 98 98	6 5 3 3 3 3 3 5 5 5 5 5 <b>49</b>	
1981	January February March April May June July August September October November December TOTAL	R2,226 R1,885 R1,876 R1,468 R1,423 R1,313 R1,365 R1,296 R1,272 R1,518 R1,670 R2,110 <b>R19,422</b>	1,769 1,592 1,745 1,675 1,720 1,666 1,697 1,747 1,607 1,680 <i>R1,680</i> <i>1,790</i> <b>R20,368</b>	R1,704 R1,534 R1,679 R1,614 R1,656 R1,636 R1,636 R1,682 R1,547 R1,602 <i>R1,610</i> <i>1,720</i> <b>R19,589</b>	965 873 945 905 909 877 889 864 869 889 904 NA NA	86 79 73 68 61 63 64 62 67 78 82 R94 <b>R877</b>	5 3 4 3 5 5 3 4 4 5 4 5 5 5 0	
1982	January	2,390	1,790	1,720	NA	<del>9</del> 5	6	

Geographic coverage: the 50 United States and District of Columbia. Includes 155 billion cubic feet of supplemental gaseous fuels in 1980, an estimated 151 billion cubic feet in 1981, and an estimated 18 billion cubic feet in January 1982. Consumption data prior to 1980 include unknown quantities of supplemental gaseous fuels. Includes 495 billion cubic feet of nonhydrocarbon gases removed in 1980, an estimated 501 billion cubic feet in 1981, and an estimated 42 billion cubic feet in January 1982. Data are not available on nonhydrocarbon gases removed prior to 1980. R=Revised data. NA=Not available.

Note: Estimated data are in italics and are likely to be revised. Sources: • Domestic Consumption—1973 through 1975: U.S. Department of the Interior, Bureau of Mines, Minerals Yearbook, "Natural Gas" chapter; 1976 through 1979: Energy Information Administration (EIA), Energy Data Report, "Natural Gas Production and Consumption"; 1980: EIA, Natural Gas Annual; January 1981 forward: EIA estimates based on a supply/disposition balance calculation. • Production—State reports to the Interstate Oil Compact Commission, data from the United States Geological Survey and EIA estimates

Production—State reports to the interstate Oil Compact Commission, data norm the Onited States Geological Survey and EIX estimate for states that do not report monthly data on a regular or timely basis.
 Domestic Producer Sales—Federal Power Commission (FPC) Form 11, "Natural Gas Pipeline Company Monthly Statement."
 Imports—1973 through 1980; FPC Form 14, "Imports and Exports of Natural Gas"; January 1981 forward: EIA estimates based on import data from FPC Form 11.
 Exports—1973 through 1980; FPC Form 14; January 1981 forward: EIA estimates based primarily on historical data reported on FPC

Form 14.



**Domestic Consumption, Marketed Production and Imports** 

Gas in Storage



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#### Natural Gas in Underground Storage<sup>1</sup>

		Total Gas In	Base	Working	Storage	Storage	Net
		Storage	Gas	Gas	Injections	Withdrawals	Injections <sup>2</sup>
				Billion c	ubic feet		
1973	TOTAL	‡ <b>4,898</b>	<b>‡2,864</b>	‡ <b>2,034</b>	NA	NA	NA
1974	TOTAL	‡ <b>4,962</b>	‡ <b>2,912</b> <sup>′</sup>	<b>‡2,050</b>	NA	NA	NA
1975	TOTAL	<b>‡5,358</b>	‡ <b>3,150</b>	‡ <b>2,208</b>	NA	NA	NA
1976	TOTAL	<b>‡5,231</b>	<b>‡3,310</b>	‡ <b>1,922</b>	1,952	2,074	(122)
1977	TOTAL	‡ <b>5,844</b>	‡ <b>3,377</b>	‡ <b>2,466</b>	2,390	1,767	623
1978	TOTAL	‡ <b>5,999</b>	<b>‡3,459</b>	<b>‡2,540</b>	2,330	2,176	154
1979	TOTAL	<b>‡6,297</b>	‡ <b>3,537</b>	‡ <b>2,76</b> 1	2,384	2,041	343
1980	January February March April May June July August September October November	5,865 5,397 5,131 5,227 5,538 5,841 6,127 6,444 6,692 6,782 6,639	3,535 3,536 3,542 3,553 3,550 3,560 3,564 3,594 3,596 3,598 3,620	2,330 1,861 1,589 1,680 1,985 2,281 2,563 2,850 3,096 3,184 3,019	21 24 41 174 319 316 302 328 260 141 66	465 493 307 78 8 13 18 30 11 53 203	(444) (469) (266) 96 311 303 284 298 249 88 (137)
1981	December January February March April May June July August September October November December†	6,272 R5,794 R5,472 R5,284 R5,434 R5,659 R5,932 R6,204 R6,204 R6,591 R6,870 R6,967 R6,927 R6,561	3,629 R3,642 R3,648 R3,654 R3,670 R3,683 R3,680 3,649 3,709 3,719 3,724 R3,728 3,748	2,643 R2,152 R1,824 R1,630 R1,764 R1,976 R2,252 R2,2555 R2,882 R3,151 R3,243 R3,199 R2,813	34 R33 R59 R55 R207 R254 R314 R295 R399 285 149 R85 R31	402 R535 R388 243 R58 R28 R27 R27 R19 R7 53 R124 R398	(368) R(502) R(329) R(188) R149 R226 R287 R268 R380 R278 96 R(39) R(367)
1982	January†	5,926	3,747	2,179	23	655	(632)

Geographic coverage: the 50 United States and District of Columbia. 'See Explanatory Note 9. "Net storage injections are storage injections minus storage withdrawals. Parentheses indicate withdrawals greater than injections. ‡Total as of December 31. †Preliminary data. R = Revised data. NA = Not available. *Source:* • 1973 and 1974: American Gas Association, *Gas Facts*; 1975 forward: Energy Information Administration, EIA Form 191 and FPC Form 8, "Underground Gas Storage Report."

#### Oil and Gas Resource Development

The January 1982 rotary rig count of 4,436 dropped 1.9 percent below the alltime record of 4,520 rigs attained the month before but was 31.0 percent higher than the January 1981 count of 3,386 rotary rigs.

Well completions reported in January 1982 totaled 5,890. This is a 43.8 percent increase above the January 1981 level of 4,097 reported.

The oil well completions in January 1982 (2,790 reported) were up 55.5 percent over the 1981 figure (1,794 reported). During January 1982, 957 gas well completions were reported, 0.7 percent below the 1981 period (964 reported). Total reported footage drilled in January increased 42.1 percent (28.3 million feet as compared to 19.9 million feet) above last year's figure.

There were 53 crews engaged in seismic exploratory work offshore during January 1982. This was a 39.5-percent increase from the January 1981 level. January 1982 onshore seismic activity decreased from the previous month's level to 642, but was 16.1 percent higher than activity during January 1981.

Although two drilling indicators dropped in January (rotary rigs and seismic exploration), industry projections for 1982 drilling indicate a 10-percent real growth in operating rigs and footage drilled over 1981. This is based on the announced exploration and development budgets of major drilling companies.

## **Oil and Gas Resource Development**

		Rotary Rigs in Operation <sup>1</sup>		Ex	ploratory a Wells Co	nd Develop ompleted <sup>2 3</sup>	ment	Total Footage of Wells Completed <sup>2</sup> 3
		Monthly average		Oil	Gas	Dry	Total	Thousand feet
1973	AVERAGE	1,194	TOTAL	9,902	6,385	10,305	26,592	136,391
1974	AVERAGE	R1,472	TOTAL	12,784	7,240	11,674	31,698	150,551
1975	AVERAGE	1,660	TOTAL	16,408	7,580	13,247	37,235	174,434
1976	AVERAGE	R1,658	TOTAL	17,059	9,085	13,621	39,765	181,780
1977	AVERAGE	2,001	TOTAL	18,912	11,378	14,692	44,982	210,848
1978	AVERAGE	2,259	TOTAL	17,775	13,064	16,218	47,057	227,110
1979	AVERAGE	2,177	TOTAL	19,383	14,681	15,752	49,816	238,659
<b>1980</b>	January February March April May June July August September October November December <b>AVERAGE</b>	2,571 2,613 2,658 2,682 2,797 2,850 2,953 3,045 3,099 3,148 3,220 3,286 <b>2,909</b>	TOTAL	1,436 1,635 2,390 1,841 2,059 2,228 2,079 2,357 2,641 2,417 2,258 3,685 <b>27,026</b>	782 1,000 1,834 1,121 1,070 1,282 1,042 1,275 1,720 1,190 1,503 1,910	1,240 1,297 1,542 1,158 1,191 1,451 1,337 1,539 1,767 1,697 1,617 2,257 <b>18,089</b>	3,458 3,932 5,766 4,120 4,320 4,961 4,458 5,171 6,128 5,304 5,378 7,852 <b>60,845</b>	16,475 18,891 27,691 18,855 19,899 24,479 21,734 24,112 28,171 24,600 25,417 34,161 <b>284,461</b>
<b>1981</b>	January February March April May June July August September October November December AVERAGE	3,386 3,502 3,595 3,728 3,816 3,926 3,998 4,131 4,242 4,352 4,436 4,520 <b>3,970</b>	TOTAL	R1,794 2,462 3,102 2,905 2,604 3,497 2,790 3,137 3,416 3,775 3,587 4,581 <b>37,639</b>	R964 1,045 1,424 1,600 1,159 1,320 1,116 1,266 1,967 1,875 1,577 2,572 <b>17,870</b>	R1,339 1,609 1,878 1,546 1,675 2,105 1,698 1,867 2,019 2,091 2,057 3,055 <b>22,945</b>	R4,097 5,116 6,404 6,051 5,438 6,922 5,604 6,270 7,402 7,741 7,221 10,208 <b>78,454</b>	R19,907 22,763 30,144 27,836 24,842 31,689 25,542 28,886 33,608 35,500 32,149 48,275 <b>360,987</b>
1982	January	4,436		2,790	957	2,143	5,890	28,288

Geographic coverage: the 50 United States and District of Columbia. <sup>1</sup>These data are for rotary rigs operating reported to the Hughes Tool Company during the reporting period. Monthly figures are averages of a 4 or 5 week reporting period and are not calendar months. <sup>2</sup>These data are for well completions reported to the American Petroleum Institute (API) during the reporting period. They exclude service

\*Data reported for the first 2 months of each quarter cover 4 weeks of drilling activity, and data for the last month of the quarter cover 5

weeks of drilling activity. R=Revised data.

Note: Totals reflect subsequent data revisions and therefore may not agree with cumulative monthly data.
 Sources: 

 Rotary Rigs: Hughes Tool Company, "Rotary Rigs Running—By State."
 Wells: API, "Monthly Drilling Report" and "Quarterly Review of Drilling Statistics for the United States."

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# **Oil and Gas Resource Development**

		Cret Seisi	ws Engaged nic Explorat	in Ion	Se	Line-Miles	of ation
		Offshore	Onshore	Tota!	Offshore	Onshore <sup>1</sup>	
		Mo	onthly averag	e		Annual tota	ป
1973	AVERAGE	23	227	250	258,944	127,160	38
1974	AVERAGE	31	274	305	341,784	158,629	50
1975	AVERAGE	30	254	284	309,283	150,694	45
· 1976	AVERAGE	25	237	262	226,303	142,926	369
1977	AVERAGE	27	281	308	124,676	120,072	24
1978	AVERAGE	25	327	352	174,607	135, <b>899</b>	310
1979	AVERAGE	30	370	400	193,212	163,929	357
1980	January February March April May June July August September October November December <b>AVERAGE</b>	29 29 31 34 39 42 44 44 41 41 40 <b>37</b>	439 440 448 465 468 496 514 521 523 530 531 540 <b>493</b>	468 469 477 496 502 535 556 565 567 567 571 572 580 <b>530</b>	202,694	184,088	386
<b>1981</b>	January February March April May June July August September October November December <b>AVERAGE</b>	38 41 40 42 44 43 46 47 52 52 47 <b>44</b>	553 561 570 605 619 652 668 689 689 689 681 656 <b>637</b>	591 602 610 645 661 696 711 735 744 741 733 703 <b>681</b>			
1982	January	53	642	695			

otal 386,104 500,413 459,977 369,229 244,748 310,506 357,141

Total

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386,782

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Geographic coverage: the 50 United States and District of Columbia. <sup>1</sup>Monthly data not available. *Sources:* • Society of Exploration Geophysicists, "Monthly Seismic Crew Count" and annual reports published in their bultetin, *Geophysics*.

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Coal production in January 1982 was 63.4 million short tons, 3.3 percent below the 65.6 million short tons produced in January 1981.

Electric utility coal consumption in December 1981 totaled 53.1 million short tons, 3.8 percent more than consumption in December 1980. Total electric utility coal consumption in calendar year 1981 totaled 596.2 million short tons, an increase of 26.9 million short tons, or 4.7 percent, compared to 1980.

Electric utility coal stocks of 167.7 million short tons at the end of December 1981 were 15.3 million short tons (8.4 percent) below the level 1 year earlier.

Imports of coal in December 1981 totaled 127 thousand short tons. Total imports in 1981 totaled 1.0 million short tons, down 14.5 percent from the amount imported in 1980. Exports of coal in December 1981 totaled 11.6 million short tons, 3.3 million short tons (40.5 percent) more than the amount exported during December 1980. Total coal exports in calendar year 1981 totaled 112.5 million short tons, 20.8 million short tons, or 22.7 percent, higher than the amount exported in 1980. Coal exports in 1981 were principally to Europe (50.2 percent), Japan (23.0 percent), and Canada (16.2 percent).

#### **Bituminous Coal, Lignite, and Anthracite**

			Domestic			
		Production	Consumption	Imports <sup>1</sup>	Exports <sup>2</sup> <sup>3</sup>	Stocks*
			Tho	usand short tons		
1973	TOTAL	598,568	562,584	127	53,587	104,335
1974	TOTAL	610,023	558,402	2,080	60,661	96,323
1975	TOTAL	654,641	562,641	940	66,309	128,050
1976	TOTAL	684,913	603,790	1,203	60,021	134,438
1977	TOTAL	697,205	625,291	1,647	54,312	157,098
1978	TOTAL	670,164	625,225	2,953	40,714	145,551
1979	TOTAL	781,134	680,524	2,059	66,042	181,646
1980	January	69.594	63.521	121	4,460	179,450
	February	65,546	59,678	193	4 041	176,808
	March	70,953	58.851	93	5,633	176.685
	April	69.658	52,635	63	7,563	185.367
	May	71.043	52.834	207	8.597	193.920
	June	71,338	56.098	104	8,899	199,299
	July	61 285	63,122	32	8,247	187,913
	August	68,399	62,752	166	9,270	190,689
	September	68.822	57.306	2	8,364	194,467
	October	72,290	55,774	139	9,454	201,975
	November	68.655	56.800	3	8,987	204,436
	December	72,117	63.362	70	8,228	204,028
	TOTAL	829,700	702,733	1,194	91,742	
1981	Januaryt	65,601	67,146	35	5,795	198,603
	February†	70,498	59,530	104	6,771	197,962
	March†	77,873	60,054	77	9,710	206,850
	April†	37,332	54,354	63	8,271	186,816
	Mayt	37,516	54,644	96	6,086	166,814
	Junet	62,379	59,319	138	6,158	157,773
	Julyt	73,911	67,092	13	10,762	154,390
	August†	78,738	65,382	150	11,315	156,529
	September†	80,240	59,364	69	11,900	164,222
	October†	83,309	NA	94	12,360	NA
	November†	72,676	NA	76	11,849	NA
	Decembert	67,672	NA	127	11,564	NA
	TOTAL	807,745	NA	1,043	112,541	NA
1982	January†	63,423	NA	NA	NA	NA

Geographic coverage: the 50 United States and District of Columbia. Totals may not equal sum of components due to independent rounding. See Explanatory Note 10 for methodology used to calculate domestic consumption from 1978 forward. 'Bituminous coal is the only type of coal imported during the years shown above. 'Includes exports of lignite beginning in 1978, Lignite prior to 1978 was combined with lignite briquets. Exports of lignite totaled 22,821 short tons in 1978; 26,389 short tons in 1979; and 65,064 short tons in 1980. 'Excludes shipments of anthracite to U.S. Armed Forces overseas (340,000 short tons in 1980). 'Stocks held by electric utilities, coke plants, and general industry at the end of period. Excludes stocks at retail dealers (which are consumed by the Residential and Commercial Sectors). †Preliminary data. NA=Not available. *Sources:* • See Sources at the end of this section.

**Bituminous Coal, Lignite, and Anthracite** 





Stocks



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### Consumption-Bituminous Coal, Lignite, and Anthracite

			Industrial			
		Electric Utilities	Coke Plants <sup>1</sup>	Other Industrial <sup>2</sup> Including Transportation	Residential and Commercial	Total
				Thousand short tons	5	
1973	TOTAL	389,212	94, 101	68,154	11,117	562,584
1974	TOTAL	391,811	90, 191	64,983	11,417	558,402
1975	TOTAL	405,962	83,598	63,670	9,410	562,641
1976	TOTAL	448,371	84,704	61,799	8,916	603,790
1977	TOTAL	477,126	77,739	61,472	8,954	625,291
1978	TOTAL	481,235	71,394	63,085	9,511	625,225
1979	TOTAL	527,051	77,368	67,717	8,388	680,524
1980	January	50,371	6,342	5,944	864	63,521
	February	47,512	6,010	5,400	756	59,678
	March	46,685.	6,428	5,199	539	58,851
	April	40,692	6,247	5,118	578	52,635
	May	41,464	6,127	4,894	349	52,834
	June	45,821	5,326	4,675	276	56,098
	July	53,655	4,903	4,222	342	63,122
	August	53,214	4,878	4,337	323	62,752
	September	47,913	4,794	4,170	429	57,306
	October	45,092	5,107	4,990	585	55,774
	November	45,698	5,152	5,331	619	56,800
	December	51,157	5,346	6,067	792	63,362
	TOTAL	569,274	66,660	60,347	6,452	702,733
1981	January†	54,357	5,465	6,469	855	67,146
	February†	47,914	5,177	5,874	565	59,530
	March†	48,398	5,532	5,654	470	60,054
	April†	43,677	4,862	5,254	561	54,354
	May†	44,999	4,259	5,016	370	54,644
	June†	49,988	4,460	4,571	300	59,319
	July†	56,144	5,440	5,092	416	67,092
	August†	. 54,328	5,425	5,233	396	65,382
	September†	48,483	5,329	5,025	527	59,364
	October†	47,800	NA	NA	NA	NA
	Novembert	47,014	NA	NA	NA	NA
	Decembert	53,116	NA	NA	NA	NA
	TOTAL	596,219	NA	NA	NA	NA

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Geographic coverage: the 50 United States and District of Columbia. Totals may not equal sum of components due to independent rounding. Bituminous coal and anthracite only. Lignite is not used at coke plants. \*See Explanatory Note 10. †Preliminary data. NA=Not available. *Sources:* • See Sources at the end of this section.

#### Stocks<sup>1</sup>—Bituminous Coal, Lignite, and Anthracite

			Indu		
		Electric Utilities	Coke Plants <sup>2</sup>	Other Industrial	Total <sup>3</sup>
			Thousand	d short tons	
1973		86,967	6,998	10,370	104,335
1974		83,509	6,209	6,605	96,323
1975		110,724	8,797	8,529	128,050
1976		117,436	9,902	7,100	134,438
1977		133,219	12,816	11,063	157,098
1978		128,225	8,278	9,048	145,551
1979		159,714	10,155	11,777	181,646
1980	January February March April May June June July August September October November December	158,717 157,124 157,625 165,817 174,029 178,959 168,806 171,891 175,067 182,045 184,133 183,010	9,634 9,263 9,317 9,579 9,692 9,913 8,427 7,866 8,213 8,488 8,606 9,067	11,099 10,421 9,743 9,971 10,199 10,427 10,680 10,932 11,187 11,442 11,697 11,951	179,450 176,688 176,685 185,367 193,920 199,299 187,913 190,689 194,467 201,975 204,436 204,028
1981	January† February† March† April† May† June† July† August† September† October† November† December†	176,975 175,715 183,983 168,894 152,103 144,520 140,656 142,315 149,526 159,676 167,002 167,681	9,634 10,211 10,788 6,952 4,850 4,500 5,074 5,648 6,224 NA NA NA	11,994 12,036 12,079 10,970 9,861 8,753 8,660 8,566 8,472 NA NA NA	198,603 197,962 206,850 186,816 166,814 157,773 154,390 156,529 164,222 NA NA

Geographic coverage: the 50 United States and District of Columbia. Totals may not equal sum of components due to independent rounding. <sup>1</sup>Stocks held by electric utilities, coke plants, and general industry at end of period. <sup>\*Bituminous coal and anthracite only.</sup> Lignite is not used at coke plants. <sup>3</sup>Total excludes stocks at retail dealers (which are consumed by the Residential and Commercial Sectors). <sup>4</sup>Preliminary data. NA=Not available. *Sources:* • See Sources at the end of this section.

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#### Sources for the Coal Section

•Production: 1973 through September 1977: Bureau of Mines, *Minerals Yearbook* and *Mineral Industry Surveys*; October 1977 forward: Energy Information Administration (EIA), "Weekly Coal Report," "Coal Distribution Report," (Form EIA-6), and selected State agencies.

Consumption and Stocks: 1973 through September 1977: Bureau of Mines, Minerals Yearbook and Mineral Industry Surveys;

Surveys; —Electric Utilities—October 1977 forward: EIA, "Monthly Power Plant Report" (FPC Form 4). —Other Industrial—October 1977 through December 1979: EIA, "Monthly Fuel Consumption Report - Manufacturing Plants" (Form EIA-3); January 1980 forward: EIA, "Quarterly Fuel Consumption Report - Manufacturing Plants" (Form EIA-3) and EIA, "Coal Distribution Report" (Form EIA-6). —Coke Plants—October 1977 through December 1980: EIA, "Coke and Coal Chemicals - Monthly/Annual" (Form EIA-5/5A); January 1981 forward: EIA, "Coke and Coal Chemicals - Quarterly/Annual" Form EIA-5/5A). —Residential and Commercial—October 1977 through December 1979: EIA, "Monthly Coal Report, Retail Dealers and Upper Lake Docks" (Form EIA-2); January 1980 forward: EIA, "Coal Distribution Report" (Form EIA-6), **-Imports/Exports**: 1973 through September 1977: Bureau of Mines, *Minerals Yearbook* and *Mineral Industry Surveys;* October 1977 forward: Bureau of the Census, Monthly Reports IM 145 (Imports) and EM 522 (Exports).

December 1981 production of electricity by utilities was 195.6 billion kilowatthours, slightly lower than the December 1980 production level. Coal-fired production totaled 106.6 billion kilowatt-hours, 2.2 percent above the December 1980 level. Nuclear production totaled 26.0 billion kilowatt-hours, 17.5 percent above the December 1980 level. Hydroelectric production was 23.9 billion kilowatt-hours in December 1981, 7.1 percent above the December 1980 level. Natural gas-fired production decreased to 22.9 billion kilowatt-hours, 0.4 percent below the level 1 year earlier. Petroleum-fired production totaled 15.8 billion kilowatthours, 32.6 percent below the December 1980 level.

Sales of electricity to all ultimate consumers in the United States in December 1981 totaled 172.4 billion kilowatt-hours, an increase of 6.3 percent from sales of the month before and 1.8 percent below December 1980 sales. Sales to residential consumers during December 1981 were 60.8 billion kilowatt-hours, 0.1 percent above sales for the corresponding month in 1980. Commercial sales were 40.8 bil-

lion kilowatt-hours, 2.3 percent more than the amount in December 1980. Sales to industrial consumers totaled 64.1 billion kilowatt-hours in December 1981, 6.4 percent less than the December 1980 figure. In December 1981 other sales totaled 6.6 billion kilowatt-hours, 2.6 percent above the December 1980 level.

Electric utility petroleum consumption (excluding petroleum coke) during December 1981 was 26.9 million barrels, a 32.1-percent drop from the December 1980 level. Coal consumption for December 1981 was 53.1 million tons, 3.8 percent above the December 1980 rate. During December 1981, consumption of natural gas by electric utilities was 239.4 billion cubic feet, 1.1 percent below the December 1980 consumption level.

On December 31, 1981, utility stocks of anthracite, bituminous coal, and lignite totaled 167.7 million tons. Stockpiles were 8.4 percent below the levels of December 1980. Petroleum stocks (exluding petroleum coke) on December 31, 1981, totaled 127.7 million barrels, 5.7 percent below the levels for the same month of 1980.

**Electric Utilities** 

### Net Electricity Production by Primary Energy Source

				Natural				
		Coal	Petroleum <sup>2</sup>	Gas	Nuclear	Hydro	Other <sup>3</sup>	Total
				Mi	llion kilowatt-ho	ours		
1973	TOTAL	847,651	314,343	340,858	83,479	272,083	2,294	1,860,710
1974	TOTAL	828,433	300,931	320,065	113,976	301,032	2,703	1,867,140
1975	TOTAL	852,786	289,095	299,778	172,505	300,047	3,437	1,917,649
1976	TOTAL	944,391	319,988	294,624	191,104	283,707	3,883	2,037,696
1977	TOTAL	985,219	358,179	305,505	250,883	220,475	4,063	2,124,323
1978	TOTAL	975,742	365,060	305,391	276,403	280,419	3,315	2,206,331
1979	TOTAL	1,075,037	303,525	329,485	255,155	279,783	4,387	2,247,372
1980	January	103,258	24,986	26,349	19,746	25,278	388	200,005
	February	98,151	24,781	24,755	19,277	21,378	373	188,715
	March	95,386	20,415	26,891	20,039	24,332	401	187,464
	April	83,562	16,025	24,181	18,794	25,748	410	168,720
	May	84,884	16,545	26,587	18,385	28,865	468	175,734
	June	93,692	18,020	31,295	18,322	27,656	445	189,430
	July	108,457	23,289	39,063	21,024	24,469	475	216,776
	August	107,580	24,885	37,647	24,333	20,431	517	215,393
	September	97,557	17,815	33,580	23,572	18,491	469	191,485
	October	91,196	15,858	28,592	24,510	17,866	533	178,555
	November	93,501	19,989	24,338	20,984	19,217	520	178,550
	December	104,339	23,386	22,961	22,130	22,290	506	195,613
	TOTAL	1,161,562	245,994	346,240	251,116	276,021	5,506	2,286,439
1981	January	111,148	25,724	22,081	23,368	22,355	540	205,217
	February	97,653	17,444	21,339	21,595	21,134	483	179,648
	March	99,482	16,962	25,900	22,004	20,572	541	185,461
	April	88,109	15,106	27,309	20,646	20,723	500	172,393
	May	88,941	14,508	29,920	19,723	24,081	483	177,656
	June	99,828	18,972	35,885	21,166	26,370	473	202,694
	July	112,854	19,973	38,602	23,080	25,133	523	220,164
	August	108,225	16,031	36,888	26,946	21,635	520	210,245
	September	97,664	15,566	30,850	24,398	17,842	538	186,858
	October	97,046	16,213	28,917	20,556	18,114	531	181,377
	November	94,841	13,847	24,670	22,783	19,030	465	175,637
	December	106,608	15,767	22,874	25,997	23,880	457	195,582
	TOTAL	1,202,400	206,113	345,235	272,263	260,869	6,054	2,292,933

Geographic coverage: the 50 United States and District of Columbia. Totals may not equal sum of components due to independent rounding. Includes bituminous coal, lignite, and anthracite. Includes fuel oil No. 2, No. 4, No. 5, No. 6, crude oil, kerosene, and petroleum coke. Includes geothermal, wood and waste. Source: •Federal Power Commission Form 4, "Monthly Power Plant Report."

**Electricity Sales**<sup>1</sup>

		Residentia	i Commercia	al Industrial	Other <sup>2</sup>	Total
			N	lillion kilowatt-ho	urs	
1973	TOTAL	579,231	388,266	686,085	59,326	1,712,909
1974	TOTAL	578,184	384,826	684,875	58,039	1,705,924
1975	TOTAL	R588,140	R403,049	R687,680	R68,222	R1,747,091
1976	TOTAL	R606,452	R425,094	R754,069	R69,631	R1,855,246
1977	TOTAL	R645,239	R446,514	R786,037	<b>R70,571</b>	R1,948,361
1978	TOTAL	R674,466	R461,163	R809,078	R73,215	R2,017,922
1979	TOTAL	682,819	473,307	841,903	73,070	R2,071,099
<b>1980</b>	January February March April May June July August September October November December	65,841 64,514 60,497 51,749 45,699 52,267 68,611 75,020 67,969 54,014 50,539 60,775 <b>717,495</b>	39,578 39,528 38,762 36,453 36,110 40,129 45,525 47,763 46,028 40,479 37,954 39,846 <b>B488,155</b>	67,532 68,508 69,086 67,908 67,235 66,739 65,531 67,415 69,570 69,413 67,613 68,517 <b>815,067</b>	6,634 6,171 6,028 5,591 5,807 5,737 6,215 6,266 6,572 6,174 6,068 6,469 <b>73,732</b>	179,585 178,720 174,373 161,702 154,851 164,872 185,882 196,464 190,139 170,080 162,174 175,607 <b>2,094,449</b>
1981	January February March April May June July August September October November December <b>TOTAL</b>	72,240 64,588 56,238 49,624 47,281 54,997 68,901 69,224 60,173 51,985 50,754 60,826 <b>706,831</b>	42,120 40,244 38,586 36,975 38,409 43,130 47,859 47,842 45,877 41,175 38,746 40,782 <b>501,745</b>	67,087 67,394 68,599 68,136 68,761 71,615 71,716 72,021 70,986 69,132 66,139 64,130 <b>825,716</b>	6,830 6,387 6,366 5,953 6,191 6,237 6,532 6,553 6,585 6,585 6,585 6,388 6,490 6,637 <b>77,149</b>	188,277 178,613 169,789 160,688 160,642 175,979 195,008 195,640 183,620 168,679 162,129 172,375 <b>2,111,439</b>

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Geographic coverage: the 50 United States and District of Columbia. Totals may not equal sum of components due to independent rounding. 'Electricity sales to all ultimate consumers. 'Includes street lighting and transportation uses. R=Revised data. Source: •1973 through February 1980: FPC Form 5, "Monthly Statement of Electric Operating Revenue and Income"; March 1980 forward: FERC Form 5, "Electric Utility Company Monthly Statement."

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### Primary Energy Consumed to Produce Electricity

		Coal				Petroleum				Natural Gas
		Anthracite	Bituminous Coal	Lignite	Total	Steam	Gas Turb./ Int. Comb.	Total Liquids	Petroleum Coke	
			Thousand sh	nort tons		IT	ousand barre	ls	Thousand short tons	Million cubic feet
1973	TOTAL	1,443	376,975	10,794	389,212	513,190	47,058	560,248	507	3,660,172
1974	TOTAL	1,498	378,643	11,670	391,811	483,146	53,128	536,274	625	3,443,428
1975	TOTAL	1,480	388,523	15,960	405,962	467,221	38,907	506,128	70	3,157,669
1976	TOTAL	1,350	425,205	21,817	448,371	514,077	41,843	555,920	68	3,080,868
1977	TOTAL	1,425	451,051	24,650	477,126	574,869	48,837	623,705	98	3,191,200
1978	TOTAL	1,064	448,763	31,407	481,235	588,319	47,520	635,839	398	3,188,363
1979	TOTAL	1,046	488,129	37,876	527,051	492,606	30,691	523,297	268	3,490,523
1980	January	74	46,518	3,779	50,371	40,695	2,197	42,892	54	276,743
	February	72	43,969	3,471	47,512	40,231	1,919	42,150	21	263,771
	March	83	43,244	3,357	46,685	33,406	1,379	34,785	13	283,945
	April	71	37,971	2,651	40,692	26,867	673	27,540	7	256,606
	May	86	38,116	3,262	41,464	26,991	840	27,831	11	281,886
	June	89	42,073	3,658	45,821	29,551	1,138	30,689	11	336,894
	July	93	49,815	3,746	53,655	37,297	2,791	40,088	11	420,339
	August	80	49,077	4,057	53,214	40,019	2,833	42,852	15	405,343
	September	84	44,487	3,342	47,913	29,367	1,286	30,653	11	357,286
	November	73	41,019	3,200	45,092	26,269	689	26,958	8	301,266
	December	89	42,379	3,203	40,090	32,702	1,320	34,102	<i>'</i>	255,559
	TOTAL	951	526,680	41,642	569,274	<b>401,863</b>	18,351	420,214	9 179	241,957 3,681,595
1981	January	81	50.304	3.972	54.357	41.556	2 027	43 583	10	231 606
	February	58	44,583	3,272	47.914	28 948	1 049	29 997	9	224 003
	March	75	45,168	3.155	48.398	28,492	784	29.276	ğ	272 348
	April	73	40,535	3,069	43.677	25.028	557	25,585	7	287.679
	May	91	41,405	3,503	44,999	23,958	967	24,925	14	314,767
	June	105	46,500	3,383	49,988	30,673	1,741	32,413	13	386,972
	July	102	51,705	4,337	56,144	32,577	1,720	34,297	11	409,979
	August	133	50,010	4,184	54,328	26,630	586	27,216	13	390,587
	September	98	44,557	3,828	48,483	25,762	520	26,282	13	324,824
	October	115	44,161	3,524	47,800	26,646	556	27,201	15	301,578
	November	141	43,032	3,841	47,014	22,749	433	23,182	12	258,811
	Decembér	148	48,487	4,481	53,116	26,351	567	26,918	12	239,396
	TOTAL	1,221	550,449	44,548	596,219	339,371	11,506	350,877	139	3,642,551

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Geographic coverage: the 50 United States and District of Columbia. Totals may not equal sum of components due to independent rounding. *Source:* •Federal Power Commission, Form 4, "Monthly Power Plant Report."

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#### **Primary Energy Consumed to Produce Electricity**













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#### End-of-Month Coal and Petroleum Stocks

		Coal				Petroleum				
		Anthracite	Bituminous Coal	Lignite	Total	Steam	Gas Turb./ Int. Comb.	Total Liquids	Petroleum Coke	
			Thousand sh	ort tons		TI	nousand barrel	s	Thousand short tons	
1973		‡1 <b>,066</b>	‡ <b>84,94</b> 1	<b>‡961</b>	‡ <b>86,967</b>	‡ <b>79,121</b>	±10,095	‡ <b>89,216</b>	‡312	
1974		<b>‡930</b>	<b>‡81,712</b>	<b>‡867</b>	<b>‡83,509</b>	‡97,718	‡ <b>15,19</b> 9	±112,917	<b>‡35</b>	
1975		<b>‡982</b>	‡10 <b>7,927</b>	<b>‡1,815</b>	‡ <b>110,724</b>	<b>‡108,825</b>	<b>‡16,432</b>	±125,257	<b>‡</b> 31	
1976		‡ <b>1,000</b>	‡ <b>114,130</b>	‡ <b>2,306</b>	‡117,436	‡1 <b>06,993</b>	<b>‡14,703</b>	±121,696	<b>‡32</b>	
1977		‡ <b>2,3</b> 21	‡1 <b>28,2</b> 10	‡ <b>2,688</b>	‡133,21 <del>9</del>	<b>‡124,750</b>	<b>‡19,281</b>	<b>‡144,031</b>	<b>‡44</b>	
1978		<b>‡2,178</b>	‡ <b>123,020</b>	‡ <b>3,027</b>	‡ <b>128,225</b>	‡102,402	<b>‡16,386</b>	‡ <b>118,78</b> 8	<b>‡198</b>	
1979		‡ <b>3,274</b>	‡1 <b>52,98</b> 1	‡ <b>3,459</b>	‡159,714	<b>‡111,121</b>	‡ <b>20,30</b> 1	‡1 <b>31,422</b>	<b>‡183</b>	
1980	January	3,371	151,891	3,455	158,717	114,313	19,597	133,909	175	
	February	3,451	150,151	3,522	157,124	111,353	19,055	130,409	168	
	March	3,488	151,022	3,116	157,625	116,246	18,934	135,180	154	
	April	3,533	158,441	3,843	165,817	118,824	19,201	138,025	103	
	May	3,725	166,325	3,980	174,029	123,043	19,485	142,529	69	
	June	3,838	171,042	4,079	178,959	124,177	19,273	143,450	65	
	July	3,955	161,159	3,691	168,806	121,596	18,680	140,276	65	
	August	4,098	163,756	4,036	171,891	118,514	18,150	136,664	63	
	September	4,291	166,515	4,262	175,067	122,240	18,064	140,304	61	
	November	4,481	175,411	4,153	182,045	124,046	18,398	142,445	60	
	December	4,001	173,469	3,903	104,133	119,863	18,051	137,915	53	
	December	4,/4/	174,104	4,110	163,010	117,227	18,147	135,374	52	
1981	January	4.824	167 884	4 267	176 975	109 915	18 280	128 105	51	
	February	4.859	166.552	4.304	175,715	112 439	17 397	129 836	52	
	March	4,951	174,554	4,478	183,983	111.105	17.502	128,607	52	
	April	5,035	159,318	4,541	168,894	108,848	17.205	126.053	52	
	Мау	5,008	142,188	4,907	152,103	111,758	17,068	128,826	52	
	June	5,081	134,321	5,119	144,520	109,313	18,027	127,341	49	
	July	5,802	129,684	5,171	140,656	110,294	16,883	127,177	48	
	August	5,337	132,068	4,909	142,315	113,472	R16,838	R130,310	47	
	September	5,428	138,808	5,290	149,526	112,771	16,588	129,359	46	
	October	5,512	148,952	5,213	159,676	111,578	16,220	127,798	44	
	November	5,548	156,360	5,094	167,002	110,971	16,064	127,035	43	
	December	5,537	157,046	5,098	167,681	111,972	15,711	127,682	42	

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Geographic coverage: the 50 United States and District of Columbia. Totals may not equal sum of components due to independent rounding. ‡Total as of December 31. R=Revised data. *Source:* •Federal Power Commission, Form 4, "Monthly Power Plant Report."
# **Electric Utilities**

**Petroleum Stocks** 

## End-of-Month Coal and Petroleum Stocks

Coal Stocks (Bituminous Coal, Lignite, and Anthracite)



J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J 



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During December 1981, operating domestic power reactors generated a total of 25,997 million net kilowatt-hours of electricity, 14.1 percent above the November 1981 output and 17.5 percent above December 1980 generation. Nuclear power accounted for 13.3 percent of all U.S. commercial electricity generation in December 1981. While the 1981 ratio of commercial electricity derived from nuclear power (11.9 percent) is less than the record 1978 ratio of 12.5 percent, nuclear power surpassed hydropower to challenge natural gas as the second major energy source for electricity generation.

There were no changes in the status of "Reactors Licensed For Commercial Operations" during December 1981; the number of operational units remained at 74. As of December 31, 1981, the maximum dependable capacity of the 74 licensed domestic power reactor units was 55.756 million net kilowatts (MWe). Of these 74 units, 2 units (McGuire-1 and Sequoyah-2) were in power ascension and 14 units (Browns Ferry-3, Farley-1, Fitzpatrick, Fort St. Vrain, Hanford, Millstone-2, Monticello, Oconee-1, Palisades, Pilgrim-1, Quad Cities-2, Surry-2, Three Mile Island-1, and Turkey Point-3) generated no electricity or operated substantially below capacity during December. Nevertheless, the average capacity factor for these 74 licensed units was 65.6 percent in December, the highest monthly level since February 1979.

During December 1981, three reactors which had previously been granted construction permits were cancelled: Carolina Power and Light's Harris-3 and -4 units with a capacity of 900 MWe each, and New Jersey Public Service Electric and Gas' Hope Creek-2 with a capacity of 1.067 MWe. These three cancellations reduced the "Total Reactor Units" to 163 and decreased total design capacity to 157 million net kilowatts. During 1981, a total of nine units were cancelled or otherwise removed from the "Status" table (Bailly-1, Callaway-2, Dresden-1, Harris-3 and -4, Hope Creek-2, Humboldt Bay, Pilgrim-2, and Three Mile Island-2). Since 1975, when "Total Reactor Units" achieved its highest number of 236, 73 reactors (almost 31 percent) have been cancelled or otherwise dropped from the total number of reactor units. This reduction represents an aggregate capacity potential of 79 million net kilowatts or 33.5 percent of the 1975 value.

### **Nuclear Powerplant Operations**

		Reactors Licensed For Commercial Operations <sup>1</sup>	( Nuclear-Based Electricity Generation <sup>2</sup>	Nuclear Portion of Domestic Electricity Generation	Maximum Dependable Capacity <sup>3</sup>	Capacity Factor
			Million net kilowatt-hours	Percent	Million net kilowatts	Percent
1973	AVERAGE	40	83,479	4.5	13.850	63.2
1974	AVERAGE	53	113,976	6.1	29.921	43.5
1975	AVERAGE	56	172,505	9.0	35.671	55.2
1976	AVERAGE	62	191,104	9.4	40.642	53.5
1977	AVERAGE	67	250,883	11.8	45.554	62.9
1978	AVERAGE	71	276,403	12.5	49.385	63.9
1979	AVERAGE	71	255,155	11.4	<b>50.604</b> ·	57.6
1980	January	71	19,746	9.9	49.945	53.1
	February	72	19,277	10.2	51.055	54.3
	March	72	20,039	10.7	51.031	52.8
	April	74	18,794	· 11.1	53.040	49.3
	May	74	18,385	10.5	53.040	46.6
	June	74	18,322	9.7	53.040	48.0
	July	74	21,024	9.7	54.064	52,3
	August	74	24,333	11.3	53.957	60.6
	September	74	23,572	12.3	53.855	60.8
	October	75	24,510	13.7	54.724	60.1
	November	75	20,984	11.8	54.737	53.2
	December	· 75	22,130	11.3	54.749	54.3
	AVERAGE	74	251,116	11.0	53.103	53.8
1981	January	75	23,368	11.4	55.853	56.2
	February	75	21,595	12.0	55.830	57.6
	March	75	22,004	11.9	55.818	53.0
	April	75	20,646	12.0	55.817	51.4
	May	75	19,723	11.1	55.841	47.5
	June	76	21,166	10.4	56.981	51.6
	July	· 74	23,080	10.5	55.840	55.6
	August	74	26,946	12.8	55.840	64.9
	September	75	24,398	13.1	56.924	59.5
	October	75	20,556	11.3	56.869	48.5
	November	74	22,783	13.0	55.785	56.7
	December	74	25,997	13.3	55.756	65.6
	AVERAGE	75	272,263	11.9	56.096	55.7

Geographic coverage: the 50 United States and District of Columbia. 'See next table (Reactor Status Table) for explanation and sources. \*Electricity generation entries represent yearly or monthly totals rather than averages. \*See Explanatory Note 11. \*Average percentage of the net Maximum Dependable Capacity utilized yearly or monthly. *Sources:* • Capacity data for units in commercial operation or start-up testing—Nuclear Regulatory Commission, 'Licensed Operating Reactors.'' • Generation Data—FPC Form 4, 'Monthly Power Plant Report.''

### **Nuclear Powerplant Operations**

Electricity Generated by Utilities and by Nuclear Powerplants



### Nuclear Portion of Electricity Generation and Capacity Factor\*



\*Percentage of Maximum Dependable Capacity utilized.

### Status of Nuclear Reactor Units<sup>1</sup>

		Reactors Licensed For Commercial Operations <sup>2</sup>	Construction Permits Granted	Construction Permits Pending	Reactor Units on Order	Reactor Units Announced	Total Reactor Units	Design Capacity <sup>3</sup> (Million Net Kilowatts)
1973		40	51	58	48	20	217	212
1974		53	58	80	28	16	235	234
1975		56	69	73	19	19	236	236
1976		62	72	66	16	19	235	236
1977		67	80	52	13	9	221	220
1978		71	90	32	9	4	206	204
1979		71	91	21	3	0	186	180 ·
1980	January	71	90	17	3	0	181	174
	February	72	89	16	3	0	180	173
	March	72	87	14	3	0	176	169
	April	74	85	14	3	Ō	176	169
	May	74	85	14	3	Ō	176	169
	June	74	85	14	3	ñ	176	169
	July	74	85	14	3	õ	176	160
	August	74	85	14	3	õ	176	169
	September	74	85	14	å	õ	176	169
	October	75	84	14	ă	õ	176	169
	November	75	82	14	ä	ñ	174	167
	December	75	82	12	3	õ	172	164
1981	January	75	81	12	3	0	. 171	164
	February	75	81	12 ·	3	0	171	164
	March	75	81	12	3	0	171	164
	April	75	81	12	3	0	171	164
	Мау	75	81	12	3	0	171	164
	June	76	80	12	3	0	171	164
	July	74	80	12	3	Ō	169	163
	August	74	79	12	3	ō	168	162
	September	75	78	11	3	ñ	167	161
	October	75	77	11	ä	ñ	166	160
	November	74	78	11	ă	0	166	160
•	December	74	75	11	3	0	100	100
	000011001	/**	70	11	3	v	103	15/

Geographic coverage: the 50 United States and District of Columbia.

Geographic coverage: the 50 United States and District of Columbia. 'Monthly data are the status as of the last day of the month. Annual data are the status as of December 31 of each year. \*These figures include reactors in fuel-loading, power-testing, and power-ascension stages. They also include two Department of Energy,dual-purpose reactors -Shippingport (capacity=60 MWe) and Hanford (capacity=800 MWe) which, while they are not licensed by the Nuclear Regulatory Commission, do generate electricity on a commercial basis. Not included in the above table is the Experimental Breeder Reactor-2 (EBR-2), which generates electricity but does not distribute it commercially. Three reactors, which have each been inoperative for at least 2 years, were dropped from this list due to their uncertain futures: Humboldt Bay (capacity=65 MWe) -which requires major seismic modifications, was dropped from the list in January 1981; while Dresden-1 (capacity =200 MWe) -which is undergoing major modifications, and Three Mile Island-2 (capacity=906 MWe) -where operations were suspended in March 1979 due to an accident, were both dropped from the list as of July 1981. \*See Explanatory Note 11.

\*See Explanatory Note 11.

Sources: • Compiled from various sources, primarily the Nuclear Energy, Office of Nuclear Reactor Programs, 'U.S. Central Station Nuclear Electric Generating Units: Significant Milestones," and from the Energy Information Administration, Office of Coal, Nuclear, Electric and Alternate Fuels.

### **Crude Oil**

The average price of domestic crude oil purchased at the wellhead was \$30.72 per barrel in December 1981. This was 0.8 percent below the previous month's level and 19.1 percent above the level in December 1980.

During December 1981, the composite refiner acquisition cost of crude oil was \$34.26 per barrel, \$0.08 per barrel (0.2 percent) below the previous month's price of \$34.34. The imported price decreased \$0.46 per barrel from the November 1981 level to \$35.80 per barrel in December. This price was 0.5 percent above the December 1980 level. The domestic price in December 1981 was \$33.47, a decrease of \$0.02 per barrel from the November average.

### **Residual Fuel Oil**

The average price, excluding taxes, for No. 6 residual fuel oil sold to utilities, industry, and other ultimate consumers in November 1981 was \$30.16 per barrel, \$0.16 per barrel (0.5 percent) below the previous month's price and 0.2 percent over the November 1980 average. The average price, excluding taxes, for No. 6 residual fuel oil sold to resellers, bulk plants, jobbers, and other wholesale accounts in November 1981 was \$28.03 per barrel, \$1.25 (4.7 percent) above the October 1981 average and a 0.3 percent decrease from the November 1980 average.

### **Heating Oil**

The national average price of heating oil sold to residential customers in December 1981 was 122.0 cents per gallon. This was 1.0 percent above the selling price in November 1981 and 14.6 percent above the December 1980 price. The average

distributor margin on residential heating oil in December was 18.3 cents per gallon, 29.8 percent above the margin during December 1980. The refiners' national average selling price to resellers and retailers was 100.7 cents per gallon in December 1981, 13.7 percent above the December 1980 average.

### **Aviation Fuel**

The average price, excluding taxes, for kerosene-type jet fuel sold to commercial airlines, Department of Defense, and other ultimate consumers in November 1981 was 102.6 cents per gallon, a 1.5 percent increase from the previous month's average and a 12.7 percent increase over the November 1980 average.

### **Motor Gasoline**

The national average retail price for all grades and all types of motor gasoline was 134.1 cents per gallon in January 1982. Leaded regular gasoline at all types of stations sold for an average of 128.5 cents per gallon in January, 0.8 cents lower (0.6 percent) than the price in December. The price for unleaded regular gasoline at all types of stations was 135.8 cents per gallon in January, 0.7 cents lower (0.5 percent) than the price in December.

### **Liquefied Petroleum Gases**

The average wholesale price for propane during November 1981, excluding taxes, was 47.6 cents per gallon, 0.6 percent above the previous month's level and 5.5 percent above the November 1980 level.

In November 1981, the average wholesale price for butane, excluding taxes, was 61.0 cents per gallon, 5.7 percent below the previous month's price and 6.9 percent below the November 1980 average.

Price

#### Petroleum Price Summary

		Actual Domestic Average	Refiner Acquisition Cost of Crude Oil-			No. 6 Resid	tual Oil Price
		Wellhead Price	Domestic	Imported	Composite	Wholesale	Retail
				Dollars per ba	arrel		
1976	AVERAGE	8.19	8.84	13.48	10.89	10.72	11.49
1977	AVERAGE	8.57	9.55	14.53	11.96	11.96	13.23
1978	AVERAGE	. 9.00	10.61	14.57	12.46	11.51	12.75
1979	AVERAGE	12.64	14.27	21.67	17.72	17.66	18.67
1980	January	17.86	19 78	30.75	24.81	24.41	26.21
	February	18.81	21 22	32.40	26.11	23.34	26.48
•	March	19.34	22.07	33 42	26.88	21.11	25.33
	April	20 29	22 89	33.54	27.09	19.09	22.87
	May	21.01	23.63	34.33	27.85	20.22	23.75
	June	21.53	24.48	34.48	28.80	20.44	24.09
	July	22.26	25.05	34.51	28.73	21.28	23.86
	August	22.63	24.98	34.44	28.70	22.25	25.00
	September	22.59	25.37	34.46	28.96	22.47	25.31
	October	23.23	26.21	34.63	29.56	24.06	26.68
	November	23.92	26.51	35.09	29.79	28.12	30.10
	December	25.80	28.55	35.63	31.39	29.76	32.33
	AVERAGE	21.19	24.23	33.89	28.07	23.14	26.09
1981	January	28.85	32.71	38.85	. 34.86	31.14	33.65
	February	34.14	36.27	39.00	37.28	31.81	36.04
	March	34.70	36.97	38.31	37.48	31.78	36.11
	April	34.05	35.58	38.41	36.58	30.56	34.70
	May	32.71	35.21	37.84	36.11	30.41	34.11
	June	31.71	34.20	37.03	35.03	25.95	31.03
	July	31.13	33.76	36.58	34.70	26.52	30.57
	August	31.13	33.79	35.82	34.46	27.01	30.52
	September	31.13	33.47	35.44	34.11	26.20	30.33
	October	31.00	33.48	35.43	34.07	R26.78	R30.32
	November	30.98	33.49	36.26	34.34	<del>†</del> 28.03	†30.1 <del>6</del>
	December	+30.72	+33.47	+35.80	<b>†34.26</b>	NA	NA
	AVERAGE	31.77	34.88	37.14	35.64	NA	NA
1982	January	NA	NA	NA	NA	NA	NA

Geographic coverage: Actual domestic average wellhead prices and No. 6 residual oil prices—the 50 United States and District of Columbia. Refiner acquisition cost of crude oil-the 50 United States, District of Columbia, Puerto Rico, Guam, and the Virgin Islands. See Explanatory Note 12.

<sup>2</sup>See Explanatory Note 13.

<sup>a</sup>Wholesale refers to the price of residual fuel sold to other refiners and resellers, including bulk plants, branded and unbranded jobbers, and other residual dealers. Retail refers to the price at which residual fuel oil is sold to ultimate consumers such as utility, industrial, commercial, and residential accounts.

\*Excludes tax.

\*Excludes tax.
†Preliminary data. R = Revised data. NA = Not available. *Sources:* •Actual domestic average—January 1976: FEA Form 90, "Crude Petroleum Production Monthly Report"; February 1976 forward: ERA Form 182, "Domestic Crude Oil First Purchase Report."
\*Refiner acquisition cost—January 1976: Form FEO 96, "Monthly Cost Allocation Report"; February 1976 through June 1978: FEA Form P110-M-1, "Refiners' Monthly Cost Allocation Report"; July 1978 through December 1980: ERA Form 49, "Domestic Crude Oil Entitlements Program Refiners Monthly Report"; January 1981 forward: Form EIA-14, "Refiners' Monthly Cost Report."
•No.6 residual oil price—FEA Form P302-M-1/EIA-460, "Petroleum Industry Monthly Report for Product Prices."

### **Petroleum Price Summary (continued)**

		No. 2 Die Aver	sel Price age	No. 2 Heating Oil Price Average		Gasoline Price Average All Typest	Propane Price Average <sup>3</sup>	Butane Price Average <sup>3</sup>
		Wholesale*	Retail	Wholesale	Retail	Retail	Wholesale <sup>1</sup>	Wholesale
					Cents per gallo	n		
197 <del>6</del>	AVERAGE	31.9	34.7	32.6	40.6	NA	20.6	21.9
1977	AVERAGE	36.1	39.3	36.9	46.0	NA	25.0	25.4
1978	AVERAGE	37.1	40.2	38.7	49.4	65.2	24.0	23.0
1979	AVERAGE	58.2	62.4	53.0	65.6	88.2	29.5	45.8
1980	January	76.0	82.2	75.2	90.8	111.0	41.8	73.3
	February	78.3	85.0	79.0	95.3	118.6	42.7	70.1
	March	79.8	87.8	80.4	97.1	123.0	41.0	66.8
	April	80.4	88.0	81.0	97.4	124.2	41.2	63.1
	Мау	80.5	87.8	81.4	<del>9</del> 7.2	124.4	41.7	63.7
	June	81.7	88.6	82.5	97.9	124.6	41.2	58.2
	July	81.9	87.6	83.0	97.9	124.7	40.8	53.8
	August	81.6	86.9	82.9	97.9	124.3	40.6	53.1
	September	80.3	86.6	83.0	98.1	123.1	41.4	51.2
	October	81.5	85.9	83.7	98.7	122.3	43.2	54.3
	November	83.6	88.9	86.1	101.1	122.2	45.1	65.5
	December	87.5	92.4	91.3	106.5	123.1	46.5	72.7
	AVERAGE	81.2	87.3	82.2	97.8	122.1	42.4	62.9
1 <b>981</b>	January	92.5	100.9	98.6	114.4	126.9	46.5	66.1
	February	99.5	106.1	106.0	123.4	135.3	48.2	63.0
	March	101.7	108.8	106.3	125.5	138.8	48.3	62.1
	April	101.3	107.7	105.2	123.9	138.1	49.3	60.1
	May	100.8	106.8	104.0	122.7	137.0	48.6	56.8
	June	99.5	106.6	103.0	120.9	136.2	46.0	52.7
	July	98.8	103.8	102.7	121.0	135.3	46.0	56.5
	August	97.8	105. <del>9</del>	102.2	119.4	134.8	47.2	60.6
	September	97.6	104.8	101.6	119.7	135.8	47.7	64.6
	October	R97.4	105.3	101.1	118.8	135.3	R47.3	R64.7
	November	t98.4	+105.2	102.3	R120.8	135.1	†47.6	<del>†</del> 61.0
	December	NA	NA	<b>†102.6</b>	†122.0	134.8	NA	NA
	AVERAGE	NA	NA	102.6	120.5	135.3	NA	NA
1982	January	NA	NA	NA	NA	134.1	NA	NA

Geographic coverage: the 50 United States and District of Columbia.

Geographic coverage: the 50 United States and District of Columbia. <sup>1</sup>Wholesale refers to the price of diesel fuel sold to other refiners and resellers, including branded jobbers, unbranded jobbers, and <sup>2</sup>Beginning with September 1981, the Bureau of Labor Statistics changed the weights used in the calculation of average motor gasoline prices. In the average for all types category, gasohol is now included and unleaded premium is weighted more heavily. See Explanatory Note 16 for additional information on motor gasoline prices. <sup>3</sup>Wholesale refers to the price at which refiners, resellers, retailers and gas plants sell to one another, including sales to agricultural and industrial accounts. Excludes butane/propane mixtures.

\*Excludes tax.

'Excludes tax.
'Preliminary data. R = Revised data. NA = Not available.
Sources: •No. 2 diesel price—FEA Form P302-M-1/EIA-460, ''Petroleum Industry Monthly Report for Product Prices.''
•No. 2 heating oil price—1976 through October 1980: FEA Form P112-M-1/EIA-9, ''No. 2 Heating Oil Supply/Price Monitoring Report''; November 1980 forward: EIA-9A ''No. 2 Distillate Price Monitoring Report.''
•Gasoline price—Bureau of Labor Statistics.
•Propane and butane prices—FEA Form P302-M-1/EIA-460, ''Petroleum Industry Monthly Report for Product Prices.''

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FOB Cost of Crude Oil Imports from Selected Countries<sup>1</sup>

		Algeria	Indonesia	iran	Libya	Mexico	Nigeria	Saudi Arabia	United Arab Emirates	United Kingdom	Venezuela
						Dollars	per barrel				
1976	AVERAGE	13.05	12.76	11.61	12.55	NA	13.08	11.69	11.94	NA	11.32
1977	AVERAGE	14.36	13.57	12.67	13.90	13.42	14.44	12.37	12.83	NA	12.68
1978	AVERAGE	14.10	13.64	12.65	13.75	13.24	14.04	12.70	13.24	13.82	12.45
1979	AVERAGE	20.65	19.35	23.71	22.43	20.29	21.80	17.63	19.58	21.20	17.37
1980	January	33.67	29.67	29.28	35.72	• 29.43	31.57	26.25	29.85	30.77	25.34
	February	34.03	31.11	NA	35.71	31.77	33.39	26.62	30.95	32.66	24.82
	March	36.74	31.54	(2)	35.88	30.56	35.59	26.85	29.34	34.34	24.03
	April	36.93	32.22	(2)	35.30	30.24	36.11	27.78	30.38	34.15	23.85
	May	37.10	32.40	(2)	36.13	30.68	36.50	28.50	32.67	34.10	24.82
	June	37.61	32.90	(2)	36.83	30.76	36.99	28.95	33.34	36.28	25.56
	July	38.40	33.19	(2)	37.26	31.84	37.17	28.47	NA	36.26	24.34
	August	37.53	33.01	(2)	37.01	31.87	36.69	2 <del>9</del> .74	NA	34.83	25.30
	September	37.21	33.13	(2)	36.94	31.21	36.38	30.34	NA	35.18	24.21
	October	37.60	32.31	(2)	37.15	31.27	36.82	30.19	NA	35.66	22.71
	November	37.05	32.94	(2)	36.90	31.59	36.87	31.43	NA	35.47	26.83
	December	37.37	33.21	(°)	37.58	32.33	36.79	32.01	NA	35.00	26.66
	AVERAGE	36.57	32.37	(°)	36.41	31.11	35.82	28.53	NA	34.58	24.78
1981	January	39.37	36.54	(2)	40.52	35.88	40.11	32.39	NA	38.34	32 87
	February	40.13	36.13	(2)	40.73	36.57	40.03	32.60	NA	39.41	30.36
	March	40.30	36.40	(2)	40.25	35.60	39.85	32.73	NA	39.50	31.24
	April	39.70	36.38	(2)	40.04	33.81	39.92	32.41	NA	38.85	29.93
	May	39.57	36.09	(2)	38.91	34.45	39.11	32.13	NA	37 16	28.39
	June	39.20	36.95	(2)	39.85	30.30	38.44	32.42	NA	35.84	30.50
	July	38.06	35.47	(2)	38.70	32.72	39.25	32.07	NA	34 89	29.25
	August	39.34	35.61	(2)	39.45	31.23	39.55	31.95	NA	34.38	27.08
	September	39.60	35.82	(²)	36.74	30.37	36.04	32.09	NA	34.44	28.14
	October	36.90	35.08	(*)	36.36	30.83	35.45	33.56	NA	34.87	27.27
	November	36.55	35.53	(2)	37.15	31.80	36.41	33,49	NA	35.97	28.39
	December†	37.15	35.73	(²)	36.81	31.08	36.41	33.72	NA	36.46	28.03
	AVERAGE	39.09	35.93	(2)	39.44	33.13	38.53	32.48	NA	36.08	28.86

<sup>1</sup>The Free on Board (FOB) cost excludes all costs related to insurance and transportation. See Explanatory Note 14. <sup>a</sup>No crude oil has been imported from Iran since February 1980. †Preliminary data. NA = Not available. Note: Prices shown for 1980 are for the month of loading; whereas prior to 1980 the prices are for the month of reporting. *Sources:* 1976 through January 1979: Economic Regulatory Administration (ERA), FEA Form 701-M-0, "Transfer Pricing Report." • February 1979 forward: ERA Form 51, "Transfer Pricing Report."

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### Landed Cost of Crude Oil Imports from Selected Countries<sup>1</sup>

		Algeria	Canada	Indonesia	iran	Libya	Mexico	Nigeria	Saudi Arabia	United Arab Emirates	United Kingdom	Venezuela
							Dollars pe	er barrel				
1975	AVERAGE	12.72	12.72	13.79	12.21	12.35	NA -	12.62	12.30	12.87	NA	11.65
197 <del>6</del>	AVERAGE	13.81	13.57	13.82	12.82	13.58	NA	13.80	13.04	13.30	NA	11.80
1977	AVERAGE	15.20	14.21	14.63	13.80	14.87	13.75	15.25	13.61	14.04	NA	13.13
1978	AVERAGE	14.91	14.50	14.64	13.88	14.72	13.54	14.86	13.92	14.39	NA	12.83
19 <b>79</b>	AVERAGE	21.90	20.43	20.69	25.02	23.68	20.86	22.96	19.15	21.90	22.16	18.18
1980	January	35.32	27.73	31.03	30.37	37.10	30.18	33.03	27.85	32.35	32.14	26.25
	February	35.28	28.60	32.95	NA	36.98	32.38	35.25	28.15	32.71	34.07	25.91
	March	38.54	30.75	33.04	(²)	37.18	31.17	36.93	28.26	30.96	35.73	24.97
	April	38.52	30.31	33.81	(2)	36.57	30.77	37.41	29.14	32.29	35.34	25.10
	May	38.54	31.16	33.73	(²)	37.36	31.22	37.53	30.30	34.06	35.82	25.93
	June	38.71	31.26	34.51	(2)	38.09	31.43	38.15	30.16	34.96	37.41	26.42
	July	39.60	31.31	34.81	(2)	38.39	32.60	38.23	30.04	NA	37.25	25.47
	August	38.60	31.44	34.81	(2)	38.38	32.62	37.77	31.24	NA	36.20	26.37
	September	38.28	30.97	34.64	(2)	38.30	31.93	37.60	31.86	NA	36.35	25.47
	October	38.77	29.22	33.65	(2)	38.53	31.96	37.75	31.73	NA	36.82	23.92
	November	38.41	28.81	34.55	(2)	38.22	32.42	37.97	32.86	NA	36.62	27.75
	December	38.63	32.72	34.64	(²)	39.04	33.76	38.11	33.40	NA	36.31	27.66
	AVERAGE	37.90	30.47	33.92	(²)	37.72	31.80	37.05	30.02	NA	35.88	25.8 <del>6</del>
1981	January	41.25	34.26	38.08	(2)	41.81	36.81	41.55	34.06	NA	39.90	33.80
	February	41.90	33.73	37.86	(²)	42.19	37.23	41.46	34.38	NA	40.69	31.20
	March	41.62	33.88	38.11	(2)	41.60	36.42	40.98	34.42	NA	40.72	32.09
	April	40.96	33.74	37.95	(2)	41.58	34.42	41.04	34.16	NA	40.02	30.97
	Мау	40.81	32.70	37.72	(ª)	40.46	34.83	40.10	33.73	NA	38.31	29.39
	June	40.31	32.67	38.73	(2)	41.44	31.03	39.60	34.29	NA	37.04	31.46
	July	39.59	31,19	37.20	(2)	40.27	33.18	40.05	33.72	NA	35.87	29.22
	August	40.65	30.44	37.07	(2)	40.30	31.77	40.85	33.23	NA	35.40	28.11
	September	41.62	30.83	37.52	(2)	37.73	30.84	37.20	33.66	NA	35.26	29.12
	October	37.52	31.17	36.39	(2)	38.15	31.34	36.64	34.88	NA	36.00	28.27
	November	37.43	31.04	36.84	(2)	38.50	32.42	37.59	34.91	NA	36.87	29.27
	December†	38.10	31.22	37.02	(2)	38.90	31.64	37.49	35.39	NA	37.45	29.21
	AVERAGE	40.49	32.16	37.57	(²)	40.92	33.78	39.70	34.19	NA	37.24	29.87

'See Explanatory Note 15.
 'No crude has been imported from Iran since February 1980.
 †Preliminary data. NA=Not available.
 Note: Prices shown for 1980 are for the month of loading; whereas prior to 1980 prices are for the month of reporting *Sources:* • 1975 through January 1979: Economic Regulatory Administration (ERA), FEA Form 701-M-0, "Transfer Pricing Report."
 • February 1979 forward: ERA Form 51, "Transfer Pricing Report."

# U.S. City Average Retail Prices for Motor Gasoline<sup>1</sup>

		Leaded Regular	Unleaded Regular	Leaded Premium	Average for All Types
			Cents per gallo	n, including tax	
1974	AVERAGE	53.2	NA	56.9	NA
1975	AVERAGE	56.7	NA	60.9	NA
1976	AVERAGE	59.0	61.4	63.6	NA
1977	AVERAGE	62.2	65.6	67.4	NA
1978	AVERAGE	62.6	67.0	69.4	65.2
1979	AVERAGE	85.7	90.3	92.2	88.2
1980	January	108.6	113.1	114.9	111.0
	February	115.9	120.7	123.3	118.6
	March	120.2	125.2	127.7	123.0
	April	121.2	126.4	129.2	124.2
	May	121.5	126.6	129.5	124.4
	June	121.7	126.9	130.0	124.6
	July	121.6	127.1	130.7	124.7
	August	121.0	126.7	131.0	124.3
	October	119.7	125.7	130.4	123.1
	Nevember	118.8	125.0	130.1	122.3
	December	118.8	125.0	129.9	122.2
	December	119.7	125.8	131.0	123.1
	AVERAGE	119.1	124.5	128.1	122.1
1981	January	123.8	129.8	133.8	126.9
	February	132.1	138.2	141.0	135.3
	March	135.2	141.7	144.9	138.8
	April	134.4	141.2	145.1	138.1
	May	133.3	140.0	144.7	137.0
	June	132.4	139.1	144.6	136.2
	July	131.5	138.2	144.6	135.3
	August	131.0	137.6	144.4	134.8
	September <sup>2</sup>	130.5	137.6	145.6	135.8
	Uctober	129.9	137.1	145.7	135.3
	November	129.7	136.9	146.2	135.1
	nacemper	129.3	136.5	146.0	134.8
	AVERAGE	131.1	137.8	143.9	135.3
1982	January	128.5	135.8	145.6	134.1

Geographic coverage: 1974 through 1977—56 urban areas; 1978 forward—85 urban areas. <sup>3</sup>See Explanatory Note 16. <sup>\*</sup>Beginning with September 1981, the Bureau of Labor Statistics changed the weights used in the calculation of average motor gasoline prices. In the average for all types category, gasohol is now included and unleaded premium is weighted more heavily. NA=Not available. Source: •Bureau of Labor Statistics.

### **Aviation Fuel**

		Aviation Ga	Aviation Gasoline		Kerosene-Type	
		Wholesale <sup>2</sup>	Retail <sup>2</sup>	<b>Retail</b> <sup>2</sup>	Wholesale <sup>2</sup>	Retall <sup>2</sup>
			Cent	s per gallon, excludi	ng tax	
1976	AVERAGE	42.4	43.1	× 31.5	32.5	31.2
1977	AVERAGE	46.7	47.7	35.0	36.7	35.8
1978	AVERAGE	51.0	52.1	37.5	38.9	38.9
1979	AVERAGE	68.5	69.5	52.3	66.5	55.1
1980	January	90.6	90.0	76.0	83.4	77.0
	February	98.5	97.8	80.1	86.2	83.0
	March	102.9	107.0	84.1	86.6	86.3
	April	104.8	109.6	83.2	88.4	87.4
	May	106.2	109.7	89.1	89.0	87.6
	June	107.7	111.4	90.0	86.1	88.6
	July .	109.3	113.4	91.4	88.3	89.7
	August	110.2	112.9	90.6	86.2	90.7
	September	110.8	113.3	92. <del>9</del>	86.4	88.8
	October	110.8	113.0	91.1	87.6	88.7
	November	112.4	113.0	92.5	89.9	91.0
	December	115.1	117.2	94.1	91.4	91.6
	AVERAGE	107.2	109.4	88.2	87.5	87.4
1981	January	118.9	121.6	99.2	97.1	95.7
	February	121.3	128.1	102.7	103.6	101.6
	March	127.2	131.1	106.9	104.8	106.3
	April	117.5	131.3	109.0	103.8	106.4
	May	120.7	133.5	109.1	104.4	106.2
	June	116.5	132.1	107.6	102.3	104.8
	July	120.1	133.4	106.3	100.5	103.8
	August	120.0	132.5	105.7	101.4	103.3
	September	121.0	133.5	105.6	103.0	103.3
	October	117.2	134.5	104.8	99.9	101.1
	Novembert	114.4	133.2	104.6	101.9	102.6
	AVERAGE	118. <del>9</del>	131.5	105.9	102.0	103.2

Geographic coverage: the 50 United States and District of Columbia. Nearly all naphtha-type fuels are sold directly to the Defense Fuel Supply Center. Consequently, wholesale prices are not applicable. \*Wholesale refers to the price of aviation fuel sold to other refiners and resellers, including bulk plants, branded and unbranded jobbers, and aviation fuel distributors. Retail refers to the price of aviation fuel sold to ultimate consumers, including commercial airline and military accounts.

Preliminary data. Source: • FEA Form P302-M-1/EIA-460, "Petroleum Industry Monthly Report for Product Prices."

## National Average Heating Oil Prices<sup>1</sup>

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		Refiners' Average Selling Price to Resellers and Retailers	Average Purchase Price Paid by Distributors for Heating Oil <sup>2</sup>	Average Distributor Margin on Residential Heating Oil <sup>2</sup>	Average Selling Price to Residential Customers <sup>2</sup>
			Cents per gallo	n	
1976	AVERAGE	31.4	32.6	NA	40.6
1977	AVERAGE	35.7	36.9	NA	46.0
1978	AVERAGE	37.2	38.7	11.0	49.4
1979	AVERAGE	55.9	53.0	12.8	65.6
1980	January February	75.0 77.8	75.2 79.0	16.2 16.7	90.8 95.3
	March April May	78.8 78.8 79 3	80.4 81.0 81.4	17.1 17.0	97.1 97.4
	June July	80.2 79.2	82.5 83.0	15.8 15.2	97.2 97.9
	August September	79.3 79.3	82.9 83.0	15.2	97.9 97.9 08 1
	October November	80.7 84.0	83.7 86.1	15.3 13.8	98.7 101 1
	December AVERAGE	88.6 80.0	91.3	14.1	106.5
			02.2 ,	15.6	97.8
1981	January February March	94.9 102.5 102.8	98.6 106.0 106.3	15.1 16.1	114,4 123,4
	April May	100.9 100.7	105.2 104.0	17.6 17.7 17.6	125.5 123.9 122.7
	June July	99.3 98.5	103.0 102.7	16.9 17.1	120.9
	August September Optober	98.2 97.8	102.2 101.6	16.2 17.2	119.4 119.7
	October November December†	98.0 100.0 100.7	101.1 102.3 102.6	16.6 17.6 18.3	118.8 R120.8 122.0
	AVERAGE	99.3	102.6	16.8	120.5

Geographic coverage: the 50 United States and District of Columbia. <sup>1</sup>See Explanatory Note 17. <sup>3</sup>Average selling prices, purchase prices, and dealer margins represent sales for residential heating oil only. <sup>†</sup>Preliminary data. R=Revised data. NA=Not available. *Source:* • 1976 through October 1980: FEA Form P112-M-1/EIA-9, "No. 2 Heating Oil Supply/Price Monitoring Report" and EIA-9A, "No. 2 Distillate Price Monitoring Report."

## **Residential Heating Oil Prices by Region**

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						Cents	per gallon			,	
		1	2	3	4	5	6	7	8	9	10
1979	January	55.1	54.5	53.3	51.6	51.5	(2)	49.6	50.4	47.6	50.8
	February	57.7	57.3	55.5	53.2	53.7	(2)	51.3	51.4	49.4	52.9
	March	60.6	59.8	57.5	54.3	56.3	(2)	54.7	55.3	50.8	55.3
	April	62.8	61.9	60.0	57.3	58.8	(2)	58.2	58.4	53.8	57.8
	May	65.9	64.8	63.4	61.2	62.8	(2)	62.0	62.7	56.2	60.8
	June	70.5	69.7	68.4	66.2	68.5	(2)	68.9	67.8	62.2	66.4
	July	75.9	73.9	72.9	70.9	73.2	(2)	72.0	72.5	68.4	72.3
	August	80.1	78.6	77.7	74.8	78.5	(2)	76.4	77.1	71.7	77.2
	September	83.3	81.4	80.0	79.4	81.5	(2)	79.5	80.1	76.8	81.4
	October	84.1	82.5	81.7	79.1	82.6	(1)	80.2	81.3	81.2	82.6
	November	85.1	83.7	82.4	80.5	83.9	(2)	82.2	84.0	80.4	82.3
	December	87.2	85.7	85.1	82.9	86.1	(2)	85.3	86.3	82.6	84.6
1980	January	91.8	91.0	90.2	88.6	90.4	(2)	90.0	90.2	89.6	91.0
	February	96.7	<del>9</del> 5.3	94.7	93.0	93.5	(2)	93.6	93.5	95.8	95.7
	March	98.7	97.2	96.5	94.8	94.3	(²)	95.1	95.9	93.9	97.6
	April	99.2	97.3	96.6	94.1	94.5	(2)	95.3	99.5	94.7	99.0
	May	98.7	97.3	96.4	94.2	95.8	(2)	95.2	97.7	95.5	98.6
	June	99.8	97.9	96.8	95.1	95.8	(2)	95.3	98.4	96.0	99.8
	July	100.3	98.1	96.6	94.2	96.2	(2)	93.1	97.0	96.7	100.2
	August	100.2	97.9	96.8	94.8	95.7	(2)	95.4	92.1	99.7	100.4
	September	100.5	98.2	97.0	94.7	95.7	(2)	93.7	93.0	97.2	100.6
	October	101.1	98.8	97.4	95.6	95.9	(2)	94.7	94.1	98.6	100.4
	November	102.5	103.0	99.9	101.5	98.8	(²)	95.2	98.5	101.0	103.1
	December	108.2	108.5	105.3	106.6	103.4	(2)	99.6	101.8	(2)	105.6
1981	January	116.2	117.1	113.2	114.0	110.4	(2)	106.3	108,6	(*)	107.5
	February	125.8	126.6	· 123.0	124,4	117.8	(2)	114.2	113.1	(2)	113.7
	March	127.6	128.4	125.0	125.3	119.3	(°)	115.4	119.3	111.5	116.5
	April	126.8	126.6	122.7	124.8	118.3	(2)	114.7	118.4	(*)	117.5
	May	125.5	125.6	122.1	118.8	117.3	(2)	114.5	115.1	114.1	115.6
	June	124.1	123. <del>6</del>	121.1	115.9	116.5	(2)	112.5	116.0	(2)	117.1
	' July	123.3	122.9	120.6	120.2	116.0	(2)	115.9	116.2	(²)	118.3
	August	122.7	122.2	117.9	117.4	115.1	(2)	112.1	116.9	(2)	117.7
	September	122.7	121.4	118.5	120.5	116.2	(²)	111.6	116.8	(2)	117.8
	October	122.5	122.0	115.3	117.6	116.3	(2)	112.0	115.8	(*)	118.2
	November	R123.3	R123.2	R119.5	R118.2	R116.7	(2)	R114.1	R115.8	(*)	R118.8
	December†	124.9	124.5	120.8	118.7	117.5	(2)	(2)	117.3	(*)	119.9

Standard Federal Region<sup>1</sup>

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Standard Federal Regions are defined in Explanatory Note 18.
 Not available for publication. Data for Region 6, and occasionally Region 9, are based on a sample of less than four reporting firms.
 Preliminary data. R=Revised data.
 Source: • 1979 through October 1980: FEA Form P112-M-1/EIA-9, "No. 2 Heating Oil Supply/Price Monitoring Report"; November 1980 forward: EIA-9A, "No. 2 Distillate Price Monitoring Report".

### Average No. 6 Residual Fuel Oil Prices

		0.0 te percen	o 0.3 t sulfur	0.31 percer	31 to 1.0 Greate cent sulfur perce		r than 1.0 nt sulfur	Av	Average	
		Whole- sale	Retail	Whole- sale	Retail	Whole- sale	Retail	Whole sale	Retali	
				D	ollars per barr	rel, excluding ta	xes			
1976	AVERAGE	12.20	12.54	10.83	11.79	9.98	10.43	10.72	11.49	
1977	AVERAGE	13.45	14.36	12.09	13.45	11.31	12.27	11.96	13.23	
1978	AVERAGE	12.77	14.47	11.95	12.78	10.73	11.70	11.51	12.75	
1979	AVERAGE	19.87	21.21	18.33	19.33	15.89	16.44	17.66	18.67	
1980	January	29.11	30.35	26.15	28.12	21.56	21.98	24.41	26.21	
	February	27.07	30.32	25.82	28.15	20.21	22.22	23.34	26.48	
	March	26.88	30.20	23.73	27.2 <del>9</del>	17.81	20.34	21.11	25.33	
	April	25.16	28.69	20.38	24.78	16.41	18.36	19.09	22.87	
	May	25.48	31.73	22.72	25.77	17.72	18.04	20.22	23.75	
	June	23.14	31.37	22.35	25.44	17.72	19.27	20.44	24.09	
	July	24.89	28.51	23.44	25.55	19.20	20.58	21.28	23.86	
	August	23.20	30.93	24.98	26.11	20.42	21.45	22.25	25.00	
	September	24.27	33.12	23.46	26.31	20.62	21.71	22.47	25.31	
	October	25.72	31.88	25.86	28.00	22.30	23.2 <del>9</del>	24.06	26.68	
	November	29.52	33.70	29.40	30.89	27.08	27.50	28.12	30,10	
	December	31.69	35.76	31.29	32.61	28.39	30.03	29.76	32.33	
	AVERAGE	26.41	31.13	24.91	27.59	20.77	22.11	23.14	26.09	
1981	January	34.27	37.23	32.12	33.96	29.12	31.35	31.14	33.65	
	February	38.04	41.60	34.96	37.32	28.96	32.02	31.81	36.04	
	March	37.78	41.19	34.47	38.01	29.55	31.95	31.78	36.11	
	April	35.66	41.71	33.10	35.94	28.35	30.56	30.56	34.70	
	May	33.61	41.09	32.53	35.94	28.77	30.64	- 30.41	34.11	
	June	28.01	38.30	26.71	32.38 .	25.33	27.16	25.95	31.03	
	July	29.56	39.02	27.38	31.93	25.62	25.96	26.52	30.57	
	August	30.48	36.57	27.77	32.04	26.03	26.20	27.01	30.52	
	September	29.91	39.17	27.46	32.08	24.80	26.26	26.20	30.33	
	October	30.26	39.90	28.64	31.88	R24.96	R26.18	R26.78	R30.32	
	November†	31.71	39.48	29.65	31.02	26.12	26.45	28.03	30.16	
	AVERAGE	33.18	39.48	30.82	33.77	27.22	28.75	29.03	32.62	

Geographic coverage: the 50 United States and District of Columbia. †Preliminary data. R = Revised data. Note: Wholesale refers to the price of residual fuel sold to other refiners and resellers, including bulk plants, branded and unbranded jobbers, and other residual dealers. Retail refers to the price at which residual fuel oil is sold to ultimate consumers such as utility, industrial, commercial, and residential accounts. *Source:* • FEA Form P302-M-1/EIA-460, "Petroleum Industry Monthly Report for Product Prices."

### **Natural Gas**

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			Delivered	
		Average	to	Average
		Wellhead	Electric	Residental
		Value	Plant	Heating
				-
4030			Cents per thousand cubic feet	
1973	AVERAGE	21.6	35.0	108.2
1974	AVERAGE	30.4	49.0	125.3
		••••		
1975	AVERAGE	44.5	76.9	154.2
1076	AVERAGE	58.0	105.0	104 6
1010	ATCHAGE	50.0	103.9	104.0
1977	AVERAGE	79.0	133.4	226.4
1079	AVEDAGE	00 E	147.0	000.0
1910	AVENAGE	90.5	147.9	202.0
1979	AVERAGE	117.8	180.3	323.1
1980	January	R138.2	201.1	354.9
	February	R143.5	210.5	357.9
	March	R148.8	214.7	368.1
	April	R155.3 •	210.4	367.8
	May	R157.3	218.1	393.9
	June	R157.8	216.4	394.8
	July	R165.5	237.3	410.6
	August	R165.5	245.6	413.1
	September	R170.5	245.6	417.0
	October	B172.3	253.4	420.6
	November	B177.0	238.4	396.1
	December	B175.0	232.7	403.3
		R 100.0	202.7	400.0
	AVEHAGE	H160.3	212.8	391.5
1981	January	R181.0	258.8	406.9
	February	R189.5	268.9	409.3
	March	B192.7	273.0	417.4
	April	B198.0	282.5	4217
	May	B201 7	293.2	457.1
	lune	B206 1	206.7	457.6
	hulv	R210 4	200.7	407.0
	August	D011 0	230.2	400.4
	September	D211.0	288.8	400.0
	October	D210.1	297.4	480.3
	Mayamhar	n219.0	299.3	487.4
	November	223.2	309.3	4/3.8
	December	220./	NA	471.1
	AVERAGE	206.3	NA	451.3

Geographic coverage: the 50 United States and District of Columbia. Includes all electric utility generating plants with a combined capacity for 25 megawatts or greater. Small quantities of coke oven gas, refinery gas, and blast furnace gas are included. R=Revised data. NA=Not available. *Sources:* • Annual data for wellhead values are from the appropriate agencies of the individual producing States and the U.S. Geological Survey: monthly data are estimated primarily on the basis of values reported by State agencies in New Mexico, Oklahoma, and Texas. • Electric plant data—FPC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."

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### Electricity

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		Cos to S	it of Fossil I iteam-Electi	Fuels Deliv ic Utility P	ered lants	Sele	Average Reta	li Electricity rivately-Owr	Prices ned Utilitie	8		
		Coal	Residual Oll <sup>1</sup>	Natural Gas²	Ail Fossil Fuels'	Residential	Commercial	Industrial	Other	Total <sup>a</sup>		
			Cents per	million Btu		Cents per kilowatt-hour						
1973	AVERAGE	40.5	78.8	33.8	47.5	2.54	2.41	1.25	2.10	1.96		
1974	AVERAGE	71.0	191.0	48.1	90.9	3.10	3.04	1.69	2.75	2.49		
1975	AVERAGE	81.4	201.4	75.4	103.0	3.51	3.45	2.07	3.08	2.92		
1976	AVERAGE	84.8	195.9	103.4	110.4	3.73	3.69	2.21	3.27	3.09		
1977	AVERAGE	94.7	220.4	130.0	127.7	4.05	4.09	2.50	3.51	3.42		
1978	AVERAGE	111.6	212.3	143.8	139.3	4.31	4.36	2.79	3.62	3.69		
1979	AVERAGE	122.4	299.7	175.4	162.1	4.64	4.68	3.05	3.96	3.99		
1980	January	128.7	423.5	194.8	187.3	4.69	4.90	3.32	4.19	4.21		
	February	129.9	429.7	203.9	189.8	4./4	4.97	3.32	4.63	4.25		
	March	130.1	411.0	207.9	184.8	4.92	5.17	3.45	4.69	4.40		
	April	133.8	394.9	204.0	178.2	5.14	5.28	3.49	4.71	4.48		
	May	133.3	403.1	212.0	180.3	5.41	5.44	3.59	4.97	4.63		
	June	135.1	392.7	209.3	178.8	5.60	5.61	3.79	4.58	4.85		
	July	137.4	394.5	228.5	199.0	5.66	5.65	3.93	4.93	5.03		
	September	139.5	404.9	237.2	196.2	5.72	5.64	3.94	4.81	5.07		
	Octobor	130.9	411.3	230.7	193.5	5.69	5.73	3.89	4.95	5.03		
	November	130.1	402.2	243.7	192.2	5.68	5.84	3.84	4.88	4.95		
	December	135.3	490.0	231.3	200.0	5.60	5.70	3.85	5.06	4.89		
		107.0	521.5	220.3	200.0	5.48	5.69	3.66	4.82	4.90		
	AVERAGE	135.2	427.9	212.9	189.3	5.36	5.48	3.69	4.76	4.73		
1981	January	142.3	540.2	254.1	221.3	5.44	5.73	3.94	4.92	4.96		
	February	146.3	572.9	260.5	218.4	5.52	5.83	3.95	5.01	4.99		
	March	148.4	583.9	263.8	215.2	5.76	6.01	4.04	5.33	5.12		
	April	146.9	568.4	273.5	242.1	5.99	6.14	4.07	5.20	5.20		
	May~ .	146.7	552.8	282.7	250.8	6.27	6.30	4.17	5.49	5.37		
	June	152.8	503.2	286.3	236.2	6.48	6.48	4.36	5.38	5.59		
	July	156.5	502.4	288.6	227.5	6.58	6.47	4.48	5.60	5.76		
	August	157.0	494.4	291.0	220.3	6.62	6.49	4.49	5.52	5.78		
	September	157.3	506.7	287.6	213.2	6.63	6.48	4.49	5.65	5.74		
	October	160.2	511.9	300.7	218.1	6.57	6.52	4.40	5.31	5.64		
	November	159.1	520.5	300.0	215.2	6.42	6.48	4.46	5.43	5.61		
	December	NA	NA	NA	NA	6.32	6.47	4.56	4.60	5.65		
	AVERAGE	NA	NA	NA	NA	6.20	6.29	4.29	5.28	5.46		

Geographic coverage: Fossil Fuels-the lower 48 States and District of Columbia. Electricity-the 50 United States and District of Columbia. See Explanatory Note 19.

See Explanatory Note 19.
 Includes small quantities of coke oven gas, refinery gas and blast furnace gas.
 Average price for total sales to ultimate consumers.
 NA = Not available.
 Sources: 

 Cost of fossil fuels—FPC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."
 Retail price—January 1973 thru February 1980: FPC Form 5, "Monthly Statement of Electric Operating Revenue and Income"; March 1980 forward: Federal Energy Regulatory Commission, Form 5, "Electric Utility Company Monthly Statement."

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### **Crude Oil Production**

World crude oil production during November 1981 was 53.4 million barrels per day, down 1.0 million barrels per day (1.8 percent) from the October 1981 level.

Organization of Petroleum Exporting Countries (OPEC) output during November 1981 averaged 20.6 million barrels per day, a decrease of 0.6 million barrels per day from the previous month. Average production by Arab members of OPEC was 14.0 million barrels per day, down 1.0 million barrels per day from the October 1981 level. Most of the decrease in OPEC production can be attributed to a decrease in production of 1.0 million barrels per day in Saudi Arabia. Important increases occurred in Libya, Nigeria, and Venezuela, up 0.2, 0.3, and 0.3 million barrels per day, respectively.

Production by most non-OPEC nations was virtually unchanged from October to November. However, production decreased by 0.4 million barrels per day in Mexico and increased almost 0.2 million barrels per day in Canada.

### **Petroleum Consumption**

Preliminary petroleum consumption data for November 1981 were available for France, Italy, and the United States. The consumption levels for all of these countries decreased from the consumption levels in November 1980.

Petroleum consumption by International Energy Agency (IEA) member nations was 31.7 million barrels per day during September 1981 (latest data available). This preliminary average was a decrease of 0.3 million barrels per day from the average rate of 32.0 million barrels per day in September 1980. The United States decreased petroleum consumption during the same period by 1.0 million barrels per day.

## Petroleum Stocks

Preliminary data on petroleum stocks for October 1981 were available for Canada, France, Italy, Japan, the United Kingdom, and the United States. Petroleum stocks in the United States were up from the level at the end of October 1980 by 4.1 percent. In contrast, stocks in Canada, France, and the United Kingdom were down 5.6, 12.2, and 11.8 percent, respectively, during the same interval.

Petroleum stocks of all Organization for Economic Cooperation and Development (OECD) members stood at 3,647 million barrels at the end of Septemer 1981 (latest data available), an decrease of 43 million barrels (1.2 percent) from stocks held at the end of September 1980. The United States held 1,481 million barrels of these stocks (40.6 percent).

### **Nuclear Electricity Production**

In December 1981, 18 non-Communist nations generated 70.0 billion gross kilowatt-hours (kWh) of nuclear-based electricity, an increase of 17.7 percent over November 1981 generation and 15.5 percent above the comparable level for December 1980. Total 1981 nuclear-based electricity generation for the 18 nations was 728.5 billion gross kWh, an increase of 17.5 percent over the comparable 1980 level. U.S. nuclear electricity production was 39.2 percent of nuclear generation during December 1981, and 39.6 percent of the 18-nation total during 1981.

During 1981, 4 domestic and 12 foreign reactors (8 French, and one unit each from Japan, Spain, Sweden, and Taiwan) began operating commercially. As of December 31, 1981, there were a total of 220 operational non-Communist power reactors with a combined capacity of 143.2 million gross kilowatts (GWe), an increase of 9.7 percent over the comparable December 1980 level. About 59.8 GWe (41.8 percent) of that combined capacity at year's end was associated with the 74 operational U.S. units.

**Crude Oil Production for Major Petroleum Producing Countries** 

		Algeria	Iraq	Kuwait <sup>ı</sup>	Libya	Qatar	Saudi Arabla'	United Arab Emirates	Arab Members of OPEC <sup>2</sup>	Indo- nesia	Iran
					Thou	sand barre	els per day				
1973	AVERAGE	1,097	2,018	3,020	2,175	570	7,596	1,533	18,009	1,339	5,861
1974	AVERAGE	1,009	1,971	2,546	1,521	518	8,480	1,679	17,724	1,375	6,022
1975	AVERAGE	983	2,262	2,084	1,480	438	7,075	1,664	15,986	1,307	5,350
1976	AVERAGE	1,075	2,415	2,145	1,933	497	8,577	1,936	18,578	1,504	5,883
1977	AVERAGE	1,152	2,348	1,969	2,063	445	9,245	1,999	19,221	1,686	5,663
1978	AVERAGE	1,161	2,563	2,131	1,983	487	8,301	1,831	18,457	1,635	5,242
1979	AVERAGE	1,154	3,477	2,500	2,092	508	9,532	1,831	21,094	1,591	3,168
1980	January February March April May June July August September October November December <b>AVERAGE</b>	1,150 1,150 1,150 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000	3,400 3,400 3,300 3,300 3,300 3,100 3,100 3,100 3,100 150 450 <b>2,514</b>	2,140 2,335 2,090 1,570 1,525 1,575 1,365 1,465 1,290 1,385 1,505 1,779 <b>1,656</b>	2,100 2,100 2,000 1,750 1,750 1,700 1,680 1,680 1,680 1,680 1,680 1,680	495 460 500 480 440 460 465 460 440 475 483 <b>472</b>	9,785 9,780 9,790 9,765 9,775 9,765 9,765 9,765 9,765 9,740 10,255 10,265 10,260 <b>9,900</b>	1,740 1,740 1,695 1,705 1,765 1,750 1,710 1,665 1,670 1,675 1,695 1,706 <b>1,709</b>	20,810 20,965 20,625 19,590 19,595 19,540 19,080 19,150 18,840 16,540 16,930 17,360 <b>19,050</b>	1,565 1,550 1,575 1,580 1,550 1,545 1,565 1,565 1,565 1,565 1,565 1,630 1,617 <b>1,577</b>	2,295 2,500 2,350 2,200 1,700 1,500 1,600 1,400 600 800 1,360 1,662
1981	January February March April May June July August September October November	950 950 900 900 800 725 600 550 700 750	600 700 1,000 1,000 1,000 1,100 1,100 1,100 1,100 1,100	1,765 1,565 1,560 995 990 1,080 1,200 830 855 985 890	1,600 1,650 1,600 1,400 1,200 750 700 700 700 900	505 480 505 515 435 340 380 295 365 360 340	10,265 10,265 10,110 10,195 10,140 10,180 10,170 10,330 9,155 9,685 8,640	1,620 1,605 1,610 1,570 1,550 1,435 1,415 1,480 1,465 1,480 1,365	17,305 17,215 17,335 16,775 16,415 16,035 15,740 15,335 14,190 15,010 13,985	1,630 1,620 1,635 1,630 1,600 1,600 1,600 1,600 1,600 1,600	1,600 1,700 1,600 1,600 1,600 1,600 1,400 1,100 1,100 1,000 800

U.S. geographic coverage: the 50 United States and District of Columbia. Monthly data may not average to annual data due to independent rounding. Data for 1981 are preliminary. Includes about one-half of the production in the former Kuwait-Saudi Arabia Neutral Zone. In November 1981 total production in this region amounted to approximately 279,000 barrels per day. \*Arab members of the Organization of Petroleum Exporting Countries (OPEC) include Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and the United Arab Emirates. Additional footnotes on following page.

## Crude Oil Production for Major Petroleum Producing Countries (continued)

		Nigeria	Vene- zuela	Total OPEC <sup>3</sup>	Canada	Mexico	United Kingdom	United n States	China	USSR	Other*	World
						Thousand	l barrels p	er day				
1973	AVERAGE	2,054	3,366	30,989	1,800	465	2	9,208	1,090	8,465	3,72 <del>9</del>	55,748
1974	AVERAGE	2,255	2,976	30,729	1,684	571	2	8,774	1,315	9,000	3,835	55,910
1975	AVERAGE	1,783	2,346	27,155	1,439	705	12	8,375	1,490	9,625	4,151	52,952
1976	AVERAGE	2,067	2,294	30,738	1,295	831	245	8,132	1,670	10,143	4,351	57,405
1977	AVERAGE	2,085	2,238	31,278	1,320	<b>98</b> 1	768	8,245	1,874	10,682	4,647	59,795
1978	AVERAGE	1,897	2,166	29,805	1,313	1,209	1,082	8,707	2,082	11,185	4,782	60,165
1979	AVERAGE	2,302	2,356	30,928	1,496	1,461	1,568	8,552	2,122	11,460	5,111	62,698
1980	January February March April May June July August September October November December <b>AVERAGE</b>	2,155 2,160 2,155 2,100 2,200 2,110 2,095 2,050 1,600 1,879 2,062 2,026 <b>2,055</b>	2,280 2,200 1,995 2,045 2,150 2,050 2,170 2,210 2,210 2,225 2,230 2,330 <b>2,167</b>	29,535 29,805 29,100 27,965 27,645 27,175 27,030 27,010 25,955 23,255 24,065 25,050 <b>26,890</b>	1,515 1,475 1,390 1,470 1,535 1,520 1,440 1,420 1,311 1,467 1,300 <b>1,424</b>	1,720 1,725 1,830 1,885 1,910 1,905 2,015 2,000 2,125 2,182 1,901 2,027 <b>1,937</b>	1,600 1,660 1,510 1,510 1,625 1,585 1,535 1,540 1,572 1,731 1,795 <b>1,622</b>	8,675 8,705 8,698 8,635 8,635 8,554 8,554 8,547 8,414 8,619 8,532 8,495 8,606 <b>8,597</b>	2,111 2,127 2,121 2,133 2,132 2,132 2,124 2,143 2,110 2,076 2,088 2,083 <b>2,114</b>	11,615 11,590 11,615 11,680 11,750 11,660 11,825 11,875 11,950 11,875 11,930 11,850 <b>11,770</b>	5,060 5,043 5,020 5,245 4,903 5,117 4,865 5,065 4,963 5,231 5,231 5,101 5,307 <b>5,098</b>	61,831 62,130 61,527 60,481 60,046 59,703 59,511 59,482 58,682 56,034 56,778 58,018 58,018 <b>59,452</b>
1981	January February March April May June July August September October November	1,900 1,960 1,875 1,625 1,295 1,350 770 710 1,065 1,250 1,590	2,220 2,195 2,240 2,200 2,200 1,990 1,760 1,960 2,080 1,970 2,230	25,025 25,075 25,190 24,215 23,380 22,945 21,620 21,050 20,385 21,200 20,575	1,260 1,300 1,200 1,190 1,195 1,130 1,270 1,235 1,265 1,120 1,280	2,220 2,120 2,365 2,540 2,545 2,300 2,095 2,260 2,480 2,490 2,090	1,765 1,820 1,885 1,750 1,770 1,765 1,750 1,760 1,830 1,845 1,840	8,533 8,598 8,601 8,543 8,496 8,616 8,422 R8,574 R8,574 R8,598 R8,547 8,595	2,024 2,025 2,011 2,025 2,025 2,025 2,010 2,020 1,990 2,020 2,020	11,900 11,900 11,900 11,800 11,800 11,800 11,800 11,800 11,800 11,800	5,248 5,257 5,244 5,376 5,424 5,284 5,393 R5,272 R5,363 5,200	57,975 58,095 58,410 57,325 56,635 55,865 54,360 53,770 53,620 54,385 53,400

<sup>3</sup>OPEC total includes production in Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, United Arab Emirates, Indonesia, Iran, Nigeria, Venezuela, Ecuador, and Gabon. <sup>4</sup>Other is a calculated total derived from the difference between world production and the nations represented above.

R = Revised data. Sources: 1973-1980 annual data: Energy Information Administration, 1980 International Energy Annual. 1973-1981 United States data: See sources at the end of the Petroleum Section. 1980 and 1981 monthly data (except U.S. and World total): Central Intelligence Agency, International Energy Statistical Review. 1981 monthly data for World: Sum of data for all countries using above sources.

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Petroleum Consumption for Major Non-Communist Industrialized Countries<sup>1</sup>

		Canada	France <sup>1</sup>	Italy	Japan	United Kingdom	United States	West Germany	Other IEA <sup>3</sup>	Total IEA4
					Thou	isand barrels p	ber day			
1973	AVERAGE	1,597	2,219	1,525	5,000	1,958	17,308	2,693	4,069	34,150
1974	AVERAGE	1,630	2,094	1,521	4,872	1,829	16,653	2,408	4,047	32,960
1975	AVERAGE	1,595	1,925	1,468	4,568	1,633	16,322	2,319	3,905	31,810
1976	AVERAGE	1,647	2,075	1,503	4,786	1,601	17,461	2,507	4,265	33,770
1977	AVERAGE	1,661	1,973	1,476	5,015	1,655	18,431	2,478	4,214	34,930
1978	AVERAGE	1,701	2,077	1,551	5,115	1,683	18,847	2,596	4,387	35,880
1979	AVERAGE	1,766	2,107	1,607	5,173	1,690	18,513	2,664	4,487	35, <b>90</b> 0
1980	January February March - April May June July August September October November December <b>AVERAGE</b>	1,820 1,930 1,720 1,600 1,660 1,660 1,650 1,710 1,770 1,770 1,720 1,940 <b>1,730</b>	2,465 2,444 1,982 2,110 1,853 1,848 1,450 1,220 1,740 2,050 2,040 2,410 <b>1,965</b>	1,778 1,864 1,657 1,541 1,448 1,611 1,537 1,310 1,650 1,670 1,530 1,740 <b>1,602</b>	5,255 5,722 5,433 4,626 4,376 4,224 4,250 3,910 4,120 4,250 4,550 5,350 <b>4,680</b>	1,769 1,621 1,585 1,472 1,348 1,286 1,217 1,120 1,270 1,430 1,440 1,480 1,420	18,851 18,817 17,377 16,784 16,238 16,187 16,008 15,753 16,598 16,995 16,702 18,410 <b>17,056</b>	2,690 2,410 2,680 2,230 2,220 2,420 2,150 2,540 2,540 2,230 2,110 2,190 <b>2,360</b>	4,337 4,736 4,398 4,197 3,870 4,012 3,988 3,807 4,112 3,855 3,948 4,390 <b>4,152</b>	36,500 37,100 32,900 31,100 31,100 31,100 29,700 32,000 32,200 32,000 35,500 <b>33,000</b>
1981	January February March April May June July August September October November	1,760 1,770 1,650 1,600 1,490 1,635 1,620 1,630 R1,595 1,585 NA	2,310 2,170 1,790 1,500 1,670 1,600 1,450 1,160 1,425 1,655 2,010	1,710 2,010 1,700 1,620 1,340 1,435 1,225 R1,570 1,495 1,500	4,980 5,350 5,020 4,140 3,600 3,915 4,082 4,070 NA NA	1,400 1,460 1,290 1,190 1,210 1,170 1,125 R1,285 1,390 NA	18,288 16,930 15,838 15,280 15,196 15,996 15,713 15,236 15,619 15,840 15,508	2,230 2,510 2,100 1,810 1,880 2,155 2,155 2,150 2,111 2,085 NA NA	4,632 4,270 3,762 4,060 4,084 4,149 4,127 3,931 4,051 NA NA	35,000 34,300 31,400 30,400 32,000 31,900 30,500 31,700 NA NA

U.S. geographic coverage: the 50 United States and District of Columbia. <sup>1</sup>These data represent inland consumption, i.e., sales of petroleum products excluding refinery fuel, refinery losses, and ocean bunkers except for the United States, where it represents domestic products supplied.

except for the United States, where it represents domestic products supplied. \*Not a member of the International Energy Agency (IEA). \*Other is a calculated total derived from the difference between total IEA consumption and the IEA nations represented above. \*The 21 signatory nations of the IEA are: Australia, Austria, Belgium, Canada, Denmark, West Germany, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States. Australia and Portugal joined the IEA as new members in 1979 and 1980, respectively. In an effort to maintain comparability within this time series, consumption data for these two countries have been incorporated into the IEA total for all years. NA = Not available. R = Revised data. Note: Data for 1980 and 1981 are preliminary. *Sources:* • Central Intelligence Agency, 'International Energy Statistical Review,' 22 February 1982 (except the United States). • 1973-1981 United States data: See sources at the end of the Petroleum Section. • 1973-1981 United States data: See sources at the on of the Petroleum Section.

· IEA totals for latest months are Energy Information Administration estimates.

### **Petroleum Consumption**



\*Excludes liquefied petroleum gases and condensates. \*\*Not a member of IEA.

**United States** 50 Million barrels per day 40 30 20 10 0 S 0 Ν D Α D . 1 F Μ А Μ J J West Germany 10 Million barrels per day 8 6 2 0 S 0 N D D Α Μ Α . J F Μ J J <sup>°</sup>United Kingdom 10 Million barrels per day 8 6 4 2 0 0 Ν D F Μ Α S D J М J J Α Italy\*\*\* 10 Million barrels per day 8 6 4 2 0 Μ Α Μ Α 0 Ν D Ď J F J J S \*\*\*Principal products only. 1980 -- 1981

Petroleum Stocks for Major Non-Communist Industrialized Countries at End of Period<sup>1</sup>

		Canada	France	Italy	Japan	United Kingdom	United States	West Germany	Other OECD <sup>2</sup>	Total OECD <sup>3</sup>
						Million barrel	s			
1973		149	203	NA	303	156	1,008	NA	NA	NA
1974		164	240	169	370	191	1,074	215	NA	NA
1975		167	239	143	375	164	1,133	190	NA	NA
1976		156	231	142	394	165	1,112	214	NA	NA
1977		170	241	162	399	147	1,312	236	485	3,152
1978		148	214	153	422	147	1,278	239	487	3,089
1979		156	231	163	457	163	1,341	273	574	3,358
1980	January February	156 153	228	164	445 419	164	1,348	282	NA	NA
	March	156	223	152	413	102	1,339	305	NA FOF	NA
	April	161	200	155	421	160	1,342	299	535	3,307
	May	168	223	164	442	167	1,300	207	NA	NA
	June	171	239	165	403	174	1,307	300	INA EEZ	
	July	178	247	176	AQA	172	1 4 25	208	557	3,500
	August	184	266	186	508	176	1 449	315	NA NA	NA NA
	September	183	264	192	508	173	1 447	306	617	2 600
	October	178	271	186	497	169	1 430	307	NA	5,050
	November	172	260	179	488	170	1.434	313	NA	NA
	December	171	254	173	481	169	1,395	323	587	3,553
1981	January	169	234	155	479	168	1,391	319	NA	NA
	February	162 .	235	184	457	170	1,398	312	NA	NA
	March	165	227	158	452	164	1,405	R319	R577	R3,468
	April	174	235	169	484	165	1,423	322	NA	NA
	мау	176	229	173	496	162	1,447	321	NA	NA
	JUNE	179	225	R172	484	158	1,438	R314	R622	R3,592
	JUIY	174	228	177	476	153	1,444	305	NA	NA
	August	177	233	189	483	_ 151	1,458	308	NA	NA
	September	177	241	188	493	R151	1,481	309	607	3,647
	October	168	238	188	500	149	1,488	NA	NA	NA

U. S. geographic coverage: the 50 United States and District of Columbia. Totals may not equal sum of components due to independent rounding.

Petroleum stocks include crude oil (including strategic reserves), unfinished oils, natural gas plant liquids, and refined products. Petroleum stocks include all non-military petroleum held for storage regardless of ownership, within each particular country in the following facilities: bulk terminals, refinery tanks, pipeline tankage, intercoastal tankers, tankers in port, and inland ship bunkers. These data exclude oil held in pipelines (except for the United States), in rail and truck cars, in sea-going ships' bunkers, in service stations, retail stores, and in tankers at sea.

<sup>a</sup>"Other OECD" includes Organization of Economic Cooperation and Development (OECD) members not shown. <sup>a</sup>The members of OECD are Australia, Austria, Belgium, Canada, Denmark, Finland, France, West Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. Total OECD excludes United States Territories.

R=Revised data. NA=Not available.

H = Hevised data. NA = Not available. Sources: • Canada: Energy, Mines and Resources Canada, Energy Information Handbook; Statistics Canada, Refined Petroleum Products. • France: Comite Professionel du Petrole, Petrole 80: Activite de L'Industrie Petroliere and Bulletin Mensuel. • West Germany and Italy: OECD, Quarterly Oil Statistics and Monthly Oil Statistics. • Japan: Ministry of International Trade and Industry, Yearbook of Coal, Petroleum, and Coke Statistics 1979; Energy Production: Supply and Demand Statistics Report. • United Kingdom: United Kingdom Department of Energy, Digest of United Kingdom Energy Statistics 1981 and Energy Trends; and OECD, Monthly Oil Statistics. • United States: 1973 through 1979: Energy Information Administration (EIA), Energy Data Reports, "Petroleum Statement, Annual"; January 1980 through October 1981: EIA, "Petroleum Statement, Monthly". • Other OECD: OECD, Quarterly Oil Statistics. • Total OECD: Sum of data for all OECD member countries using above sources.

## **Petroleum Stocks**



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Nuclear Electricity Generation by Non-Communist Countries<sup>1</sup>

										Nether-	
		Argentina	Belgium	Canada	Finland	France	India	Italy	Japan	lands	Pakistan
					Bill	ion gross k	ilowatt-hou	urs			
1973	TOTAL	0	0	18.3	0	11.6	1. <del>9</del>	3.1	9.4	1.1	0.5
1974	TOTAL	1.0	0.1	15.4	0	14.7	2.5	3.4	18.1	3.3	0.6
1975	TOTAL	2.5	6.8	13.2	0	18.3	2.5	3.8	22.2	3.3	0.5
1976	TOTAL	2.6	10.0	18.0	0	15.8	3.2	3.8	36.8	3.9	0.5
1977	TOTAL	1.6	11.9	26.8	2.7	17.9	2.8	3.4	<b>28.</b> 1	3.7	0.3
1978	TOTAL	2.9	12.5	32.9	3.3	30.5	2.3	4.4	53.2	4.1	0.2
1979	TOTAL	2.7	11.4	38.4	6.7	39.9	3.2	2.6	62.0	3.5	(S)
1980	January	0.3	1.2	3.6	0.8	5.5	0.2	0.2	8.0	0.4	0
	February	0.1	1.0	3.5	0.8	5.3	0.1	0.4	7.4	0.4	0
	March	0	1.0	3.7	0.8	5.1	0.2	0.5	8.0	0.4	0
	April	0.1	0.5	3.2	0.8	5.0	0.3	0.4	5.6	0.3	0
	May	0.2	0.7	2.5	0.3	4.2	0.3	0.3	6.0	0.3	0
	June	0.2	1.1	3.1	0	4.1	0.2	0.1	6.7	0.3	0
	July	0.2	1.3	3.6	0.4	4.8	0.2	0.1	7.8	0.4	(s)
	August	0.3	1.3	3.9	0.4	3.2	0.3	0.1	8.6	0.4	(s)
	September	0.3	1.1	3.1	0.4	4.5	0.3	0.1	7.0	0.4	(s)
	October	0.3	0.9	3.3	0.5	5.1	0.2	0	6.0	0.3	Ó
	November	0.3	1.1	3.4	0.6	5.8	0.3	0	5.4	0.3	(s)
	December	0.3	1.2	3.5	1.2	8.5	0.2	0	6.3	0.3	(s)
	TOTAL	2.3	12.5	40.4	7.0	61.2	2.9	2.2	82.8	4.2	0.1
1981	January	0.3	1.2	3.2	1.3	9.3	0.2	0.2	8.2	0.1	(s)
	February	0.2	1.0	3.5	0.9	8.6	0.2	0.3	7.1	(s)	(s)
	March	0.3	0.6	3.9	1.4	8.8	0.3	0.1	7.8	0.3	0
	April	· 0.2	0.7	3.3	1.5	8.3	0.3	0.6	7.9	0.4	0
	May	0.2	1.2	3.4	1.0	8.9	0.4	0.3	8.0	0.4	(s)
•	June	0.2	1.2	3.6	0.7	8.3	0.3	0.1	6.7	0.4	(S)
	July	0.3	1.3	4.0	0.8	8.4	0.3	0.3	8.3	0.4	(s)
	August	0.2	1.2	4.0	1.4	7.7	0.2	0.1	8.1	0.4	(S)
	September	0.3	0. <del>9</del>	3.3	1.5	8.5	0.2	0.1	5.9	0.4	(s)
	October	0.2	1.0	3.4	1.4	8.1	0.2	0.1	5.1	0.4	(s)
	November	0.2	R1.3	3.5	1.3	9.3	0.2	0.1	4.8	0.4	(s)
	December	0.2	1.3	4.1	1.2	11.0	0.3	0.4	5.6	0.3	(s)
	TOTAL	2.8	12.8	43.3	14.5	105.2	3.1	2.7	83.5	3.7	0.2

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Totals may not equal sum of components due to independent rounding. 'Figures are for gross electricity generation as opposed to net electricity generation. Net figures are generally less than gross figures by about 5 percent, which represents the energy consumed by the generating plants themselves. R=Revised data. (s)=Less than 0.05 billion gross kilowatt-hours. Source: • Nucleonics Week.

Nuclear Electricity Generation by Non-Communist Countries<sup>1</sup> (continued)

		South Korea	Spain	Sweden	Switzer- land	Taiwan	United Kingdom <sup>2</sup>	West Germany	Non- Communist World Excluding U.S.	United States	Total Non- Communist World
						Billion gr	ross kilowat	t-hours			
1973	TOTAL	0	6.5	2.1	6.2	0	28.0	11.9	100.7	88.0	188.7
1974	TOTAL	0	7.2	1.6	7.0	0	34.0	12.0	121.1	104.5	225.6
1975	TOTAL	0	7.5	12.0	7.7	0	30.5	21.7	152.7	181.8	334.5
1976	TOTAL	0	7.6	16.0	7.9	0	36.8	24.5	187.3	201.7	389.1
1977	TOTAL	0.1	6.5	19.9	8.1	0.1	38.1	35.8	207.8	263.3	471.0
1978	TOTAL	2.3	7.6	23.8	8.3	2.7	36.7	35.9	263.6	292.7	556.3
1979	TOTAL	. 3.2	6.7	21.0	11.8	6.3	38.5	42.2	300.1	270.7	570.8
1980	January	0.1	0.7	2.5	1.5	0.9	3.7	4.7	34.2	21.1	55.3
	February	(s)	0.3	2.4	1.2	0.7	3.4	4.2	31.3	21.0	52.2
	March	0.4	0.4	2.3	1.3	0.8	4.2	3.4	32.4	21.0	53.4
	April	0.4	0.4	1.9	1,4	0.7	2.7	3.6	27.3	19.8	47.1
	May	0.4	0.4	1.6	1.4	0.4	2.6	3.5	25.1	19.6	44.7
	June	0.1	0.3	1.6	0.6	0.5	2.8	2. <del>9</del>	24.7	19.4	44.1
	July	0.4	0.3	1.3	0.6	0.8	2.0	3.0	27.2	22.4	49.6
	August	0.3	0.4	1.3	0.7	0.8	2.6	2.7	27.2	25.7	52.9
	September	0.4	0.4	2.1	1.3	0.8	3.1	3.2	28.4	24.8	53.2
	October	0.4	0.4	2.7	1.4	0.8	2.7	3.1	28.2	25.7	53.9
	November	0.4	0.5	3.4	1.4	0.6	3.2	4.1	30.8	22.0	52.8
	December	0.3	0.7	3.6	1.5	0.5	4.2	5.3	37.5	23.1	60.7
	TOTAL	3.5	<b>5.2</b>	26.7	14.3	8.2	37.2	43.7	354.4	265.5	619.9
1981	January	0.3	0.8	3.5	1.5	0.8	3.8	5.0	39.7	25.7	65.4
	February	0	0.6	3.6	1.4	0.7	3.4	4.6	36.2	22.6	58.8
	March	0	0.7	3.7	1.5	0.8	4.2	4.9	39.1	23.1	62.2
	April	0	0.6	3.3	1.4	0.8	2.8	4.4	36.5	21.7	58.2
	May	0.2	0.8	2.8	1.4	0.8	2.5	4.3	36.6	20.9	57.4
	June	0.4	0.8	2.8	0.7	0.8	3.3	4.1	34.5	22.6	57.1
	July	0.4	1.1	1.4	0.6	0.8	2.5	5.2	36.1	24.8	60.9
	August	0.4	1.0	2.6	1.0	0.8	2.5	3.9	35.6	28.3	63. <del>9</del>
	September	0.3	0.6	3.0	1.3	0.8	3.1	3.2	33.4	25.7	59.1
	October	0.3	1.2	3.3	1.5	1.2	2.7	4.0	34.2	21.6	55.8
	November	0.3	0.6	3.6	1.4	1.0	3.1	4.3	35.5	24.1	59.5
	December	0.4	0.7	4.1	1.5	1.1	4.9	5.4	42.6	27.5	70.0
	TOTAL	2.9	9.4	37.7	15.2	10.7	38.9	53.3	439.9	288.6	728.5

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United States geographic coverage: the 50 United States and District of Columbia. Totals may not equal sum of components due to independent rounding. <sup>1</sup>Figures are for gross electricity generation, as opposed to net electricity generation. Net figures are generally less than gross figures by about 5 percent, which represents the energy consumed by the generating plants themselves. <sup>2</sup>The United Kingdom assesses generation at 4-, 5- or 6-week intervals, rather than by calendar month. R=Revised data. (s) = Less than 0.05 billion gross kilowatt-hours. *Source: • Nucleonics Week.* 

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## Definitions

#### 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. Includes metaanthracite and semianthracite. Conforms to ASTM Specification D388 for anthracite.

#### Average Retail Selling Price, Motor Gasoline

The average price of sales of motor gasoline to retail customers at service stations.

#### **Bituminous Coal**

A coal that is high in carbonaceous matter having a volatility greater than anthracite and a calorific value greater than lignite. Often referred to in the United States as soft coal. Includes subbituminous coal and conforms to ASTM Specification D388 for bituminous and subbituminous coal.

#### Coke (Coal)

Bituminous coal from which constituents have been driven off by heat so that the fixed carbon and the ash are fused together. It is used primarily in blast furnaces for smelting ores, especially iron ore.

#### Crude Oil

A mixture of hydrocarbons that is in the liquid phase in natural underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities. Statistically, crude oil reported at refineries, in pipelines, at pipeline terminals, and on leases may include lease condensate, shale oil, and tar sands oil.

#### **Crude Oil Domestic Production**

Domestic crude oil production is measured at the wellhead and includes lease condensate, which is a natural gas liquid recovered from lease separators or field facilities.

#### **Crude Oil Refinery Input**

Total crude oil (including lease condensate) input to crude oil distillation units and other units for processing.

#### **Crude Oil Stocks**

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

#### Distillate Fuel Oil

A light fuel oil distilled off during the refining process. Included are products known as No. 1 and No. 2 heating oils, diesel fuels, and No. 4 fuel oil, which conform to either ASTM Specification D396 or D975. These products are used primarily for space heating, on- and off-highway diesel engine fuel (including railroad engine fuel), and electric power generation.

#### **Distillate Fuel Oil Production**

Total production of distillate fuel by refineries, measured at the refinery outlet. Relatively small quantities of distillate fuel are produced at natural gas processing plants, but these quantities are not included.

#### **Electricity Production**

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

#### **Exploratory Well**

A well drilled to (1) find and produce oil or gas in an unproved area; (2) find a new reservoir in a field previously found to be productive of oil or gas in another reservoir; or (3) extend the limit of a known oil or gas reservoir.

#### **Full-Serve Station**

Station at which services such as pumping gas, washing windows, and checking under the hood are performed by attendants.

#### Imports

Receipts into the 50 States and the District of Columbia of foreign goods (including receipts of goods from U.S. territories and U.S. Foreign Trade Zones) that are classified by customs officials as "imports for consumption" or "withdrawals from bonded warehouse for consumption," . including withdrawals from bonded warehouse for military offshore use and for bunkering of vessels or aircraft engaged in international commerce. Included are imports for the Strategic Petroleum Reserve. Excluded are receipts into bonded warehouse and into U.S. territories and U.S. Foreign Trade Zones.

#### Jet Fuel

Includes both naphtha-type and kerosene-type jet fuel meeting standards for use in aircraft turbine engines or meeting ASTM Specification D1655. Although most jet fuel is used in aircraft, some is used for other purposes, such as fuel for turbines to produce electricity.

#### Landed Cost of Imported Crude Oil

Includes the purchase price at the foreign port (or U.S. land border), transportation and insurance costs, wharfage and demurrage, brokerage fees, import fees and duties, license (ticket) fees, and transportation costs to the refinery. Averages are computed based on major importers, which account for an estimated 90 to 95 percent of total crude oil imports. Coverage includes United States and its territories.

#### Lease Condensate

A natural gas liquid recovered from gas-well gas in lease separators and field facilities. It consists primarily of pentanes and heavier hydrocarbons. Generally, it is blended with crude oil for refining.

#### Ugnite

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

#### Line Miles of Seismic Exploration

The distance along the earth's surface that is covered by seismic surveying.

#### Maximum Dependable Capacity, Net

Represents the dependable main-unit net capacity of domestic reactors and generally varies throughout the year because the unit efficiency varies with seasonal cooling water temperature variations. Usually maximum dependable capacity is the highest net dependable output of the turbine generator during the most restrictive seasonal conditions (usually summer).

#### **Motor Gasoline**

A complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives, that have been blended to form a fuel suitable for use in spark ignition engines. Included are leaded and unleaded products and all refinery products listed in ASTM Specification D439.

#### Motor Gasoline, Premium Grade

A volatile hydrocarbon mixture suitable for operation of an internal combustion engine and customarily marketed as "ethyl," "super," or equivalent classification.

#### **Motor Gasoline Production**

Total production of motor gasoline by refineries, measured at the refinery outlet. Relatively small quantities of motor gasoline are produced at natural gas processing plants, but these quantities are not included.

#### Motor Gasoline, Regular Grade

Motor gasoline that has an antiknock designation of 2 for unleaded motor gasoline and 3 for leaded motor gasoline.

#### Natural Gas

A mixture of hydrocarbon compounds and small quantities of various nonhydrocarbons existing in gaseous phase or in solution with crude oil in natural underground reservoirs at reservoir conditions.

#### Natural Gas Liquids

Those hydrocarbons in natural gas that are separated as liquid from the gas at lease separators, field facilities, or natural gas processing plants. Natural gas liquids include natural gas plant liquids and lease condensate.

#### **Natural Gas Plant Liquids**

Those portions of natural gas that are liquefied at natural gas processing plants, including natural gasoline plants, cycling plants, and fractionators, and, in some instances, field. facilities. Products obtained include ethane, liquefied petroleum gases (propane, butanes, propane-butane mixtures, ethane-propane mixtures), isopentane, natural gasoline, unfractionated streams, plant condensate, and minor quantities of finished products such as motor gasoline, special naphthas, jet fuel, kerosene, and distillate fuel oil.

#### Natural Gas Production (Dry)

Derived by subtracting extraction loss from marketed production. It represents the amount of domestic natural gas production that is available to be marketed and consumed as a gas.

#### Petroleum

A generic term applied to oil and oil products in all forms, such as crude oil, lease condensate, unfinished oils, refined petroleum products, natural gas plant liquids, and nonhydrocarbon compounds blended into finished petroleum products.

#### **Petroleum Coke**

A solid residue; the final product of the condensation process in cracking. It consists of aromatic hydrocarbons very poor in hydrogen. Calcination of petroleum coke can yield almost pure carbon or artificial graphite suitable for production of carbon or graphite electrodes, structural graphite, motor brushes, dry cells, and similar products.

#### **Petroleum Products**

Products obtained from the processing of crude oil, unfinished oils, natural gas liquids, and other miscellaneous hydrocarbon compounds. Includes aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, ethane, liquefied gases, petrochemical feedstocks, special naphthas, lubricants, paraffin wax, petroleum coke, asphalt, road oil, still gas, and other miscellaneous products.

#### **Refined Petroleum Product Supplied**

Total refined petroleum product supplied is the sum of all refined petroleum products supplied. For each product the amount supplied is derived by summing production, imports, crude oil burned directly, and subtracting changes in primary stocks (net withdrawals is a plus quantity; net additions is a minus quantity) and exports.

#### **Refiner Acquisition Cost**

The cost to the refiner, including transportation and fees, of crude oil. The composite cost is the average of domestic and imported crude oil costs and represents the amount of crude oil cost that refiners may pass on to their customers.

#### **Residual Fuel Oil**

The heavier oils that remain after the distillate fuel oils and lighter hydrocarbons are boiled off in refinery operations. Included are products known as No. 5 and No. 6 fuel oil that conform to ASTM Specification D396, Navy Special Fuel Oil, Bunker C fuel oil, and acid sludge and pitch used as refinery fuels. Residual fuel oil is used for the production of

electric power, space heating, vessel bunkering, and various industrial purposes.

#### **Rotary Rig**

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

#### Self-Serve Station

Station at which services such as pumping gas, washing windows, and checking under the hood are not performed by attendants.

#### **Startup Test Phase of Nuclear Powerplant**

A nuclear powerplant that has been licensed by the Nuclear Regulatory Commission to operate, but that is in the initial testing phase during which 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 powerplant in the rate base calculation.

#### **Stocks (Refined Petroleum Product)**

Stocks held at refineries, bulk terminals, and pipelines (including pipeline fill) where the storage capacity exceeds 50,000 barrels. Stocks held at natural gas processing plants and stocks held in secondary storage facilities, such as those held by jobbers, dealers, independent marketers, and consumers, are excluded.

#### **Strategic Petroleum Reserve**

Petroleum inventories (currently only crude oil) held in Government-owned underground storage for use during periods of supply interruptions. Congress enacted legislation to establish a Strategic Petroleum Reserve in Title I, Part B, of the Energy Policy and Conservation Act of 1975, Public Law 94-163.

#### Synthetic Natural Gas (SNG)

A product resulting from the manufacture, conversion, or reforming of hydrocarbons that may be easily substituted for or interchanged with pipeline-quality natural gas.

#### **Unaccounted for Crude Oil**

Represents the arithmetic difference between the indicated demand for crude oil and the total disposition of crude oil. Indicated demand is the sum of crude oil production and imports less changes in crude oil stocks. Total disposition of crude oil is the sum of refinery input, exports of crude oil, crude oil burned as fuel, and crude oil losses.

#### Well

A hole drilled for the process of finding or producing crude oil or natural gas or providing services related to the production of crude oil or natural gas. Wells are classified as oil wells, gas wells, dry holes, stratigraphic or core tests, or service wells.

## **Explanatory Notes**

1. Domestic production of energy includes production of coal (anthracite, bituminous coal, and lignite), crude oil and lease condensate, natural gas plant liquids, natural gas (dry), electric utility and industrial production of hydropower, and electricity generated from nuclear power, geothermal power, and wood and waste. The volumetric data were converted to approximate heat contents (Btu values) of these energy sources using conversion factors listed in Thermal Conversion Factors.

2. Domestic consumption of energy includes consumption of coal (anthracite, bituminous coal, and lignite), natural gas (dry), refined petroleum products supplied, electric utility and industrial production of hydropower, net imports of electricity produced from hydropower, net imports of coke made from coal, and electricity generated from nuclear power, geothermal power, and wood and waste. Approximate heat contents (Btu values) were derived using conversion factors listed in Thermal Conversion Factors.

3. U.S. energy imports include imports of bituminous coal, crude oil (including crude oil imported for the Strategic Petroleum Reserve), refined petroleum products, natural gas (dry), electricity produced from hydropower, and coke made from coal.

4. U.S. energy exports include bituminous coal and anthracite, crude oil, refined petroleum products, natural gas (dry), electricity produced from hydropower, and coke made from coal.

5. The Residential and Commercial Sector consists of housing units, non-manufacturing business establishments (e.g, wholesale and retail businesses), health and educational institutions, and government office buildings. The Industrial Sector is made up of construction, manufacturing, agriculture, and mining establishments. The Transportation Sector consists of both private and public passenger and freight transportation, as well as government transportation, including military operations. The Electric Utilities Sector is made up of privately- and publicly-owned establishments that generate electricity primarily for resale.

6. 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 two degree-day data bases maintained by the National Oceanic and Atmospheric Administration. Weekly degree-day information is based on mean daily temperatures recorded at about 200 major weather stations around the country. Monthly data are based on readings at more than 8,000 weather stations. The temperature information recorded at these weather stations is used to calculate statewide degree-day averages based on population. The

State figures are then aggregated into Petroleum Administration for Defense (PAD) Districts and into the national average, also using a population weighting method.

Weekly weather reports are available much sooner than the monthly reports, and therefore the degree-day information published in the *Monthly Energy Review* is normally derived from the weekly source.

7. Domestic products supplied figures for natural gas liquids (NGL) in this publication do not include amounts utilized by refineries for blending purposes in the production of finished products, principally gasoline. Use of NGL at refineries is reported in a separate column. The production series cited in this publication shows both NGL produced at processing plants and liquefied gases produced at refineries (LRG). The stock series shown in this volume includes natural gas liquids held as stocks at both natural gas processing plants and at refineries and LRG held at refineries.

8. Domestic consumption of natural gas includes the quantities sold to consumers plus the gas used for plant and pipeline fuel, after the natural gas liquids have been extracted. All monthly consumption data are estimated. Marketed production of natural gas includes gross withdrawals from the ground less the quantities used for repressuring and the amount vented and flared, before the natural gas liquids have been extracted. Dry production of natural gas is the quantity remaining after the natural gas liquids have been extracted.

9. The Federal Energy Administration and Federal Power Commission began the coordinated collection and compilation of monthly underground storage information from all underground storage operators in the United States in October 1975. Initial storage information reported was for the month of September 1975. Comparable monthly information for total U.S. storage operations is not available for prior periods.

The total gas in storage is the total volume of gas (base gas plus working gas) in storage reservoirs as of the end of the month. Base gas is the volume of gas, including all native gas in place at the time of conversion to storage, needed as a permanent inventory to maintain adequate reservoir pressures and deliverability rates throughout the withdrawal season. Base gas includes the volumes that will not be recoverable upon termination of storage operations. Working gas is the volume of gas above the designated base gas level available for withdrawal.

10. Preliminary estimates of monthly coal production are based on the number of cars loaded at mines reported weekly to the Association of American Railroads by Class I railroads. The amount of coal produced and shipped by other modes of transportation is derived by employing the ratio of railroad shipments to total production for the most recent period for which this ratio is known. Final monthly and annual coal production data are derived from the Energy Information Administration (EIA) "Coal Distribution Report" (Form EIA-6) and selected State agencies.

Domestic consumption data in this series approximate actual consumption. This is in contrast to domestic products supplied reported for petroleum products, which is a calculated value representing total disappearance from prigrary supplies.

The data sources used to compute the monthly coal consumption estimates from 1978 forward for the "Other Industrial" (i.e. Industrial except coke plants) sector are:

- (a) Form EIA-3, "Monthly Fuel Consumption Report Manufacturing Plants."
- (b) Form EIA-6, "Bituminous Coal and Lignite Distribution Report."

The basic assumption used in deriving a quarterly estimate for coal consumption is that consumption is equal to beginning stocks plus receipts minus ending stocks. In terms of an equation, consumption can be expressed as

$$C = S_{B} + R - S_{E}, \qquad (1)$$

where

 $S_B =$  beginning stocks R = receipts  $S_E =$  ending stocks.

The change in stocks ( $S_B - S_E$ ) can be denoted by  $\Delta S$ . From equation (1), consumption is

$$C = \Delta S + R.$$
 (2)

The Form EIA-6 provides complete coverage of the "Other Industrial" sector. The quarterly receipts are obtained from this form.

The Form EIA-3 does not provide total coverage of the "Other Industrial" sector; however, it does contain stock change information. The impact of the stock change in the portion of the sector that is not covered by the Form EIA-3 is not substantial.

Given the estimated quarterly consumption for the "Other Industrial" sector (C), the monthly consumption for the sector ( $C_M$ ) can be estimated for each month in the quarter as

$$C_{M} = (C_{M3}/C_{3}) \bullet C \qquad (3)$$

where

C<sub>M3</sub> = the monthly consumption in the "Other Industrial" sector as reported on Form EIA-3.

C<sub>3</sub> = the quarterly consumption in the "Other Industrial" sector as reported on Form EIA-3.

Equation (3) insures that a) the monthly consumption estimates (C<sub>M</sub>) sum to C over the quarter and b) the estimated seasonality for the C<sub>M</sub>'s is the same as that for the C<sub>M3</sub>'s.

11. The units used to describe power generation at nuclear plants are based on the watt, a unit of power. (Power is energy produced per unit of time.) Nuclear powerplants may have more than one type of power rating, including:

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

- (b). Maximum Dependable Capacity, Gross—The gross electrical output as measured at the output terminals of the turbine generator during the most restrictive seasonal conditions (usually summer).
- (c). Maximum Dependable Capacity, Net—The gross maximum dependable capacity less the nominal station service load. (The nominal station service load for a nuclear plant is about 5 percent of its gross generation.)<sup>-</sup>
- (d). Thermal Capacity The rate of heat production by the reactor core. The Nuclear Regulatory Commission authorizes a maximum thermal power rating for U.S. reactors.

12. The actual domestic average price represents the average price at which all domestic crude oil is purchased. Prior to February 1976, the domestic crude oil wellhead price represented an estimate of the average of posted prices; after February 1976, the wellhead price represents an average of first sale prices.

13. Beginning with January 1981, refiner acquisition costs of crude oil are from data collected on Form EIA-14, the "Refiners' Monthly Cost Report." These prices were previously published from data collected on Form ERA-49, the "Domestic Crude Oil Entitlements Program Refiners Monthly Report." The 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 in comparing the data collected on the two forms.

The costs previously published for January 1981, viz., \$30.87 per barrel for domestic crude, \$37.59 per barrel for imported, and \$33.40 per barrel for the composite, were from data collected on Form ERA-49. The revised costs are from data collected on Form EIA-14. The January prices are being replaced because the Form ERA-49 data were based on only the 27 days of controlled activity, and because there was considerable recertification of oil, which occurred in January.

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, the "Transfer Pricing Report," or any crude oil that is not domestic oil.

Crude oil costs and volumes reported on Form ERA-49 excluded unfinished oils but included Strategic Petroleum Reserve (SPR). Crude oil costs and volumes reported on the FEA Form P110-M-1 included unfinished oils but excluded SPR. Imported averages derived from 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. 14. FOB literally means "Free on Board." It denotes a transaction whereby the seller makes the product available with an agreement on a given port at a given price; it is the responsibility of the buyer to arrange for the transportation and insurance.

15. 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.

16. The motor gasoline prices are calculated monthly by the Bureau of Labor Statistics in conjunction with the construction of the Consumer Price Index (CPI). For the period 1974 through 1978 prices were collected in 56 urban areas. For the period 1978 forward, prices were collected from a new sample of service stations in 85 urban areas selected to represent all urban consumers – about 80 percent of the total U.S. population. The service stations are selected initially, and on a replacement basis, in such a way that they represent the purchasing habits of the CPI population. Service stations in the current sample include those providing all types of service (i.e., full-, mini-, and self-serve).

17. The survey and method used to derive data for March 1976 forward differ from those used for prior months. Data for January 1974 through February 1976 are derived from a survey of distributors, and prices and margins are computed as unweighted averages. The average distributor purchase price and average dealer margin for March 1976 forward are for distributors only, whereas the average selling price includes both refiners and distributors. Data for March 1976 forward are computed as sales weighted averages.

18. Standard Federal Regions are defined as follows:

- Region 1 -Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island: Region 2 -New York, New Jersey, Puerto Rico, Virgin Islands; Region 3 -Pennsylvania, Maryland, West Virginia, Virginia, District of Columbia, Delaware; -Kentucky, Tennessee, North Carolina, South Region 4 Carolina, Mississippi, Alabama, Georgia, Florida, Canal Zone: Region 5 - Minnesota, Wisconsin, Michigan, Illinois, Indiana, Ohio; Region 6 - Texas, New Mexico, Oklahoma, Arkansas, Louisiana: -Kansas, Missouri, Iowa, Nebraska; Region 7 Region 8 -Montana, North Dakota, South Dakota, Wyoming, Utah, Colorado; Region 9 - California, Nevada, Arizona, Hawaii, Trust Territory of the Pacific Islands, American
- Samoa, Guam;
- Region 10 Washington, Oregon, Idaho, Alaska.

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

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## **Conversion Factors**

Andmarite Thousand Biu/short ton 23,170 22,660 23,390 22,770 23,180 23,520 23,50 23,350 23,350 23,350 23,350 22,360 25,40	Approximate Heat Content of Various Fuels		1973	1974	1975	1976	1977	1978	1979	1930	<b>1981</b> 1
Production         Thousand Bur/short ton         23,170         22,380         23,230         23,520         23,530         23,530         23,530         23,530         23,530         23,530         23,530         23,530         23,530         23,530         23,530         23,530         23,530         23,530         25,400         26,400         26,100         26,000         26,100	Anthracite										
Imports and exports         Thousand Blu/short ton         25,400         22,180         22	Production	Thousand Btu/short ton	23,170	22,560	23,390	22,770	23,180	23,520	23,590	23,350	23,350
Consumption, average         Thousand Buryshort ton         22,710         22,150         22,870         22,700         22,160         22,100         2	Imports and exports	Thousand Btu/short ton	25,400	25,400	25,400	25,400	25,400	25,400	25,400	25,400	25,400
Bateric utility consumption.         Thousand Btu/short ton         17,820         17,260         17,650		Thousand Btu/short ton	22,710	21,950	21,740	22,150	22,690	22,970	22,700	22,160	22,160
Nen-utility consumption         Thousand Btu/short ton         24,340         23,750         23,840         24,990         25,170         25,200         23,740         23,740           Bruminous consumption         Thousand Btu/short ton         24,010         23,750         23,200         22,430         22,500         25,000	Electric utility consumption	Thousand Btu/short ton	17,920	17,200	17,060	17,530	17,240	17,100	17,450	17,650	17,650
Bituminus casa and ignite         Thousand Bu / short ton         24,010         23,730         23,200         23,150         22,590         23,150	Non-utility consumption	Thousand Btu/short ton	24,340	23,750	23,650	23,840	24,990	25,170	25,200	23,740	23,740
Demonstructure Bis No.         Thousand Bitu /short ton         24,010         22,700         22,700         22,700         22,700         22,700         22,600         25,000         <	Bituminous coal and limite										
Thousand Bur/short on       25,000       25,000       25,000       25,000       25,000       25,000       25,000       25,000       25,000       25,000       25,000       27,000 <t< td=""><td>Production</td><td>Thousand Btu/short ton</td><td>24,010</td><td>23,730</td><td>23,200</td><td>23,150</td><td>22,700</td><td>22,430</td><td>22,590</td><td>23,150</td><td>23,150</td></t<>	Production	Thousand Btu/short ton	24,010	23,730	23,200	23,150	22,700	22,430	22,590	23,150	23,150
Imports         Thousand But/short ton         27,000	Importe	Thousand Btu/short ton	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000
Exports	European State Sta	Thousand Btu/short ton	27.000	27.000	27.000	27,000	27.000	27.000	27,000	26,180	26,190
Consumption, wirdge         Thousand Btu/short ton         22.280         21.680         21.680         21.680         21.280         21.300 <th< td=""><td>Exports</td><td>Thousand Btu/short ton</td><td>23 650</td><td>23.070</td><td>22,800</td><td>22,750</td><td>22.330</td><td>22,140</td><td>22,200</td><td>22,000</td><td>22,000</td></th<>	Exports	Thousand Btu/short ton	23 650	23.070	22,800	22,750	22.330	22,140	22,200	22,000	22,000
Electric utility consumption.         Incusand Burlshort ton         25,840         25,120         25,870         25,080         25,060         25,060         25,060         25,060         25,060         25,060         25,060         25,060         25,060         25,060         25,060         25,060         26,000	Consumption, average	Thousand Bhu/short ton	22,260	21,800	21,660	21,690	21 480	21,280	21,380	21,300	21,300
Non-Willing Consumption         Intolasing Bur/short ton         26,000	Electric utility consumption.	Thousand Btu (short ton	26 840	26 120	25 810	25 870	25 130	25 070	25.060	25.060	25,060
Cade periodum <sup>1</sup> Thousand Bu/barrel         5,800 <t< td=""><td>Non-utility consumption</td><td>Thousand Btu /short ton</td><td>26 000</td><td>26,000</td><td>26,000</td><td>26,000</td><td>26,000</td><td>26,000</td><td>26,000</td><td>26,000</td><td>26,000</td></t<>	Non-utility consumption	Thousand Btu /short ton	26 000	26,000	26,000	26,000	26,000	26,000	26,000	26,000	26,000
Crude petroleum         Thousand Btu/barrel         5,800         5,803 <t< td=""><td>Loal Loke</td><td>(housand bid/short ton</td><td>1.0,000</td><td></td><td>20,000</td><td>20,000</td><td>20,000</td><td></td><td></td><td></td><td>,</td></t<>	Loal Loke	(housand bid/short ton	1.0,000		20,000	20,000	20,000				,
Production       Intousand But/Damei       5,812       5,803       5,803       5,800       5,805       5	Crude petroleum	The used Stu /bagal	5 800	5 800	5,800	5 800	5 800	5 800	5,800	5 800	5 800
Imports         Thousand Bu/barrel         5,800 </td <td>Production</td> <td>Thousand Btu /barrol</td> <td>5 817</td> <td>5,000</td> <td>5 821</td> <td>5,808</td> <td>5 810</td> <td>5 802</td> <td>5,810</td> <td>5 812</td> <td>5 812</td>	Production	Thousand Btu /barrol	5 817	5,000	5 821	5,808	5 810	5 802	5,810	5 812	5 812
Exports	Imports	Thousand Btu (barrel	5,800	5,027	5,800	5,800	5,800	5 800	5.800	5,800	5 800
Crude patroleum and products         Thousand Btu/barrel         5,897         5,884         5,856         5,856         5,834         5,839         5,810         5,796         5,796           Patroleum products         Thousand Btu/barrel         5,752         5,774         5,745         5,745         5,797         5,808         5,832         5,832         5,820         5,832           Patroleum products         Thousand Btu/barrel         5,515         5,504         5,518         5,519         5,494         5,623         5,281         5,273         5,281         5,273         5,281         5,275         5,234         5,546         5,553         5,445         5,512         5,534         5,546         5,553         5,485         5,443         5,512         5,534         5,546         5,553         5,443         5,512         5,121         5,122         5,234         5,546         5,429         5,441         5,429         5,441         5,429         5,441         5,429         6,244         5,429         5,441         5,429         5,441         5,429         5,441         5,429         5,441         5,429         5,441         5,429         5,441         5,429         5,441         5,429         5,441         5,429         5,441 <td>Exports</td> <td>i nousano più/barrei</td> <td>5,600</td> <td>5,600</td> <td>5,000</td> <td>3,800</td> <td>5,000</td> <td>5,000</td> <td>5,000</td> <td>0,000</td> <td>9,000</td>	Exports	i nousano più/barrei	5,600	5,600	5,000	3,800	5,000	5,000	5,000	0,000	9,000
Imports, average       Thousand Bu/barrel       5,752       5,774       5,745       5,797       5,808       5,825       5,820       5,820         Petroleum products       Thousand Btu/barrel       5,752       5,774       5,745       5,797       5,808       5,825       5,820       5,825       5,811       5,749	Crude petroleum and products	The second Day (bene)	6 997	5 994	6.858	<b>5 956</b>	5 834	5 839	5 810	5 796	5 798
Exports, average	Imports, average	Thousand Blu/Darrei	5,637	5,004	5,000	5,000	E 707	6,000	5 832	5,920	5,920
Petroleum products         Thousand Btu/barrel         5,515         5,504         5,518         5,519         5,494         5,479         5,479           Consumption, sverage         Thousand Btu/barrel         5,515         5,504         5,381         5,384         5,386         5,281         5,270         5,230           Industrial,         Thousand Btu/barrel         5,559         5,551         5,522         5,348         5,386         5,485         5,443         5,429           Electric Utility         Thousand Btu/barrel         5,293         5,546         5,503         5,405         5,443         5,429           Electric Utility         Thousand Btu/barrel         5,223         6,223         6,221         6,227         6,243         6,244         6,249         6,244           Imports         Thousand Btu/barrel         5,983         5,995         5,931         5,746         5,748         5,748         5,748         5,748         5,748         5,748         5,748         5,744         5,748         5,744         5,748         5,748         5,814         5,864         5,841         5,841         5,841         5,841         5,841         5,841         5,841         5,841         5,864         5,814         5,864	Exports, average	Thousand Btu/barrel	5,752	0,774	3,740	5,745	5,757	5,606	3,032	0,02.0	5,620
Consumption, twerage       Thousand Btu/barrel       5,315       5,504       5,434       5,304       5,315       5,315       5,241       5,270       5,230         Residential and Commercial       Thousand Btu/barrel       5,386       5,386       5,386       5,386       5,386       5,483       5,270       5,230         Industrial       Thousand Btu/barrel       5,396       5,396       5,396       5,386       5,404       5,412       5,423       5,441       5,429       5,441       5,441       5,481       5,601       5,60	Petroleum products		F 616	F 604	F 404	F 604	E E 10	E 610	E 404	E 470	5 479
Residential and Commercial       Thousand Btu/barrel       5,381       5,371       5,394       5,383       5,384       5,380       5,401       5,401       5,403       5,102       5,103       5,102<	Consumption, everage	Thousand Btu/barrel	5,515	5,504	5,494	5,504	5,518	5,515	E 201	5,475	5 220
Industrial,       Thousand Btu/barrel       5,559       5,511       5,522       5,534       5,640       5,441       5,423       5,441       5,429         Tiansportation       Thousand Btu/barrel       6,223       6,215       6,229       6,235       6,231       6,227       6,243       6,249       6,249       6,249       6,249       6,249       6,243       6,244       6,244       6,244       6,244       6,244       6,244       6,244       6,244       6,244       6,244       6,244       6,244       6,244       6,244       6,244       6,244       6,244       6,244       6,244       6,243       6,244       6,244       6,243       6,244       5,364	Residential and Commercial	Thousand Btu/barrel	5,381	5,371	5,354	5,363	5,384	5,380	5,201	5,270	5,230
Tiansportation       Thousand Btu/barrel       5,398       5,396       5,396       5,390       5,404       5,412       5,443       5,441       5,423       5,441       5,423       5,441       5,423       5,441       5,423       5,441       5,423       6,213       6,215       6,223       6,215       6,231       6,215       6,231       6,215       6,231       6,244       6,245       6,244       6,245       6,244       5,742       5,743       5,796       5,814       5,864       5,841       <	Industrial, , ,	Thousand Btu / barrel	5,559	5,631	5,522	5,534	5,546	5,553	5,400	0,443	5,012
Electric Utility         Thousand Btu/barrel         6,223         6,215         6,223         6,221         6,224         6,243         <	Transportation	Thousand Btu /barrel	5,398	5,396	5,395	5,400	5,404	5,412	0,429	0,941	5,423
Imports.       Thousand Btu/barrel       5,983       5,955       5,810       5,964       5,965       5,915       5,915       5,811       5,748       5,7	Electric Utility	Thousand Btu/barrel	6,223	6,215	6,229	6,235	6,231	6,227	0,243	6,249	0,244
Exports         Thousand Btu/barrel         5,752         5,773         5,747         5,743         5,796         5,814         5,864         5,841<	Imports, ,	Thousand Btu/barrel	5,983	5,959	5,935	5,980	5,908	5,955	5,611	5,748	5,748
LPG consumption average *	Exports	Thousand Btu/barrel	5,752	5,773	5,747	5,743	5,796	5,814	5,804	5,841	5,841
Natural gas plant liquid production         Thousand Btu/barrel         4,049         4,011         3,964         3,941         3,925         3,955         3,914         3,914           Natural gas, drv Production and consumption         Btu/cubic foot         1,021         1,024         1,021         1,021         1,021         1,021         1,021         1,026         1,026         1,026         1,026         1,026         1,024         1,021         1,021         1,024         1,021         1,021         1,026         1,026         1,026         1,026         1,026         1,024         1,022         1,026         1,024         1,021         1,024         1,021         1,024         1,022         1,026         1,026         1,024         1,022         1,026         1,024         1,024         1,022         1,024         1,02	LPG consumption average *	Thousand Btu / barrel	3,746	3,730	3,715	3,711	3,677	3,669	3,680	3,674	3,074
production         Thousand Btu/barrel         4,049         4,011         3,984         3,964         3,941         3,925         3,955         3,914         3,914           Natural gas, div Production and consumption         Btu/cubic foot         1,021         1,024         1,021         1,023         1,023         1,021         1,022         1,022         1,022         1,022         1,022         1,022         1,022         1,022         1,022         1,022         1,022         1,022         1,022         1,022         1,022         1,022         1,022         1,022         1,022<	Natural gas plant liquid										
Natural gas, dry         Btu/cubic foot         1,021         1,024         1,021         1,021         1,021         1,026         t,026           Production and consumption         Btu/cubic foot         1,024         1,022         1,026         1,021         1,024         1,021         1,021         1,026         t,026           Electric utility consumption         Btu/cubic foot         1,024         1,022         1,026         1,023         1,029         1,034         1,034         1,034         1,034           Non-utility consumption         Btu/cubic foot         1,020         1,024         1,022         1,026         1,023         1,019         1,016         1,018         1,024         1,022           Imports         Btu/cubic foot         1,026         1,027         1,026         1,030         1,037         1,022         1,022           Exports         Btu/cubic foot         1,023         1,016         1,013         1,013         1,013         1,013         1,013           Natural gas, wet         Production         Btu/cubic foot         1,093         1,095         1,093         1,093         1,088         1,092         1,099         1,035           Hydropower *         Btu/kWh         10,389 <td< td=""><td>production</td><td>Thousand Btu/barrel</td><td>4,049</td><td>4,011</td><td>3,984</td><td>3,964</td><td>3,941</td><td>3,925</td><td>3,955</td><td>3,914</td><td>3,914</td></td<>	production	Thousand Btu/barrel	4,049	4,011	3,984	3,964	3,941	3,925	3,955	3,914	3,914
Production and consumption         Btu/cubic foot         1,021         1,024         1,021         1,021         1,021         1,023         1,023         1,024         1,021         1,021         1,024         1,023         1,024         1,023         1,024         1,023         1,024         1,023         1,024         1,024         1,022         1,024         1,024         1,022         1,024         1,024         1,022         1,024         1,024         1,022         1,024         1,024         1,022         1,024         1,024         1,022         1,024         1,024         1,022         1,024         1,022         1,024         1,022         1,024         1,022         1,024         1,022         1,024         1,024         1,023         1,026         1,023         1,026         1,023         1,026         1,023         1,013	Natural cas, dry										
Electric utility consumption         Btu/cubic foot         1,024         1,022         1,023         1,029         1,034         1,037         1,022         1,022         1,022         1,022         1,022         1,022         1,022         1,022         1,022         1,023         1,013         1,013         1,013         1,013         1,013         1,013         1,013         1,013         1,013         1,013         1,013         1,013         1,013         1,013         1,013	Production and consumption	Btu/cubic foot	1,021	1,024	1,021	1,020	1,021	1,019	1,021	1,026	1,026
Non-utility consumption         Btu/cubic foot         1,020         1,024         1,020         1,019         1,016         1,018         1,024         1,024           Imports         Btu/cubic foot         1,026         1,027         1,026         1,026         1,030         1,037         1,022         1,022           Exports         Btu/cubic foot         1,023         1,016         1,013         1,014         1,013         1,014         1,013         1,013         1,014         1,014         1,015         1,014         1,015         1,014         1,015         1,024         1,024         1,024         1,024         1,024         1,02	Electric utility consumption	Btu/cubic foot	1,024	1,022	1,026	1,023	1,029	1,034	1,034	1,034	1,034
Imports         Btu/cubic foot         1.026         1.027         1.026         1.025         1.026         1.030         1.037         1.022         1.022           Exports         Btu/cubic foot         1.023         1.016         1.014         1.013         1.01	Non-utility consumption	Btu/cubic foot	1,020	1,024	1,020	1,019	1,019	1,016	1,018	1,024	1,024
Btu/cubic foot         1,023         1,016         1,013         1,0353         10,353         10,353	Imports	Btu/cubic foot	1,026	1,027	1,026	1,025	1,026	1,030	1,037	1,022	1,022
Bitu/subic         Bitu/subic foot         1,093         1,097         1,093 </td <td>Exporte</td> <td>Btu/cubic foot</td> <td>1,023</td> <td>1,016</td> <td>1,014</td> <td>1,013</td> <td>1,013</td> <td>1,013</td> <td>1,013</td> <td>1,013</td> <td>1,013</td>	Exporte	Btu/cubic foot	1,023	1,016	1,014	1,013	1,013	1,013	1,013	1,013	1,013
Btu/cubic foot         1,093         1,097         1,093         1,043         10,640         10,640         10,640         10,640 <td>Natural das wat</td> <td></td>	Natural das wat										
Btu/kWh         10,389         10,442         10,406         10,373         10,435         10,361         10,353	Production	Btu/cubic foot	1.093	1,097	1,095	1,093	1,093	1,088	1,092	1,099	1,099
Btu/kWh         10.903         11.161         11.013         11.047         10.769         10.941         10.640	iludioonuar <sup>3</sup>	Btu/kWh	10,389	10,442	10,406	10,373	10 435	10,361	10,353	10,353	10,353
Geothermal power *	Nuclear newsr 3	Btu / kWh	10,903	11,161	11,013	11,047	10,769	10,941	10,640	10,640	10,640
Geouremen power	Contramel nower 3	Btu /kWb	21,674	21,674	21,611	21,611	21,611	21,611	21,553	21,629	21,629
Financial consumption	Electricity consumption	Btu/kWh	3,412	3,412	3,412	3,412	3,412	3,412	3,412	3,412	3,412

**Refined Petroleum Products:** 

Thousand Btu barrel

Asphalt	6,636
Aviation gasoline	5,048
Butane	4,326
Butane-propane mixture <sup>4</sup>	4,130
Distillate fuel oil	5,825
Ethane	3,082
Ethane-propane mixture*	3,308
Isobutane	3,974
Jet fuel-kerosene type	5,670
Jet fuel-naphtha type	5,355
Kerosene	5,670
Lubricants	6,065
Motor gasoline	5,253
Natural gasoline	4,620
Petrochemical feedstocks	
Naphtha 400°	5,248
Other oils over 400°	5,825
Still gas	6,000
Petroleum coke	6,024
Plant condensate	5,418
Propane	3,836
Residual fuel oil	6,287
Road oil	6,636
Special naphtha	5,248
Still gass	6,000
Unfinished oils	5,825
Unfractionated Stream	5,418
Wax	5,537
Miscellaneous	5,796

## **Units of Measure**

Weight

contains	1,000 kilograms or 2,204	.62 pounds
contains	2,240 pounds	
contains	2,000 pounds	
	contains contains contains	contains1,000 kilograms or 2,204contains2,240 poundscontains2,000 pounds

Conversion Factors for Crude Oil (Average Gravity)

1 barrel	contains	42 gallons
1 barrel	contains	0.136 metric tons (0.150 short tons)
1 metric ton	contains	7.33 barrels
1 short ton	contains	6.65 barrels

**Conversion Factors for Uranium** 

1 short ton (U <sub>3</sub> O <sub>8</sub> )	contains	0,769 metric tons of uranium
1 short ton (UF <sub>6</sub> )	contains	0.613 metric tons of uranium
1 metric ton (UF <sub>6</sub> )	contains	0.676 metric tons of uranium

1 Indudes lease condensate.

2 LPG consumption average is the annual weighted average of the LPG product supplied components: ethane, ethylene, propane, propylene, butane, butane, butane-propane mixture, ethane-pro-

<sup>2</sup> LPG consumption average is the annual weighted average of the LPG product supplied components: enable, entywere, propanel, program, busine, outpete, busine, bottlete, busine, cent. \* 60 percent butane and 40 percent propane.

70 percent ethane and 30 percent propane.
 † Preliminary data.

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## U.S. DEPARTMENT OF ENERGY ENERGY INFORMATION ADMINISTRATION OFFICE OF ENERGY INFORMATION SERVICES 1000 INDEPENDENCE AVENUE, S.W. WASHINGTON, D.C. 20585

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