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DOE/EIA-0035(84/10)

# Monthly Energy Review

Energy Information Administration  
Washington, D.C.

October 1984

Published:  
January 1985





## ***Monthly Energy Review***

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

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

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

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

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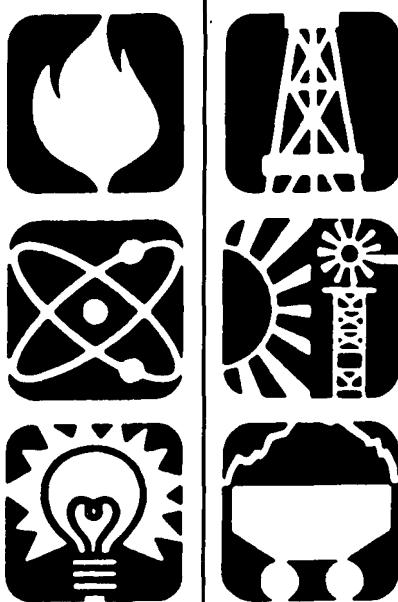
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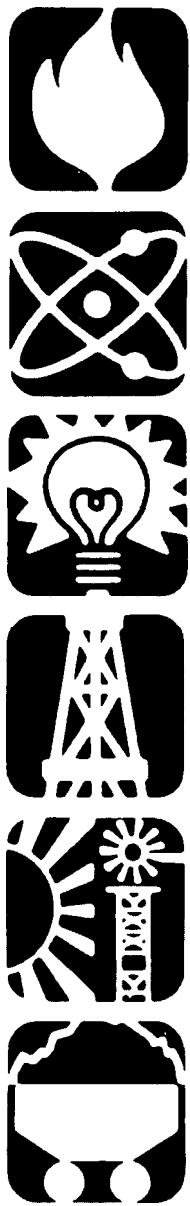
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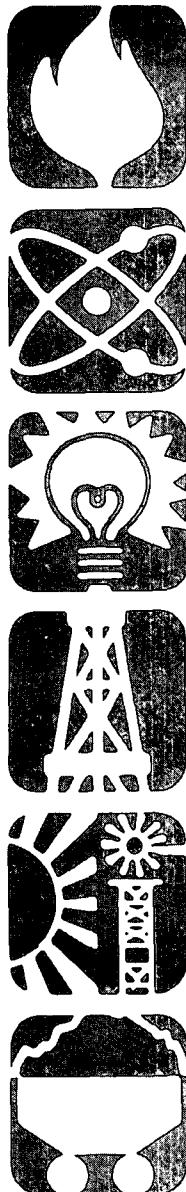
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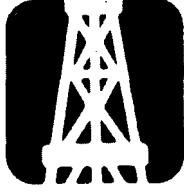
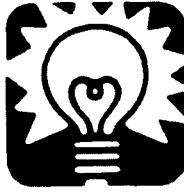
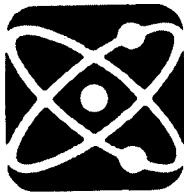
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## Articles

Feature articles on energy-related subjects are often included in this publication. The following articles have appeared in issues since the beginning of 1981. A list of the articles included prior to 1981 may be found in any issue published from 1981 through 1983.

Changes in 1981 Petroleum Data Series .....	May 1981
Information Services of the Energy Information Administration .....	September 1981
An Overview of Natural Gas Markets .....	December 1981
The Interstate and Intrastate Natural Gas Markets.....	January 1982
Natural Gas Drilling and Production Under the Natural Gas Policy Act.....	February 1982
Impacts of Financial Constraints on the Electric Utility Industry.....	October 1982
The Effect of Weather on Energy Use .....	April 1983
Trends in U.S. Energy Since 1973.....	May 1983
Data Series on Petroleum Use at Electric Utilities .....	July 1983
Residential Energy Consumption, 1978 Through 1981 .....	September 1983
Exploring for Oil and Gas.....	November 1983
The Influence of Federal Actions on Petroleum Exploration .....	December[2] 1983
Aggregate Statistics: Accurate or Misleading? .....	December[3] 1983

## Highlights

Summaries of Energy Information Administration reports have appeared as 'Highlights' in this publication since 1982. The following is a list of all the reports that have been summarized herein.

<i>U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, 1981 Annual Report .....</i>	September 1982
<i>Energy Company Development Patterns in the Postembargo Era, Volume One.....</i>	November 1982
<i>Residential Energy Consumption Survey: Consumption and Expenditures.....</i>	January 1983
<i>Residential Energy Consumption Survey: Housing Characteristics.....</i>	February 1983
<i>Energy Price and Expenditure Data Report, 1970-1980.....</i>	July 1983
<i>Railroad Deregulation: Impact on Coal.....</i>	August 1983
<i>Port Deepening and User Fees: Impact on U.S. Coal Exports.....</i>	August 1983
<i>U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, 1982 Annual Report .....</i>	September 1983
<i>Annual Energy Review 1983.....</i>	February 1984
<i>State Energy Data Report, Consumption Estimates, 1960-1982.....</i>	March 1984
<i>Annual Energy Outlook 1983.....</i>	March 1984
<i>State Energy Price and Expenditure Report, 1970-1981.....</i>	May 1984
<i>Solar Collector Manufacturing Activity 1983.....</i>	June 1984
<i>Estimates of U.S. Wood Energy Consumption, 1980-1983.....</i>	September 1984
<i>International Energy Annual 1983.....</i>	September 1984

# Part 1

# Energy Summary

## Energy Summary

### January through October Summary

The United States produced 8.0 percent more energy during the first 10 months of 1984 than during the same period in 1983 and U.S. energy consumption was up 5.6 percent. Net imports of all energy were 9.2 percent higher, with net imports of petroleum up 10.4 percent compared to those imports in the first 10 months of 1983.

### Production

Energy production during October 1984 totaled 5.3 quadrillion Btu, a slight decrease compared to the level of production during October 1983. Coal production decreased 3.8 percent. Natural gas production was up 1.7 percent, and petroleum production increased 1.1 percent. Production of all other forms of energy combined decreased 1.7 percent compared to production 1 year earlier.

### Energy Summary

(Quadrillion ( $10^{15}$ ) Btu)

	October			Cumulative January Through October			
	1984	1983	Percent Change <sup>1</sup>	1984	1983	1983 Daily Rate	Percent Change <sup>1</sup>
<b>Total Production</b>	<b>5.252</b>	<b>5.278</b>	<b>-0.5</b>	<b>54.899</b>	<b>0.180</b>	<b>50.662</b>	<b>0.167</b>
Petroleum <sup>2</sup>	1.788	1.769	+1.1	17.383	0.057	17.177	0.057
Natural Gas (Dry)	1.435	1.410	+1.7	14.684	0.048	13.481	0.044
Coal	1.520	1.580	-3.8	16.834	0.055	14.309	0.047
Other <sup>3</sup>	0.510	0.518	-1.7	5.998	0.020	5.696	0.019
<b>Total Consumption</b>	<b>5.838</b>	<b>5.676</b>	<b>+2.9</b>	<b>60.954</b>	<b>0.200</b>	<b>57.509</b>	<b>0.189</b>
Petroleum <sup>4</sup>	2.622	2.509	+4.5	25.995	0.085	24.755	0.081
Natural Gas <sup>5</sup>	1.277	1.310	-2.5	14.481	0.047	13.733	0.045
Coal	1.394	1.303	+7.0	14.160	0.046	13.033	0.043
Other <sup>6</sup>	0.546	0.554	-1.6	6.318	0.021	5.988	0.020
<b>Net Imports</b>	<b>0.852</b>	<b>0.725</b>	<b>+17.6</b>	<b>7.445</b>	<b>0.024</b>	<b>6.794</b>	<b>0.022</b>
Petroleum <sup>7</sup>	0.923	0.837	+10.3	8.312	0.027	7.502	0.025
Natural Gas	0.065	0.061	+6.7	0.649	0.002	0.698	0.002
Coal <sup>8</sup>	(0.172)	(0.209)	(-17.7)	(1.835)	(0.006)	(1.698)	(0.006)
Other <sup>9</sup>	0.036	0.036	-0.1	0.319	0.001	0.293	0.001

<sup>1</sup> Based on daily rates prior to rounding.

<sup>2</sup> Includes crude oil, lease condensate, and natural gas plant liquids.

<sup>3</sup> Other is hydroelectric and nuclear power, and electricity produced from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems.

<sup>4</sup> Includes refined petroleum products and natural gas plant liquids.

<sup>5</sup> Includes supplemental gaseous fuels.

<sup>6</sup> Other is hydroelectric and nuclear power; electricity produced from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems; and net imports of electricity and coal coke.

<sup>7</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.

<sup>8</sup> Parentheses indicate exports are greater than imports.

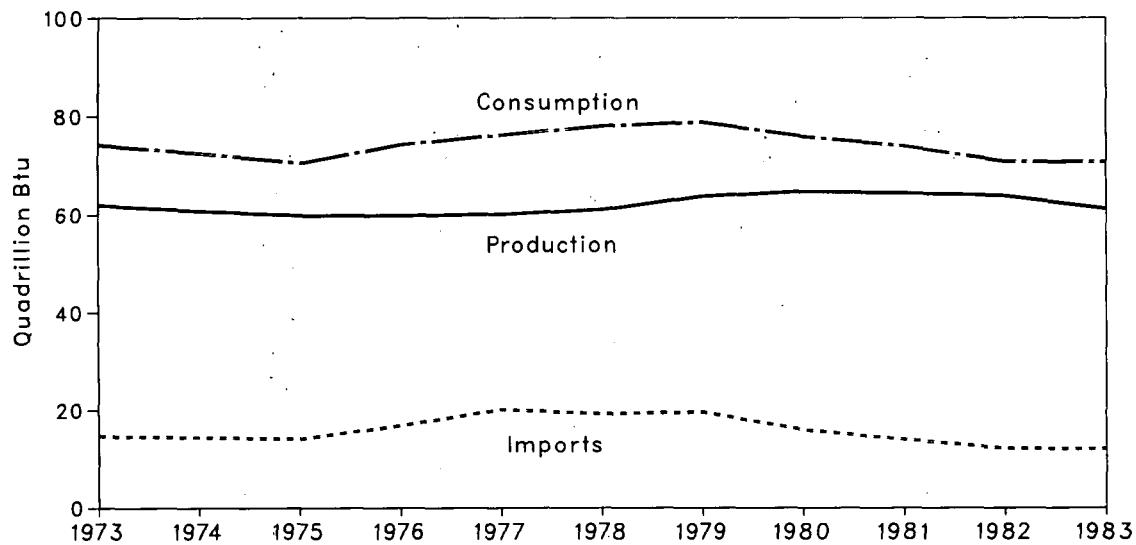
<sup>9</sup> Other is net imports of electricity and coal coke.

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

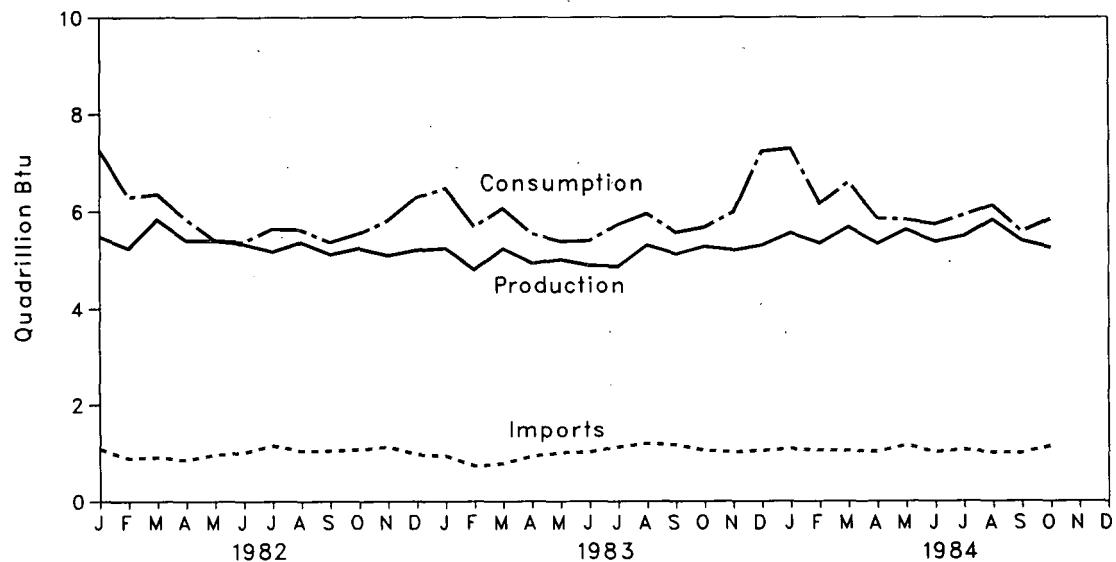
# Energy Summary

## Overview

### Yearly



### Monthly



# Energy Summary

## Overview<sup>1</sup>

		Production <sup>2</sup>	Consumption <sup>2</sup>	Imports <sup>2</sup>	Exports	Net Imports
Quadrillion (10 <sup>15</sup> ) Btu						
1973	Total	61.993	74.212	14.732	2.053	12.679
1974	Total	60.770	72.479	14.417	2.224	12.192
1975	Total	59.801	70.485	14.113	2.361	11.753
1976	Total	59.886	74.297	16.838	2.190	14.648
1977	Total	60.142	76.215	20.092	2.073	18.019
1978	Total	61.049	78.039	19.261	1.932	17.329
1979	Total	63.744	78.845	19.620	2.872	16.748
1980	Total	64.708	75.900	15.972	3.726	12.246
1981	Total	64.376	73.940	13.974	4.331	9.643
1982	January	5.489	7.262	1.086	0.318	0.768
	February	5.236	6.292	0.890	0.376	0.514
	March	5.835	6.353	0.909	0.442	0.466
	April	5.408	5.847	0.855	0.428	0.427
	May	5.395	5.409	0.958	0.421	0.537
	June	5.325	5.371	1.004	0.419	0.585
	July	5.165	5.641	1.150	0.388	0.762
	August	5.362	5.618	1.041	0.358	0.683
	September	5.109	5.369	1.042	0.376	0.666
	October	5.236	5.542	1.067	0.437	0.629
	November	5.090	5.815	1.125	0.351	0.774
	December	5.202	6.289	0.969	0.322	0.647
	<b>Total</b>	<b>63.851</b>	<b>70.807</b>	<b>12.095</b>	<b>4.637</b>	<b>7.458</b>
1983	January	5.235	6.480	0.940	0.301	0.639
	February	4.801	5.687	0.731	0.264	0.466
	March	5.231	6.067	0.782	0.319	0.463
	April	4.931	5.547	0.930	0.314	0.616
	May	5.004	5.386	1.004	0.348	0.656
	June	4.888	5.400	1.017	0.334	0.683
	July	4.865	5.737	1.123	0.274	0.849
	August	5.310	5.955	1.198	0.348	0.850
	September	5.118	5.573	1.171	0.323	0.848
	October	5.278	5.676	1.049	0.325	0.725
	November	5.206	5.982	1.018	0.280	0.738
	December	5.306	7.231	1.046	0.290	0.756
	<b>Total</b>	<b>61.175</b>	<b>70.721</b>	<b>12.008</b>	<b>3.720</b>	<b>8.288</b>
1984	January	5.559	7.290	1.088	0.245	0.843
	February	5.346	6.162	1.052	0.217	0.834
	March	5.680	6.597	1.045	0.313	0.731
	April	5.340	5.862	1.031	0.326	0.705
	May	5.626	5.830	1.163	0.365	0.798
	June	5.377	5.738	1.016	0.366	0.650
	July	5.496	5.926	1.067	0.326	0.742
	August	5.826	6.121	1.002	0.359	0.643
	September	R5.398	R5.589	1.001	0.355	0.646
	October	5.252	5.838	1.147	0.294	0.852

<sup>1</sup>For definitions, see Notes on the last page of this section.

<sup>2</sup>The sum of domestic energy production and net imports of energy does not equal domestic energy consumption. The difference is attributed to stock changes; losses and gains in conversion, transportation, and distribution; the addition of blending compounds; shipments of anthracite to U.S. Armed Forces in Europe; and adjustments to account for discrepancies between reporting systems. R=Revised data.

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

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

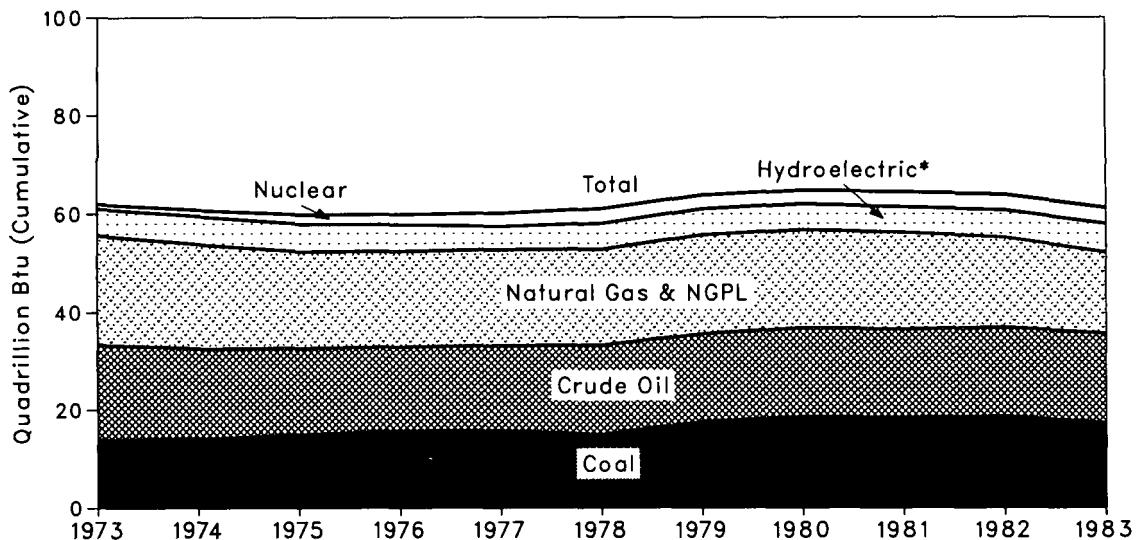
• Data do not include geothermal, wood, waste, wind, photovoltaic, or solar thermal energy sources except that consumed by electric utilities.

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

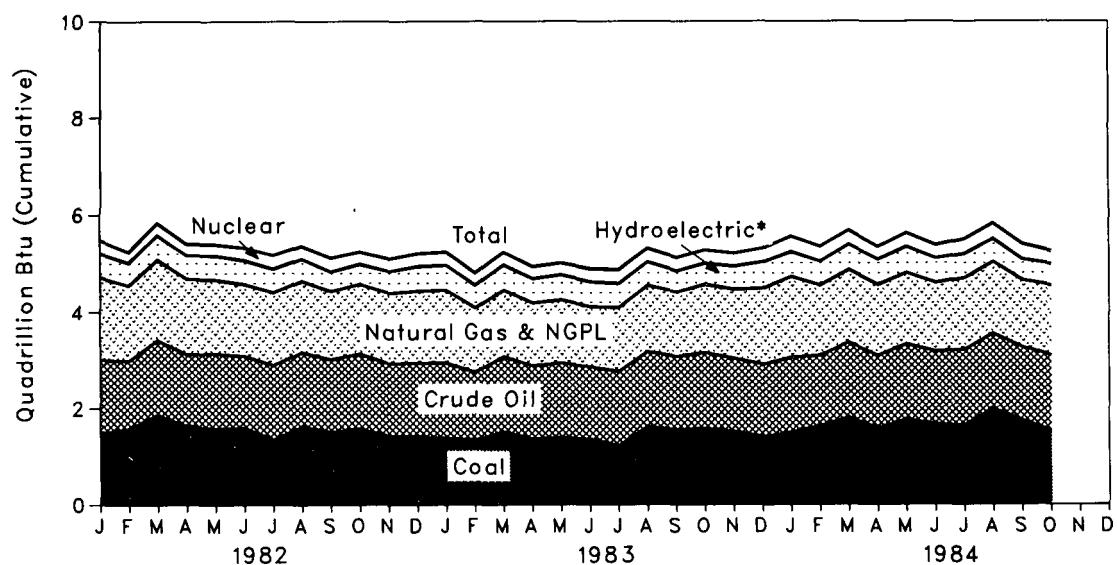
# Energy Summary

## Production of Energy by Source

Yearly



Monthly



\*Includes industrial and utility production of hydroelectric power. Also includes electricity produced from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems.

# Energy Summary

## Production of Energy by Source

		Coal	Crude Oil <sup>1</sup>	NGPL <sup>2</sup>	Natural Gas (Dry)	Hydro- electric Power <sup>3</sup>	Nuclear Electric Power	Other <sup>4</sup>	Total	Year to Date
Quadrillion (10 <sup>15</sup> ) Btu										
1973	Total	13.926	19.493	2.569	22.187	2.861	0.910	0.046	61.993	
1974	Total	14.010	18.575	2.471	21.210	3.177	1.272	0.056	60.770	
1975	Total	14.931	17.729	2.374	19.640	3.155	1.900	0.072	59.801	
1976	Total	15.649	17.262	2.327	19.480	2.976	2.111	0.081	59.886	
1977	Total	15.679	17.454	2.327	19.565	2.333	2.702	0.082	60.142	
1978	Total	14.856	18.434	2.245	19.485	2.937	3.024	0.068	61.049	
1979	Total	17.483	18.104	2.286	20.076	2.931	2.776	0.089	63.744	
1980	Total	18.544	18.249	2.254	19.907	2.900	2.739	0.114	64.708	
1981	Total	18.331	18.146	2.307	19.699	2.758	3.008	0.127	64.376	
1982	January	1.490	1.530	0.189	1.703	0.285	0.283	0.009	5.489	5.489
	February	1.580	1.413	0.169	1.562	0.282	0.222	0.008	5.236	10.725
	March	1.863	1.558	0.189	1.651	0.316	0.251	0.007	5.835	16.560
	April	1.633	1.495	0.179	1.558	0.296	0.240	0.007	5.408	21.968
	May	1.579	1.561	0.182	1.530	0.296	0.238	0.008	5.395	27.362
	June	1.592	1.504	0.175	1.483	0.296	0.265	0.010	5.325	32.688
	July	1.344	1.557	0.182	1.504	0.289	0.281	0.010	5.165	37.853
	August	1.618	1.552	0.183	1.471	0.253	0.275	0.010	5.362	43.216
	September	1.508	1.514	0.176	1.410	0.211	0.280	0.010	5.109	48.324
	October	1.573	1.565	0.184	1.439	0.209	0.256	0.011	5.236	53.560
	November	1.422	1.513	0.187	1.455	0.246	0.256	0.011	5.090	58.650
	December	1.401	1.546	0.195	1.489	0.293	0.269	0.009	5.202	63.851
	Total	18.603	18.309	2.191	18.255	3.271	3.115	0.108	63.851	
1983	January	1.382	1.564	0.189	1.505	0.309	0.276	0.011	5.235	5.235
	February	1.336	1.422	0.170	1.325	0.295	0.245	0.008	4.801	10.037
	March	1.517	1.564	0.184	1.372	0.320	0.263	0.010	5.231	15.268
	April	1.362	1.527	0.174	1.296	0.317	0.246	0.009	4.931	20.199
	May	1.392	1.552	0.179	1.301	0.330	0.243	0.007	5.004	25.204
	June	1.361	1.508	0.176	1.242	0.325	0.266	0.010	4.888	30.091
	July	1.216	1.553	0.184	1.321	0.297	0.282	0.012	4.865	34.956
	August	1.614	1.561	0.187	1.371	0.273	0.289	0.016	5.310	40.266
	September	1.549	1.528	0.185	1.336	0.230	0.275	0.014	5.118	45.384
	October	1.580	1.577	0.192	1.410	0.219	0.284	0.015	5.278	50.662
	November	1.513	1.526	0.190	1.428	0.261	0.275	0.013	5.206	55.869
	December	1.403	1.510	0.185	1.573	0.334	0.290	0.011	5.306	61.175
	Total	17.225	18.392	2.195	16.482	3.510	3.235	0.135	61.175	
1984	January	1.501	1.557	0.190	1.665	0.314	0.321	0.011	5.559	5.559
	February	1.628	1.468	0.182	1.447	0.295	0.312	0.013	5.346	10.905
	March	1.803	1.567	0.190	1.491	0.321	0.293	0.015	5.680	16.585
	April	1.584	1.512	0.187	1.461	0.317	0.266	0.014	5.340	21.925
	May	1.766	1.574	0.193	1.460	0.337	0.283	0.014	5.626	27.551
	June	1.665	1.521	0.187	1.410	0.304	0.277	0.013	5.377	32.928
	July	1.645	1.577	0.197	1.467	0.291	0.306	0.013	5.496	38.424
	August	1.974	1.579	0.199	1.469	0.266	0.323	0.016	5.826	44.249
	September	1.748	1.524	0.193	R1.379	0.221	0.318	0.015	R5.398	R49.647
	October	1.520	1.591	0.197	1.435	0.221	0.273	0.016	5.252	54.899

<sup>1</sup>Includes lease condensate.

<sup>2</sup>Natural gas plant liquids.

<sup>3</sup>Includes industrial and utility production of hydroelectric power.

<sup>4</sup>Includes only electricity produced from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems.

R=Revised data.

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

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

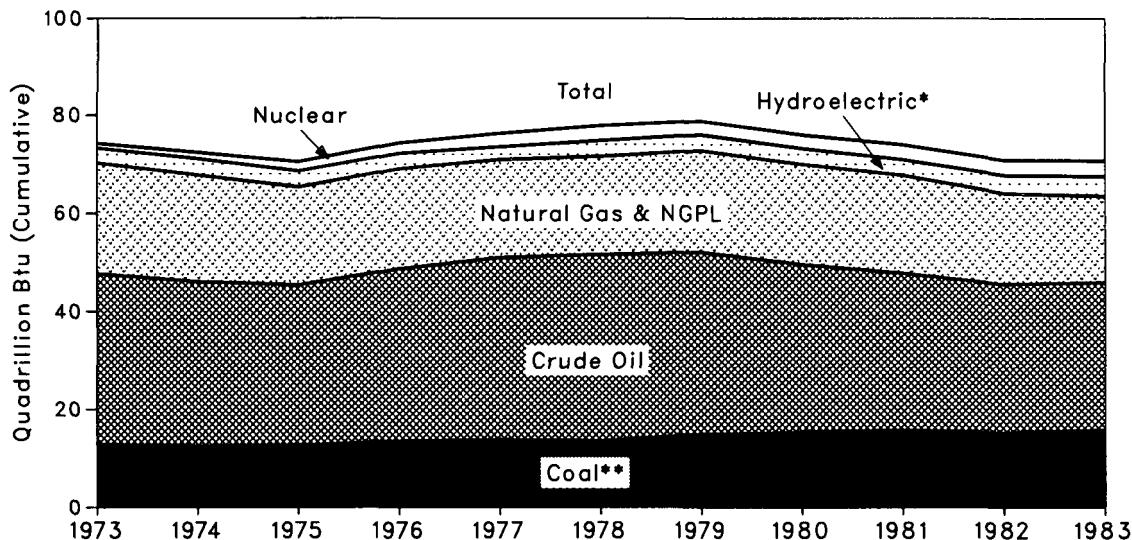
• Data do not include geothermal, wood, waste, wind, photovoltaic, or solar thermal energy sources except that consumed by electric utilities.

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

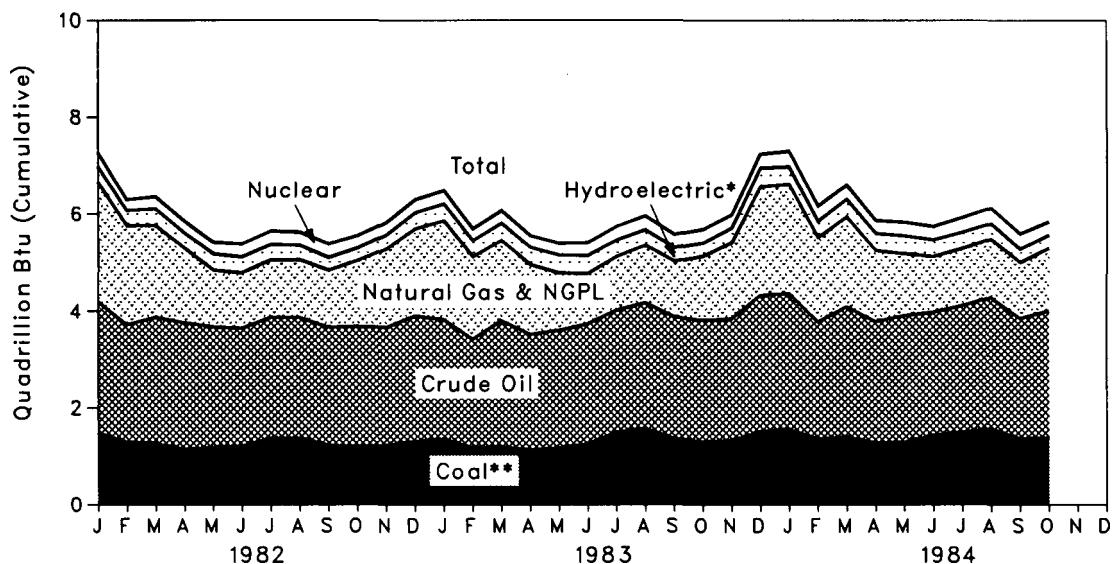
# Energy Summary

## Consumption of Energy by Source

Yearly



Monthly



\*Includes electricity produced from geothermal, wood, waste, photovoltaic and solar thermal energy sources connected to electric utility distribution systems.

\*\*Includes net imports of coal coke.

# Energy Summary

## Consumption of Energy by Source

		Coal	Natural Gas <sup>1</sup>	Petro-leum	Hydro-electric Power <sup>2</sup>	Nuclear Electric Power	Net Imports of Coal Coke <sup>3</sup>	Other <sup>4</sup>	Total	Year to Date
Quadrillion (10 <sup>15</sup> ) Btu										
1973	Total	12.903	22.512	34.840	3.010	0.910	(0.008)	0.046	74.212	
1974	Total	12.596	21.732	33.455	3.309	1.272	0.059	0.056	72.479	
1975	Total	12.601	19.948	32.731	3.219	1.900	0.014	0.072	70.485	
1976	Total	13.519	20.345	35.175	3.066	2.111	0.000	0.081	74.297	
1977	Total	13.848	19.931	37.122	2.515	2.702	0.015	0.082	76.215	
1978	Total	13.710	20.000	37.965	3.141	3.024	0.131	0.068	78.039	
1979	Total	14.983	20.666	37.123	3.141	2.776	0.066	0.089	78.845	
1980	Total	15.373	20.391	34.202	3.118	2.739	(0.037)	0.114	75.900	
1981	Total	15.860	19.926	31.931	3.105	3.008	(0.017)	0.127	73.940	
1982	January	1.486	2.467	2.707	0.311	0.283	0.000	0.009	7.262	7.262
	February	1.292	2.040	2.426	0.305	0.222	(0.001)	0.008	6.292	13.554
	March	1.260	1.889	2.612	0.336	0.251	(0.002)	0.007	6.353	19.907
	April	1.152	1.527	2.607	0.315	0.240	(0.001)	0.007	5.847	25.753
	May	1.186	1.168	2.492	0.319	0.238	(0.003)	0.008	5.409	31.162
	June	1.210	1.146	2.436	0.308	0.265	(0.004)	0.010	5.371	36.533
	July	1.381	1.177	2.488	0.308	0.281	(0.003)	0.010	5.641	42.174
	August	1.374	1.183	2.491	0.286	0.275	(0.001)	0.010	5.618	47.792
	September	1.227	1.172	2.440	0.244	0.280	(0.003)	0.010	5.369	53.162
	October	1.190	1.348	2.494	0.244	0.256	(0.001)	0.011	5.542	58.703
	November	1.229	1.603	2.438	0.279	0.256	(0.002)	0.011	5.815	64.518
	December	1.303	1.788	2.600	0.323	0.269	(0.001)	0.009	6.289	70.807
	Total	15.291	18.507	30.232	3.577	3.115	(0.023)	0.108	70.807	
1983	January	1.358	2.029	2.469	0.338	0.276	(0.001)	0.011	6.480	6.480
	February	1.179	1.692	2.241	0.324	0.245	(0.001)	0.008	5.687	12.167
	March	1.195	1.646	2.606	0.349	0.263	(0.001)	0.010	6.067	18.234
	April	1.138	1.427	2.385	0.345	0.246	(0.002)	0.009	5.547	23.782
	May	1.171	1.181	2.433	0.353	0.243	(0.002)	0.007	5.386	29.168
	June	1.255	1.036	2.481	0.352	0.266	(0.001)	0.010	5.400	34.568
	July	1.497	1.100	2.519	0.329	0.282	(0.002)	0.012	5.737	40.305
	August	1.572	1.176	2.596	0.307	0.289	(0.001)	0.016	5.955	46.260
	September	1.365	1.136	2.517	0.267	0.275	(0.001)	0.014	5.573	51.833
	October	1.303	1.310	2.509	0.256	0.284	(0.001)	0.015	5.676	57.509
	November	1.324	1.562	2.516	0.293	0.275	(0.001)	0.013	5.982	63.491
	December	1.520	2.240	2.805	0.367	0.290	(0.003)	0.011	7.231	70.721
	Total	15.877	17.535	30.076	3.880	3.235	(0.016)	0.135	70.721	
1984	January	1.553	2.254	2.805	0.345	0.321	0.001	0.011	7.290	7.290
	February	1.360	1.734	2.414	0.326	0.312	0.002	0.013	6.162	13.452
	March	1.403	1.848	2.686	0.352	0.293	(0.001)	0.015	6.597	20.049
	April	1.270	1.454	2.513	0.347	0.266	0.000	0.014	5.862	25.911
	May	1.296	1.265	2.611	0.361	0.283	(0.001)	0.014	5.830	31.741
	June	1.436	1.135	2.546	0.334	0.277	(0.003)	0.013	5.738	37.479
	July	1.506	1.170	2.607	0.325	0.306	(0.001)	0.013	5.926	43.406
	August	1.574	1.202	2.705	0.303	0.323	(0.002)	0.016	6.121	49.526
	September	1.368	R1.142	2.486	0.261	0.318	0.000	0.015	R5.589	R55.115
	October	1.394	1.277	2.622	0.260	0.273	(0.004)	0.016	5.838	60.954

<sup>1</sup>Includes supplemental gaseous fuels.

<sup>2</sup>Includes industrial and utility production and net imports of electricity.

<sup>3</sup>Parentheses indicate exports are greater than imports.

<sup>4</sup>Includes only electricity produced from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems.

R=Revised data.

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

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

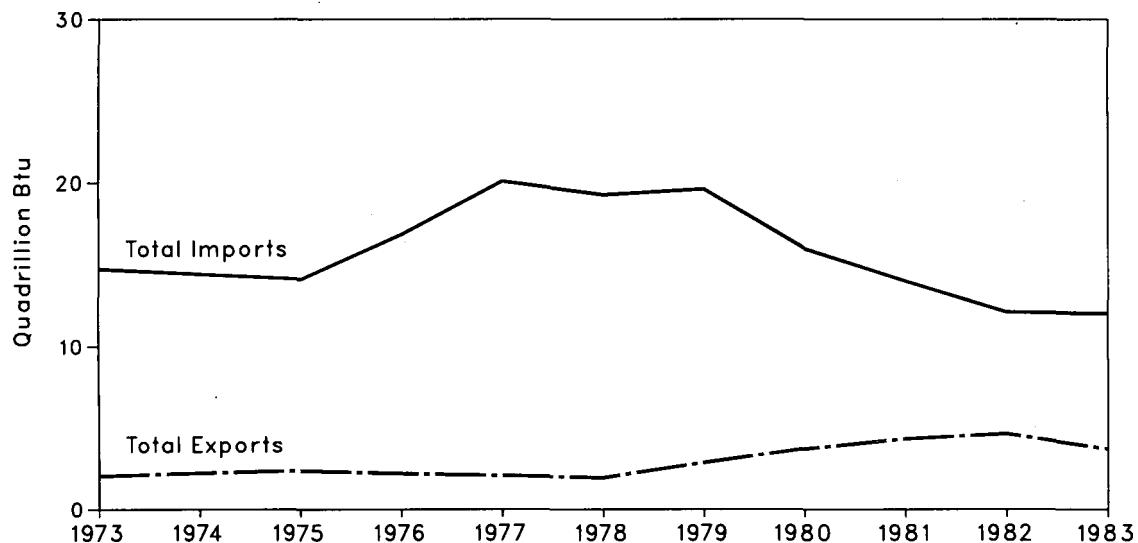
• Data do not include geothermal, wood, waste, wind, photovoltaic, or solar thermal energy sources except that consumed by electric utilities.

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

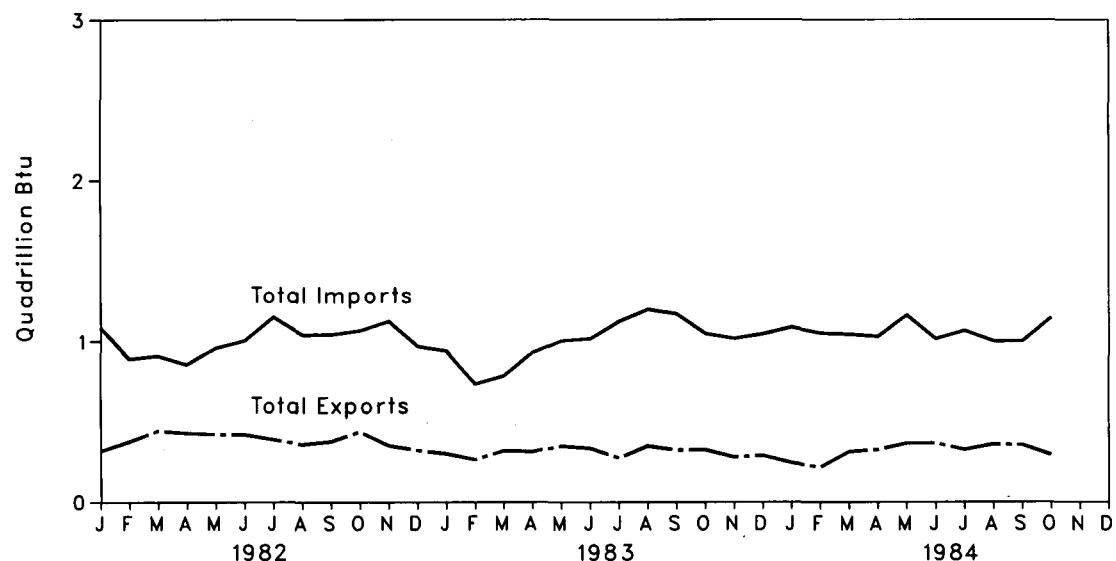
## Energy Summary

### Energy Imports and Exports

Yearly



Monthly



# Energy Summary

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

		Coal	Crude Oil <sup>2</sup>	Refined Petroleum Products <sup>3</sup>	Natural Gas	Electricity	Coal Coke	Total	Year to Date
Quadrillion (10 <sup>15</sup> ) Btu									
1973	Total	(1.422)	6.883	6.097	0.981	0.148	(0.008)	12.679	
1974	Total	(1.568)	7.389	5.273	0.907	0.133	0.059	12.192	
1975	Total	(1.738)	8.708	3.800	0.904	0.064	0.014	11.753	
1976	Total	(1.567)	11.221	3.982	0.922	0.089	0.000	14.648	
1977	Total	(1.401)	13.921	4.321	0.981	0.182	0.015	18.019	
1978	Total	(1.004)	13.125	3.932	0.941	0.204	0.131	17.329	
1979	Total	(1.702)	13.328	3.603	1.243	0.211	0.066	16.748	
1980	Total	(2.391)	10.586	2.912	0.957	0.217	(0.037)	12.246	
1981	Total	(2.918)	8.854	2.522	0.855	0.347	(0.017)	9.643	
1982	January	(0.160)	0.624	0.181	0.097	0.027	0.000	0.768	0.768
	February	(0.234)	0.438	0.207	0.081	0.023	(0.001)	0.514	1.282
	March	(0.273)	0.461	0.181	0.078	0.020	(0.002)	0.466	1.748
	April	(0.284)	0.468	0.153	0.071	0.019	(0.001)	0.427	2.175
	May	(0.262)	0.551	0.166	0.063	0.022	(0.003)	0.537	2.712
	June	(0.280)	0.654	0.147	0.056	0.012	(0.004)	0.585	3.297
	July	(0.239)	0.726	0.196	0.063	0.019	(0.003)	0.762	4.058
	August	(0.190)	0.641	0.144	0.056	0.033	(0.001)	0.683	4.742
	September	(0.226)	0.603	0.196	0.062	0.033	(0.003)	0.666	5.407
	October	(0.260)	0.614	0.168	0.073	0.035	(0.001)	0.629	6.036
	November	(0.203)	0.629	0.228	0.088	0.033	(0.002)	0.774	6.810
	December	(0.157)	0.507	0.161	0.107	0.030	(0.001)	0.647	7.458
	Total	(2.768)	6.917	2.128	0.896	0.307	(0.023)	7.458	
1983	January	(0.116)	0.514	0.105	0.109	0.029	(0.001)	0.639	0.639
	February	(0.113)	0.327	0.133	0.092	0.029	(0.001)	0.466	1.105
	March	(0.162)	0.382	0.133	0.082	0.028	(0.001)	0.463	1.568
	April	(0.157)	0.530	0.148	0.070	0.028	(0.002)	0.616	2.184
	May	(0.180)	0.556	0.201	0.057	0.023	(0.002)	0.656	2.840
	June	(0.188)	0.600	0.187	0.057	0.028	(0.001)	0.683	3.523
	July	(0.159)	0.673	0.251	0.054	0.032	(0.002)	0.849	4.372
	August	(0.217)	0.732	0.251	0.051	0.034	(0.001)	0.850	5.222
	September	(0.195)	0.705	0.238	0.064	0.037	(0.001)	0.848	6.070
	October	(0.209)	0.597	0.240	0.061	0.037	(0.001)	0.725	6.794
	November	(0.153)	0.551	0.232	0.076	0.032	(0.001)	0.738	7.532
	December	(0.162)	0.563	0.222	0.104	0.033	(0.003)	0.756	8.288
	Total	(2.013)	6.730	2.340	0.878	0.370	(0.016)	8.288	
1984	January	(0.131)	0.519	0.331	0.093	E0.031	0.001	0.843	0.843
	February	(0.108)	0.468	0.375	0.067	E0.031	0.002	0.834	1.678
	March	(0.151)	0.581	0.207	0.065	E0.031	(0.001)	0.731	2.409
	April	(0.198)	0.567	0.239	0.068	E0.030	0.000	0.705	3.115
	May	(0.214)	0.670	0.251	0.068	E0.025	(0.001)	0.798	3.913
	June	(0.205)	0.557	0.210	0.060	E0.030	(0.003)	0.650	4.563
	July	(0.214)	0.639	0.228	0.055	E0.034	(0.001)	0.742	5.304
	August	(0.214)	0.551	0.217	0.053	E0.037	(0.002)	0.643	5.947
	September	(0.227)	0.547	0.232	0.054	E0.040	0.000	0.646	6.593
	October	(0.172)	0.652	0.271	0.065	E0.040	(0.004)	0.852	7.445

<sup>1</sup>Net imports equals imports minus exports. Parentheses indicate exports are greater than imports.

<sup>2</sup>Includes crude oil, lease condensate, and imports of crude oil for the Strategic Petroleum Reserve.

<sup>3</sup>Includes refined petroleum products, unfinished oils, natural gasoline, and plant condensate.

E=Estimated value.

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

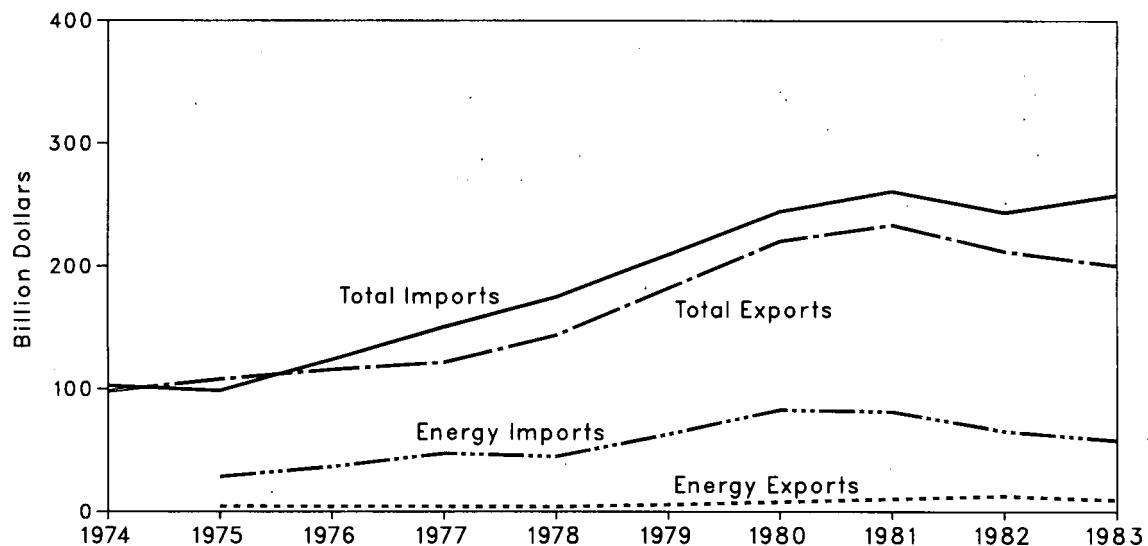
• Totals may not equal sum of components due to independent rounding.

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

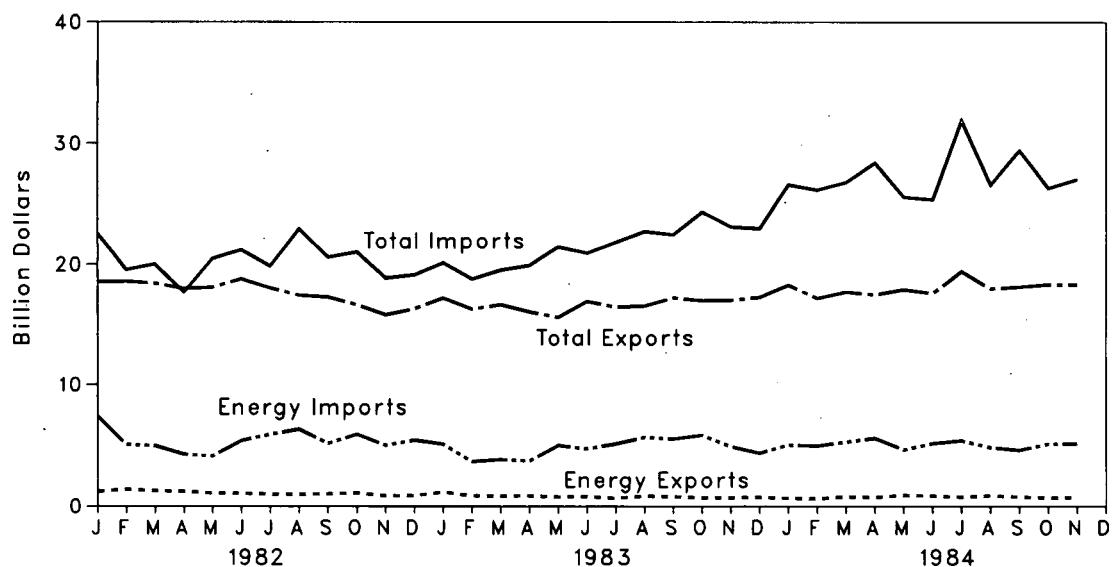
# Energy Summary

## Merchandise Trade Value

Yearly



Monthly



# Energy Summary

## Merchandise Trade Value

		Exports			Imports			Trade Balance		
		Energy	All Other	Total	Energy	All Other	Total	Energy	All Other	Total
Million dollars										
1974	Total	NA	NA	98,092	NA	NA	102,559	NA	NA	-4,467
1975	Total	4,470	103,182	107,652	28,325	70,178	98,503	-23,855	+33,004	+9,149
1976	Total	4,226	110,997	115,223	36,384	87,093	123,477	-32,158	+23,904	-8,254
1977	Total	4,184	117,048	121,232	47,153	103,237	150,390	-42,969	+13,811	-29,158
1978	Total	3,882	139,799	143,681	44,763	129,994	174,757	-40,881	+9,805	-31,076
1979	Total	5,675	176,185	181,860	63,077	146,381	209,458	-57,402	+29,803	-27,599
1980	Total	7,982	212,644	220,626	82,924	161,947	244,871	-74,942	+50,698	-24,244
1981	Total	10,279	223,398	233,677	81,360	179,622	260,982	-71,081	+43,776	-27,305
1982	January	1,205	17,379	18,584	7,439	15,134	22,573	-6,234	+2,245	-3,989
	February	1,361	17,253	18,614	5,107	14,463	19,570	-3,746	+2,790	-956
	March	1,256	17,206	18,462	5,009	15,010	20,019	-3,753	+2,196	-1,557
	April	1,201	16,804	18,005	4,312	13,402	17,714	-3,111	+3,402	+291
	May	1,065	17,059	18,124	4,167	16,310	20,477	-3,102	+749	-2,353
	June	1,035	17,788	18,823	5,427	15,760	21,187	-4,392	+2,028	-2,364
	July	974	17,086	18,060	5,943	13,906	19,849	-4,969	+3,179	-1,790
	August	961	16,502	17,463	6,353	16,577	22,930	-5,392	-75	-5,467
	September	998	16,322	17,320	5,201	15,380	20,581	-4,203	+942	-3,261
	October	1,072	15,599	16,671	5,947	15,059	21,006	-4,875	+540	-4,335
	November	847	15,005	15,852	5,037	13,855	18,892	-4,190	+1,149	-3,041
	December	855	15,492	16,347	5,468	13,686	19,154	-4,613	+1,805	-2,808
	Total	12,729	199,464	212,193	65,409	178,543	243,952	-52,680	+20,921	-31,759
1983	January	1,142	16,090	17,232	5,142	14,985	20,127	-4,000	+1,105	-2,895
	February	833	15,479	16,312	3,704	15,100	18,804	-2,871	+378	-2,493
	March	822	15,868	16,690	3,865	15,663	19,528	-3,043	+206	-2,837
	April	850	15,245	16,095	3,763	16,151	19,914	-2,913	-906	-3,819
	May	750	14,905	15,655	5,033	16,413	21,446	-4,283	-1,508	-5,791
	June	791	16,168	16,959	4,767	16,149	20,916	-3,976	+19	-3,957
	July	644	15,842	16,486	5,164	16,664	21,828	-4,520	-821	-5,341
	August	824	15,758	16,582	5,703	17,011	22,714	-4,879	-1,253	-6,132
	September	778	16,479	17,257	5,571	16,880	22,451	-4,793	-402	-5,195
	October	699	16,334	17,033	5,872	18,461	24,333	-5,173	-2,127	-7,300
	November	689	16,374	17,063	4,951	18,164	23,115	-4,262	-1,790	-6,052
	December	739	16,559	17,298	4,417	18,559	22,976	-3,678	-2,000	-5,678
	Total	9,500	190,986	200,486	57,952	200,096	258,048	-48,452	-9,110	-57,562
1984	January	660	17,667	18,327	5,089	21,497	26,586	-4,429	-3,831	-8,260
	February	610	16,602	17,212	5,006	21,141	26,147	-4,396	-4,539	-8,935
	March	767	16,960	17,727	5,323	21,448	26,771	-4,556	-4,488	-9,044
	April	739	16,783	17,522	5,629	22,739	28,368	-4,890	-5,957	-10,847
	May	893	17,057	17,950	4,696	20,873	25,569	-3,803	-3,816	-7,619
	June	848	16,785	17,633	5,206	20,150	25,356	-4,358	-3,365	-7,723
	July	758	18,684	19,442	5,434	26,449	31,883	-4,676	-7,764	-12,440
	August	864	17,172	18,036	4,886	21,681	26,567	-4,022	-4,509	-8,531
	September	773	17,404	18,177	4,663	24,767	29,430	-3,890	-7,363	-11,253
	October	681	17,706	18,387	5,168	21,145	26,313	-4,487	-3,440	-7,927
	November	724	17,649	18,373	5,207	21,826	27,033	-4,483	-4,178	-8,661

NA=Not available.

Notes: • Annual totals are unadjusted and may not equal the sum of monthly totals, which are adjusted for seasonal and working-day variation, if present and identifiable.

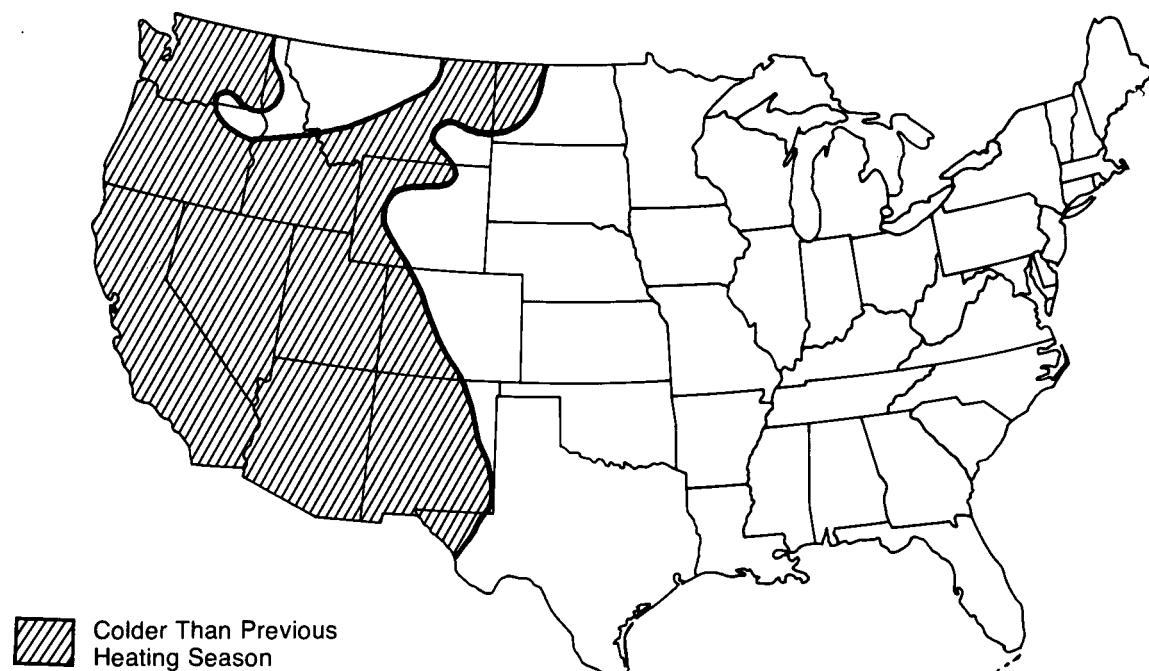
• The U.S. import statistics reflect both government and nongovernment imports of merchandise from foreign countries into the U.S. customs territory (which is comprised of the 50 States, the District of Columbia, and Puerto Rico) and the Virgin Islands.

Additional Notes and Sources: • See the last page of this section.

## Energy Summary

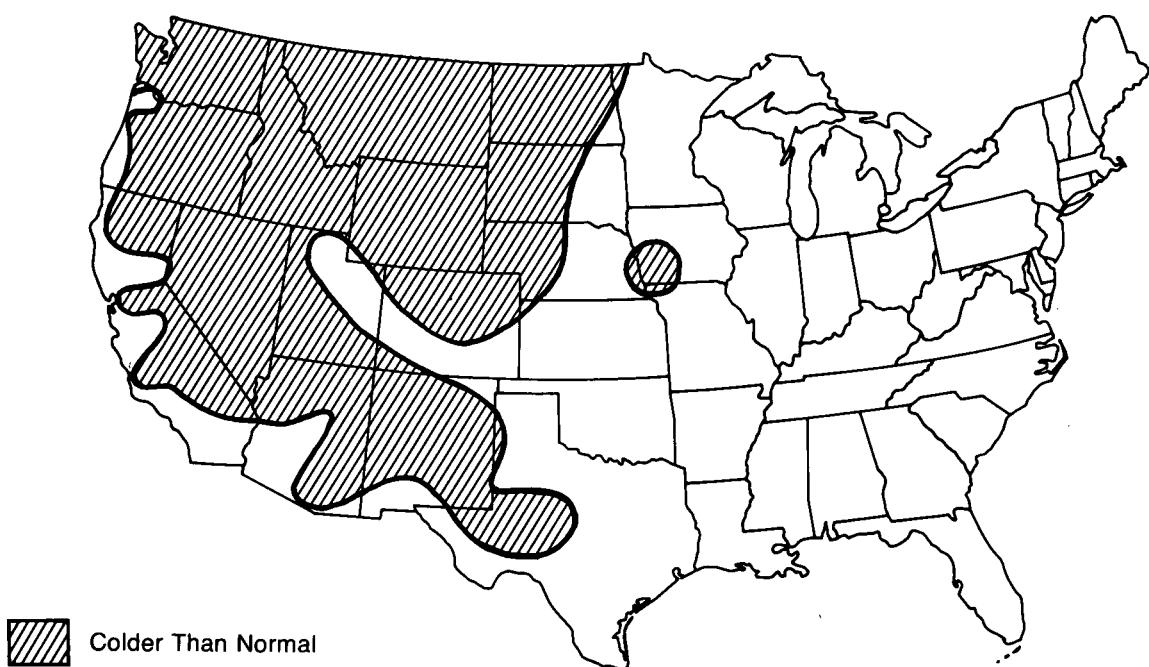
Heating Degree-Days Accumulated from July 1, 1984, through December 29, 1984

### Departure from Previous Heating Season



Colder Than Previous  
Heating Season

### Departure from Normal



Colder Than Normal

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

# Energy Summary

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

Census Divisions	December 1 through December 31			Cumulative July 1 through December 31						
				Percent Change						
	Normal <sup>2</sup>	1983	1984	Normal to 1984	1983 to 1984	Normal	1983	1984	Normal to 1984	1983 to 1984
<b>New England</b> Conn., Maine, Mass., N.H., R.I., Vt.	1,107	1,127	931	-15.9	-17.4	2,458	2,353	2,253	-8.3	-4.2
<b>Middle Atlantic</b> N.J., N.Y., Pa.	1,022	1,099	809	-20.8	-26.4	2,174	2,214	1,856	-14.6	-16.2
<b>Eastern North Central</b> Ill., Ind., Mich., Ohio, Wisc.	1,135	1,413	961	-15.3	-32.0	2,402	2,597	2,188	-8.9	-15.7
<b>Western North Central</b> Iowa, Kans., Minn., Mo., Nebr., N.Dak., S.Dak.	1,219	1,667	1,154	-5.3	-30.8	2,586	2,935	2,525	-2.4	-14.0
<b>South Atlantic</b> Del., Fla., Ga., Md. and D.C., N.C., S.C., Va., W.Va.	598	677	398	-33.4	-41.2	1,167	1,226	921	-21.1	-24.9
<b>Eastern South Central</b> Ala., Ky., Miss., Tenn.	706	896	451	-36.1	-49.7	1,410	1,534	1,061	-24.8	-30.8
<b>Western South Central</b> Ark., La., Okla., Tex.	511	802	332	-35.0	-58.6	912	1,116	728	-20.2	-34.8
<b>Mountain</b> Ariz., Colo., Idaho, Mont., Nev., N.Mex., Utah, Wyo.	949	1,078	984	3.7	-8.7	2,226	2,233	2,332	4.8	4.4
<b>Pacific Coast</b> Calif., Oreg., Wash.	561	536	613	9.3	14.4	1,209	1,076	1,311	8.4	21.8
<b>U.S. Average<sup>3</sup></b>	<b>853</b>	<b>1,011</b>	<b>711</b>	<b>-16.6</b>	<b>-29.7</b>	<b>1,787</b>	<b>1,872</b>	<b>1,616</b>	<b>-9.6</b>	<b>-13.7</b>

<sup>1</sup> See Note on the last page of this section for explanation of degree-days.

<sup>2</sup> Normal is based on calculations of data from 1951 through 1980.

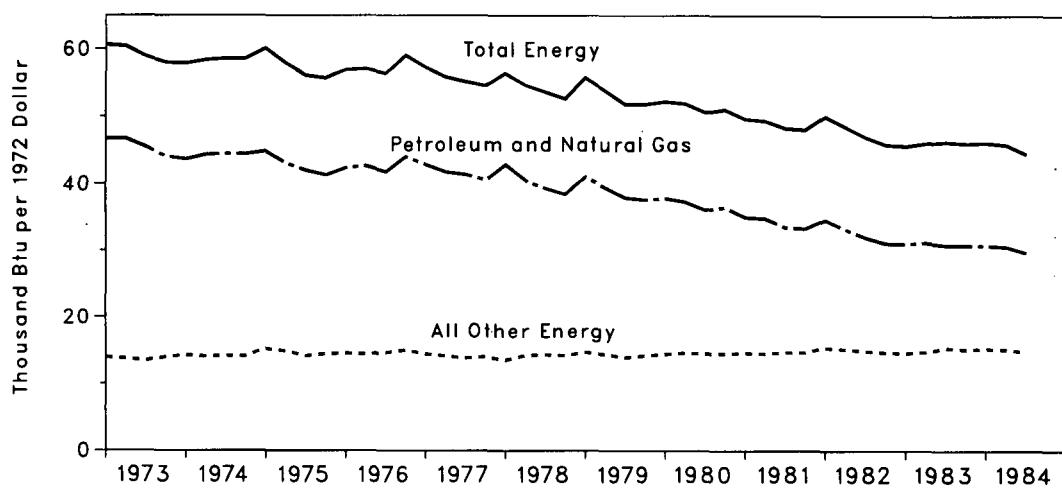
<sup>3</sup> Excludes Alaska and Hawaii.

## Energy Summary

### Energy Indicator—Energy Consumption per Dollar of Gross National Product (Seasonally Adjusted)

	Annual Rate of Energy Consumption	Gross National Product (GNP)	Energy Consumption per Dollar of GNP (Seasonally Adjusted)		
			Total Energy	Petroleum and Natural Gas	All Other Energy
			Trillion 1972 dollars	Thousand Btu per 1972 dollar	
1973	74.212	1.254	59.2	45.7	13.5
1974	72.479	1.246	58.2	44.3	13.9
1975	70.485	1.232	57.2	42.8	14.4
1976	74.297	1.298	57.2	42.8	14.4
1977	76.215	1.370	55.6	41.6	14.0
1978	78.039	1.439	54.2	40.3	13.9
1979	78.845	1.479	53.3	39.1	14.2
1980	75.900	1.475	51.5	37.0	14.5
1981	73.940	1.512	48.8	34.3	14.5
1982	1st Quarter <sup>1</sup>	74.278	50.1	34.7	15.4
	2nd Quarter <sup>1</sup>	71.757	48.5	33.3	15.2
	3rd Quarter <sup>1</sup>	69.370	47.0	32.1	14.9
	4th Quarter <sup>1</sup>	67.910	45.9	31.2	14.7
	Year	70.807	47.8	32.8	15.0
1983	1st Quarter <sup>1</sup>	68.206	45.7	31.1	14.6
	2nd Quarter <sup>1</sup>	70.349	46.1	31.3	14.8
	3rd Quarter <sup>1</sup>	71.830	46.3	30.9	15.4
	4th Quarter <sup>1</sup>	72.437	46.1	30.9	15.2
	Year	70.721	46.1	31.0	15.1
1984	1st Quarter <sup>1</sup>	74.370	46.2	30.9	15.3
	2nd Quarter <sup>1</sup>	75.251	45.9	30.7	15.2
	3rd Quarter <sup>1</sup>	R73.292	44.6	R29.8	R14.8

### Quarterly Energy Consumption per Dollar of Gross National Product<sup>1</sup> (Seasonally Adjusted)



<sup>1</sup>Quarterly data are seasonally adjusted and shown at annual rates.

R=Revised data.

Notes • Geographic coverage is the 50 States and the District of Columbia.

• Yearly data may not equal average of quarters due to seasonality adjustments and independent rounding.

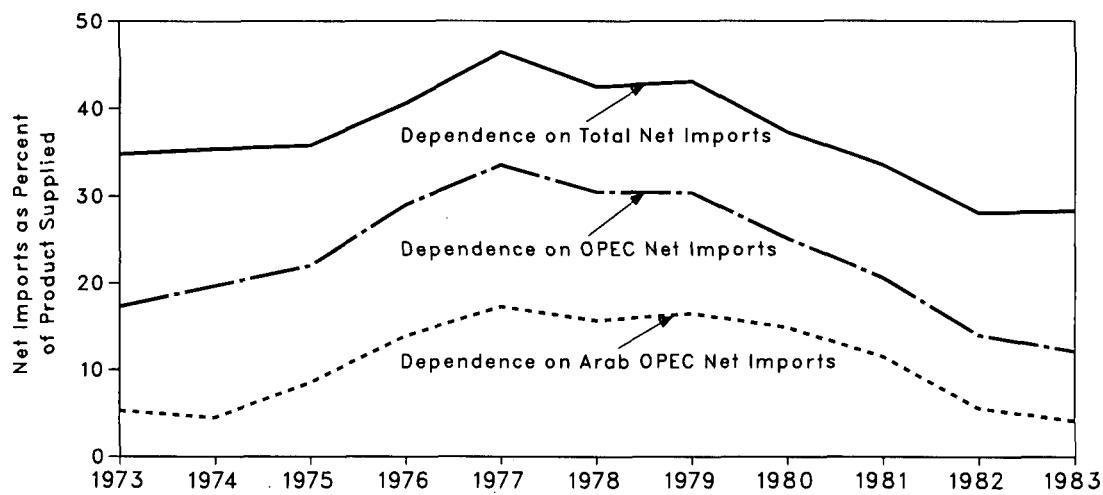
Sources: • See the last page of this section.

# Energy Summary

## Energy Indicator—U.S. Dependence on Petroleum Net Imports<sup>1</sup>

		Net Imports <sup>2</sup>			Net Imports as Percent of U.S. Petroleum Products Supplied			
		From Arab OPEC <sup>3</sup> Countries	From All OPEC <sup>4</sup> Countries	From All Countries	Petroleum Products Supplied	From Arab OPEC <sup>3</sup> Countries	From All OPEC <sup>4</sup> Countries	From All Countries
<b>Annual Rate</b>		Thousand barrels per day					Percent	
1973	Average	914	2,991	6,025	17,308	5.3	17.3	34.8
1974	Average	752	3,277	5,892	16,653	4.5	19.7	35.4
1975	Average	1,382	3,599	5,846	16,322	8.5	22.0	35.8
1976	Average	2,423	5,063	7,090	17,461	13.9	29.0	40.6
1977	Average	3,184	6,190	8,565	18,431	17.3	33.6	46.5
1978	Average	2,962	5,747	8,002	18,847	15.7	30.5	42.5
1979	Average	3,054	5,633	7,985	18,513	16.5	30.4	43.1
1980	Average	2,549	4,293	6,365	17,056	14.9	25.2	37.3
1981	Average	1,844	3,315	5,401	16,058	11.5	20.6	33.6
1982	1st Quarter	1,105	2,391	4,038	15,892	7.0	15.1	25.4
	2nd Quarter	817	1,925	4,075	15,292	5.3	12.6	26.6
	3rd Quarter	819	2,239	4,721	14,893	5.5	15.0	31.7
	4th Quarter	672	1,992	4,353	15,119	4.4	13.2	28.8
	Average	852	2,136	4,298	15,296	5.6	14.0	28.1
1983	1st Quarter	351	1,174	3,079	15,026	2.3	7.8	20.5
	2nd Quarter	444	1,708	4,237	14,825	3.0	11.5	28.6
	3rd Quarter	860	2,501	5,370	15,333	5.6	16.3	35.0
	4th Quarter	857	1,972	4,536	15,732	5.4	12.5	28.8
	Average	630	1,843	4,312	15,231	4.1	12.1	28.3
1984	1st Quarter	754	1,855	4,741	16,058	4.7	11.6	29.5
	2nd Quarter	891	2,227	4,755	15,579	5.7	14.3	30.5
	3rd Quarter	872	2,069	4,555	15,668	5.6	13.2	29.1

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



<sup>1</sup>Beginning in October 1977, Strategic Petroleum Reserves are included.

<sup>2</sup>Net imports equals imports minus exports. Imports from OPEC countries exclude indirect imports which are refined products imported primarily from Caribbean and West European areas and refined from crude oil produced in OPEC countries.

<sup>3</sup>Includes Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and the United Arab Emirates.

<sup>4</sup>Includes Arab OPEC countries plus Ecuador, Gabon, Indonesia, Iran, Nigeria, and Venezuela.

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

• Annual averages may not equal average of quarters due to independent rounding.

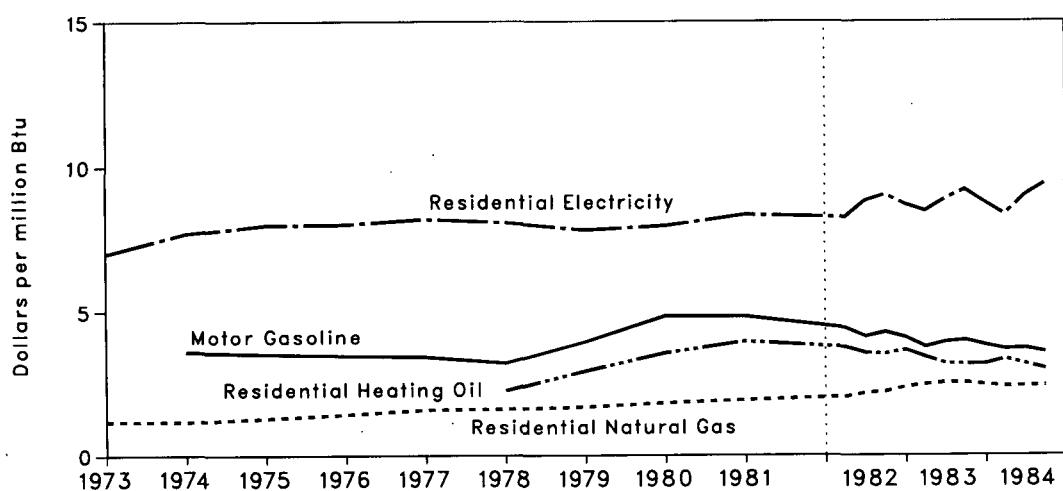
Sources: • See the last page of this section.

## Energy Summary

### Energy Indicator—Cost of Fuels to End Users in Constant (1972) Dollars<sup>1</sup>

		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	121.4	1.19	2.39	7.00
1974	Average	45.1	3.61	NA	NA	121.3	1.18	2.63	7.71
1975	Average	44.1	3.53	NA	NA	132.9	1.30	2.73	8.00
1976	Average	43.4	3.47	NA	NA	145.5	1.43	2.74	8.03
1977	Average	42.9	3.43	NA	NA	162.2	1.59	2.80	8.21
1978	Average	40.1	3.21	31.4	2.26	164.2	1.62	2.76	8.09
1979	Average	49.4	3.95	40.6	2.93	171.8	1.69	2.67	7.83
1980	Average	60.5	4.84	49.4	3.56	186.8	1.82	2.72	7.97
1981	Average	60.4	4.83	54.9	3.96	197.3	1.92	2.85	8.35
1982	1st Quarter	55.3	4.42	52.2	3.76	208.5	2.03	2.82	8.26
	2nd Quarter	51.7	4.13	49.4	3.56	221.6	2.16	3.01	8.82
	3rd Quarter	53.5	4.28	48.9	3.53	226.4	2.21	3.08	9.03
	4th Quarter	51.3	4.10	50.7	3.66	243.0	2.37	2.97	8.70
	Average	53.0	4.24	50.3	3.63	224.1	2.19	2.97	8.70
1983	1st Quarter	47.1	3.77	47.3	3.41	252.6	2.46	2.89	8.47
	2nd Quarter	49.3	3.94	44.2	3.19	260.0	2.53	3.03	8.88
	3rd Quarter	50.0	4.00	43.9	3.17	258.1	2.52	3.14	9.20
	4th Quarter	47.9	3.83	43.9	3.17	250.9	2.45	2.99	8.76
	Average	48.6	3.89	45.3	3.27	254.5	2.48	3.01	8.82
1984	1st Quarter	46.1	3.69	46.4	3.35	245.0	2.39	2.85	8.35
	2nd Quarter	46.5	3.72	43.9	3.17	247.2	2.41	3.07	9.00
	3rd Quarter	44.9	3.59	41.6	3.00	248.5	2.42	3.21	9.41

### Average Cost of Fuels to End Users in Constant (1972) Dollars<sup>1</sup>



<sup>1</sup>Fuel costs shown on this page are calculated using the Urban Consumer Price Index developed by the Bureau of Labor Statistics. See the Conversion Factors section of this report.

NA=Not available.

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

• Annual averages may not equal average of quarters due to independent rounding.

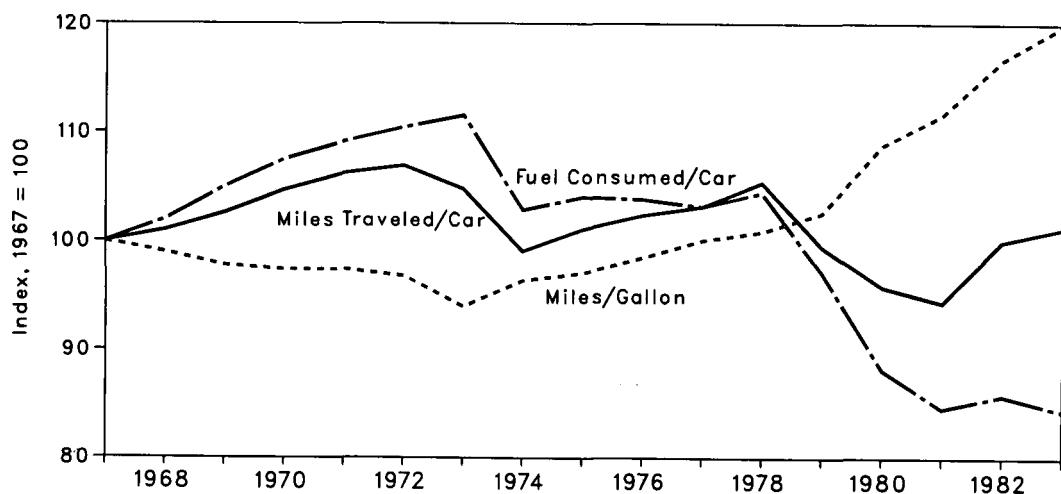
Sources: • See the last page of this section.

# Energy Summary

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

	Average Fuel Consumed per Car		Average Miles Traveled per Car		Average Miles Traveled per Gallon of Fuel Consumed	
	Gallons	Index	Miles	Index	Miles	Index
1967	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	10,184	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
1979	664	97.1	9,485	99.5	14.29	102.6
1980	603	88.2	9,135	95.8	15.15	108.8
1981	579	84.6	9,002	94.4	15.54	111.6
1982	587	85.8	9,533	100.0	16.25	116.7
1983†	577	84.4	9,641	101.2	16.70	119.9

U.S. Passenger Car Efficiency Index



†Preliminary data.

Note: • Geographic coverage is the 50 States and the District of Columbia.  
Sources: • See the last page of this section.

## Notes and Sources for the Energy Summary Section

### Notes

**1. Energy Production:** Production of energy includes production of coal, crude oil and lease condensate, natural gas plant liquids, natural gas (dry), electric utility and industrial production of hydroelectric power, electricity generated from nuclear power, and electricity produced from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems. The volumetric data are converted to approximate heat contents (Btu values) of these energy sources using the conversion factors provided in the Conversion Factors section of this publication.

**2. Energy Consumption:** Consumption of energy includes consumption of coal, natural gas (including supplemental gaseous fuels), refined petroleum products supplied, electric utility and industrial production of hydroelectric power, net imports of electricity produced from hydroelectric power, net imports of coal coke, electricity generated from nuclear power, and electricity produced from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems. Approximate heat contents (Btu values) are derived using the conversion factors provided in the Conversion Factors section of this publication.

**3. Energy Imports:** Energy imports include imports of coal, crude oil (including crude oil imported for the Strategic Petroleum Reserve), refined petroleum products, natural gas, electricity produced from hydroelectric power, and coal coke. Approximate heat contents (Btu values) are derived using the conversion factors provided in the Conversion Factors section of this publication. For further information on electricity, see the note and sources for imports and exports of electricity in Note 7 of the Notes and Sources for the Consumption Section.

**4. Energy Exports:** Energy exports include coal, crude oil, refined petroleum products, natural gas, electricity produced from hydroelectric power, and coal coke. Approximate heat contents (Btu values) are derived using the conversion factors provided in the Conversion Factors section of this publication. For more information on electricity, see the note and sources for imports and exports of electricity in Note 7 of the Notes and Sources for the Consumption Section.

**5. Merchandise Trade Value:** 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) and the Virgin Islands. The statistics exclude imports into Guam, American Samoa, and other U.S. possessions, as well as shipments between the United States and Puerto Rico and the Virgin Islands, between the United States and other U.S. possessions, and between any of these outlying areas. From January 1981 forward, import data presented are on a customs value basis. All other values are on a free alongside ship (f.a.s.) basis. Monthly data are adjusted for seasonal and working-day variation, if present and identifiable; annual data are unadjusted, and annual totals may not equal sum of monthly totals. Statistics include nonmonetary gold. Statistics exclude Department of Defense 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; a positive balance indicates a surplus trade value and a negative balance indicates a deficit trade value. The "All Other" columns are calculated by subtracting "Energy" from "Total."

**6. Degree-Days:** Degree-days are relative measurements of outdoor air temperature. Cooling degree-days are defined as deviations of the mean daily temperature at a sampling station above a base temperature equal to 65° F. by convention. Heating degree-days are deviations of the mean

daily temperature below 65° F. For example, if a weather station recorded a mean daily temperature of 78° F., cooling degree-days for that station would be 13 (and heating degree-days, 0). A weather station recording a mean daily temperature of 40° F. would report 25 heating degree-days (and 0 cooling degree-days).

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

### Sources

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

• 1981 forward: U.S. Department of Commerce, Bureau of the Census, "Summary of U.S. Export and Import Merchandise Trade," most recent monthly issue.

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

**U.S. Dependence on Petroleum Net Imports:** • Imports and products supplied—Part 3 of this publication.

• Exports—1973 through 1976: Bureau of Mines, *Mineral Industry Surveys*; 1977 through 1982: Energy Information Administration (EIA), *Energy Data Reports*, "Petroleum Statement, Annual"; 1983 forward: EIA, *Petroleum Statement, Monthly*.

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

• Leaded Regular Motor Gasoline—Bureau of Labor Statistics (BLS).

• Residential Heating Oil—EIA, 1983 forward: EIA Form-782A, "Refiners/Gas Plant Operators' Monthly Petroleum Product Sales Report" and EIA Form-782B, "Resellers/Retailers' Monthly Petroleum Product Sales Report." Prices prior to 1983 are EIA backcast estimates using data from FEA Form P112-M1/EIA-9, "No. 2 Heating Oil Supply/Price Monitoring Report" and EIA Form 9-A, "No. 2 Distillate Price Monitoring Report." See Note 8 in the Notes and Sources for the Price Section for additional information.

• Residential Natural Gas—Annual data 1973 through 1982 from EIA, *Natural Gas Annual*, based on Form EIA-176, "Supply and Distribution of Natural Gas," and predecessors. Annual 1983 and quarterly data are EIA estimates based on the BLS Urban Consumer Price Index for natural gas and are adjusted to conform with final reported annual data. See Note 6 in the Notes and Sources for the Price Section for estimation procedures.

• Residential Electricity—Federal Energy Regulatory Commission (FERC), 1973 through February 1980: FPC Form 5, "Monthly Statement of Electric Operating Revenue and Income"; March 1980 forward: FERC Form 5, "Electric Utility Company Monthly Statement."

• Deflator (The Urban Consumer Price Index)—BLS.

**U.S. Passenger Car Efficiency:** • Indexes prepared from statistics published by the U.S. Department of Transportation, Federal Highway Administration, Federal Highway Statistics Division, "Highway Statistics," Table VM-1.

# Part 2 Consumption

## Consumption

Total U.S. energy consumption in October 1984 was 5.8 quadrillion Btu, 2.9 percent above the October 1983 level. Petroleum accounted for 44.9 percent of the energy consumed in October 1984, while coal accounted for 23.9 percent and natural gas accounted for 21.9 percent.

The transportation sector used 61.5 percent of petroleum consumed and the industrial sector used 27.7 percent. Of total natural gas consumed, the industrial sector used 49.4 percent, the residential and commercial sector used 25.4 percent, and electric utilities used 21.8 percent. Most of the coal used in October 1984 (82.6 percent) was consumed by electric utilities. The residential and commercial sector used 60.8 percent of total electricity sales, while the industrial sector used 39.0 percent.

Residential and commercial sector consumption was 1.8 quadrillion Btu in October 1984, up 2.2 percent from the October 1983 level. This sector consumed 30.7 percent of the October 1984 total, slightly below its 30.9-percent share in October 1983.

Industrial sector consumption was 2.4 quadrillion Btu in October 1984, up 2.4 percent from the October 1983 level. The industrial sector accounted for 40.9 percent of the October 1984 total consumption, slightly below the industrial sector's 41.1-percent share of October 1983 total consumption.

Transportation sector consumption of energy was 1.7 quadrillion Btu in October 1984, up 4.4 percent from the October 1983 level. This sector consumed 28.4 percent of the October 1984 total, slightly above the sector's 28.0-percent share in October 1983.

The electric utilities consumption of energy was an estimated 2.1 quadrillion Btu in October 1984, 3.5 percent higher than in October 1983. Coal contributed 55.8 percent of the energy consumed by electric utilities in October 1984, while natural gas contributed 13.5 percent; nuclear, 13.2 percent; hydroelectric, 12.5 percent; petroleum, 4.1 percent; and geothermal, wood, waste, wind, photovoltaic, and solar thermal energy, 0.8 percent.

## Consumption Summary for October 1984

(Quadrillion ( $10^{15}$ ) Btu)

Energy Source	Sector				
	Residential and Commercial	Industrial	Transportation	Electric Utilities	Total
Coal	0.017	0.229	0.000	1.151	1.394
Natural Gas <sup>1</sup>	0.324	0.631	0.042	0.279	1.277
Petroleum Products	0.200	0.725	1.612	0.084	2.622
Hydroelectric	0.000	0.002	0.000	0.258	0.260
Nuclear	0.000	0.000	0.000	0.273	0.273
Net Imports of Coal Coke	0.000	(0.004)	0.000	0.000	(0.004)
Other <sup>2</sup>	0.000	0.000	0.000	0.016	0.016
<b>Primary Consumption</b>	<b>0.541</b>	<b>1.584</b>	<b>1.654</b>	<b>2.062</b>	<b>5.838</b>
Electricity Sales	0.377	0.242	0.001	(0.620)	
Net Energy Consumption	0.918	1.826	1.655		4.397
Electrical Energy Losses	0.877	0.563	0.002	(1.442)	1.442
<b>Total Energy Consumption</b>	<b>1.795</b>	<b>2.389</b>	<b>1.657</b>		<b>5.838</b>

<sup>1</sup> Includes supplemental gaseous fuels.

<sup>2</sup> Other is electricity produced from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems.

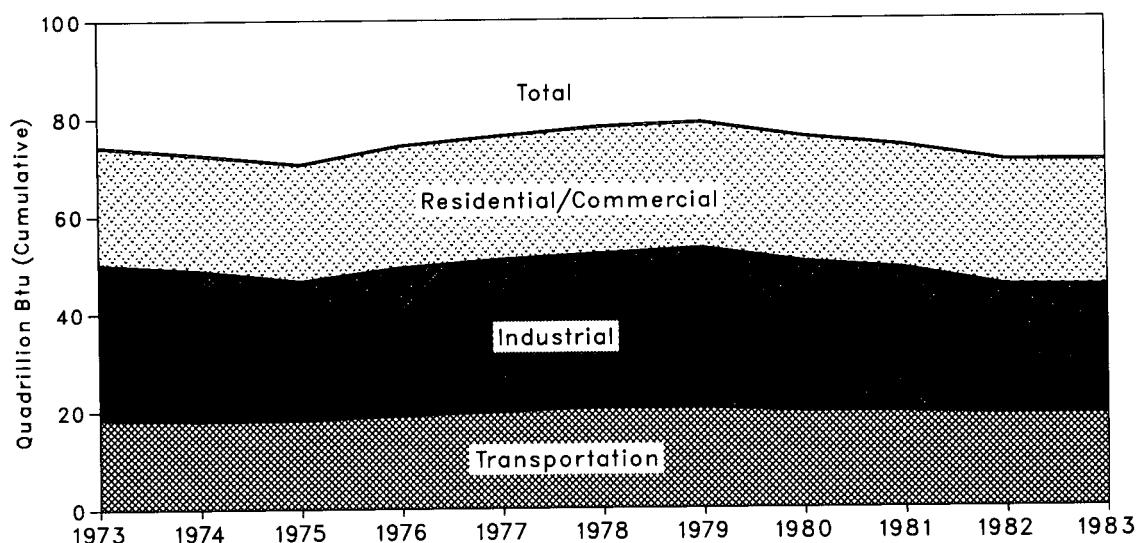
Notes: • Totals may not equal sum of components due to independent rounding and the use of preliminary conversion factors.

• Additional notes and sources for this table and all other tables in this section are provided on the last four pages of this section.

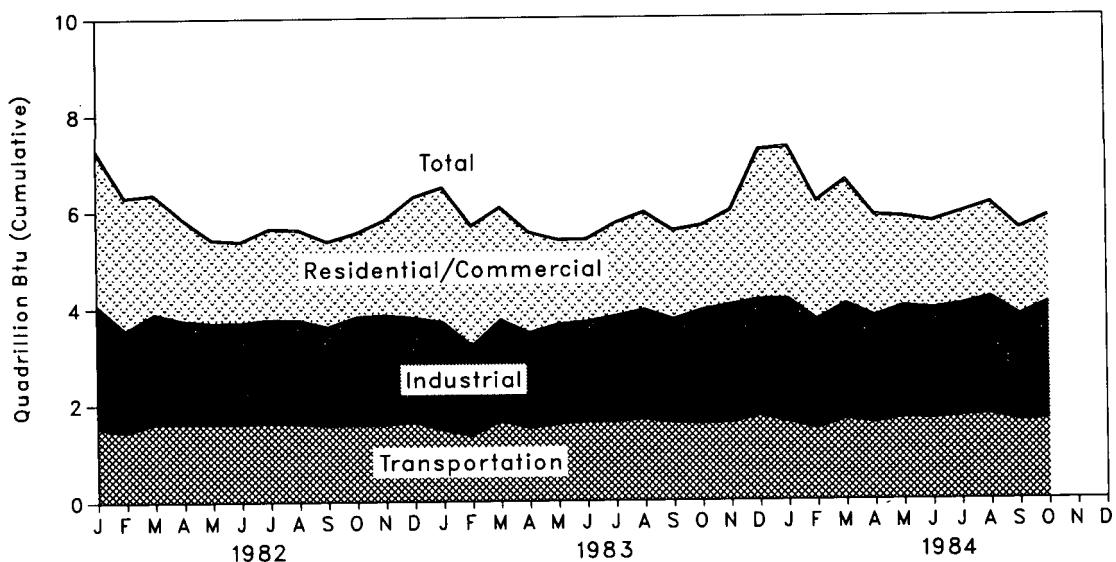
## Consumption

### Consumption of Energy by End-Use Sector

Yearly



Monthly



# Consumption

## Consumption of Energy by End-Use Sector

		Residential and Commercial	Industrial	Transportation	Total
Quadrillion (10 <sup>18</sup> ) Btu					
1973	Total	24.147	31.463	18.596	74.212
1974	Total	23.729	30.630	18.113	72.479
1975	Total	23.902	28.343	18.240	70.485
1976	Total	25.020	30.177	19.093	74.297
1977	Total	25.375	31.021	19.808	76.215
1978	Total	26.084	31.363	20.589	78.039
1979	Total	25.810	32.567	20.464	78.845
1980	Total	25.654	30.549	19.693	75.900
1981	Total	25.246	29.208	19.495	73.940
1982	January	3.193	2.533	1.536	7.262
	February	2.749	2.097	1.449	6.292
	March	2.471	2.265	1.620	6.353
	April	2.110	2.119	1.621	5.847
	May	1.723	2.075	1.613	5.409
	June	1.673	2.087	1.611	5.371
	July	1.877	2.121	1.640	5.641
	August	1.866	2.142	1.607	5.618
	September	1.763	2.028	1.576	5.369
	October	1.736	2.228	1.577	5.542
	November	1.970	2.260	1.582	5.815
	December	2.498	2.152	1.634	6.289
	<b>Total</b>	<b>25.629</b>	<b>26.105</b>	<b>19.066</b>	<b>70.807</b>
1983	January	2.779	2.232	1.466	6.480
	February	2.488	1.844	1.355	5.687
	March	2.326	2.082	1.657	6.067
	April	2.081	1.969	1.500	5.547
	May	1.747	2.055	1.586	5.386
	June	1.704	2.060	1.634	5.400
	July	1.928	2.168	1.639	5.737
	August	2.022	2.253	1.676	5.955
	September	1.839	2.130	1.603	5.573
	October	1.756	2.334	1.587	5.676
	November	1.958	2.428	1.597	5.982
	December	3.095	2.395	1.739	7.231
	<b>Total</b>	<b>25.725</b>	<b>25.949</b>	<b>19.040</b>	<b>70.721</b>
1984	January	3.155	2.524	1.610	7.290
	February	2.453	2.244	1.466	6.162
	March	2.560	2.373	1.665	6.597
	April	2.088	2.195	1.586	5.862
	May	1.851	2.294	1.690	5.830
	June	1.810	2.266	1.662	5.738
	July	1.915	2.292	1.718	5.926
	August	1.961	2.415	1.743	6.121
	September	1.798	R2.175	R1.618	R5.589
	October	1.795	2.389	1.657	5.838

R=Revised data.

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

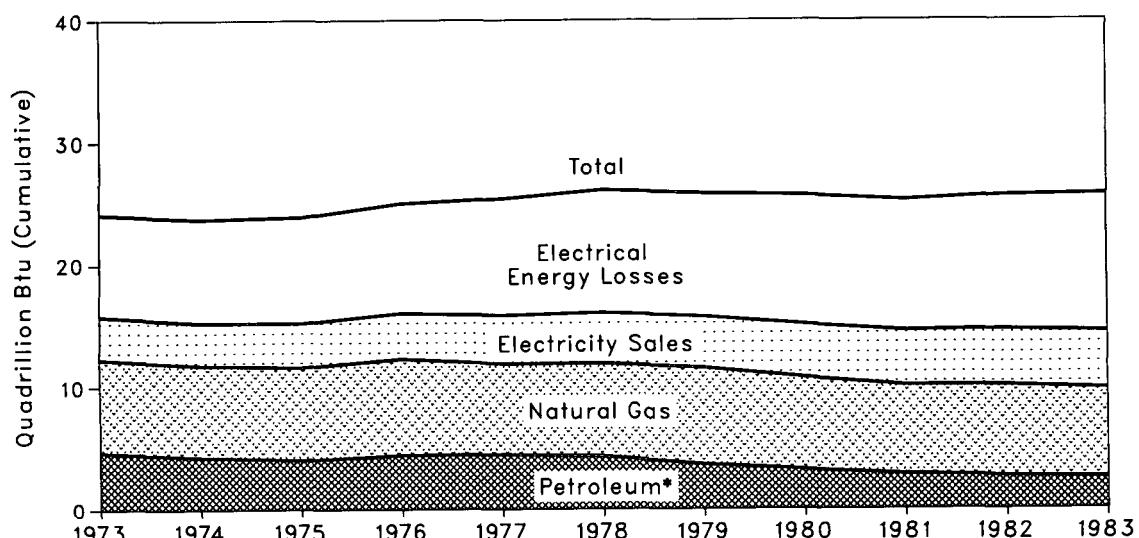
• Totals may not equal sum of components due to independent rounding and the use of preliminary conversion factors after 1981.

Additional Notes and Sources: • See the last four pages of this section.

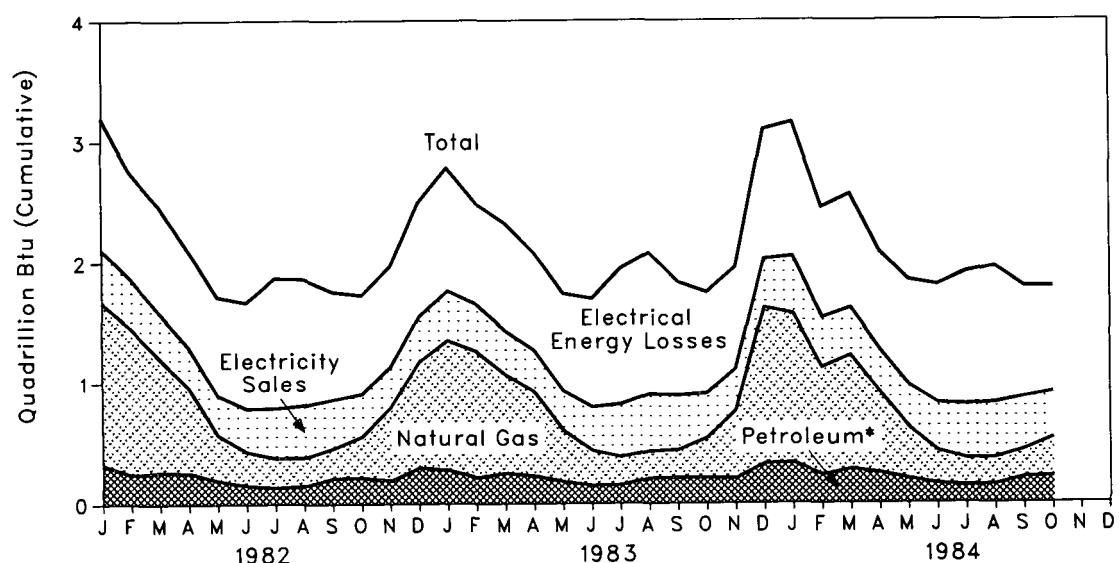
## Consumption

### Consumption of Energy by the Residential and Commercial Sector

Yearly



Monthly



\*Includes very small quantities of coal.

# Consumption

## Consumption of Energy by the Residential and Commercial Sector

		Coal	Natural Gas <sup>1</sup>	Petroleum	Electricity Sales	Electrical Energy Losses	Total	Year to Date
Quadrillion (10 <sup>15</sup> ) Btu								
1973	Total	0.259	7.626	4.391	3.495	8.377	24.147	
1974	Total	0.260	7.518	3.996	3.475	8.480	23.729	
1975	Total	0.212	7.581	3.805	3.604	8.700	23.902	
1976	Total	0.206	7.866	4.181	3.747	9.020	25.020	
1977	Total	0.207	7.461	4.206	3.955	9.545	25.375	
1978	Total	0.215	7.624	4.070	4.116	10.060	26.084	
1979	Total	0.188	7.891	3.448	4.184	10.100	25.810	
1980	Total	0.147	7.539	3.035	4.355	10.578	25.654	
1981	Total	0.171	7.249	2.634	4.497	10.696	25.246	
1982	January	0.023	1.344	0.303	0.440	1.084	3.193	3.193
	February	0.016	1.222	0.228	0.409	0.874	2.749	5.942
	March	0.013	0.948	0.252	0.373	0.886	2.471	8.413
	April	0.016	0.706	0.243	0.346	0.798	2.110	10.523
	May	0.011	0.382	0.181	0.327	0.822	1.723	12.245
	June	0.008	0.279	0.144	0.358	0.885	1.673	13.919
	July	0.014	0.245	0.121	0.412	1.084	1.877	15.796
	August	0.015	0.234	0.134	0.431	1.053	1.866	17.662
	September	0.015	0.247	0.197	0.403	0.902	1.763	19.426
	October	0.015	0.343	0.201	0.349	0.827	1.736	21.161
	November	0.019	0.605	0.172	0.340	0.834	1.970	23.131
	December	0.023	0.878	0.274	0.381	0.942	2.498	25.629
	Total	0.189	7.433	2.449	4.566	10.991	25.629	
1983	January	0.020	1.081	0.257	0.413	1.007	2.779	2.779
	February	0.018	1.049	0.198	0.390	0.834	2.488	5.266
	March	0.013	0.821	0.239	0.365	0.889	2.326	7.593
	April	0.017	0.698	0.210	0.352	0.805	2.081	9.674
	May	0.011	0.427	0.169	0.327	0.813	1.747	11.421
	June	0.008	0.290	0.140	0.359	0.907	1.704	13.126
	July	0.014	0.233	0.120	0.435	1.127	1.928	15.054
	August	0.013	0.224	0.138	0.472	1.176	2.022	17.076
	September	0.017	0.233	0.194	0.451	0.944	1.839	18.916
	October	0.018	0.333	0.193	0.367	0.845	1.756	20.672
	November	0.019	0.559	0.185	0.350	0.844	1.958	22.630
	December	0.025	1.296	0.302	0.402	1.069	3.095	25.725
	Total	0.192	7.244	2.345	4.683	11.261	25.725	
1984	January	0.024	1.240	0.309	0.476	1.105	3.155	3.155
	February	0.021	0.894	0.210	0.416	0.912	2.453	5.608
	March	0.015	0.947	0.265	0.395	0.938	2.560	8.168
	April	0.021	0.669	0.228	0.360	0.810	2.088	10.257
	May	0.013	0.424	0.187	0.355	0.873	1.851	12.108
	June	0.010	0.272	0.147	0.395	0.986	1.810	13.918
	July	0.010	0.221	0.133	0.448	1.104	1.915	15.833
	August	0.010	0.218	0.144	0.456	1.134	1.961	17.794
	September	0.012	0.230	0.200	0.433	0.922	1.798	19.592
	October	0.017	0.324	0.200	0.377	0.877	1.795	21.387

<sup>1</sup>Includes supplemental gaseous fuels.

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

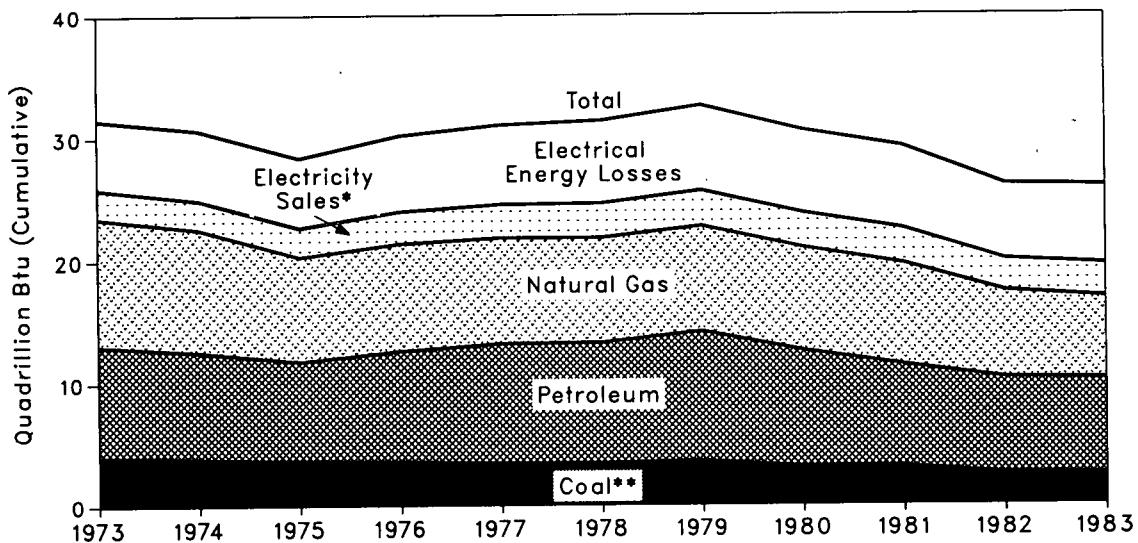
• Totals may not equal sum of components due to independent rounding.

Additional Notes and Sources: • See the last four pages of this section.

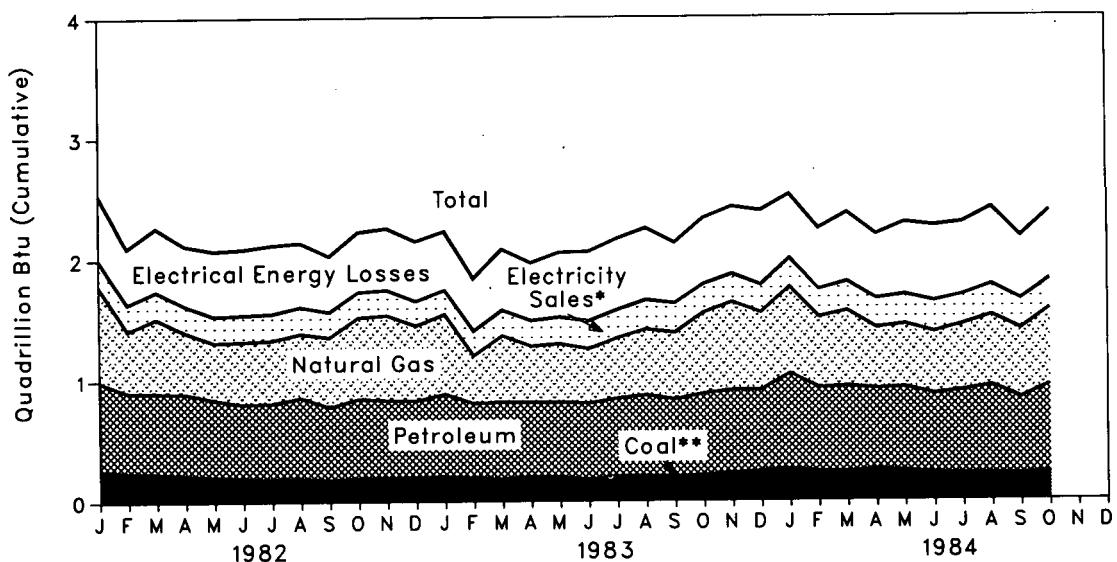
## Consumption

### Consumption of Energy by the Industrial Sector

Yearly



Monthly



\*Includes hydroelectric.

\*\*Includes net imports of coal coke.

# Consumption

## Consumption of Energy by the Industrial Sector

		Coal	Natural Gas <sup>1</sup>	Petro-leum	Hydro-electric	Net Imports of Coal Coke	Electricity Sales	Electrical Energy Losses	Total	Year to Date
Quadrillion (10 <sup>18</sup> ) Btu										
1973	Total	3.984	10.388	9.113	0.035	(0.008)	2.341	5.610	31.463	
1974	Total	3.800	10.003	8.698	0.033	0.059	2.337	5.700	30.630	
1975	Total	3.602	8.532	8.151	0.032	0.014	2.346	5.665	28.343	
1976	Total	3.595	8.761	9.018	0.033	0.000	2.573	6.197	30.177	
1977	Total	3.394	8.636	9.786	0.033	0.015	2.682	6.476	31.021	
1978	Total	3.258	8.539	9.890	0.032	0.131	2.761	6.755	31.363	
1979	Total	3.532	8.549	10.576	0.034	0.066	2.873	6.937	32.567	
1980	Total	3.103	8.394	9.524	0.033	(0.037)	2.781	6.751	30.549	
1981	Total	3.109	8.265	8.295	0.033	(0.017)	2.817	6.704	29.208	
1982	January	0.262	0.793	0.731	0.003	0.000	0.215	0.530	2.533	2.533
	February	0.245	0.520	0.658	0.003	(0.001)	0.214	0.458	2.097	4.630
	March	0.236	0.622	0.663	0.003	(0.002)	0.220	0.523	2.265	6.895
	April	0.218	0.515	0.676	0.003	(0.001)	0.214	0.493	2.119	9.014
	May	0.211	0.480	0.634	0.003	(0.003)	0.213	0.536	2.075	11.089
	June	0.197	0.524	0.612	0.003	(0.004)	0.217	0.538	2.087	13.176
	July	0.191	0.529	0.625	0.003	(0.003)	0.214	0.563	2.121	15.296
	August	0.192	0.537	0.667	0.002	(0.001)	0.216	0.528	2.142	17.438
	September	0.184	0.583	0.600	0.002	(0.003)	0.205	0.458	2.028	19.466
	October	0.192	0.678	0.657	0.002	(0.001)	0.208	0.492	2.228	21.694
	November	0.195	0.708	0.641	0.002	(0.002)	0.207	0.508	2.260	23.953
	December	0.197	0.626	0.635	0.002	(0.001)	0.199	0.494	2.152	26.105
	Total	2.520	7.116	7.798	0.033	(0.023)	2.542	6.120	26.105	
1983	January	0.208	0.664	0.678	0.003	(0.001)	0.198	0.482	2.232	2.232
	February	0.194	0.403	0.613	0.003	(0.001)	0.201	0.431	1.844	4.076
	March	0.185	0.554	0.635	0.003	(0.001)	0.206	0.500	2.082	6.158
	April	0.202	0.471	0.615	0.003	(0.002)	0.207	0.473	1.969	8.127
	May	0.196	0.489	0.622	0.003	(0.002)	0.214	0.532	2.055	10.182
	June	0.180	0.456	0.626	0.003	(0.001)	0.226	0.570	2.060	12.241
	July	0.203	0.507	0.643	0.003	(0.002)	0.227	0.587	2.168	14.409
	August	0.206	0.550	0.666	0.002	(0.001)	0.238	0.592	2.253	16.662
	September	0.200	0.558	0.636	0.002	(0.001)	0.238	0.498	2.130	18.792
	October	0.214	0.673	0.669	0.002	(0.001)	0.235	0.541	2.334	21.127
	November	0.224	0.728	0.689	0.002	(0.001)	0.230	0.555	2.428	23.554
	December	0.246	0.642	0.669	0.002	(0.003)	0.229	0.609	2.395	25.949
	Total	2.458	6.696	7.759	0.033	(0.016)	2.648	6.372	25.949	
1984	January	0.256	0.715	0.794	0.003	0.001	0.228	0.528	2.524	2.524
	February	0.236	0.588	0.690	0.003	0.002	0.227	0.498	2.244	4.768
	March	0.238	0.626	0.704	0.003	(0.001)	0.238	0.566	2.373	7.141
	April	0.250	0.508	0.669	0.003	0.000	0.236	0.529	2.195	9.335
	May	0.242	0.526	0.688	0.003	(0.001)	0.241	0.594	2.294	11.629
	June	0.222	0.517	0.655	0.003	(0.003)	0.249	0.622	2.266	13.896
	July	0.217	0.550	0.687	0.003	(0.001)	0.241	0.595	2.292	16.188
	August	0.220	0.583	0.724	0.002	(0.002)	0.254	0.633	2.415	18.603
	September	0.214	R0.574	R0.625	0.002	0.000	0.243	0.517	R2.175	R20.778
	October	0.229	0.631	0.725	0.002	(0.004)	0.242	0.563	2.389	23.167

<sup>1</sup>Includes supplemental gaseous fuels.

R=Revised data.

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

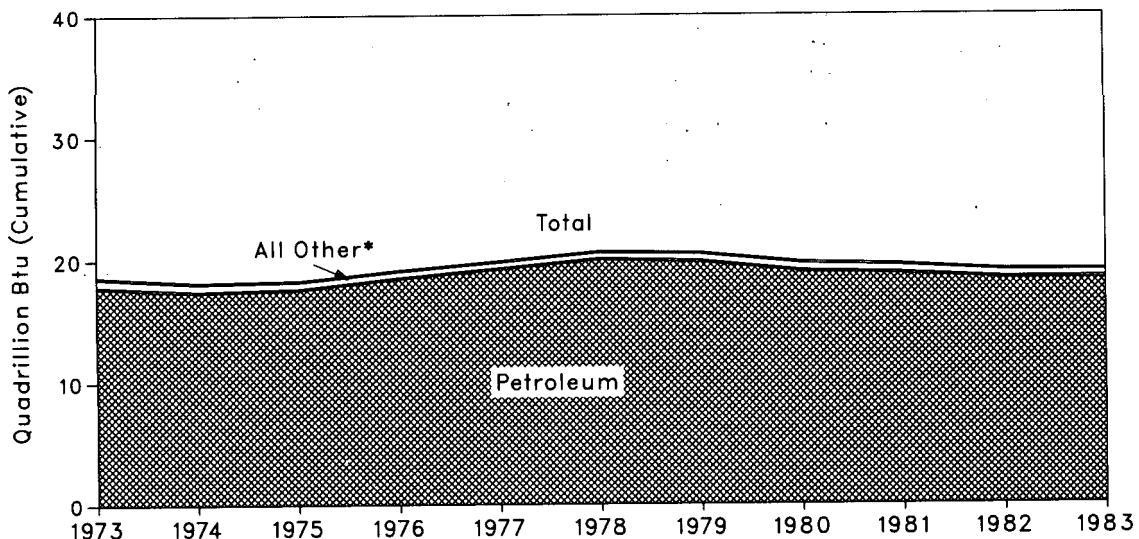
• Totals may not equal sum of components due to independent rounding.

Additional Notes and Sources: • See the last four pages of this section.

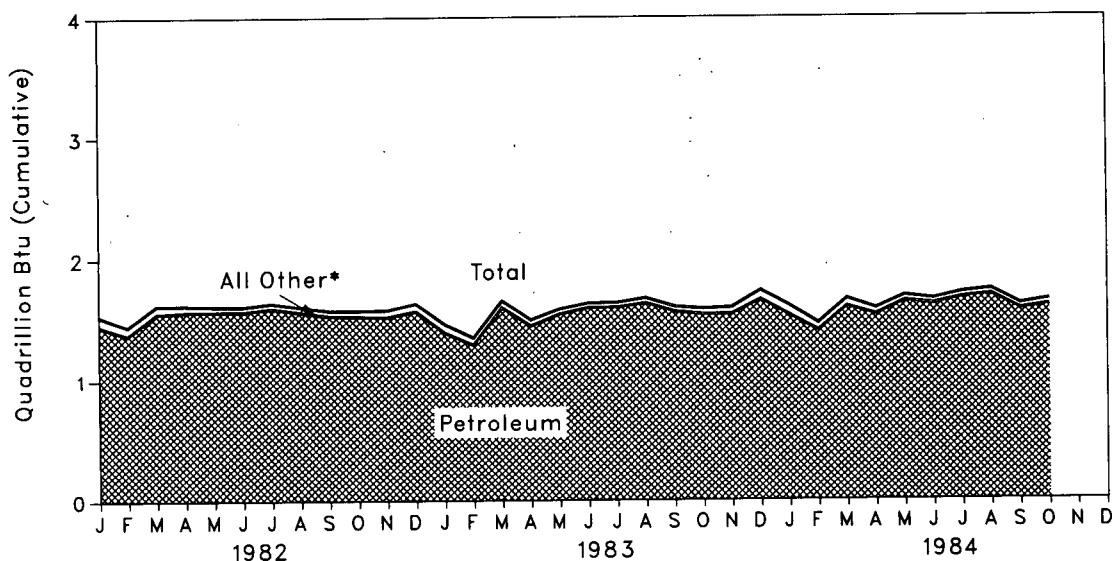
## Consumption

### Consumption of Energy by the Transportation Sector

Yearly



Monthly



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

# Consumption

## Consumption of Energy by the Transportation Sector

		Coal	Natural Gas <sup>1</sup>	Petroleum	Electricity Sales	Electrical Energy Losses	Total	Year to Date
Quadrillion (10 <sup>15</sup> ) Btu								
1973	Total	0.003	0.743	17.821	0.009	0.020	18.596	
1974	Total	0.002	0.685	17.396	0.009	0.022	18.113	
1975	Total	0.001	0.595	17.610	0.010	0.025	18.240	
1976	Total	( <sup>2</sup> )	0.559	18.499	0.010	0.025	19.093	
1977	Total	( <sup>2</sup> )	0.543	19.230	0.010	0.025	19.808	
1978	Total	( <sup>2</sup> )	0.539	20.019	0.009	0.022	20.589	
1979	Total	( <sup>2</sup> )	0.612	19.817	0.010	0.025	20.464	
1980	Total	( <sup>2</sup> )	0.648	19.009	0.011	0.026	19.693	
1981	Total	( <sup>2</sup> )	0.658	18.800	0.011	0.026	19.495	
1982	January	( <sup>2</sup> )	0.081	1.452	0.001	0.002	1.536	1.536
	February	( <sup>2</sup> )	0.068	1.378	0.001	0.002	1.449	2.985
	March	( <sup>2</sup> )	0.063	1.554	0.001	0.002	1.620	4.605
	April	( <sup>2</sup> )	0.050	1.568	0.001	0.002	1.621	6.226
	May	( <sup>2</sup> )	0.039	1.571	0.001	0.002	1.613	7.840
	June	( <sup>2</sup> )	0.038	1.570	0.001	0.002	1.611	9.451
	July	( <sup>2</sup> )	0.039	1.597	0.001	0.002	1.640	11.090
	August	( <sup>2</sup> )	0.039	1.565	0.001	0.002	1.607	12.698
	September	( <sup>2</sup> )	0.039	1.534	0.001	0.002	1.576	14.274
	October	( <sup>2</sup> )	0.044	1.529	0.001	0.002	1.577	15.850
	November	( <sup>2</sup> )	0.053	1.525	0.001	0.002	1.582	17.432
	December	( <sup>2</sup> )	0.060	1.571	0.001	0.002	1.634	19.066
	Total	( <sup>2</sup> )	0.613	18.417	0.011	0.026	19.066	
1983	January	( <sup>2</sup> )	0.067	1.396	0.001	0.002	1.466	1.466
	February	( <sup>2</sup> )	0.055	1.296	0.001	0.002	1.355	2.820
	March	( <sup>2</sup> )	0.054	1.600	0.001	0.002	1.657	4.478
	April	( <sup>2</sup> )	0.047	1.450	0.001	0.002	1.500	5.977
	May	( <sup>2</sup> )	0.039	1.544	0.001	0.002	1.586	7.563
	June	( <sup>2</sup> )	0.034	1.597	0.001	0.002	1.634	9.197
	July	( <sup>2</sup> )	0.036	1.600	0.001	0.002	1.639	10.837
	August	( <sup>2</sup> )	0.039	1.634	0.001	0.002	1.676	12.513
	September	( <sup>2</sup> )	0.037	1.564	0.001	0.002	1.603	14.116
	October	( <sup>2</sup> )	0.043	1.541	0.001	0.002	1.587	15.703
	November	( <sup>2</sup> )	0.051	1.543	0.001	0.002	1.597	17.300
	December	( <sup>2</sup> )	0.074	1.662	0.001	0.002	1.739	19.040
	Total	( <sup>2</sup> )	0.577	18.428	0.010	0.024	19.040	
1984	January	( <sup>2</sup> )	0.074	1.533	0.001	0.002	1.610	1.610
	February	( <sup>2</sup> )	0.057	1.406	0.001	0.002	1.466	3.077
	March	( <sup>2</sup> )	0.061	1.602	0.001	0.002	1.665	4.742
	April	( <sup>2</sup> )	0.048	1.535	0.001	0.002	1.586	6.329
	May	( <sup>2</sup> )	0.042	1.646	0.001	0.002	1.690	8.019
	June	( <sup>2</sup> )	0.037	1.623	0.001	0.002	1.662	9.682
	July	( <sup>2</sup> )	0.039	1.676	0.001	0.002	1.718	11.400
	August	( <sup>2</sup> )	0.040	1.700	0.001	0.002	1.743	13.143
	September	( <sup>2</sup> )	R0.038	R1.577	0.001	0.002	R1.618	R14.761
	October	( <sup>2</sup> )	0.042	1.612	0.001	0.002	1.657	16.418

<sup>1</sup>Includes supplemental gaseous fuels.

<sup>2</sup>Since 1976, the amount of coal consumed by the transportation sector has been negligible.

R=Revised data.

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

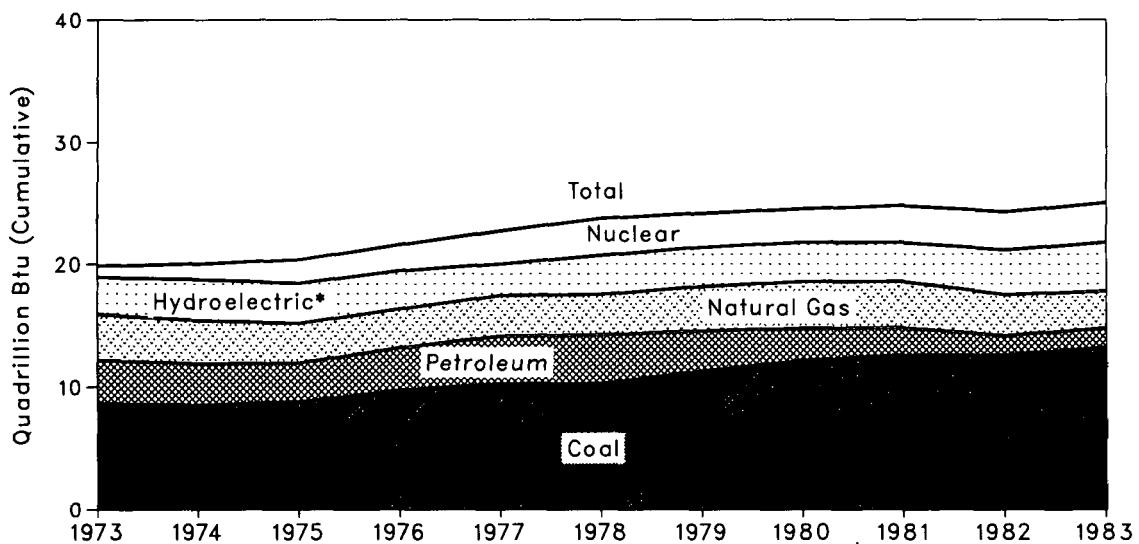
• Totals may not equal sum of components due to independent rounding.

Additional Notes and Sources: • See the last four pages of this section.

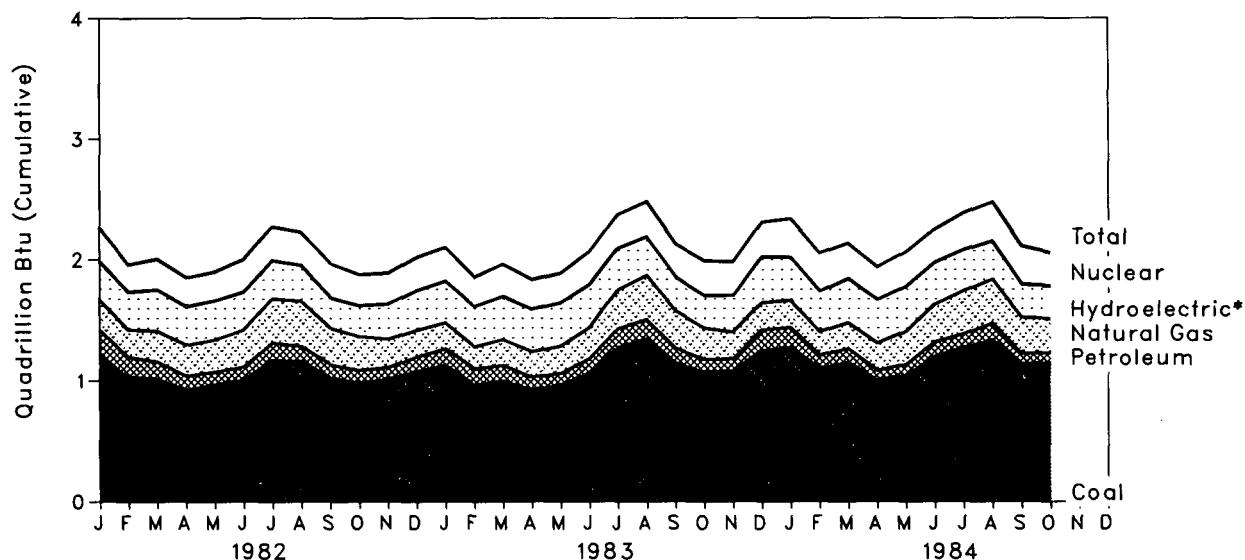
## Consumption

### Energy Input at Electric Utilities

Yearly



Monthly



\*Includes electricity produced from geothermal, wood, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems.

# Consumption

## Energy Input at Electric Utilities

		Coal	Natural Gas <sup>1</sup>	Petro-leum <sup>2</sup>	Hydro-electric Power <sup>3</sup>	Nuclear Electric Power	Other <sup>4</sup>	Total	Year to Date
Quadrillion (10 <sup>15</sup> ) Btu									
1973	Total	8.658	3.748	3.515	2.975	0.910	0.046	19.852	
1974	Total	8.535	3.519	3.365	3.276	1.272	0.056	20.023	
1975	Total	8.786	3.240	3.166	3.187	1.900	0.072	20.350	
1976	Total	9.720	3.152	3.477	3.032	2.111	0.081	21.573	
1977	Total	10.243	3.284	3.901	2.482	2.702	0.082	22.694	
1978	Total	10.236	3.297	3.987	3.110	3.024	0.068	23.722	
1979	Total	11.264	3.609	3.283	3.107	2.776	0.089	24.129	
1980	Total	12.122	3.807	2.634	3.085	2.739	0.114	24.501	
1981	Total	12.583	3.760	2.202	3.072	3.008	0.127	24.752	
1982	January	1.204	0.246	0.221	0.308	0.283	0.009	2.271	2.271
	February	1.036	0.228	0.162	0.303	0.222	0.008	1.958	4.230
	March	1.015	0.255	0.144	0.333	0.251	0.007	2.004	6.234
	April	0.922	0.255	0.120	0.312	0.240	0.007	1.855	8.089
	May	0.967	0.267	0.106	0.315	0.238	0.008	1.902	9.991
	June	1.005	0.306	0.111	0.304	0.265	0.010	2.000	11.991
	July	1.171	0.365	0.144	0.305	0.281	0.010	2.276	14.266
	August	1.162	0.374	0.125	0.284	0.275	0.010	2.230	16.497
	September	1.026	0.303	0.110	0.241	0.280	0.010	1.970	18.467
	October	0.982	0.283	0.106	0.242	0.256	0.011	1.879	20.346
	November	1.013	0.234	0.100	0.277	0.256	0.011	1.891	22.237
	December	1.079	0.222	0.120	0.320	0.269	0.009	2.018	24.256
	Total	12.582	3.338	1.568	3.544	3.115	0.108	24.256	
1983	January	1.129	0.215	0.137	0.335	0.276	0.011	2.103	2.103
	February	0.968	0.183	0.134	0.322	0.245	0.008	1.859	3.962
	March	0.997	0.215	0.133	0.346	0.263	0.010	1.963	5.925
	April	0.922	0.210	0.110	0.342	0.246	0.009	1.838	7.764
	May	0.967	0.226	0.097	0.350	0.243	0.007	1.889	9.653
	June	1.065	0.256	0.119	0.349	0.266	0.010	2.065	11.717
	July	1.278	0.325	0.156	0.326	0.282	0.012	2.379	14.096
	August	1.349	0.364	0.158	0.305	0.289	0.016	2.480	16.577
	September	1.147	0.309	0.123	0.265	0.275	0.014	2.133	18.710
	October	1.072	0.260	0.106	0.254	0.284	0.015	1.992	20.701
	November	1.083	0.222	0.099	0.291	0.275	0.013	1.983	22.685
	December	1.251	0.226	0.171	0.364	0.290	0.011	2.314	24.998
	Total	13.226	3.011	1.544	3.847	3.235	0.135	24.998	
1984	January	1.274	0.223	0.169	0.342	0.321	0.011	2.340	2.340
	February	1.106	0.194	0.108	0.323	0.312	0.013	2.056	4.396
	March	1.154	0.213	0.115	0.349	0.293	0.015	2.139	6.535
	April	1.006	0.228	0.081	0.344	0.266	0.014	1.938	8.473
	May	1.047	0.274	0.090	0.358	0.283	0.014	2.066	10.539
	June	1.204	0.309	0.121	0.331	0.277	0.013	2.255	12.794
	July	1.277	0.361	0.111	0.322	0.306	0.013	2.390	15.185
	August	1.341	0.362	0.137	0.300	0.323	0.016	2.480	17.665
	September	1.142	0.301	0.083	0.259	0.318	0.015	2.118	19.783
	October	1.151	0.279	0.084	0.258	0.273	0.016	2.062	21.845

<sup>1</sup>Includes supplemental gaseous fuels.

<sup>2</sup>Includes petroleum products reported as "oil consumed in steam plants" through 1979 and "heavy oil" from 1980 forward, which are assumed to be residual fuel oil; petroleum products reported as "oil consumed in gas turbine and internal combustion engine plants" through 1979 and "light oil" from 1980 forward, which are assumed to be distillate fuel oil and kerosene; and petroleum coke.

<sup>3</sup>Includes net imports of electricity.

<sup>4</sup>Includes only electricity produced from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems.

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

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

Additional Notes and Sources: • See the last four pages of this section.

## Notes and Sources for the Consumption Section

**1. Total Energy Consumed:** Total energy consumed includes coal (anthracite, bituminous coal, and lignite), natural gas (including supplemental gaseous fuels), refined petroleum products supplied, electric utility and industrial generation of hydroelectric power, net imports of electricity generated from hydroelectric power, electricity generated from nuclear power, and electricity produced from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems. Data do not include geothermal, wood, waste, wind, photovoltaic, or solar thermal energy sources except that consumed by electric utilities.

**2. End-Use Sectors:** Energy use is assigned to the major end-use sectors according to the following guidelines as closely as possible:

- Residential and commercial sector—Energy consumed by private household establishments primarily for space heating, water heating, air conditioning, cooking, and clothes drying; by non-manufacturing business establishments, including motels, restaurants, wholesale businesses, retail stores, laundries, and other service enterprises; by health, social, and educational institutions; and by Federal, State, and local governments.
- Industrial sector—Energy consumed by manufacturing, construction, mining, agriculture, fishing, and forestry establishments.
- Transportation sector—Energy consumed to move people and commodities in both the public and private sectors, including military, railroad, vessel bunkering, and marine uses, as well as the pipeline transmission of natural gas.
- Electric utility sector—Energy consumed by privately- and publicly-owned establishments that generate electricity primarily for resale.

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

**4. Coal:** Coal is anthracite, bituminous coal, and lignite.

*Sources:*

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

**5. Natural Gas:** Natural gas consumption by end-use sector is based on data presented in the table titled "Natural Gas Consumption" in Part 4. For the Part 2 consumption section, lease and plant fuel consumption are added to the industrial sector deliveries and pipeline fuel represents the transportation sector's use of natural gas. Values in Btu are derived using the conversion factors provided in the Conversion Factors section of this publication.

*Sources:*

- 1973 through 1975: DOI, BOM, *Minerals Yearbook*, "Natural Gas" chapter.
- 1976 through 1978: EIA, *Energy Data Reports*, "Natural Gas, Annual."
- 1979: EIA, *Natural Gas Production and Consumption 1979*.
- 1980 and 1982: EIA, *Natural Gas Annual*.
- 1983 forward: EIA, *Natural Gas Monthly*.
- Electric utilities consumption—1973 through 1976: FPC Form 4, "Monthly Power Plant Report."
- 1977 through 1981: Federal Energy Regulatory Commission (FERC), FPC Form 4, "Monthly Power Plant Report."
- 1982 forward: EIA, EIA Form 759, "Monthly Power Plant Report."
- American Gas Association, "Monthly Gas Utility Statistical Report."

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

*Sources for petroleum products supplied by individual products are:*

- 1973 through 1975: DOI, BOM, *Mineral Industry Surveys*, "Petroleum Statement, Annual."
- 1976 through 1980: EIA, *Energy Data Reports*, "Petroleum Statement, Annual."
- 1981 through 1983: EIA, *Petroleum Supply Annual*.
- 1984 forward: EIA, *Petroleum Supply Monthly*.

Specific petroleum products' end-use allocation procedures follow:

- **Aviation Gasoline**—All product supplied is assigned to the transportation sector.
- **Asphalt**—All product supplied is assigned to the industrial sector.
- **Distillate Fuel**

— ***Electric Utility Sector, All Periods.***

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

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

— ***Nonutility Sectors, Annual Estimates.***

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

— Residential sector deliveries are taken directly from the "Deliveries" report for 1979 through 1982. Deliveries for 1982 are used as estimates for 1983. Prior to 1979, each year's subtotal of the heating plus industrial category deliveries is split into residential, commercial, and industrial (including farm) in proportion to the 1979 shares;

(Notes and Sources for the Consumption Section are continued on the next page.)

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

### 6. Petroleum (continued):

#### • Distillate Fuel (continued)

- **Nonutility Sectors, Annual Estimates (cont'd).**
  - Commercial sector deliveries are taken directly from the "Deliveries" report for 1979 through 1982. Deliveries for 1982 are used as estimates for 1983. Prior to 1979, each year's subtotal of the heating plus industrial category deliveries is split into residential, commercial, and industrial (including farm) in proportion to the 1979 shares;
  - Industrial sector deliveries for 1979 through 1982 are the sum of deliveries for industrial, farm, oil company, off-highway, diesel, and all other uses. Deliveries for 1982 are used as estimates for 1983. Prior to 1979, each year's subtotal of the heating plus industrial category deliveries is split into residential, commercial, and industrial (including farm) in proportion to the 1979 shares, and this estimated industrial portion is added to oil company, off-highway diesel, and all other uses; and
  - Transportation sector deliveries are the sum of deliveries for railroad, vessel bunkering, on-highway diesel, and military uses for all years. Deliveries for 1982 are used as estimates for 1983.
- **Nonutility Sectors, Monthly Estimates Through 1982.**
  - Residential and commercial sector monthly consumption is estimated by allocating the annual sector estimates to months in proportion to each month's share of the year's sales of No. 2 heating oil as reported in the "Monthly Report of Heating Oil Sales" by the Ethyl Corporation from 1973 through 1980 and the American Petroleum Institute since January 1981.
  - The transportation sector highway use portion is allocated into the months in proportion to each month's share of the year's total sales for highway use as reported by the Federal Highway Administration's Table MF-25, "Private and Commercial Highway Use of Special Fuels by Months." The remaining transportation use of distillate fuel (i.e., for railroads, vessel bunkering, and military use) is evenly distributed over the months, adjusted for the number of days per month.
  - Industrial sector monthly estimates are made by subtracting the residential and commercial, transportation, and electric utility sector estimates from each month's total distillate fuel supplied.
- **Nonutility Sectors, 1983 Forward.**

Each month's nonutility consumption subtotal is disaggregated into the major end-use sectors in proportion to the shares each sector held of the nonutility subtotal in the same month in 1982.
- **Jet Fuel**—Small amounts of kerosene-type jet fuel in all periods are consumed by the electric utility sector. Kerosene-type jet fuel deliveries to electric utilities as reported on the FERC-423 (formerly FPC-423) are used as an estimate of this consumption. All remaining jet fuel (kerosene-type and naphtha-type) is consumed by the transportation sector.
- **Kerosene**—Total product supplied monthly is allocated to the major end-use sectors in proportion to annual deliveries grouped into end-use sectors from EIA's "Deliveries of Fuel Oil and Kerosene" reports (based primarily on data collected by Form EIA-172) as follows:
  - Residential sector deliveries are taken directly from the "Deliveries" report for 1979 through 1982. Deliveries for 1982 are used as estimates for 1983

forward. Prior to 1979, each year's category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares;

- Commercial sector deliveries are taken directly from the "Deliveries" report for 1979 through 1982. Deliveries for 1982 are used as estimates for 1983 forward. 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 are taken directly from the "Deliveries" report for 1979 through 1982. Deliveries for 1982 are used as estimates for 1983 forward. 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 (including farm) portion is added to "all other uses."

#### • Liquefied Petroleum Gases (LPG)

- 1973 through 1982: the annual shares of LPG's total consumption that are estimated to be consumed by each end-use sector are applied to each month's total LPG consumption to create monthly end-use consumption estimates. The annual end-use shares are calculated in the following manner:
  - Sales of LPG to the residential and commercial sector are converted from thousand gallons per year to thousand barrels per year and are assumed to equal the annual consumption of LPG by the sector;
  - The quantity of LPG sold each year that is consumed in internal combustion engines is allocated between the transportation and industrial sectors according to a 5-year moving average of the percentage of carburetors sold to each end-use category. The proportions range from 31 percent transportation and 69 percent industrial in 1973 to 52 percent transportation and 48 percent industrial in 1982.
  - LPG consumed annually by the industrial sector is estimated as the difference between LPG's total supplied and the estimated consumption by the sum of the residential and commercial sector and the transportation sector. The industrial sector includes LPG used by chemical plants as raw materials or solvents and for use in the production of synthetic rubber; refinery fuel use; use as synthetic natural gas feedstock and use in secondary recovery projects; all farm use; LPG sold to gas utility companies for distribution through the mains; and a portion of the use of LPG as an internal combustion engine fuel.

The source of the sales data is EIA's "Sales of Liquefied Petroleum Gases and Ethane" reports, based primarily on data collected by Form EIA-174.

- 1983 forward: The 1982 annual end-use shares are applied for succeeding periods to estimate the amount of the total LPG supplied that is consumed by each major end-use sector.

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

(Notes and Sources for the Consumption Section are continued on the next page.)

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

### 6. Petroleum (continued):

- **Motor Gasoline**—Total product supplied monthly is allocated to the major end-use sectors in proportion to aggregations of annual sales categories formed from the U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, Tables MF-21, MF-24, and MF-25, as follows:
  - Commercial sales are the sum of sales for public non-highway use, miscellaneous use, and unclassified use;
  - Industrial sales are the sum of sales for agriculture, construction, and industrial and commercial use as classified in the *Highway Statistics*; and
  - Transportation sales are the sum of sales for highway use (minus the sales of special fuels, which are primarily diesel fuel and are accounted for in the transportation sector of distillate fuel) and sales for marine use.
- **Petroleum Coke**—The portion consumed by the electric utility sector is from EIA Form 759, "Monthly Power Plant Report" (formerly FPC Form 4). The remaining portion is assigned to the industrial sector.

#### • Residual Fuel

##### — *Electric Utility Sector, All Periods.*

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

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

##### — *Nonutility Sectors, Annual Estimates.*

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

- Commercial sector deliveries are taken directly from the "Deliveries" report for 1979 through 1982. Deliveries for 1982 are used as estimates for 1983. Prior to 1979, each year's subtotal of the heating plus industrial category deliveries is split into commercial and industrial in proportion to the 1979 shares;
- Industrial sector deliveries for 1979 through 1982 are the sum of deliveries for industrial, oil company, and all other uses. Deliveries for 1982 are used as estimates for 1983. Prior to 1979, each year's subtotal of the heating plus industrial category deliveries is split into commercial and industrial in proportion to the 1979 shares; and this estimated industrial portion is added to oil company and all other uses; and
- Transportation sector deliveries are the sum of deliveries for railroad, vessel bunkering, and military uses for all years. Deliveries for 1982 are used as estimates for 1983.

##### — *Nonutility Sectors, Monthly Estimates Through 1982.*

- Commercial sector monthly consumption is estimated by allocating the annual commercial sector estimates to months in proportion to each month's share of the year's sales of No. 2 heating oil as reported in the "Monthly Report of Heating Oil Sales" by the Ethyl Corporation

for 1973 through 1980 and the American Petroleum Institute since January 1981.

- Transportation sector monthly estimates are made by evenly distributing the annual sector estimate over the months, adjusted for the number of days per month.
- Industrial sector monthly estimates are made by subtracting the commercial, transportation, and electric utility sector estimates from each month's total residual fuel supplied.

##### — *Nonutility Sectors, 1983 Forward.*

Each month's nonutility consumption subtotal is disaggregated into the major end-use sectors in proportion to the shares each sector held of the nonutility subtotal in the same month in 1982.

- **Road Oil**—All product supplied is assigned to the industrial sector.

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

### 7. Hydroelectric

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

#### *Sources for electric utilities sector:*

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

#### *Sources for industrial sector:*

- 1973 through 1978: FPC 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 numbers in proportion to each month's hydroelectricity generation in the electric utility sector.

#### *Note for imports and exports of electricity:*

- Monthly electricity imports and exports estimates for 1982 forward were revised in the May 1984 *Monthly Energy Review*. The revisions do not cause discontinuity in the annual data series: the data continue to come from the same source. The monthly data series, however, are discontinuous because monthly data from January 1982 forward are now available from the same source as the annual data. Estimates for monthly values prior to 1982, published in previous issues, were developed by converting the annual value to a daily rate and multiplying by the number of days in the month. Accordingly, month-to-month analyses are not comparable when taken across the transition date of January 1982. Monthly analyses on either side of that date will be comparable. There is no known bias in either the annual data or the monthly data since January 1982.

#### *Sources for imports and exports of electricity:*

- 1973 through 1980: DOE, Economic Regulatory Administration, "Report on Electric Energy Exchanges with Canada and Mexico."
- 1981: DOE, Office of Energy Emergency Operations, "Report on Electric Energy Exchanges with Canada and Mexico for Calendar Year 1981," April 1982 (revised June 1982).
- 1982 and 1983: DOE, Economic Regulatory Administration, EIA-781, "Annual Report of International Electric Import/Export Data."
- 1984: EIA estimates.

(Notes and Sources for the Consumption Section are continued on the next page.)

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

### 8. Nuclear:

#### Sources:

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

**9. Net Imports of Coal Coke:** Net imports means imports minus exports, and the parentheses indicate that exports are greater than imports.

#### Sources:

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

**10. Other Energy:** "Other" is electricity produced from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems.

*Sources:* same as Note 8 above, for Nuclear.

**11. Electricity Sales:** From the sources cited below the following sales categories are available: residential, com-

mercial, industrial, and other. For the end-use estimates in this section, the "other" category (which is primarily sales for use in government buildings) is added to the commercial sector except for approximately 4 percent, which represents the transportation sector use of electricity, primarily by railroads and railways. Sales of electricity are converted into Btu at the rate of 3,412 Btu per kilowatthour.

#### Sources of sales data:

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

**12. 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 the end-use sectors 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.

# Part 3 Petroleum

## Petroleum\*

Domestic crude oil production during December 1984 was estimated to be 8.8 million barrels per day, 0.6 percent lower than the November 1984 rate, but 4.8 percent higher than the rate in December 1983. Crude oil production during 1984 was estimated to be 8.8 million barrels per day, 0.8 percent more than the 1983 production average.

Total petroleum imports averaged 5.0 million barrels per day in December 1984, 9.5 percent less than the November 1984 rate and slightly less than the December 1983 rate. Total petroleum imports during 1984 averaged 5.4 million barrels per day, 6.7 percent more than the average imports during 1983.

In December 1984, 16.1 million barrels per day of petroleum products were supplied for domestic use, 3.0 percent above the level in November 1984, but 3.9 percent below the level of the previous December. Motor gasoline accounted for 42.2 percent of the total; distillate fuel oil, 18.8 percent; and residual fuel oil, 7.9 percent.

During 1984, 15.8 million barrels per day of petroleum products were supplied, 3.5 percent more than the average of 15.2 million barrels per day during 1983. Motor gasoline was 42.6 percent of the total products supplied in 1984, while distillate fuel oil was 18.1 percent, and residual fuel oil was 8.7 percent, of the total.

Motor gasoline supplied during December 1984 averaged 6.8 million barrels per day,

slightly below the rate in November 1984 and 1.0 percent below the rate of the previous December. During 1984 an average of 6.7 million barrels per day of motor gasoline were supplied, 1.4 percent more than during 1983. Stocks of motor gasoline totaled 239 million barrels at the end of December 1984, 1 million barrels below the level at the end of November 1984 but 17 million barrels above the level 1 year earlier.

In December 1984, 3.0 million barrels of distillate fuel oil were supplied per day, 7.2 percent higher than the November 1984 rate, but 10.0 percent lower than the December 1983 rate. An average of 2.9 million barrels per day of distillate fuel oil were supplied during 1984, 6.4 percent more than during 1983. Distillate fuel oil ending stocks for December 1984 were 161 million barrels, the same level as the previous month, but 21 million barrels above the ending stocks level in December 1983.

Residual fuel oil supplied in December 1984 averaged 1.3 million barrels per day, 6.4 percent lower than in November 1984 and 20.0 percent lower than the December 1983 rate. The 1984 annual average of residual fuel oil supplied was 1.4 million barrels per day, 3.4 percent less than the average in 1983. Residual fuel oil stocks measured 53 million barrels at the end of December 1984, 6 million barrels more than the stocks level of the previous month and 4 million barrels more than the ending stocks level in December 1983.

\*Estimates for the most current month are based on Energy Information Administration (EIA) weekly data (except crude production) and will be revised to conform with data from the EIA Petroleum Reporting System as available. For the most recent month, crude production is an EIA estimate based on historical and provisional data through September 1984. The total import data above include imports into the Strategic Petroleum Reserve.

# Petroleum

## Crude Oil<sup>1</sup> and Petroleum Products Overview

		Field Production			Stock Withdrawal <sup>2</sup>		Petroleum Products Supplied	Ending Stocks <sup>3</sup>		
		Total Domestic <sup>4</sup>	Crude Oil	Natural Gas Plant Production	Crude Oil <sup>5</sup>	Petroleum Products		Crude Oil <sup>6</sup> and Petroleum Products		
								Million barrels		
Thousand barrels per day										
1973	Average	10,975	9,208	1,738	11	-146	17,308	1,008		
1974	Average	10,498	8,774	1,688	-62	-117	16,653	*1,074		
1975	Average	10,045	8,375	1,633	*-17	*-145	16,322	1,133		
1976	Average	9,774	8,132	1,603	-39	96	17,461	1,112		
1977	Average	9,913	8,245	1,618	-170	-378	18,431	1,312		
1978	Average	10,328	8,707	1,567	-78	172	18,847	1,278		
1979	Average	10,179	8,552	1,584	-148	-25	18,513	1,341		
1980	Average	10,214	8,597	1,573	-98	-42	17,056	*1,392		
1981	Average	10,230	8,572	1,609	*-290	*130	16,058	1,484		
1982	January	10,128	8,509	1,578	-401	1,298	16,124	1,456		
	February	10,312	8,702	1,563	-242	1,230	16,001	1,428		
	March	10,284	8,667	1,572	121	1,047	15,560	1,392		
	April	10,188	8,591	1,542	-37	1,583	16,046	1,346		
	May	10,244	8,683	1,518	29	-66	14,847	1,347		
	June	10,212	8,646	1,511	40	-489	14,998	1,360		
	July	10,229	8,658	1,513	-147	-926	14,821	1,393		
	August	10,215	8,634	1,524	-440	-44	14,839	1,408		
	September	10,279	8,701	1,518	263	-447	15,022	1,414		
	October	10,299	8,701	1,530	-548	-47	14,859	1,432		
	November	10,359	8,697	1,609	-398	-361	15,009	1,455		
	December	10,276	8,598	1,628	128	688	15,487	*1,430		
	Average	10,252	8,649	1,550	-136	283	15,296			
1983	January	10,331	8,697	1,580	*-499	*772	14,722	1,452		
	February	10,388	8,758	1,575	-320	1,113	14,792	1,430		
	March	10,279	8,700	1,541	83	1,810	15,541	1,372		
	April	10,322	8,776	1,506	-402	308	14,692	1,374		
	May	10,190	8,631	1,493	-15	-602	14,505	1,394		
	June	10,261	8,667	1,523	-122	-276	15,289	1,405		
	July	10,228	8,636	1,539	233	-909	15,019	1,426		
	August	10,284	8,679	1,562	-796	-271	15,480	1,460		
	September	10,447	8,784	1,602	-239	-621	15,506	1,485		
	October	10,434	8,771	1,604	-274	-442	14,962	1,508		
	November	10,461	8,770	1,641	114	-182	15,500	1,510		
	December	9,983	8,397	1,544	-329	2,133	16,726	1,454		
	Average	10,299	8,688	1,559	-214	234	15,231			
1984	January	10,282	8,659	1,585	-342	1,085	16,726	1,430		
	February	10,410	8,726	1,629	186	-1,353	15,389	1,464		
	March	10,354	8,718	1,588	-2	643	16,017	1,444		
	April	10,347	8,688	1,616	-565	-128	15,484	1,465		
	May	10,415	8,752	1,610	-616	-422	15,566	1,497		
	June	10,398	8,743	1,612	-95	-77	15,687	1,502		
	July	10,487	8,769	1,649	-184	-184	15,547	1,514		
	August	10,476	8,781	1,663	250	185	16,130	1,500		
	September	10,464	8,759	1,666	266	-736	15,315	1,514		
	October	10,549	8,847	1,648	-798	-211	15,631	1,545		
	November	10,558	8,846	1,680	R-166	R-176	R15,602	R1,556		
	December†	NA	8,797	NA	-80	604	16,074	1,542		
	Average	NA	8,757	NA	-181	-55	15,769			

<sup>1</sup>Includes lease condensate.

<sup>2</sup>A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>3</sup>Stocks are totals as of end of period.

<sup>4</sup>Includes crude oil, natural gas plant production, other hydrocarbons, and alcohol.

<sup>5</sup>Includes stocks located in the Strategic Petroleum Reserve.

<sup>6</sup>Includes crude oil for storage in the Strategic Petroleum Reserve.

\*Net imports equals imports minus exports.

†In January 1975, 1981, and 1983, numerous respondents were added to surveys affecting stocks reported and stocks withdrawal calculations. See Note 5 on the last page of this section.

Footnotes continued on following page.

# Petroleum

## Crude Oil<sup>1</sup> and Petroleum Products Overview (continued)

		Imports			Exports			Net Imports <sup>7</sup>
		Total	Crude Oil <sup>6</sup>	Petroleum Products	Total	Crude Oil	Petroleum Products	
Thousand barrels per day								
1973	Average	6,256	3,244	3,012	231	2	229	6,025
1974	Average	6,112	3,477	2,635	221	3	218	5,892
1975	Average	6,056	4,105	1,951	209	6	204	5,846
1976	Average	7,313	5,287	2,026	223	8	215	7,090
1977	Average	8,807	6,615	2,193	243	50	193	8,565
1978	Average	8,363	6,356	2,008	362	158	204	8,002
1979	Average	8,456	6,519	1,937	471	235	236	7,985
1980	Average	6,909	5,263	1,646	544	287	258	6,365
1981	Average	5,996	4,396	1,599	595	228	367	5,401
1982	January	5,332	3,693	1,639	829	238	591	4,503
	February	4,807	2,990	1,817	804	304	499	4,003
	March	4,484	2,874	1,610	882	321	561	3,602
	April	4,378	2,849	1,529	786	174	611	3,593
	May	4,811	3,309	1,503	803	262	542	4,008
	June	5,327	3,836	1,491	703	94	609	4,624
	July	5,890	4,248	1,642	741	229	512	5,149
	August	5,244	3,851	1,392	858	304	554	4,386
	September	5,414	3,636	1,778	791	184	606	4,624
	October	5,306	3,670	1,636	932	270	662	4,374
	November	5,744	3,862	1,882	786	262	524	4,958
	December	4,606	3,000	1,605	860	193	667	3,746
	Average	5,113	3,488	1,625	815	236	579	4,298
1983	January	4,438	2,964	1,474	973	117	856	3,464
	February	3,726	2,267	1,459	865	262	603	2,861
	March	3,690	2,290	1,400	801	174	627	2,889
	April	4,727	3,118	1,609	809	88	721	3,918
	May	5,089	3,360	1,729	848	280	568	4,241
	June	5,326	3,577	1,749	774	144	630	4,552
	July	5,741	3,871	1,870	571	145	426	5,170
	August	6,159	4,227	1,933	663	172	491	5,496
	September	6,129	4,210	1,919	684	177	507	5,445
	October	5,258	3,446	1,812	576	140	436	4,682
	November	5,210	3,337	1,873	679	186	494	4,531
	December	5,033	3,213	1,820	639	95	544	4,394
	Average	5,051	3,329	1,722	739	164	575	4,312
1984	January	5,347	3,029	2,318	575	153	422	4,772
	February	5,643	2,952	2,691	582	185	397	5,061
	March	5,253	3,455	1,798	840	236	605	4,413
	April	5,319	3,417	1,902	655	172	483	4,664
	May	5,916	3,927	1,989	766	219	548	5,150
	June	5,304	3,410	1,893	864	222	642	4,440
	July	5,387	3,646	1,741	536	108	429	4,851
	August	5,036	3,244	1,793	732	190	542	4,305
	September	5,173	3,294	1,880	664	162	502	4,510
	October	5,767	3,751	2,016	599	141	458	5,167
	November	R5,534	R3,552	R1,983	854	202	652	4,680
	December†	5,011	3,317	1,694	NA	NA	NA	NA
	Average	5,390	3,419	1,972	NA	NA	NA	NA

Footnotes continued.

†Italics denote estimates based upon preliminary data. R = Revised data. NA = Not available.

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

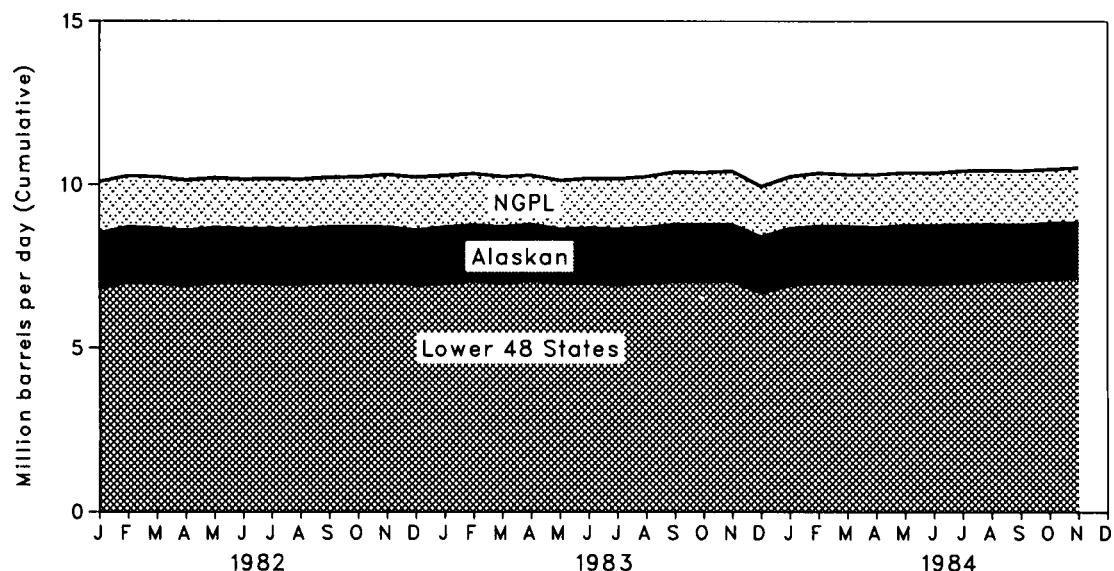
• Totals may not equal sum of components due to independent rounding.

Sources: • See the last page of this section.

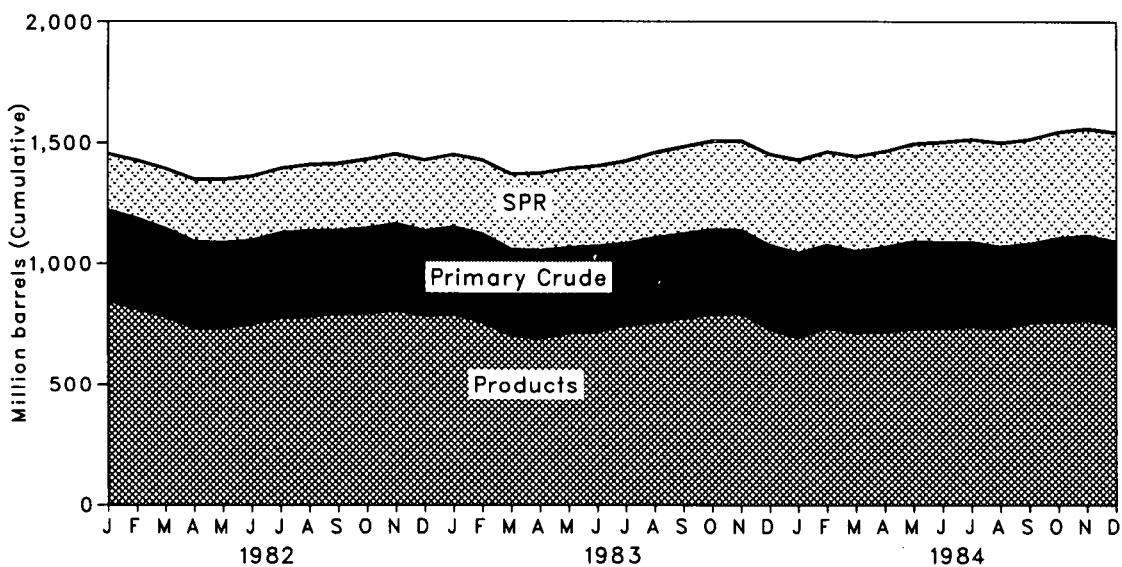
# Petroleum

## Overview

### Production of Crude Oil and Natural Gas Plant Liquids



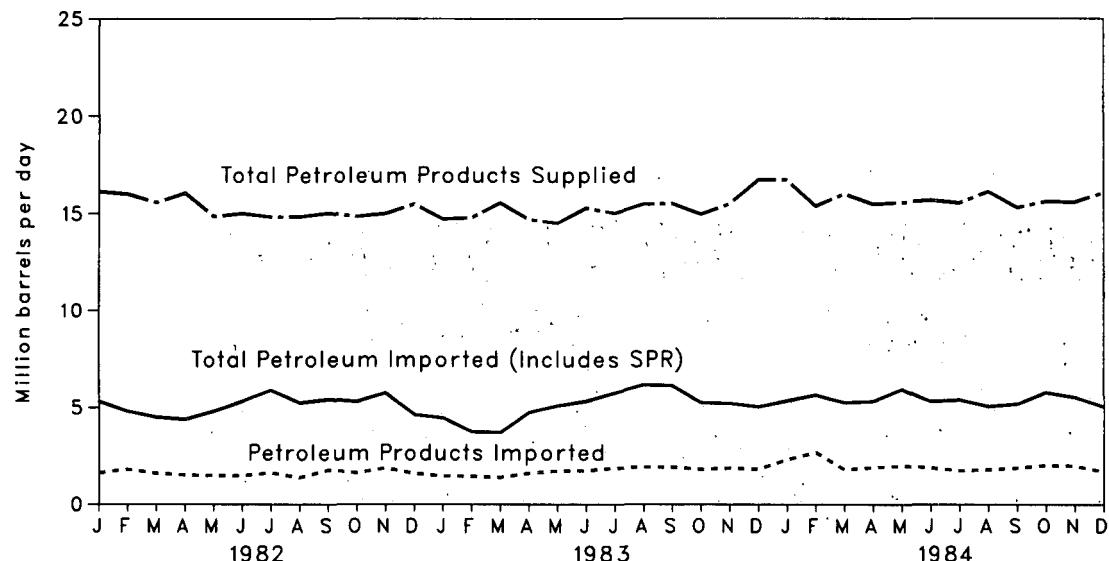
### Ending Stocks



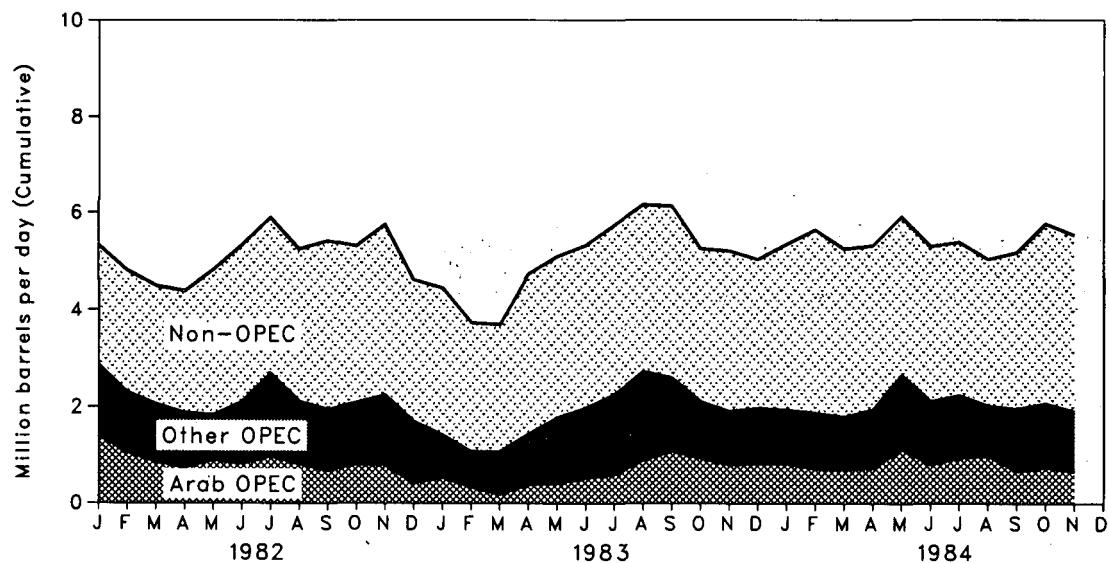
# Petroleum

## Overview

### Products Supplied and Imports



### Petroleum Imports by Source



# Petroleum

## Crude Oil<sup>1</sup> Supply and Disposition

Supply								
	Field Production		Imports		Stock Withdrawal <sup>2</sup>		Unaccounted for Crude Oil	
	Total Domestic	Alaskan	Total	SPR <sup>4</sup>	Other	SPR <sup>4</sup>	Other	
Thousand barrels per day								
1973	Average	9,208	198	3,244	3,244		11	3
1974	Average	8,774	193	3,477	3,477		-62	-25
1975	Average	8,375	191	4,105	4,105		-17	17
1976	Average	8,132	173	5,287	5,287		-39	77
1977	Average	8,245	464	6,615	21	6,594	-20	-150
1978	Average	8,707	1,229	6,356	162	6,195	-163	84
1979	Average	8,552	1,401	6,519	67	6,452	-67	-81
1980	Average	8,597	1,617	5,263	44	5,219	-45	-52
1981	Average	8,572	1,609	4,396	256	4,141	-336	46
1982	January	8,509	1,705	3,693	170	3,523	-159	-242
	February	8,702	1,707	2,990	159	2,830	-213	-29
	March	8,667	1,696	2,874	185	2,689	-235	357
	April	8,591	1,691	2,849	190	2,659	-233	196
	May	8,683	1,707	3,309	204	3,105	-176	205
	June	8,646	1,665	3,836	105	3,732	-105	144
	July	8,658	1,710	4,248	97	4,150	-97	-50
	August	8,634	1,697	3,851	208	3,643	-208	-232
	September	8,701	1,705	3,636	139	3,497	-143	406
	October	8,701	1,706	3,670	216	3,454	-216	-332
	November	8,697	1,676	3,862	180	3,683	-179	-219
	December	8,598	1,682	3,000	124	2,877	-125	252
	Average	8,649	1,696	3,488	165	3,323	-174	38
1983	January	8,697	1,732	2,964	219	2,746	-219	280
	February	8,758	1,717	2,267	197	2,070	-197	-123
	March	8,700	1,732	2,290	201	2,089	-184	267
	April	8,776	1,721	3,118	205	2,913	-197	-205
	May	8,631	1,662	3,360	289	3,071	-293	278
	June	8,667	1,687	3,577	190	3,387	-188	66
	July	8,636	1,715	3,871	274	3,597	-264	497
	August	8,679	1,697	4,227	350	3,876	-358	-438
	September	8,784	1,738	4,210	309	3,901	-307	68
	October	8,771	1,733	3,446	202	3,244	-201	-73
	November	8,770	1,720	3,337	171	3,166	-135	250
	December	8,397	1,711	3,213	193	3,020	-252	-78
	Average	8,688	1,714	3,329	234	3,096	-234	20
1984	January	8,659	1,741	3,029	200	2,829	-173	-169
	February	8,726	1,740	2,952	85	2,868	-96	282
	March	8,718	1,740	3,455	148	3,307	-147	145
	April	8,688	1,725	3,417	170	3,247	-170	-396
	May	8,752	1,793	3,927	246	3,681	-245	-371
	June	8,743	1,792	3,410	309	3,101	-309	214
	July	8,769	1,769	3,646	329	3,317	-328	144
	August	8,781	1,725	3,244	180	3,064	-179	429
	September	8,759	1,725	3,294	53	3,240	-53	320
	October	8,847	1,708	3,751	187	3,564	-231	-567
	November	8,846	1,707	R3,552	R219	R3,332	R-160	R-6
	December†	8,797	1,658	3,317	216	3,102	-217	198
	Average	8,757	1,735	3,419	196	3,223	-193	12
								NA

<sup>1</sup>Includes lease condensate.

<sup>2</sup>Stocks are totals as of end of period.

<sup>3</sup>A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>4</sup>Strategic Petroleum Reserve.

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

Stocks of Alaskan crude oil in transit were included beginning in January 1981. Stock withdrawals are calculated using new basis stock levels. See Notes 5 and 6 on the last page of this section.

Footnotes continued on following page.

# Petroleum

## Crude Oil<sup>1</sup> Supply and Disposition (continued)

	Supply	Disposition				Ending Stocks <sup>2</sup>			
	Crude Used Directly <sup>3</sup>	Crude Losses	Refinery Inputs	Exports	Product Supplied <sup>3</sup>	Total	SPR <sup>4</sup>	Other Primary	
Thousand barrels per day									
1973	Average	-19	13	12,431	2	NA	242	242	
1974	Average	-15	13	12,133	3	NA	265	265	
1975	Average	-17	13	12,442	6	NA	271	271	
1976	Average	-18	15	13,416	8	NA	285	285	
1977	Average	-14	16	14,602	50	NA	348	7	340
1978	Average	-14	16	14,739	158	NA	376	67	309
1979	Average	-13	16	14,648	235	NA	430	91	339
1980	Average	-13	15	13,481	287	NA	466	108	358
1981	Average	-58	5	12,470	228	NA	594	230	363
1982	January	-63	3	11,599	238	NA	606	235	371
	February	-64	2	11,236	304	NA	613	241	372
	March	-63	5	11,276	321	NA	609	249	361
	April	-65	3	11,392	174	NA	610	256	355
	May	-62	3	11,806	262	NA	609	261	348
	June	-60	7	12,494	94	NA	608	264	344
	July	-60	3	12,446	229	NA	613	267	346
	August	-57	2	11,871	304	NA	626	274	353
	September	-56	4	12,146	184	NA	619	278	341
	October	-51	2	11,749	270	NA	636	285	351
	November	-51	1	11,724	262	NA	648	290	358
	December	-53	1	11,514	193	NA	644	294	350
	Average	-59	3	11,774	236	NA			
1983	January	NA	2	11,143	117	71	660	301	360
	February	NA	3	10,633	262	71	669	306	363
	March	NA	2	10,859	174	70	667	312	355
	April	NA	2	11,433	88	68	679	318	361
	May	NA	1	11,800	280	63	679	327	353
	June	NA	(s)	12,284	144	64	683	332	351
	July	NA	2	12,360	145	65	676	341	335
	August	NA	1	12,152	172	64	700	352	349
	September	NA	1	12,482	177	66	708	361	347
	October	NA	1	11,782	140	63	716	367	349
	November	NA	2	12,004	186	64	713	371	341
	December	NA	1	11,234	95	67	723	379	344
	Average	NA	2	11,685	164	66			
1984	January	NA	1	11,579	153	64	733	384	348
	February	NA	1	12,100	185	65	727	387	340
	March	NA	2	11,936	236	62	728	392	336
	April	NA	(s)	11,893	172	64	744	397	348
	May	NA	2	12,243	219	62	764	404	359
	June	NA	2	12,263	222	61	766	414	353
	July	NA	1	12,087	108	60	772	424	348
	August	NA	1	12,403	190	63	764	429	335
	September	NA	-2	12,327	162	66	756	431	325
	October	NA	-1	11,976	141	69	781	438	343
	November	NA	-1	R12,103	202	62	R786	443	R343
	December†	NA	NA	11,924	NA	NA	792	450	342
	Average	NA	NA	12,068	NA	NA			

Footnotes continued.

†Italics denote estimates based upon preliminary data. R=Revised data. NA=Not available. (s)=Less than 500 barrels per day.

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

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

Sources: • See the last page of this section.

# Petroleum

## Crude Oil and Petroleum Product Imports

### Imports from OPEC Sources<sup>1</sup>

		Algeria	Libya	Saudi Arabia	United Arab Emirates	Indonesia	Iran	Nigeria	Venezuela	Other OPEC <sup>2</sup>	Total OPEC	Total Arab OPEC <sup>3</sup>
Thousand barrels per day												
1973	Average	136	164	486	71	213	223	459	1,135	106	2,993	915
1974	Average	190	4	461	74	300	469	713	979	88	3,280	752
1975	Average	282	232	715	117	390	280	762	702	122	3,601	1,383
1976	Average	432	453	1,230	254	539	298	1,025	700	134	5,066	2,424
1977	Average	559	723	1,380	335	541	535	1,143	690	287	6,193	3,185
1978	Average	649	654	1,144	385	573	555	919	645	226	5,751	2,963
1979	Average	636	658	1,356	281	420	304	1,080	690	212	5,637	3,056
1980	Average	488	554	1,261	172	348	9	857	481	130	4,300	2,551
1981	Average	311	319	1,129	81	366	0	620	406	90	3,323	1,848
1982	January	254	161	877	111	289	0	663	376	128	2,859	1,403
	February	139	92	693	89	244	0	584	355	102	2,297	1,054
	March	91	37	555	155	200	0	522	399	91	2,051	860
	April	85	0	511	122	215	0	427	426	85	1,871	740
	May	179	0	601	116	236	0	222	422	54	1,830	897
	June	115	0	593	94	215	72	537	361	110	2,096	820
	July	159	0	660	108	327	69	910	356	95	2,685	965
	August	181	0	489	133	271	27	574	299	133	2,107	818
	September	179	0	432	57	191	21	477	518	69	1,943	677
	October	249	7	494	61	242	108	313	504	106	2,084	810
	November	247	14	489	47	283	34	479	528	115	2,235	797
	December	155	0	237	12	265	88	462	399	73	1,690	421
	Average	170	26	552	92	248	35	514	412	97	2,146	854
1983	January	207	0	282	47	255	43	186	337	54	1,412	537
	February	115	0	214	9	217	0	92	393	28	1,068	338
	March	63	0	103	0	138	0	121	440	201	1,066	183
	April	227	0	162	(s)	210	0	186	523	125	1,432	389
	May	286	0	122	12	405	37	385	455	69	1,771	420
	June	300	0	188	40	466	38	467	335	138	1,973	528
	July	283	0	182	64	464	112	525	434	187	2,251	606
	August	378	0	448	52	433	213	464	511	230	2,728	903
	September	423	0	587	21	501	86	324	432	221	2,595	1,084
	October	261	0	638	16	368	12	307	337	169	2,108	938
	November	184	0	545	56	302	21	215	452	135	1,910	807
	December	144	0	569	45	294	9	329	415	163	1,969	826
	Average	240	0	337	30	338	48	302	422	144	1,862	632
1984	January	242	0	463	114	278	0	243	547	51	1,939	828
	February	348	0	324	33	267	0	244	481	174	1,871	723
	March	283	0	307	112	284	67	260	354	127	1,792	717
	April	280	0	320	95	221	0	288	581	158	1,944	734
	May	456	0	329	240	480	0	289	621	242	2,657	1,131
	June	284	0	411	46	415	0	243	574	139	2,112	806
	July	332	0	429	112	384	0	204	535	242	2,237	946
	August	404	0	438	82	281	0	114	487	216	2,021	993
	September	343	0	159	113	333	17	160	689	147	1,961	672
	October	333	0	287	114	436	0	208	578	115	2,070	754
	November	295	0	183	124	409	24	163	536	173	1,907	665
	Average	327	0	333	108	345	10	220	544	162	2,048	817

<sup>1</sup>Excludes petroleum imported into the United States indirectly from OPEC countries, primarily from Caribbean and West European areas, as refined petroleum products that were refined from crude oil produced in OPEC countries.

<sup>2</sup>Includes Ecuador, Gabon, Iraq, Kuwait, and Qatar.

<sup>3</sup>Includes Algeria, Libya, Saudi Arabia, United Arab Emirates, Iraq, Kuwait, and Qatar.

Footnotes continued on following page.

# Petroleum

## Crude Oil and Petroleum Product Imports (continued)

Imports from Non-OPEC Sources*												
		Bahamas	Canada	Mexico	Nether- lands Antilles	Trinidad and Tobago	United Kingdom	Puerto Rico	Virgin Islands	Other Non- OPEC	Total Non- OPEC	Total Imports
Thousand barrels per day												
1973	Average	174	1,325	16	585	255	15	99	329	465	3,263	6,256
1974	Average	164	1,070	8	511	251	8	90	391	340	2,832	6,112
1975	Average	152	846	71	332	242	14	90	406	300	2,454	6,056
1976	Average	118	599	87	275	274	31	88	422	353	2,247	7,313
1977	Average	171	517	179	211	289	126	105	466	550	2,614	8,807
1978	Average	160	467	318	229	253	180	94	429	484	2,613	8,363
1979	Average	147	538	439	231	190	202	92	431	548	2,819	8,456
1980	Average	78	455	533	225	176	176	88	388	491	2,609	6,909
1981	Average	74	447	522	197	133	375	62	327	534	2,672	5,996
1982	January	58	513	425	179	106	346	62	334	452	2,474	5,332
	February	67	537	476	221	120	181	38	362	508	2,510	4,807
	March	43	437	503	189	118	294	62	307	480	2,433	4,484
	April	82	360	476	184	166	247	36	266	690	2,507	4,378
	May	77	419	766	152	95	516	47	302	607	2,981	4,811
	June	32	481	797	148	129	557	58	322	708	3,231	5,327
	July	64	536	783	158	118	433	38	376	698	3,204	5,890
	August	80	443	853	145	106	520	24	317	650	3,137	5,244
	September	92	493	897	195	89	631	51	278	746	3,472	5,414
	October	45	459	682	148	109	666	52	262	801	3,222	5,306
	November	51	553	860	212	90	623	81	334	706	3,508	5,744
	December	88	561	689	174	102	438	48	336	480	2,916	4,606
	Average	65	482	685	175	112	456	50	316	627	2,968	5,113
1983	January	68	534	849	228	73	314	40	299	621	3,026	4,438
	February	92	586	722	183	81	193	50	192	558	2,658	3,726
	March	86	488	775	187	78	240	43	162	565	2,624	3,690
	April	174	454	981	216	85	421	20	183	759	3,295	4,727
	May	135	518	944	153	108	484	42	235	699	3,318	5,089
	June	137	586	830	173	120	440	48	262	757	3,353	5,326
	July	69	634	849	198	107	369	37	364	864	3,490	5,741
	August	144	542	906	197	90	461	40	313	738	3,431	6,159
	September	148	533	849	261	82	475	33	307	845	3,534	6,129
	October	171	532	771	172	106	414	48	357	580	3,151	5,258
	November	148	556	726	144	110	334	55	427	801	3,300	5,210
	December	127	604	710	153	113	429	22	278	628	3,063	5,033
	Average	125	547	826	189	96	382	40	282	701	3,189	5,051
1984	January	152	624	705	277	54	382	53	390	772	3,408	5,347
	February	142	620	747	288	77	338	58	418	1,083	3,772	5,643
	March	88	726	707	169	93	400	34	247	996	3,460	5,253
	April	88	691	859	207	91	282	37	257	863	3,375	5,319
	May	31	715	675	192	57	418	38	336	796	3,259	5,916
	June	50	499	732	234	104	318	53	268	934	3,192	5,304
	July	14	574	738	99	120	362	27	292	924	3,150	5,387
	August	57	551	621	205	98	388	34	236	826	3,015	5,036
	September	101	537	762	133	103	490	38	245	803	3,213	5,173
	October	152	685	827	112	122	486	37	321	955	3,697	5,767
	November	88	637	822	174	115	544	44	283	921	3,628	5,534
	Average	87	624	744	189	94	401	41	299	897	3,377	5,425

Footnotes continued.

\*Includes petroleum imported into the United States indirectly from OPEC countries, primarily from Caribbean and West European areas, as refined petroleum products that were refined from crude oil produced in OPEC countries.

(s) = Less than 500 barrels per day.

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

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

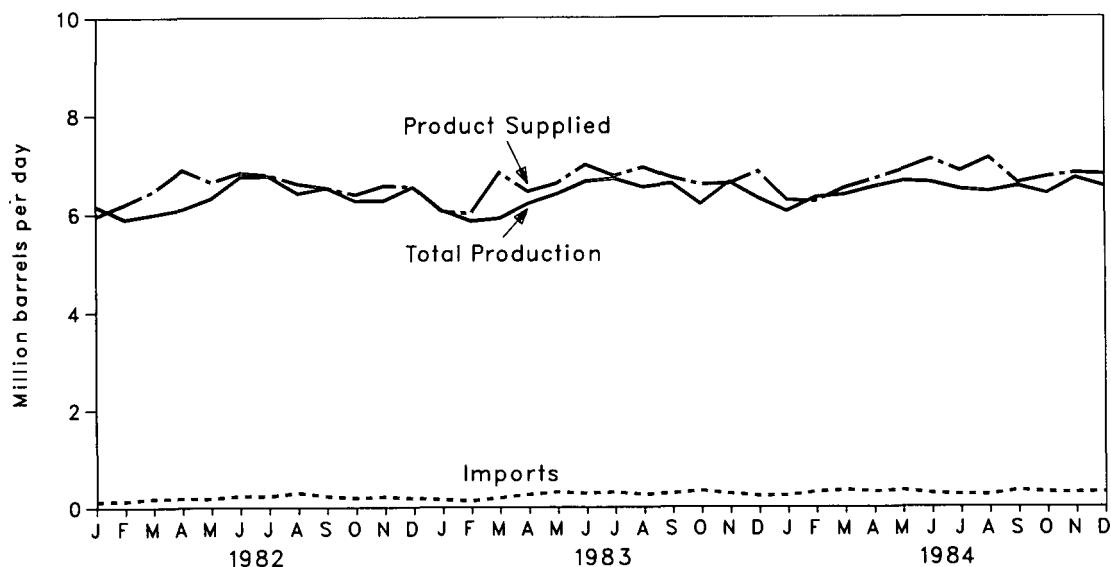
• Beginning in October 1977, Strategic Petroleum Reserve imports are included.

Sources: • See the last page of this section.

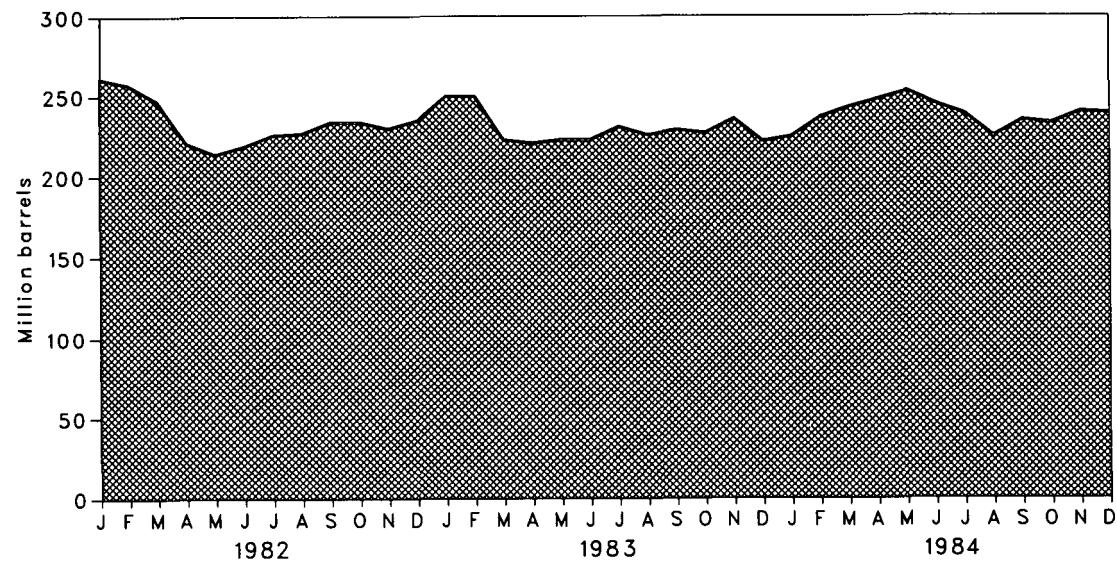
# Petroleum

## Finished Motor Gasoline Supply and Disposition

### Products Supplied, Total Production, and Imports



### Ending Stocks



# Petroleum

## Finished Motor Gasoline Supply and Disposition

	Supply	Disposition						Ending Stocks <sup>1</sup>	
		Total Production	Imports <sup>2</sup>	Stock Withdrawal <sup>2,3</sup>	Exports	Product Supplied			Total Motor Gasoline <sup>5</sup>
						Total	Unleaded <sup>4</sup>	Unleaded Percent of Total	
Thousand barrels per day									
1973	Average	6,535	134	9	4	6,674			209
1974	Average	6,360	204	-24	2	6,537			<sup>a</sup> 218
1975	Average	6,520	184	-28	2	6,675			235
1976	Average	6,841	131	10	3	6,978			231
1977	Average	7,033	217	-72	2	7,177	1,976	27.5	258
1978	Average	7,169	190	54	1	7,412	2,521	34.0	238
1979	Average	6,852	181	2	(s)	7,034	2,798	39.8	237
1980	Average	6,506	140	-66	1	6,579	3,067	46.6	<sup>a</sup> 261
1981	Average <sup>7</sup>	6,405	157	-28	2	6,588	3,264	49.5	253
1982	January	6,167	128	-316	18	5,961	3,067	51.5	261
	February	5,899	133	172	8	6,196	3,210	51.8	257
	March	5,994	183	334	44	6,466	3,358	51.9	247
	April	6,095	185	650	33	6,897	3,495	50.7	221
	May	6,319	182	177	23	6,655	3,415	51.3	214
	June	6,754	230	-134	14	6,835	3,565	52.2	219
	July	6,768	225	-178	24	6,790	3,577	52.7	226
	August	6,419	291	-81	16	6,614	3,526	53.3	185
	September	6,527	223	-198	22	6,531	3,404	52.1	234
	October	6,262	185	-42	15	6,391	3,351	52.4	234
	November	6,273	211	101	11	6,574	3,451	52.5	230
	December	6,542	178	-165	7	6,549	3,485	53.2	<sup>a</sup> 235
	Average	6,338	197	25	20	6,539	3,409	52.1	<sup>a</sup> 194
1983	January	6,065	153	-167	(s)	6,051	3,364	55.6	250
	February	5,848	128	24	(s)	6,000	3,264	54.4	250
	March	5,906	186	768	23	6,836	3,622	53.0	223
	April	6,201	255	-3	1	6,452	3,492	54.1	221
	May	6,397	305	-83	1	6,617	3,558	53.8	223
	June	6,655	277	84	22	6,994	3,792	54.2	223
	July	6,707	302	-225	18	6,765	3,746	55.4	231
	August	6,537	250	161	13	6,936	3,836	55.3	226
	September	6,611	279	-149	14	6,727	3,691	54.9	229
	October	6,188	330	72	2	6,588	3,711	56.3	227
	November	6,634	269	-298	2	6,603	3,692	55.9	236
	December	6,308	224	339	25	6,846	3,966	57.9	222
	Average	6,340	247	45	10	6,622	3,647	55.1	186
1984	January	6,037	233	-1	1	6,268	3,606	57.5	225
	February	6,320	303	-384	2	6,237	3,585	57.5	237
	March	6,375	343	-197	9	6,512	3,747	57.5	243
	April	6,528	308	-153	(s)	6,682	3,854	57.7	248
	May	6,650	329	-106	(s)	6,873	3,990	58.1	253
	June	6,620	272	217	17	7,092	4,210	59.4	245
	July	6,481	247	130	9	6,849	4,094	59.8	239
	August	6,436	243	437	1	7,114	4,263	59.9	225
	September	6,545	333	-263	2	6,614	3,982	60.2	235
	October	6,396	293	42	1	6,730	4,074	60.5	233
	November	R6,705	R286	R-175	11	R6,805	4,243	62.3	R240
	December†	6,536	297	-54	NA	6,778	NA	NA	239
	Average	6,468	290	-40	NA	6,715	NA	NA	201

<sup>1</sup>Stocks are totals as of end of period.

<sup>2</sup>Beginning in 1981, excludes blending components.

<sup>3</sup>A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>4</sup>Includes gasohol.

<sup>5</sup>Includes motor gasoline blending components.

<sup>6</sup>In January 1975, 1981, and 1983, numerous respondents were added to surveys affecting stocks reported and stock withdrawal calculations. See Note 5 on the last page of this section.

<sup>7</sup>Beginning in January 1981, survey forms were modified. See Note 2 on the last page of this section.

Italicics denote estimates based upon preliminary data. R=Revised data. NA=Not available. (s)=Less than 500 barrels per day.

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

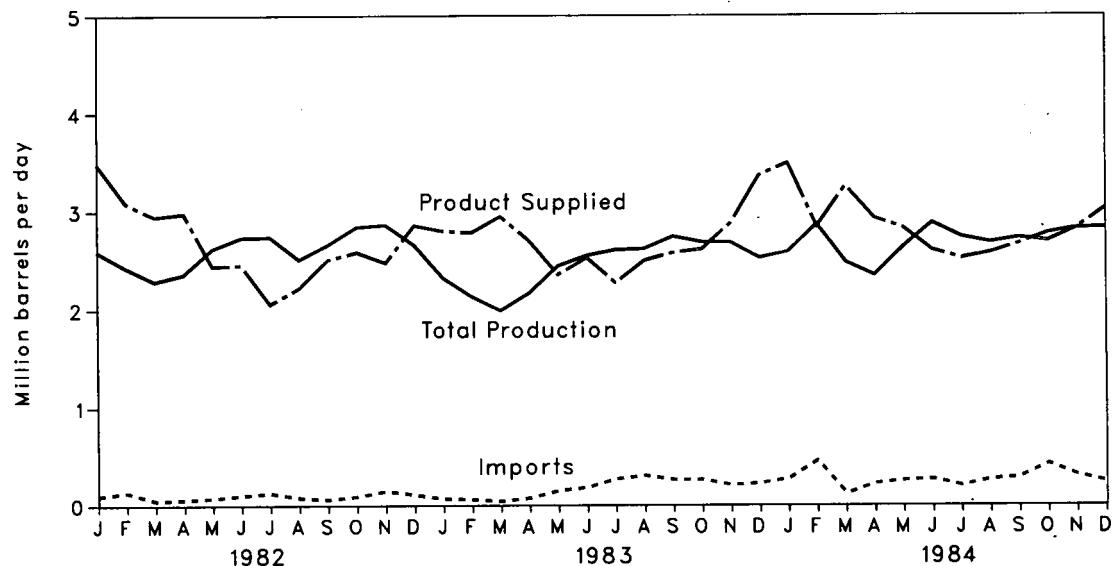
• Totals may not equal sum of components due to independent rounding.

Sources: • See the last page of this section.

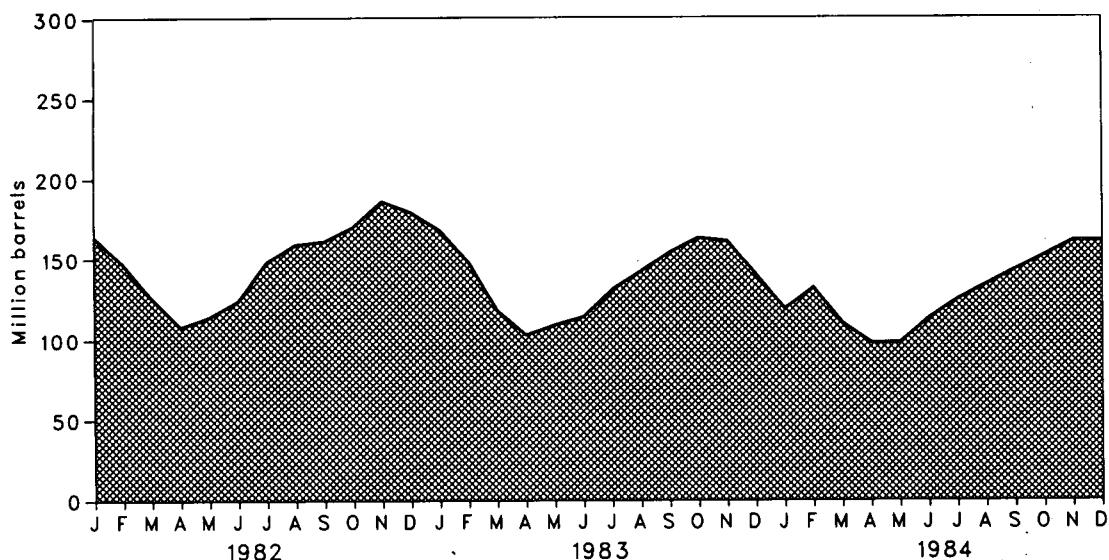
# Petroleum

## Distillate Fuel Oil Supply and Disposition

### Product Supplied, Total Production, and Imports



### Ending Stocks



# Petroleum

## Distillate Fuel Oil Supply and Disposition

		Supply			Disposition		Ending Stocks <sup>1</sup>	
		Total Production	Imports	Stock Withdrawal <sup>2</sup>	Crude Used Directly <sup>3</sup>	Exports	Product Supplied <sup>4</sup>	
		Thousand barrels per day						
1973	Average	2,822	392	-115	2	9	3,092	196
1974	Average	2,669	289	-9	2	2	2,948	200
1975	Average	2,654	155	40	2	1	2,851	209
1976	Average	2,924	146	62	1	1	3,133	186
1977	Average	3,278	250	-176	1	1	3,352	250
1978	Average	3,167	173	93	1	3	3,432	216
1979	Average	3,153	193	-34	1	3	3,311	229
1980	Average	2,662	142	64	1	3	2,866	205
1981	Average <sup>5</sup>	2,613	173	48	10	5	2,829	192
1982	January	2,591	97	876	10	90	3,484	164
	February	2,427	132	605	11	90	3,085	147
	March	2,288	48	682	10	84	2,945	126
	April	2,358	59	612	13	64	2,978	108
	May	2,618	74	-183	10	75	2,444	114
	June	2,729	102	-335	10	55	2,452	124
	July	2,734	125	-789	11	24	2,058	148
	August	2,507	80	-339	10	40	2,218	159
	September	2,657	61	-85	12	139	2,507	161
	October	2,838	91	-289	8	66	2,581	170
	November	2,860	145	-514	8	24	2,475	186
	December	2,655	109	225	10	143	2,855	179
	Average	2,606	93	35	10	74	2,671	
1983	January	2,321	68	480	NA	173	2,797	168
	February	2,135	59	691	NA	105	2,780	148
	March	1,993	42	971	NA	59	2,947	118
	April	2,171	73	500	NA	47	2,697	103
	May	2,444	147	-186	NA	50	2,354	109
	June	2,546	179	-161	NA	40	2,524	114
	July	2,604	267	-546	NA	55	2,270	131
	August	2,615	301	-379	NA	43	2,495	142
	September	2,739	259	-386	NA	37	2,575	154
	October	2,681	260	-276	NA	55	2,611	163
	November	2,680	203	45	NA	54	2,874	161
	December	2,522	221	676	NA	54	3,365	140
	Average	2,456	174	124	NA	64	2,690	
1984	January	2,585	270	676	NA	40	3,490	119
	February	2,864	458	-439	NA	41	2,842	132
	March	2,480	115	727	NA	66	3,256	110
	April	2,347	220	393	NA	32	2,929	98
	May	2,633	252	-10	NA	48	2,827	98
	June	2,879	266	-490	NA	53	2,602	113
	July	2,736	198	-375	NA	40	2,518	125
	August	2,678	263	-291	NA	74	2,575	134
	September	2,724	285	-322	NA	22	2,665	143
	October	2,692	424	-295	NA	47	2,773	152
	November	R2,821	R308	R-281	NA	24	R2,824	161
	December†	2,829	239	-9	NA	NA	3,028	161
	Average	2,688	274	-56	NA	NA	2,862	

<sup>1</sup>Stocks are totals as of end of period.

<sup>2</sup>A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>3</sup>Beginning in January 1983, product supplied for distillate fuel oil does not include crude oil used directly. See Note 4 on the last page of this section.

<sup>4</sup>In January 1975, 1981, and 1983, numerous respondents were added to surveys affecting stocks reported and stock withdrawal calculations. See Note 5 on the last page of this section.

<sup>5</sup>Beginning in January 1981, survey forms were modified. See Note 2 on the last page of this section.

†Italics denote estimates based upon preliminary data. R=Revised data. NA=Not available.

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

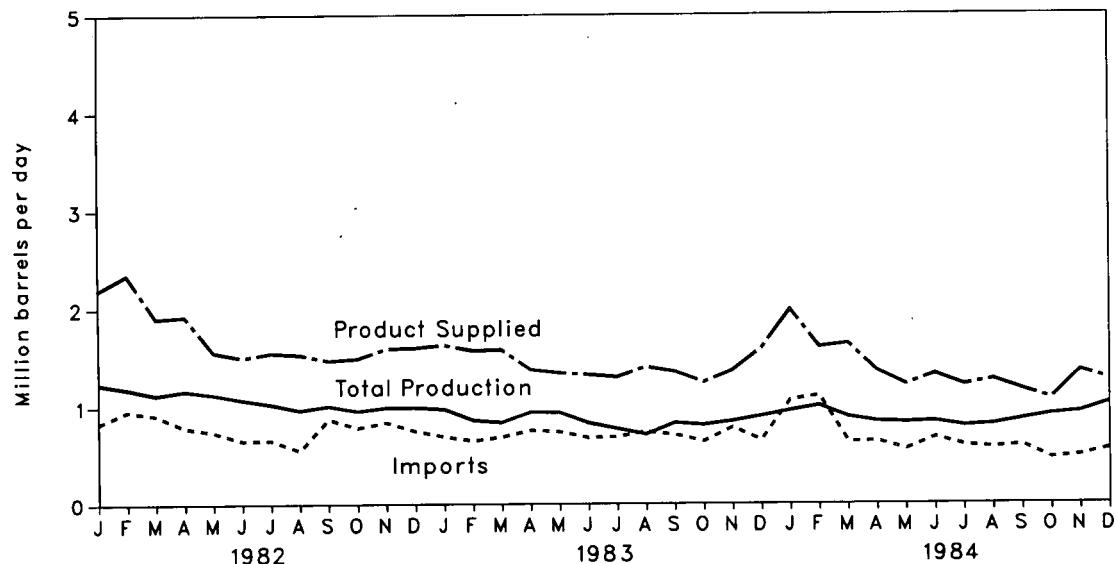
• Totals may not equal sum of components due to independent rounding.

Sources: • See the last page of this section.

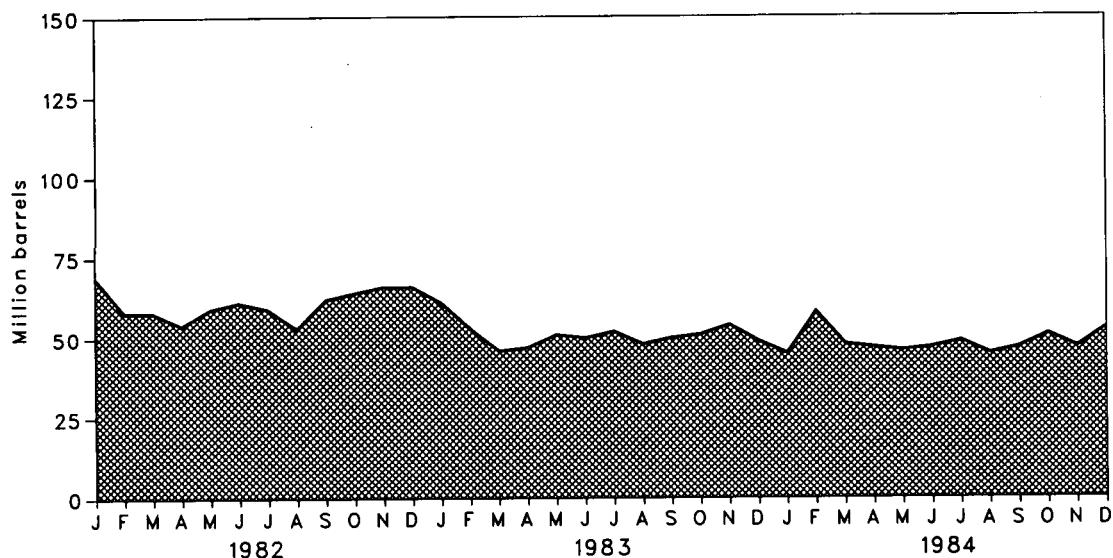
# Petroleum

## Residual Fuel Oil Supply and Disposition

### Product Supplied, Total Production, and Imports



### Ending Stocks



# Petroleum

## Residual Fuel Oil Supply and Disposition

	Supply			Disposition		Ending Stocks <sup>1</sup>	
	Total Production	Imports	Stock Withdrawal <sup>2</sup>	Crude Used Directly <sup>3</sup>	Exports	Product Supplied <sup>4</sup>	
	Thousand barrels per day						
1973 Average	971	1,853	5	17	23	2,822	53
1974 Average	1,070	1,587	-17	13	14	2,639	60
1975 Average	1,235	1,223	2	15	15	2,462	74
1976 Average	1,377	1,413	5	17	12	2,801	72
1977 Average	1,754	1,359	-48	13	6	3,071	90
1978 Average	1,667	1,355	-1	13	13	3,023	90
1979 Average	1,687	1,151	-15	12	9	2,826	96
1980 Average	1,580	939	10	12	33	2,508	92
1981 Average <sup>5</sup>	1,321	800	-37	48	118	2,088	78
1982 January	1,235	831	301	53	235	2,185	69
February	1,186	956	363	53	213	2,344	58
March	1,123	912	12	53	197	1,903	58
April	1,166	788	150	52	234	1,923	54
May	1,128	742	-172	52	191	1,560	59
June	1,074	652	-57	50	217	1,501	61
July	1,028	657	56	49	239	1,550	59
August	965	551	203	47	235	1,531	53
September	1,008	872	-306	44	148	1,470	62
October	955	783	-57	43	234	1,490	64
November	989	837	-94	43	182	1,591	66
December	989	747	6	43	186	1,598	66
Average	1,070	776	32	48	209	1,716	
1983 January	972	691	-258	NA	294	1,626	61
February	857	647	257	NA	191	1,570	53
March	835	686	227	NA	169	1,579	46
April	941	753	-10	NA	310	1,374	47
May	936	738	-141	NA	190	1,342	51
June	828	677	36	NA	218	1,323	50
July	769	684	-64	NA	90	1,299	52
August	710	739	115	NA	165	1,400	48
September	826	706	-47	NA	134	1,351	50
October	807	638	-50	NA	153	1,243	51
November	845	780	-97	NA	167	1,362	54
December	897	649	182	NA	141	1,587	49
Average	852	699	55	NA	185	1,421	
1984 January	953	1,061	119	NA	151	1,981	45
February	1,003	1,107	-420	NA	87	1,602	58
March	887	633	321	NA	204	1,637	48
April	840	637	9	NA	130	1,357	47
May	829	554	35	NA	200	1,218	46
June	841	676	-17	NA	176	1,324	47
July	792	596	-77	NA	99	1,213	49
August	808	572	146	NA	260	1,266	45
September	861	596	-77	NA	214	1,165	47
October	912	461	-123	NA	174	1,075	51
November	R936	R588	R119	NA	286	R1,357	R47
December†	1,029	556	-115	NA	NA	1,270	53
Average	891	668	-5	NA	NA	1,372	

<sup>1</sup>Stocks are totals as of end of period.

<sup>2</sup>A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>3</sup>Beginning in January 1983, product supplied for residual fuel oil does not include crude oil used directly. See Note 4 on the last page of this section.

<sup>4</sup>In January 1975, 1981, and 1983, numerous respondents were added to surveys affecting stocks reported and stock withdrawal calculations. See Note 5 on the last page of this section.

<sup>5</sup>Beginning in January 1981, survey forms were modified. See Note 2 on the last page of this section.

†Italics denote estimates based upon preliminary data. R=Revised data. NA=Not available.

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

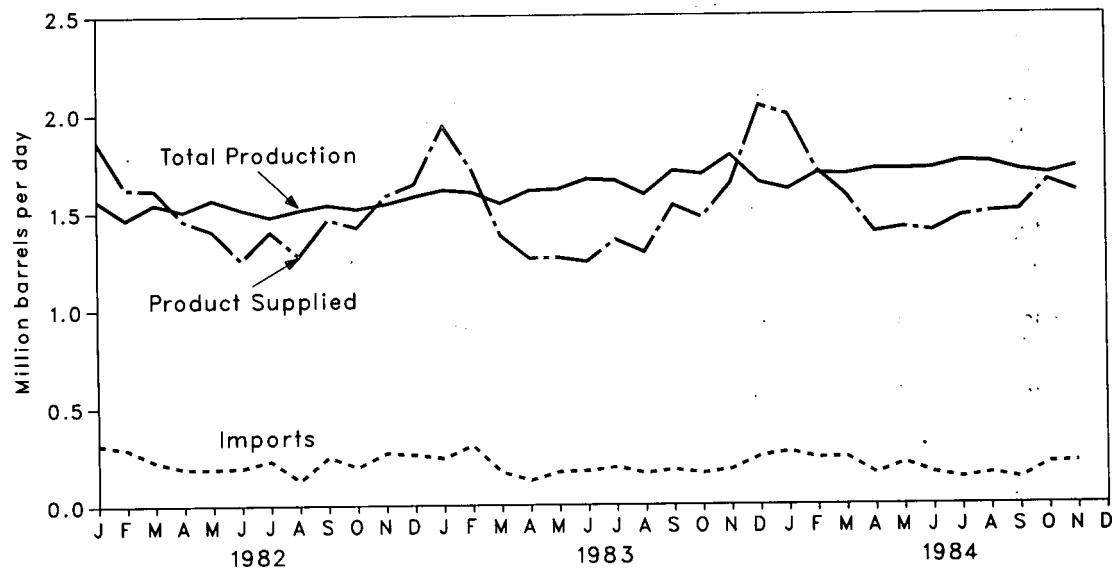
• Totals may not equal sum of components due to independent rounding.

Sources: • See the last page of this section.

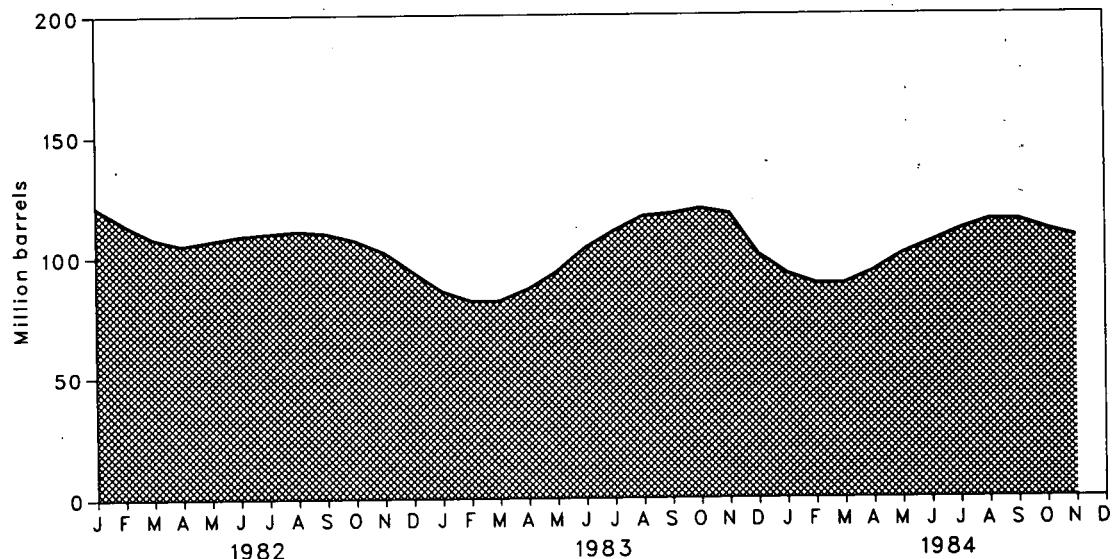
# Petroleum

## Liquefied Petroleum Gases Supply and Disposition

### Product Supplied, Total Production, and Imports



### Ending Stocks



# Petroleum

## Liquefied Petroleum Gases<sup>1</sup> Supply and Disposition

	Supply			Disposition			Ending Stocks <sup>2</sup> Million barrels
	Total Production	Imports	Stock Withdrawal <sup>3</sup>	Refinery Inputs	Exports	Product Supplied	
	Thousand barrels per day						
1973 Average	1,600	132	-35	220	27	1,449	99
1974 Average	1,565	123	-38	220	25	1,406	113
1975 Average	1,527	112	-35	246	26	1,333	125
1976 Average	1,535	130	24	260	25	1,404	116
1977 Average	1,566	161	-55	233	18	1,422	136
1978 Average	1,537	123	12	239	20	1,413	132
1979 Average	1,556	217	70	236	15	1,592	111
1980 Average	1,535	216	-27	233	21	1,469	120
1981 Average	1,571	244	-18	289	42	1,466	135
1982 January	1,565	314	443	391	67	1,863	121
February	1,466	291	243	327	51	1,621	114
March	1,544	223	211	289	74	1,615	108
April	1,506	188	98	257	77	1,458	105
May	1,565	186	-71	234	43	1,403	107
June	1,515	192	-86	262	106	1,254	109
July	1,476	227	-13	253	37	1,399	110
August	1,511	125	-45	254	61	1,276	111
September	1,538	247	37	274	85	1,463	110
October	1,517	194	97	306	81	1,421	107
November	1,542	267	175	363	37	1,583	102
December	1,580	258	256	395	56	1,642	94
Average	1,528	226	111	300	65	1,499	
1983 January	1,611	240	4520	313	118	1,939	86
February	1,600	305	128	244	76	1,713	82
March	1,543	166	-9	197	127	1,377	82
April	1,607	124	-156	198	116	1,260	87
May	1,613	167	-225	207	84	1,263	94
June	1,664	172	-334	203	59	1,241	104
July	1,656	191	-221	217	55	1,354	111
August	1,586	160	-199	229	29	1,289	117
September	1,705	178	-30	236	86	1,531	118
October	1,688	160	-81	268	32	1,467	120
November	1,785	180	70	362	33	1,640	118
December	1,645	247	575	363	66	2,038	101
Average	1,642	190	4	253	73	1,509	
1984 January	1,610	269	470	333	23	1,993	93
February	1,690	237	146	323	41	1,708	89
March	1,685	241	12	289	68	1,581	89
April	1,711	155	-170	253	54	1,389	94
May	1,709	211	-221	244	42	1,412	101
June	1,714	158	-189	237	53	1,394	106
July	1,750	132	-138	232	43	1,469	111
August	1,744	154	-132	241	34	1,491	115
September	1,704	128	-24	283	26	1,499	115
October	1,683	207	137	322	56	1,648	111
November	1,719	212	90	376	52	1,593	108
Average	1,702	191	-2	285	45	1,562	

<sup>1</sup>Includes ethane, propane, normal butane, and isobutane.

<sup>2</sup>Stocks are totals as of end of period.

<sup>3</sup>A negative number indicates an increase in stocks and a positive number indicates a decrease.

In January 1975, 1981, 1983, and 1984, a new stock basis was established affecting stocks reported and stock withdrawal calculations. See Note 5 on the last page of this section.

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

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

Sources: • See the last page of this section.

# Petroleum

## Other Petroleum Products<sup>1</sup> Supply and Disposition

		Supply			Disposition			Ending Stocks <sup>2</sup>
		Total Production	Imports	Stock Withdrawal <sup>3</sup>	Refinery Inputs	Exports	Product Supplied	
		Thousand barrels per day						Million barrels
1973	Average	3,693	502	-9	750	166	3,270	208
1974	Average	3,558	432	-28	665	174	3,123	218
1975	Average	3,424	277	-2	537	160	3,002	219
1976	Average	3,643	206	-5	524	175	3,145	220
1977	Average	3,912	205	-27	514	165	3,410	230
1978	Average	4,046	166	14	492	167	3,568	225
1979	Average	4,153	195	-37	352	209	3,749	238
1980	Average	3,956	210	-23	311	198	3,634	247
1981	Average	3,739	226	-46	723	199	3,088	282
1982	January	3,171	269	-7	624	180	2,631	282
	February	3,403	305	-153	663	138	2,755	287
	March	3,466	243	-191	725	161	2,631	293
	April	3,408	309	73	796	204	2,790	290
	May	3,317	318	184	824	210	2,785	285
	June	3,547	315	123	812	216	2,954	281
	July	3,660	408	-1	856	187	3,023	281
	August	3,583	346	217	743	202	3,201	274
	September	3,533	375	105	749	213	3,051	271
	October	3,529	383	244	915	266	2,976	264
	November	3,498	423	-28	837	269	2,786	264
	December	3,324	313	366	885	275	2,842	253
	Average	3,453	334	80	787	211	2,869	
1983	January	3,194	322	-419	588	271	2,239	271
	February	3,229	321	12	673	232	2,658	270
	March	3,381	319	-147	572	249	2,732	275
	April	3,299	404	-24	592	247	2,840	276
	May	3,405	374	35	705	242	2,866	275
	June	3,610	444	96	717	292	3,144	272
	July	3,636	425	148	735	209	3,265	267
	August	3,695	482	30	668	242	3,297	266
	September	3,792	497	-6	788	236	3,255	266
	October	3,578	424	-107	711	195	2,990	270
	November	3,568	441	95	912	238	2,957	267
	December	3,123	479	361	883	257	2,823	256
	Average	3,460	411	6	712	242	2,923	
1984	January	3,391	486	-177	561	207	2,931	253
	February	3,582	586	-256	751	225	2,935	261
	March	3,510	466	-218	530	258	2,969	268
	April	3,584	582	-207	627	268	3,063	274
	May	3,683	642	-118	775	257	3,175	277
	June	3,863	521	404	1,229	343	3,213	265
	July	3,866	567	278	1,034	238	3,438	257
	August	3,855	561	24	648	172	3,621	256
	September	3,768	539	-51	712	238	3,306	258
	October	3,580	632	30	724	180	3,336	257
	November	3,530	592	64	948	281	2,960	255
	Average	3,656	562	-20	775	242	3,179	

<sup>1</sup>Includes pentanes plus, other hydrocarbons and alcohol, unfinished oil, gasoline blending components, and all finished petroleum products except finished motor gasoline, distillate fuel oil, residual fuel oil, and liquefied petroleum gases.

<sup>2</sup>Stocks are totals as of end of period.

<sup>3</sup>A negative number indicates an increase in stocks and a positive number indicates a decrease.

\*In January 1975, 1981, 1983, and 1984, a new stock basis was established affecting stocks reported and stock withdrawal calculations. See Note 5 on the last page of this section.

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

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

Sources: • See the last page of this section.

## Notes and Sources for the Petroleum Section

### Notes

1. During 1981 the listing (frame) of operators of all facilities required to complete each monthly survey was updated. The refinery frame was found to be complete and accurate, although the frames for bulk terminals, pipelines, and crude oil stocks facilities were found to be outdated. A variety of sources (published directories, listings, and exploratory surveys) were researched for potential new respondents. As a result of this research, a significant number of respondents were added to the frames. The increase in the respondents for the frames affects the stocks of crude oil and petroleum products. For further details, see the Energy Information Administration (EIA), *Petroleum Supply Monthly*.

2. Research conducted by the EIA in the latter half of 1980 indicated changes had taken place in the petroleum industry that were not being adequately reflected in the EIA survey forms. First, the flows of unfinished oils and the redesignation of finished products were not being accurately described on the EIA survey forms. Second, a substantial amount of motor gasoline was being produced at non-refinery "downstream blending stations" but was not being reported. Although empirical information is not available to precisely measure the historical effects, estimates of the magnitude of the differences in the major series affected are shown in the EIA, *Petroleum Supply Monthly*. Beginning in January 1981, the EIA modified its survey forms, changed definitions of gasoline (motor and aviation), and added the non-refinery blenders previously not reported.

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

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

5. **New Stock Basis:** In January 1975, 1981, and 1983, numerous respondents were added to bulk terminal and

pipeline surveys affecting subsequent stocks reported and stock withdrawal calculations. Using the expanded coverage (new basis), the end-of-year stocks, in million barrels, would have been:

- Crude Oil: 1982—645 (Total) and 351 (Other Primary).
- Crude Oil and Petroleum Products: 1974—1,121; 1980—1,420; and 1982—1,462.
- Motor Gasoline: 1974—225; 1980—263; 1982—244 (Total) and 203 (Finished).
- Distillate Fuel Oil: 1974—224; 1980—205; and 1982—186.
- Residual Fuel Oil: 1974—75; 1980—91; and 1982—68.
- Liquefied Petroleum Gases: 1974—113; 1980—128; and 1982—103.
- Other Petroleum Products: 1974—220; 1980—249; and 1982—259.
- Stock withdrawal calculations beginning in 1975, 1981, and 1983, were made using new basis stock levels.

In January 1984, changes were made in the reporting of natural gas liquids. As a result, unfractionated stream, which was formerly included in "Other Petroleum Products Supply and Disposition" table, is now reported on a component basis (ethane, propane, normal butane, isobutane and pentanes plus). Most of these stocks will now appear in the "Liquefied Petroleum Gases Supply and Disposition" table. This change will affect stocks reported and stock withdrawals in each table. Under new basis, end-of-year 1983 stocks, in million barrels would have been:  
• Liquefied Petroleum Gases: 1983—108.  
• Other Petroleum Products: 1983—248.

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

### Sources

- 1973 through 1976: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, "Petroleum Statement, Annual" and "PAD Districts Supply/Demand, Annual."
- 1977 through 1980: Energy Information Administration (EIA), *Energy Data Reports*, "Petroleum Statement, Annual" and "PAD Districts Supply/Demand, Annual" and unleaded gasoline data from *Monthly Petroleum Statistics Report*.
- January 1981 through December 1983: EIA, *Petroleum Supply Annual*.
- January 1983 through November 1984: Detailed statistics in appropriate issues of the *Petroleum Supply Monthly* (except domestic crude oil production).
- December 1984: Estimates based on EIA weekly data (except domestic crude oil production).
- January 1983 through December 1984: Domestic crude oil production estimate based on historical statistics from State Conservation Agencies and the U.S. Geological Survey.

# Part 4 Natural Gas

## Natural Gas

Total dry natural gas production in the United States during November 1984 was an estimated 1.4 trillion cubic feet (Tcf). This was 0.9 percent higher than in November 1983. Output during the first 11 months of 1984 totaled 15.7 Tcf, a daily average of 7.8 percent more than during the first 11 months of 1983.

Consumption of natural and supplemental gas in November 1984 was an estimated 1.6 Tcf, 5.1 percent higher than in November 1983. Estimated consumption during the first 11 months of 1984 totaled 15.7 Tcf, a daily average of 5.1 percent higher than during the comparable 1983 period.

Deliveries to industrial consumers, the principal end users of natural and supplemental gas, during October 1984 (latest data available) were an estimated 527 billion cubic feet (Bcf). This was 42.4 percent of total October 1984 consumption and was 7.5 percent lower than in October 1983. Industrial consumption totaled 4,773 Bcf during the first 10 months of 1984, a daily average of 9.0 percent higher than during the comparable 1983 period.

Imports of natural gas in November 1984 were an estimated 79 Bcf, 1.3 percent lower than in the previous November. During the first 11 months of 1984, imports of natural gas totaled an estimated 763 Bcf, a daily average of 6.3 percent lower than during the comparable 1983 period. Receipts of foreign gas during November 1984 included Algerian liquefied natural gas (LNG) equivalent to approximately 5 Bcf.

Stocks of working gas\* in underground natural gas storage reservoirs at the end of November 1984 totaled 3,017 Bcf. This was 4.9 percent below stocks available a year earlier. Net withdrawals from storage during November 1984 were 146 Bcf, 82.5 percent higher than during the previous November.

\*Gas available for withdrawal.

# Natural Gas

## Production Summary

		Gross Wet Gas Withdrawals <sup>1</sup>	Used for Repressuring <sup>2</sup>	Nonhydrocarbon Gas Removed <sup>3</sup>	Vented and Flared	Marketed Production (Wet) <sup>4</sup>	Extraction Loss <sup>5</sup>	Total Dry Gas Production <sup>6</sup>
Billion cubic feet								
1973	Total	24,067	1,171	NA	248	22,648	917	21,731
1974	Total	22,850	1,080	NA	169	21,601	887	20,713
1975	Total	21,104	861	NA	134	20,109	872	19,236
1976	Total	20,944	859	NA	132	19,952	854	19,098
1977	Total	21,097	935	NA	137	20,025	863	19,163
1978	Total	21,309	1,181	NA	153	19,974	852	19,122
1979	Total	21,883	1,245	NA	167	20,471	808	19,663
1980	Total	21,870	1,365	199	125	20,180	777	19,403
1981	Total	21,587	1,312	222	98	19,956	775	19,181
1982	January	1,865	108	19	9	1,728	71	1,657
	February	1,712	101	18	8	1,584	65	1,519
	March	1,816	115	19	7	1,675	69	1,606
	April	1,714	108	18	7	1,581	65	1,516
	May	1,692	117	17	7	1,552	64	1,488
	June	1,643	114	16	7	1,505	62	1,443
	July	1,667	119	15	7	1,526	63	1,463
	August	1,638	120	18	8	1,492	61	1,431
	September	1,570	116	16	6	1,431	59	1,372
	October	1,610	126	16	8	1,460	60	1,400
	November	1,621	119	18	9	1,476	61	1,415
	December	1,663	125	19	10	1,510	62	1,448
	<b>Total</b>	<b>20,210</b>	<b>1,388</b>	<b>208</b>	<b>93</b>	<b>18,520</b>	<b>762</b>	<b>17,758</b>
1983	January	1,688	125	20	7	1,536	72	1,464
	February	1,488	111	17	7	1,353	64	1,289
	March	1,552	125	18	8	1,401	66	1,335
	April	1,470	123	16	8	1,323	62	1,261
	May	1,467	114	17	9	1,328	62	1,266
	June	1,415	121	19	7	1,268	60	1,208
	July	1,502	128	18	8	1,348	63	1,285
	August	1,555	127	20	8	1,400	66	1,334
	September	1,514	123	19	8	1,364	64	1,300
	October	1,591	125	18	8	1,440	68	1,372
	November	1,602	117	19	9	1,457	68	1,389
	December	1,753	119	21	8	1,605	75	1,530
	<b>Total</b>	<b>18,597</b>	<b>1,458</b>	<b>222</b>	<b>95</b>	<b>16,822</b>	<b>790</b>	<b>16,033</b>
1984	January	1,849	119	22	7	1,700	80	1,620
	February	1,617	115	19	6	1,477	69	1,408
	March	1,662	112	21	7	1,522	72	1,450
	April	1,637	120	19	7	1,491	70	1,421
	May	1,644	127	20	7	1,490	70	1,420
	June	1,588	122	19	8	1,440	68	1,372
	July	1,650	126	19	8	1,497	70	1,427
	August	1,652	126	19	8	1,499	70	1,429
	September	R1,551	R121	R15	R7	R1,407	R66	R1,341
	October	R1,616	R124	19	8	R1,465	R69	R1,396
	November	1,623	125	20	8	1,470	69	1,401

<sup>1</sup>Gas withdrawn from gas and oil wells.

<sup>2</sup>Gas returned to formations for repressuring, pressure maintenance, and cycling.

<sup>3</sup>For definitions and further explanations, see Notes on the last two pages of this section.

<sup>4</sup>Equal to gross withdrawals minus volumes used for repressuring, volumes of nonhydrocarbon gases removed, and volumes vented and flared. See Note 2 on the last two pages of this section for further explanation.

<sup>5</sup>Equal to marketed production (wet) minus extraction loss.

<sup>6</sup>May include unknown quantities of nonhydrocarbon gases.

R=Revised data. NA=Not available.

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

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

• Italics denote estimated data. Data for 1973 through 1982 are final. All other data are preliminary unless otherwise indicated.

Sources: • See the last page of this section.

# Natural Gas

## Supply and Disposition of Natural Gas

		Supply				Disposition			
		Total Dry Gas Production	With-drawals from Storage <sup>1</sup>	Supplemental Gaseous Fuels <sup>2</sup>	Imports <sup>2</sup>	Total Supply/Disposition <sup>3</sup>	Additions to Storage <sup>1</sup>	Exports <sup>2</sup>	Consumption <sup>2</sup>
Billion cubic feet									
1973	Total	121,731	1,533	NA	1,033	24,297	1,974	77	22,049
1974	Total	20,713	1,701	NA	959	23,373	1,784	77	21,223
1975	Total	19,236	1,760	NA	953	21,949	2,104	73	19,538
1976	Total	19,098	1,921	NA	963	21,983	1,756	65	19,946
1977	Total	19,163	1,750	NA	1,011	21,924	2,307	56	19,521
1978	Total	19,122	2,158	NA	966	22,245	2,278	53	19,627
1979	Total	19,663	2,047	NA	1,253	22,964	2,295	56	20,241
1980	Total	19,403	1,972	155	985	22,515	1,949	49	19,877
1981	Total	19,181	1,930	176	904	22,191	2,228	59	19,404
1982	January	1,657	697	19	98	2,471	24	3	2,400
	February	1,519	461	16	85	2,081	51	5	1,984
	March	1,606	274	15	82	1,977	91	5	1,838
	April	1,516	112	12	72	1,712	185	2	1,485
	May	1,488	11	9	65	1,573	394	3	1,136
	June	1,443	11	9	61	1,524	364	6	1,115
	July	1,463	12	9	67	1,551	362	5	1,145
	August	1,431	36	9	61	1,537	342	6	1,151
	September	1,372	20	9	66	1,467	285	5	1,140
	October	1,400	62	11	77	1,550	197	5	1,311
	November	1,415	168	13	91	1,687	85	5	1,559
	December	1,448	299	14	110	1,871	88	5	1,739
	Total	17,758	2,165	145	933	21,001	2,472	52	18,001
1983	January	1,464	450	16	112	2,042	24	5	1,974
	February	1,289	324	13	95	1,721	35	5	1,646
	March	1,335	266	13	86	1,700	58	5	1,601
	April	1,261	162	11	74	1,508	81	5	1,388
	May	1,266	41	9	61	1,377	189	5	1,149
	June	1,208	22	8	59	1,297	254	3	1,008
	July	1,285	25	9	58	1,377	267	5	1,070
	August	1,334	35	9	56	1,434	248	6	1,144
	September	1,300	27	9	67	1,403	259	4	1,105
	October	1,372	40	10	64	1,486	171	4	1,274
	November	1,389	160	12	80	1,641	80	5	1,519
	December	1,530	602	17	107	2,256	31	5	2,179
	Total	16,033	2,153	136	918	19,242	1,697	55	17,057
1984	January	1,620	563	17	95	2,295	54	4	2,193
	February	1,408	300	13	70	1,791	62	4	1,687
	March	1,450	352	14	69	1,885	43	5	1,798
	April	1,421	105	11	72	1,609	152	5	1,414
	May	1,420	30	10	73	1,533	258	6	1,231
	June	1,372	21	9	63	1,465	320	4	1,104
	July	1,427	28	9	59	1,523	342	5	1,138
	August	1,429	30	10	57	1,526	314	5	1,169
	September	R1,341	32	9	58	R1,440	288	5	R1,111
	October	R1,396	48	10	R68	R1,522	238	4	R1,242
	November	1,401	222	13	79	1,715	76	4	1,597
									R36
									R38

<sup>1</sup>Monthly and annual data for 1980 through 1982 include underground storage and liquefied natural gas storage. All other data include underground storage only. Computation procedures are discussed in Note 8 on the last two pages of this section.

<sup>2</sup>For definitions and further explanations, see Notes on the last two pages of this section.

<sup>3</sup>Data for 1978 through 1982 do not include intratransit receipts and deliveries.

<sup>4</sup>May include unknown quantities of nonhydrocarbon gases.

R = Revised data. NA = Not available.

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

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

• Italics denote estimated data. Data for 1973 through 1982 are final. All other data are preliminary unless otherwise indicated.

Sources: • See the last page of this section.

# Natural Gas

## Natural Gas<sup>1</sup> Consumption

		Lease and Plant Fuel	Pipeline Fuel	Delivered to Consumers				Total Consumption	
				Residential	Commercial <sup>2</sup>	Industrial	Electric Utilities		
				Billion cubic feet					
1973	Total	1,496	728	4,879	2,597	8,689	3,660	19,825	22,049
1974	Total	1,477	669	4,786	2,556	8,292	3,443	19,077	21,223
1975	Total	1,396	583	4,924	2,508	6,968	3,158	17,558	19,538
1976	Total	1,634	548	5,051	2,668	6,964	3,081	17,764	19,946
1977	Total	1,659	533	4,821	2,501	6,815	3,191	17,329	19,521
1978	Total	1,648	530	4,903	2,601	6,757	3,188	17,449	19,627
1979	Total	1,499	601	4,965	2,786	6,899	3,491	18,141	20,241
1980	Total	1,026	635	4,752	2,611	7,172	3,682	18,216	19,877
1981	Total	928	642	4,546	2,520	7,128	3,640	17,834	19,404
1982	January	104	79	866	444	669	238	2,217	2,400
	February	95	66	786	405	412	220	1,823	1,984
	March	100	61	602	322	506	247	1,677	1,838
	April	95	49	451	237	407	246	1,341	1,485
	May	93	38	233	139	375	258	1,005	1,136
	June	90	37	165	107	420	296	988	1,115
	July	91	38	138	101	424	353	1,016	1,145
	August	89	38	123	105	435	361	1,024	1,151
	September	86	38	136	105	482	293	1,016	1,140
	October	87	43	204	130	573	273	1,181	1,311
	November	88	52	372	218	603	226	1,419	1,559
	December	90	58	557	299	520	215	1,591	1,739
	Total	1,109	596	4,633	2,606	5,831	3,226	16,295	18,001
1983	January	92	65	697	357	555	208	1,817	1,974
	February	81	54	673	349	312	177	1,511	1,646
	March	84	53	525	275	456	208	1,464	1,601
	April	79	46	449	231	380	203	1,263	1,388
	May	80	38	269	147	397	218	1,031	1,149
	June	76	33	176	107	368	248	899	1,008
	July	81	35	130	97	413	314	954	1,070
	August	84	38	119	99	452	352	1,022	1,144
	September	82	36	124	103	461	299	987	1,105
	October	86	42	195	130	570	251	1,146	1,274
	November	87	50	347	198	623	214	1,382	1,519
	December	96	72	825	438	530	219	2,011	2,179
	Total	1,008	563	4,530	2,530	5,516	2,912	15,486	17,057
1984	January	102	72	805	404	595	215	2,019	2,193
	February	88	56	580	291	485	187	1,543	1,687
	March	91	59	611	312	519	206	1,648	1,798
	April	89	47	428	224	406	220	1,278	1,414
	May	89	41	265	148	424	264	1,101	1,231
	June	86	36	161	104	418	299	982	1,104
	July	90	38	124	91	446	349	1,010	1,138
	August	90	39	117	95	478	350	1,040	1,169
	September	R84	R37	128	96	R475	291	R990	R1,111
	October	88	41	194	122	527	270	1,113	1,242

<sup>1</sup>Includes supplemental gaseous fuels.

<sup>2</sup>Includes deliveries to local, State, and Federal agencies engaged in nonmanufacturing activities.

<sup>3</sup>Estimated on the basis of heating degree-day data obtained from the National Oceanic and Atmospheric Administration.

R=Revised data.

Notes: • Geographic coverage is the 50 States and the District of Columbia:

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

• Data for 1973 through December 1982 are final. All other data are preliminary unless otherwise indicated.

Sources: • See the last page of this section.

# Natural Gas

## Underground Natural Gas Storage—All Operators

	Natural Gas in Underground Storage at End of Period			Change in Working Gas from Same Period Previous Year		Storage Activity		
	Base Gas	Working Gas	Total <sup>1</sup>	Volume	Percent	Injections	Withdrawals	Net <sup>2</sup>
Volumes in billion cubic feet								
1973 Total	2,864	2,034	4,898	305	17.6	1,974	1,533	441
1974 Total	2,912	2,050	4,962	16	0.8	1,784	1,701	83
1975 Total	3,162	2,212	5,374	162	7.9	2,104	1,760	344
1976 Total	3,323	1,926	5,250	-286	-12.9	1,756	1,921	-165
1977 Total	3,391	2,475	5,866	549	28.5	2,307	1,750	557
1978 Total	3,473	2,547	6,020	72	2.9	2,278	2,158	120
1979 Total	3,553	2,753	6,306	207	8.1	2,295	2,047	248
1980 Total	3,642	2,655	6,297	-99	-3.6	1,896	1,910	-14
1981 Total	3,752	2,817	6,569	162	6.1	2,180	1,887	293
1982 January	3,751	2,182	5,932	29	1.4	24	673	-649
February	3,750	1,787	5,536	-37	-2.0	50	446	-396
March	3,766	1,604	5,370	-26	-1.6	88	265	-176
April	3,778	1,676	5,454	-88	-5.0	180	108	73
May	3,780	2,034	5,814	57	2.9	382	11	371
June	3,778	2,369	6,147	117	5.2	353	11	342
July	3,780	2,704	6,484	146	5.7	351	12	339
August	3,781	2,998	6,778	116	4.0	332	35	298
September	3,782	3,251	7,033	99	3.1	277	20	257
October	3,785	3,364	7,149	116	3.6	191	60	131
November	3,772	3,309	7,081	108	3.4	83	163	-80
December	3,808	3,071	6,879	255	9.0	86	289	-204
<b>Total</b>						<b>2,399</b>	<b>2,094</b>	<b>306</b>
1983 January	3,813	2,644	6,457	462	21.2	24	450	-425
February	3,811	2,356	6,167	569	31.9	35	324	-288
March	3,812	2,148	5,959	544	33.9	58	266	-208
April	3,818	2,074	5,893	398	23.8	81	162	-81
May	3,818	2,222	6,041	188	9.3	189	41	148
June	3,819	2,454	6,272	85	3.6	254	22	232
July	3,826	2,696	6,522	-8	-0.3	267	25	242
August	3,823	2,908	6,731	-89	-3.0	248	35	213
September	3,823	3,140	6,964	-110	-3.4	259	27	232
October	3,825	3,269	7,095	-94	-2.8	171	40	130
November	3,841	3,174	7,015	-135	-4.1	80	160	-80
December	3,847	2,595	6,442	-476	-15.5	31	602	-571
<b>Total</b>						<b>1,697</b>	<b>2,153</b>	<b>-456</b>
1984 January	3,847	2,090	5,937	-554	-20.9	54	563	-510
February	3,828	1,876	5,704	-580	-20.4	62	300	-238
March	3,824	1,572	5,395	-576	-26.8	43	352	-308
April	3,822	1,620	5,442	-454	-21.9	152	105	47
May	3,827	1,843	5,670	-379	-17.1	258	30	227
June	3,828	2,141	5,969	-313	-12.7	320	21	299
July	3,829	2,456	6,285	-240	-8.9	342	28	313
August	3,829	2,740	6,569	-169	-5.8	314	30	284
September	3,829	2,996	6,825	-145	-4.6	288	32	256
October	3,837	3,177	7,014	-92	-2.8	238	48	190
November	3,848	3,017	6,865	-158	-5.0	76	222	-146

<sup>1</sup>Total underground storage capacity at the end of each calendar year (in billion cubic feet): 1978—6,890; 1979—6,929; 1980—7,434; 1981—7,805; 1982—7,915; and 1983—7,985. Current total capacity is 8,044.

<sup>2</sup>Positive numbers indicate injections are greater than withdrawals. Negative numbers indicate withdrawals are greater than injections. Net injections or withdrawals may not equal the difference between applicable ending stocks. See Note 8 on the last two pages of this section.

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

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

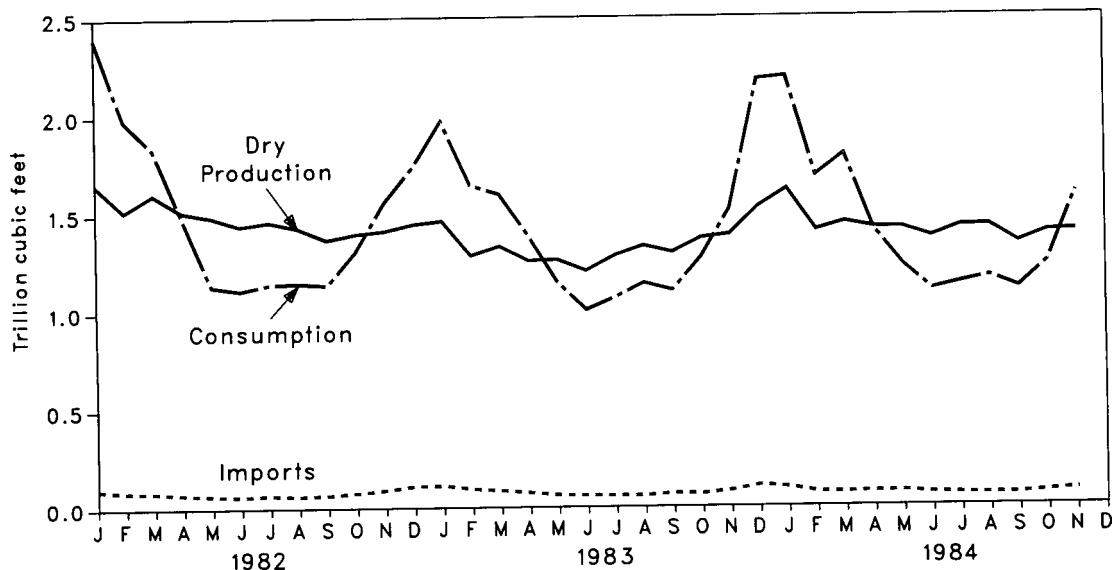
• Data for 1978 through 1982 are final. All other data are preliminary unless otherwise noted.

Sources: • See the last page of this section.

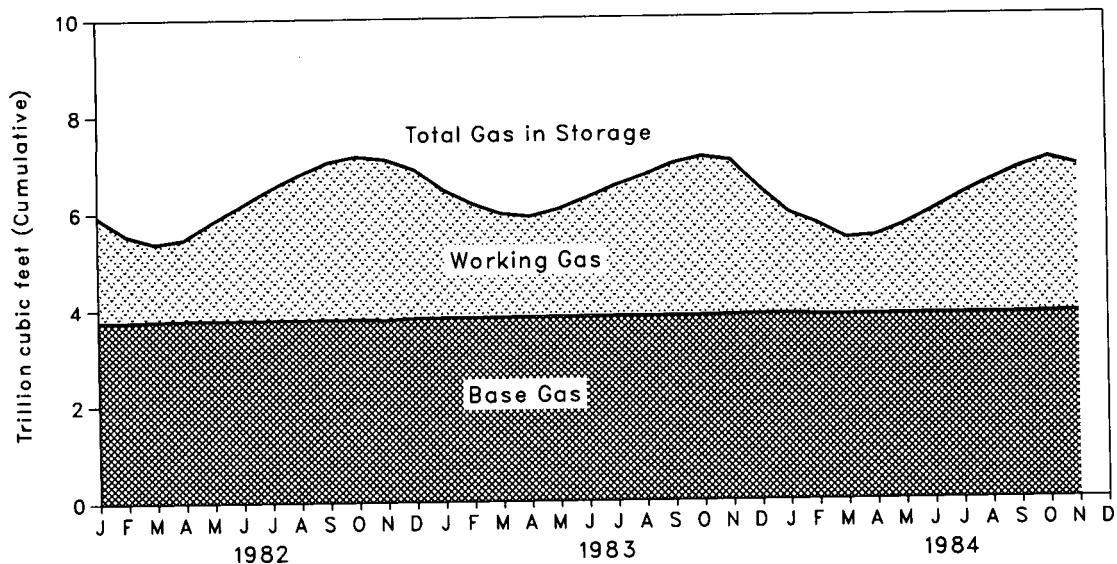
# Natural Gas

## Overview

### Consumption, Dry Production, and Imports



### Gas in Storage at End of Period



## Notes and Sources for the Natural Gas Section

### Notes

**1. Nonhydrocarbon Gases Removed:** Annual data on nonhydrocarbon gases removed from marketed production—carbon dioxide, helium, hydrogen sulfide, and nitrogen—are from the EIA *Natural Gas Annual, 1982*. These data are not available for periods prior to 1980. For 1982, of the 31 producing States, 18 reported data on nonhydrocarbon gases removed. These 18 States accounted for 53 percent of total 1982 gross withdrawals. In addition, gross withdrawals data from two States, which together accounted for 40 percent of the 1982 total production, did not include all or most of the nonhydrocarbon gases removed on leases. No estimates are made for the two States not reporting nonhydrocarbon gases removed. For further information, see the Energy Information Administration (EIA) *Natural Gas Monthly*.

Monthly data are reported by two States and computed for four States. All monthly data are considered preliminary until after publication of the EIA *Natural Gas Annual* for the year in which the report month falls. Three States report monthly data on nonhydrocarbon gases removed; the rest of the data is estimated. For further information on methods of estimating preliminary monthly data, see the EIA *Natural Gas Monthly*.

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

**2. Production:** Annual data. Final annual data are from the Energy Information Administration (EIA) *Natural Gas Annual, 1982*.

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

Preliminary monthly data. All monthly data are considered preliminary until after publication of the EIA *Natural Gas Annual* for the year in which the report month falls. Preliminary monthly data are gathered from reports from the Interstate Oil Compact Commission and the U.S. Minerals Management Service. Volumetric data are converted, as necessary to a standard 14.73 psia pressure base. Unless there are major changes, data are not revised until after publication of the EIA *Natural Gas Annual*.

Final monthly data. The difference between annual production data published in the EIA *Natural Gas Annual, 1982* and the sum of preliminary monthly data (January–December) is allocated proportionally to the preliminary monthly data.

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

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

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

Monthly data are revised and considered final after the publication of the EIA *Natural Gas Annual*. Final monthly data are estimated by allocating annual extraction loss data to each month based on its total natural gas disposition.

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

Annual data beginning with 1980 are from the EIA *Natural Gas Annual, 1982*. Unknown quantities of supplemental gaseous fuels are included in consumption data for 1979 and earlier years.

All monthly data are considered preliminary until after the publication of the EIA *Natural Gas Annual* for the year in which the report month falls. Monthly estimates are based on the annual ratio of supplemental gaseous fuels to the sum of dry gas production, net imports, and net withdrawals from storage. This ratio is applied to the monthly sum of these three elements to compute a monthly supplemental gaseous fuels figure.

**5. Imports and Exports:** The United States imports natural gas via pipeline from Mexico and Canada, and liquefied natural gas via tanker from Algeria. The United States exports natural gas via pipeline to Mexico and Canada and liquefied natural gas via tanker to Japan.

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

Preliminary monthly data are EIA estimates. For a discussion of estimation procedures, see the EIA *Natural Gas Monthly*. Preliminary data are revised after the publication of the EIA *U.S. Imports and Exports of Natural Gas* for the calendar year in which the report month falls.

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

All final data are from the EIA, *Natural Gas Annual*. All monthly data are considered preliminary until after publication of the EIA *Natural Gas Annual*. For more detailed information on the methods of estimating preliminary and final monthly data, see the EIA *Natural Gas Monthly*.

**7. Unaccounted For:** The "unaccounted for" category represents quantities lost, the net result of flow data metered at varying temperature and pressure conditions and converted to a standard temperature and pressure base; the effect of variations in company accounting and billing practices; and imbalances from EIA's merger of data reporting systems which vary in scope, format, definitions, and type of respondents. For additional explanatory information, see the EIA *Natural Gas Monthly*.

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

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

The final monthly and annual storage and withdrawal data for 1980 through 1982 include both underground and liquefied natural gas (LNG) storage. Underground storage data are taken from the FPC-8/EIA-191 survey in the following manner. Annual data on LNG additions and withdrawals are taken from Form EIA-176. Monthly data are estimated by computing the ratio of each month's underground storage additions and withdrawals to annual underground storage additions and withdrawals and applying it to annual LNG data.

(Notes and Sources for the Natural Gas Section are continued on the next page.)

## Notes and Sources for the Natural Gas Section (continued)

### Sources

**Production:** 1973 through 1982: Energy Information Administration (EIA), *Natural Gas Annual, 1982*, Appendix B; January 1983 forward: State reports to the Interstate Oil Compact Commission, data from the U.S. Minerals Management Service, and EIA estimates for States that do not report monthly data on a regular or timely basis.

**Extraction Loss, Consumption, and Unaccounted For:** 1973 through 1982: EIA, *Natural Gas Annual, 1982*, Appendix B; January 1983 forward: EIA computations.

**Withdrawals from and Additions to Storage:** 1973 through 1982: EIA, *Natural Gas Annual, 1982*, Appendix B; January 1983 forward: Form FPC-8 and Form EIA-191, "Underground Gas Storage Report."

**Supplemental Gaseous Fuels:** 1980 through 1982: EIA, *Natural Gas Annual, 1982*, Appendix B; January 1983 forward: EIA computations.

**Imports and Exports:** 1973 through 1982: Form FPC-14, "Imports and Exports of Natural Gas"; January 1983 forward: EIA computations.

**End-Use Consumption:** • All data except electric utility—1973 through 1982: EIA, *Natural Gas Annual, 1982*, Appendix B; January 1983 forward: EIA computations.

• Electric utility data—EIA, Form 759, "Monthly Power Plant Report" (formerly Form FPC-4).

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

# Part 5

# Oil and Gas Resource Development

## Oil and Gas Resource Development

The December 1984 rotary rig count of 2,713 was 2.4 percent less than the December 1983 count of 2,780. The 1984 annual average rotary rig count of 2,428 was 8.8 percent higher than the annual average for 1983. The 242 rigs operating offshore during December 1984 were 15.2 percent higher than those working in December 1983.

November 1984 was the first month since May 1984 when all figures indicating drilling activity were lower than the comparable figures for the same month of 1983. For November 1984, the reported total wells completed were 5,897, a decrease of 7.5 percent from the 6,375 reported for November 1983. Oil well completions reported for November 1984 were 3,131, a 3.4-percent decrease from the comparable 1983 figure of 3,240. Gas well completions of 1,071 reported for November 1984 decreased 6.5 percent from the November 1983 figure of 1,145. Total reported footage drilled for November 1984 was 24.3 million feet, a decrease of 9.5 percent from the November 1983 figure of 26.8 million feet.

The 493 crews engaged in seismic exploration in November 1984 were 2 crews less than the seismic crews working in November 1983. The decrease was in land crews, leaving 444 land crews working. The 49 marine vessels were the same number as those working during November 1983.

# Oil and Gas Resource Development

	Rotary Rigs in Operation <sup>1</sup>	Monthly average	Exploratory and Development Wells Drilled <sup>2</sup>				Total Footage of Wells Drilled <sup>2</sup>	
			Oil	Gas	Dry	Total		
1973	Average	1,194	Total	9,902	6,385	10,305	26,592	136,391
1974	Average	1,472	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	1,658	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
1980	Average	2,909	Total	27,026	15,730	18,089	60,845	284,461
1981	Average	3,970	Total	37,671	17,894	22,973	78,538	361,407
1982	January	4,436		2,798	954	2,132	5,884	28,167
	February	4,160		3,036	1,430	2,234	6,700	31,985
	March	3,816		3,736	1,480	2,479	7,695	37,896
	April	3,460		3,674	1,530	2,287	7,491	36,439
	May	3,178		3,451	1,940	2,205	7,596	36,987
	June	2,908		3,888	1,891	2,521	8,300	38,962
	July	2,746		3,290	1,703	1,931	6,924	31,111
	August	2,620		2,865	1,588	1,917	6,370	28,836
	September	2,482		3,363	1,599	2,330	7,292	32,611
	October	2,402		2,833	1,210	2,125	6,168	27,274
	November	2,500		3,279	1,658	2,025	6,962	31,130
	December	2,696		4,087	1,970	2,363	8,420	34,648
	Average	3,105	Total	40,301	18,952	26,542	85,795	395,993
1983	January	2,622		2,376	891	1,640	4,907	20,922
	February	2,192		2,885	1,184	2,211	6,280	27,659
	March	2,003		3,433	1,607	2,630	7,670	34,210
	April	1,846		3,031	1,403	1,979	6,413	27,423
	May	1,926		3,187	1,747	1,830	6,764	28,564
	June	1,979		3,523	1,242	2,113	6,878	28,154
	July	2,039		2,689	1,127	1,639	5,455	22,970
	August	2,156		2,641	1,080	1,535	5,256	22,634
	September	2,252		3,736	1,282	2,016	7,034	30,374
	October	2,382		2,976	1,221	1,702	5,899	24,965
	November	2,572		R3,240	R1,145	R1,990	R6,375	R26,833
	December	2,780		3,470	1,699	2,201	7,370	30,942
	Average	2,232	Total	37,207	15,628	23,494	76,329	325,760
1984	January	2,666		23,253	*1,058	*2,004	*6,315	*27,915
	February	2,423		3,212	1,425	2,123	6,760	27,623
	March	2,245		4,092	1,373	2,941	8,406	34,156
	April	2,120		2,821	1,162	1,690	5,673	26,234
	May	2,277		3,137	1,155	1,637	5,929	26,417
	June	2,363		3,723	1,362	2,298	7,383	32,174
	July	2,386		2,629	1,138	1,831	5,598	25,454
	August	2,417		3,968	1,421	2,121	7,510	31,612
	September	2,420		3,946	1,332	2,900	8,178	32,867
	October	2,492		3,434	1,238	2,058	6,730	28,065
	November	2,629		3,131	1,071	1,695	5,897	24,287
	December	2,713		NA	NA	NA	NA	NA
	Average	2,428	Total	NA	NA	NA	NA	NA

<sup>1</sup>Monthly data are averages of 4- or 5-week reporting periods and are not calendar months.

<sup>2</sup>Data exclude service wells and stratigraphic and core tests. Prior to 1984, weekly data are aggregated into months within quarters using the following number of weeks in the 12 months—(4,4,5), (4,4,5), (4,4,5), and (4,4,5). In 1984, weekly data are aggregated into months differently to more closely represent the actual number of weeks in the calendar months—(5,4,5), (4,4,5), (4,5,4), and (4,4,5).

R=Revised data. NA=Not available.

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

• 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 and Footage Drilled: American Petroleum Institute, "Monthly Drilling Report" and "Quarterly Review of Drilling Statistics for the United States."

## Oil and Gas Resource Development

		Crews Engaged in Seismic Exploration			Line-Miles of Seismic Exploration		
		Offshore	Onshore	Total	Offshore <sup>1</sup>	Onshore <sup>1</sup>	Total <sup>1</sup>
		Monthly average			Annual total		
1973	Average	23	227	250	258,944	127,160	386,104
1974	Average	31	274	305	341,784	158,629	500,413
1975	Average	30	254	284	309,283	150,694	459,977
1976	Average	25	237	262	226,303	142,926	369,229
1977	Average	27	281	308	124,676	120,072	244,748
1978	Average	25	327	352	174,607	135,899	310,506
1979	Average	30	370	400	193,212	163,929	357,141
1980	Average	37	493	530	202,694	184,088	386,782
1981	Average	44	637	681	338,201	256,201	594,402
1982	January	53	642	695			
	February	53	625	678			
	March	52	597	649			
	April	55	571	626			
	May	61	551	612			
	June	69	546	615			
	July	66	527	593			
	August	62	500	562			
	September	59	476	535			
	October	51	465	516			
	November	50	452	502			
	December	49	428	477			
	Average	57	531	588	558,464	248,483	806,947
1983	January	49	407	456			
	February	47	404	451			
	March	45	402	447			
	April	39	410	449			
	May	39	410	449			
	June	43	428	471			
	July	46	437	483			
	August	49	435	484			
	September	57	444	501			
	October	50	448	498			
	November	49	446	495			
	December	48	445	493			
	Average	47	426	473	469,227	188,457	657,684
1984	January	50	427	477			
	February	53	433	486			
	March	47	424	471			
	April	50	423	473			
	May	46	444	490			
	June	45	455	500			
	July	47	482	529			
	August	53	470	523			
	September	52	472	524			
	October	48	449	497			
	November	49	444	493			

<sup>1</sup>Monthly data not available.

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

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

Sources: • Society of Exploration Geophysicists, "Monthly Seismic Crew Count" and annual reports published in their bulletins, *Geophysics* and *Leading Edge*.

# Part 6

# Coal

## Coal

Coal production in November 1984 was 65.7 million short tons, 4.4 percent less than the 68.7 million short tons produced in November 1983.

Electric utility coal consumption in October 1984 totaled 54.4 million short tons, 7.3 percent more than consumption in October 1983.

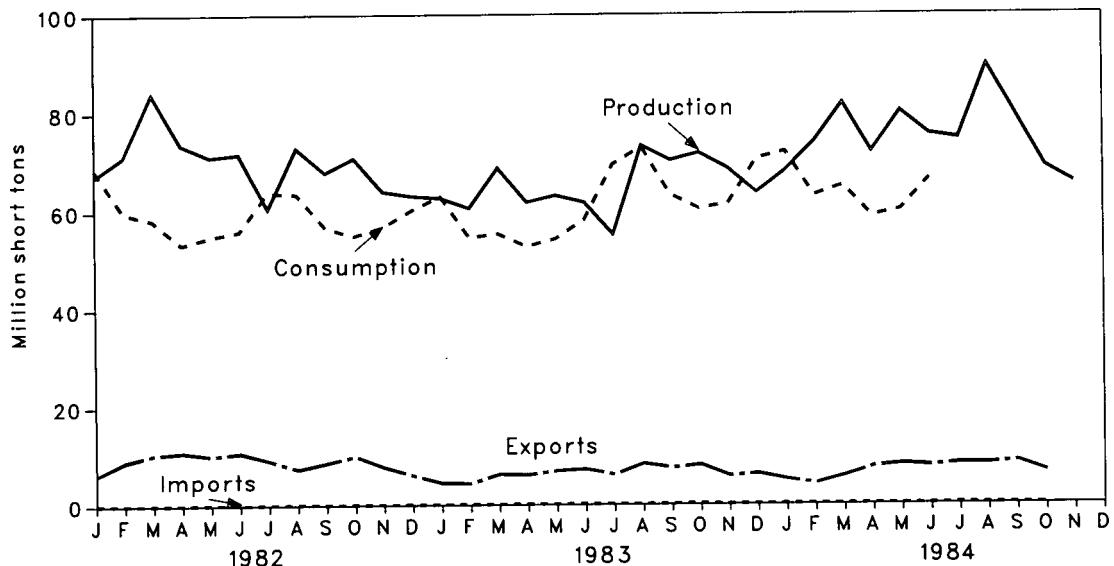
Electric utility coal stocks of 183.1 million short tons at the end of October 1984 were 16.6 million short tons (10.0 percent) above the level 1 year earlier.

Imports of coal in October 1984 totaled 104 thousand short tons, 86 thousand short tons less than the amount imported in October 1983. Exports of coal in October 1984 totaled 6.6 million short tons, 18.3 percent less than the amount exported during October 1983. Coal exports in October 1984 were principally to Europe (35.5 percent), Canada (30.0 percent), and Japan (18.2 percent).

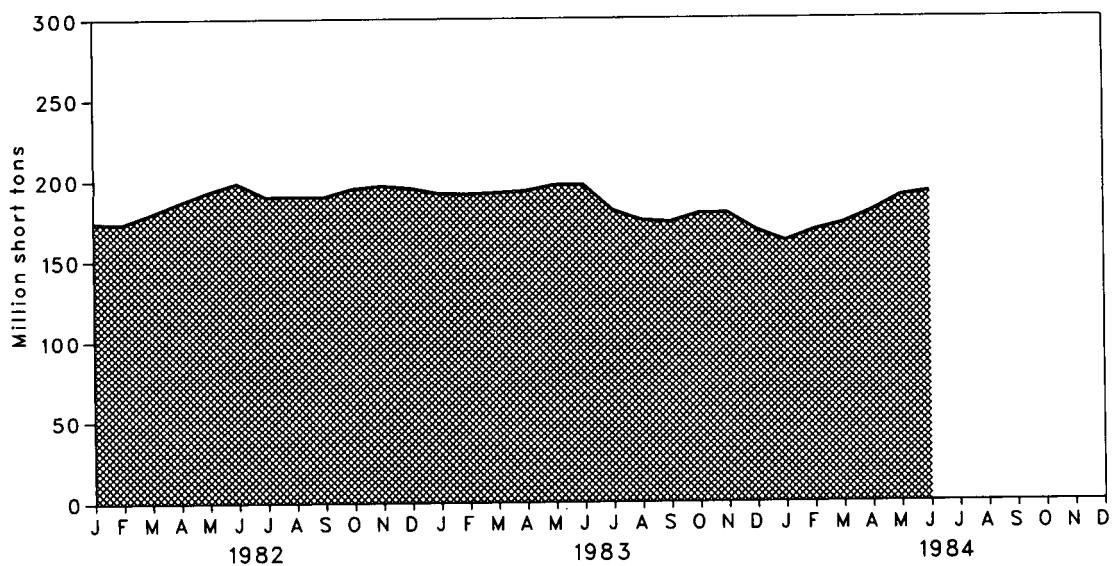
## Coal

## Overview

## Production, Consumption, Imports, and Exports



### **Stocks at End of Period**



# Coal

## Overview

		Production	Consumption	Imports	Exports <sup>1</sup>	Stocks <sup>2</sup>
Thousand 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	Total	829,700	702,729	1,194	91,742	204,028
1981	Total	823,775	732,627	1,043	112,541	185,274
1982	January	67,138	68,692	71	6,177	173,931
	February	71,169	59,746	30	8,964	173,193
	March	83,943	58,236	12	10,423	179,484
	April	73,587	53,274	10	10,831	186,458
	May	71,127	54,844	109	10,110	192,926
	June	71,720	55,950	9	10,680	198,377
	July	60,535	63,828	69	9,182	189,997
	August	72,898	63,528	131	7,385	190,310
	September	67,951	56,734	71	8,683	189,967
	October	70,852	55,034	66	9,972	195,107
	November	64,055	56,831	87	7,807	196,700
	December	63,136	60,214	76	6,064	195,254
	Total	838,112	706,911	742	106,277	
1983	January	62,731	63,019	78	4,471	191,902
	February	60,654	54,692	71	4,382	191,574
	March	68,896	55,434	120	6,291	192,315
	April	61,837	52,816	144	6,115	193,402
	May	63,210	54,327	102	6,952	196,982
	June	61,797	58,237	133	7,279	197,033
	July	55,213	69,478	87	6,140	181,222
	August	73,291	72,947	115	8,380	175,067
	September	70,312	63,317	97	7,525	173,743
	October	71,754	60,454	190	8,131	179,166
	November	68,684	61,411	32	5,838	179,281
	December	63,713	70,541	102	6,269	168,654
	Total	782,091	736,672	1,271	77,772	
1984	January†	68,154	72,033	81	5,062	162,082
	February†	73,934	63,096	140	4,251	168,473
	March†	81,864	65,121	55	5,813	172,862
	April†	71,939	58,906	148	7,688	180,347
	May†	80,204	60,138	72	8,221	189,685
	June†	75,586	66,634	49	7,828	192,271
	July†	74,691	NA	193	8,318	NA
	August†	89,630	NA	95	8,235	NA
	September†	79,373	NA	95	8,710	NA
	October†	69,003	NA	104	6,641	NA
	November†	65,695	NA	NA	NA	

<sup>1</sup>Excludes shipments of anthracite to U.S. Armed Forces overseas (335,000 short tons in 1982 and 363,000 short tons in 1983).

<sup>2</sup>Stocks held by electric utilities, coke plants, and general industry at the end of period. Excludes stocks at retail dealers that are consumed by the residential and commercial sector.

†Preliminary data. NA=Not available.

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

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

• See Note on the last page of this section for methodology used to calculate production, consumption, and stocks.

Sources: • See the last page of this section.

# Coal

## Consumption by End-Use Sector

		Industrial				Total
		Electric Utilities	Coke Plants	Other Industrial <sup>1</sup> Including Transportation	Residential and Commercial	
Thousand short tons						
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	Total	569,274	66,657	60,347	6,451	702,729
1981	Total	596,797	61,014	67,395	7,421	732,627
1982	January	56,825	4,444	6,430	993	68,692
	February	48,878	4,340	5,835	693	59,746
	March	47,884	4,173	5,616	563	58,236
	April	43,490	3,708	5,373	703	53,274
	May	45,622	3,622	5,133	467	54,844
	June	47,424	3,481	4,681	364	55,950
	July	55,248	3,121	4,831	628	63,828
	August	54,838	3,058	4,962	670	63,528
	September	48,414	2,924	4,759	637	56,734
	October	46,330	2,757	5,287	660	55,034
	November	47,799	2,693	5,494	845	56,831
	December	50,914	2,587	5,695	1,018	60,214
	Total	593,666	40,908	64,097	8,240	706,911
1983	January	53,351	2,813	5,970	884	63,019
	February	45,772	2,742	5,405	773	54,692
	March	47,110	2,567	5,206	551	55,434
	April	43,589	3,206	5,254	767	52,816
	May	45,691	3,151	5,023	463	54,327
	June	50,338	2,734	4,798	367	58,237
	July	60,390	3,269	5,220	599	69,478
	August	63,767	3,252	5,362	566	72,947
	September	54,212	3,196	5,156	752	63,317
	October	50,689	3,307	5,659	799	60,454
	November	51,185	3,335	6,046	845	61,411
	December	59,117	3,461	6,880	1,082	70,541
	Total	625,211	37,033	65,980	8,448	736,672
1984	January†	60,224	3,791	6,942	1,076	72,033
	February†	52,257	3,592	6,305	942	63,096
	March†	54,534	3,843	6,072	672	65,121
	April†	47,553	4,180	6,245	928	58,906
	May†	49,507	4,100	5,971	560	60,138
	June†	56,923	3,564	5,704	443	66,634
	July†	60,359	NA	NA	NA	NA
	August†	63,396	NA	NA	NA	NA
	September†	53,991	NA	NA	NA	NA
	October†	54,407	NA	NA	NA	NA

<sup>1</sup>See Note on the last page of this section.

†Preliminary data. NA = Not available.

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

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

Sources: • See the last page of this section.

## Coal

### Stocks by End-Use Sector at End of Period

		Industrial			
	Electric Utilities	Coke Plants	Other Industrial	Total <sup>1</sup>	
Thousand 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	183,010	9,067	11,951	204,028	
1981	168,893	6,475	9,906	185,274	
1982	January	158,469	6,207	9,255	173,931
	February	158,136	5,909	9,148	173,193
	March	164,518	5,612	9,354	179,484
	April	171,390	5,931	9,137	186,458
	May	177,461	6,231	9,234	192,926
	June	182,513	6,532	9,331	198,377
	July	174,503	6,166	9,328	189,997
	August	175,194	5,800	9,316	190,310
	September	175,225	5,434	9,308	189,967
	October	180,571	5,171	9,365	195,107
	November	182,368	4,908	9,424	196,700
	December	181,132	4,642	9,479	195,254
1983	January	178,604	4,338	8,960	191,902
	February	179,101	4,034	8,439	191,574
	March	180,671	3,728	7,916	192,315
	April	181,371	4,089	7,942	193,402
	May	184,567	4,450	7,965	196,982
	June	184,236	4,812	7,985	197,033
	July	168,566	4,489	8,167	181,222
	August	162,557	4,165	8,345	175,067
	September	161,384	3,842	8,518	173,743
	October	166,574	4,010	8,582	179,166
	November	166,457	4,178	8,645	179,281
	December	155,598	4,346	8,710	168,654
1984	January†	148,723	4,947	8,412	162,082
	February†	154,811	5,548	8,114	168,473
	March†	158,897	6,149	7,816	172,862
	April†	164,597	7,171	8,579	180,347
	May†	172,150	8,193	9,342	189,685
	June†	172,949	9,217	10,105	192,271
	July†	169,737	NA	NA	NA
	August†	174,397	NA	NA	NA
	September†	181,678	NA	NA	NA
	October†	183,149	NA	NA	NA

<sup>1</sup>Total excludes stocks at retail dealers that are consumed by the residential and commercial sector.

†Preliminary data. NA=Not available.

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

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

Sources: • See the last page of this section.

## Notes and Sources for the Coal Section

### Notes

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

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

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

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

Prior to 1980, monthly consumption for the residential and commercial sector was derived by using reported data to modify baseline figures developed by the Bureau of Mines. Since that time, it has been estimated by proportioning reported quarterly data using the ratios of monthly to quarterly consumption in 1979, the last year in which monthly data were reported on Form EIA-2. During 1981 and 1982, the estimates were also modified to reflect air temperature degree-days. Quarterly consumption is taken directly from reported data and is defined as distribution to the residential and commercial sector as reported by coal producers and distributors on Form EIA-6.

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

Prior to 1978, stocks for the other industrial sector were derived by using reported data to modify baseline figures from a one-time Bureau of Mines survey of consumers. During the period 1978 through 1982, they were derived by judgmentally proportioning reported quarterly data based on representative seasonal patterns of supply and demand. Since that time, they have been estimated as indicated above for coke plants. Quarterly stocks are taken directly from data reported on Form EIA-3 and therefore include only manufacturing industries; data for agriculture, forestry, fishing, mining, and construction stocks are not available. Monthly and quarterly stock data are not available for the residential and commercial sector.

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

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

### Sources

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

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

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

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

# Part 7

## Electric Utilities

### Electric Utilities

During October 1984, electric utilities generated 190.4 billion kilowatthours of electricity, 4.1 percent above the October 1983 generation level. Coal-fired generation totaled 110.3 billion kilowatthours, 8.2 percent above the October 1983 level. Natural gas-fired generation totaled 25.8 billion kilowatthours, 8.4 percent above the October 1983 level. Nuclear generation was 24.8 billion kilowatthours in October 1984, 4.0 percent below the October 1983 level. Hydroelectric generation was 20.9 billion kilowatthours, 0.7 percent above the level 1 year earlier. Petroleum-fired generation totaled 7.9 billion kilowatthours, 20.8 percent below the October 1983 level.

Sales of electricity to all ultimate consumers in the United States in October 1984 were 181.7 billion kilowatthours, 3.1 percent above October 1983 sales. Sales to residential consumers during October 1984 were 56.0 billion kilowatthours, 1.1 percent above the level of sales during the same month in 1983. Commercial sales were 48.1 billion kilowatthours, 5.6 percent more than the amount sold to commercial consumers in October 1983.

Sales to industrial consumers totaled 70.9 billion kilowatthours in October 1984, 2.9 percent more than the 1983 figure. In October 1984, other sales totaled 6.7 billion kilowatthours, 3.0 percent below the October 1983 level.

Electric utility petroleum consumption (excluding petroleum coke) during October 1984 was 13.4 million barrels, 20.4 percent below the October 1983 level. Coal consumption during October 1984 was 54.4 million short tons, 7.3 percent above the October 1983 rate. During October 1984, electric utilities consumed 269.6 billion cubic feet of natural gas, 7.4 percent above the October 1983 consumption level.

On October 31, 1984, utility stocks of anthracite, bituminous coal, and lignite totaled 183.1 million short tons. Stockpiles were 10.0 percent above the level of October 31, 1983. Petroleum stocks (excluding petroleum coke) on October 31, 1984, totaled 85.6 million barrels, 11.3 percent below the level on the same date in 1983.

# Electric Utilities

## Net Electricity Generation by Primary Energy Source

		Coal	Petroleum <sup>1</sup>	Natural Gas <sup>2</sup>	Nuclear Electric Power	Hydro-electric Power	Other <sup>3</sup>	Total
Million kilowatthours								
1973	Total	847,651	314,343	340,858	83,479	272,083	2,294	1,860,710
1974	Total	828,433	300,931	320,065	113,976	301,032	2,703	1,867,140
1975	Total	852,786	289,095	299,778	172,505	300,047	3,437	1,917,649
1976	Total	944,391	319,988	294,624	191,104	283,707	3,883	2,037,696
1977	Total	985,219	358,179	305,505	250,883	220,475	4,063	2,124,323
1978	Total	975,742	365,060	305,391	276,403	280,419	3,315	2,206,331
1979	Total	1,075,037	303,525	329,485	255,155	279,783	4,387	2,247,372
1980	Total	1,161,562	245,994	346,240	251,116	276,021	5,506	2,286,439
1981	Total	1,203,203	206,421	345,777	272,674	260,684	6,054	2,294,812
1982	January	113,124	20,674	22,621	25,678	26,896	411	209,403
	February	96,906	15,217	20,920	20,188	26,690	380	180,299
	March	97,625	13,495	23,598	22,755	29,885	330	187,687
	April	88,116	11,192	23,231	21,785	27,928	328	172,580
	May	92,997	9,868	24,291	21,639	27,971	381	177,147
	June	95,314	10,419	27,959	24,026	27,953	458	186,128
	July	110,617	13,380	33,340	25,467	27,294	485	210,584
	August	110,124	11,753	34,418	24,986	23,894	480	205,656
	September	96,896	10,363	27,649	25,391	19,896	468	180,662
	October	93,769	9,885	25,804	23,248	19,750	509	172,966
	November	95,547	9,313	21,466	23,235	23,297	520	173,377
	December	100,970	11,238	19,963	24,376	27,760	415	184,722
	Total	1,192,004	146,797	305,260	282,773	309,213	5,164	2,241,211
1983	January	108,164	12,880	19,721	25,073	29,235	506	195,579
	February	92,692	12,586	16,659	22,198	27,950	395	172,479
	March	95,598	12,556	19,686	23,890	30,302	455	182,488
	April	88,114	10,337	19,174	22,335	29,989	424	170,372
	May	91,296	9,050	20,445	22,051	31,194	356	174,392
	June	101,512	11,139	23,091	24,152	30,692	462	191,048
	July	121,560	14,710	29,615	25,602	28,113	565	220,165
	August	129,313	14,731	33,147	26,201	25,828	738	229,957
	September	108,868	11,299	28,040	25,007	21,712	678	195,604
	October	101,951	9,941	23,783	25,797	20,747	712	182,931
	November	103,225	9,229	20,169	25,010	24,678	637	182,949
	December	117,131	16,041	20,567	26,361	31,691	528	212,319
	Total	1,259,424	144,499	274,098	293,677	332,130	6,456	2,310,285
1984	January	120,850	15,939	20,245	29,135	29,738	541	216,450
	February	104,706	10,079	17,835	28,340	27,901	637	189,498
	March	111,158	10,806	19,645	26,613	30,425	713	199,359
	April	97,538	7,452	21,197	24,109	29,948	688	180,934
	May	100,139	8,421	25,227	25,673	31,814	671	191,945
	June	115,304	11,274	28,344	25,117	28,735	651	209,425
	July	121,094	10,398	33,325	27,764	27,499	644	220,724
	August	127,744	12,837	33,290	29,322	25,137	790	229,119
	September	108,792	7,713	27,839	28,884	20,909	726	194,864
	October	110,270	7,874	25,783	24,774	20,886	819	190,405

<sup>1</sup>Includes fuel oil No. 2, No. 4, No. 5, No. 6, crude oil, kerosene, and petroleum coke.

<sup>2</sup>Includes supplemental gaseous fuels.

<sup>3</sup>Includes only electricity produced from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems.

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

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

Sources: • 1973 through September 1977: Federal Power Commission, Form 4, "Monthly Power Plant Report"; October 1977 through 1981: Federal Energy Regulatory Commission, FPC Form 4, "Monthly Power Plant Report"; 1982 forward: Energy Information Administration Form 759, "Monthly Power Plant Report."

# Electric Utilities

## Electricity Sales<sup>1</sup>

		Residential	Commercial	Industrial	Other <sup>2</sup>	Total
Million kilowatthours						
1973	Total	579,231	388,266	686,085	59,328	1,712,910
1974	Total	578,184	384,826	684,875	58,039	1,705,924
1975	Total	588,140	403,049	687,680	68,222	1,747,091
1976	Total	606,452	425,094	754,069	69,631	1,855,246
1977	Total	645,239	446,514	786,037	70,571	1,948,361
1978	Total	674,466	461,163	809,078	73,215	2,017,922
1979	Total	682,819	473,307	841,903	73,070	2,071,099
1980	Total	717,495	488,156	815,067	73,732	2,094,449
1981	Total	722,265	514,338	825,742	84,756	2,147,101
1982	January	76,264	44,947	62,939	7,929	192,079
	February	69,128	43,459	62,778	7,441	182,805
	March	60,498	41,710	64,496	7,255	173,959
	April	54,918	40,036	62,723	6,836	164,512
	May	49,092	40,021	62,480	6,976	158,569
	June	54,083	44,206	63,684	6,766	168,739
	July	65,704	48,211	62,617	7,035	183,567
	August	69,906	49,720	63,306	6,808	189,740
	September	63,053	48,068	59,980	7,194	178,296
	October	52,638	42,864	60,830	7,084	163,416
	November	52,136	40,572	60,651	7,122	160,479
	December	62,102	42,584	58,464	7,128	170,278
	Total	729,519	526,397	744,949	85,575	2,086,440
1983	January	69,967	44,019	57,938	7,252	179,176
	February	65,039	42,475	59,032	6,919	173,465
	March	58,912	41,518	60,261	6,893	167,584
	April	56,284	40,679	60,548	6,296	163,807
	May	49,669	40,305	62,729	6,216	158,919
	June	54,138	45,086	66,152	6,228	171,604
	July	69,965	51,013	66,424	6,752	194,153
	August	78,374	53,245	69,611	6,885	208,115
	September	73,197	52,147	69,618	6,960	201,922
	October	55,374	45,517	68,924	6,942	176,307
	November	53,704	42,666	67,544	6,560	170,474
	December	66,326	45,119	67,217	6,765	185,428
	Total	750,948	543,788	775,999	80,219	2,150,955
1984	January	83,300	49,216	66,743	7,289	206,548
	February	69,776	45,840	66,604	6,638	188,857
	March	63,741	45,251	69,687	6,906	185,563
	April	56,373	43,052	69,049	6,452	174,927
	May	53,519	44,150	70,774	6,559	175,002
	June	59,933	49,410	73,014	6,714	189,071
	July	70,671	53,764	70,658	6,986	202,079
	August	73,138	53,603	74,534	7,089	208,364
	September	67,456	52,854	71,275	6,969	198,554
	October†	55,965	48,061	70,945	6,732	181,702

<sup>1</sup>Electricity sales to all ultimate consumers.

<sup>2</sup>Includes sales of electricity to Government, railways, street lighting authorities, and sales not included elsewhere.

†Initial estimates.

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

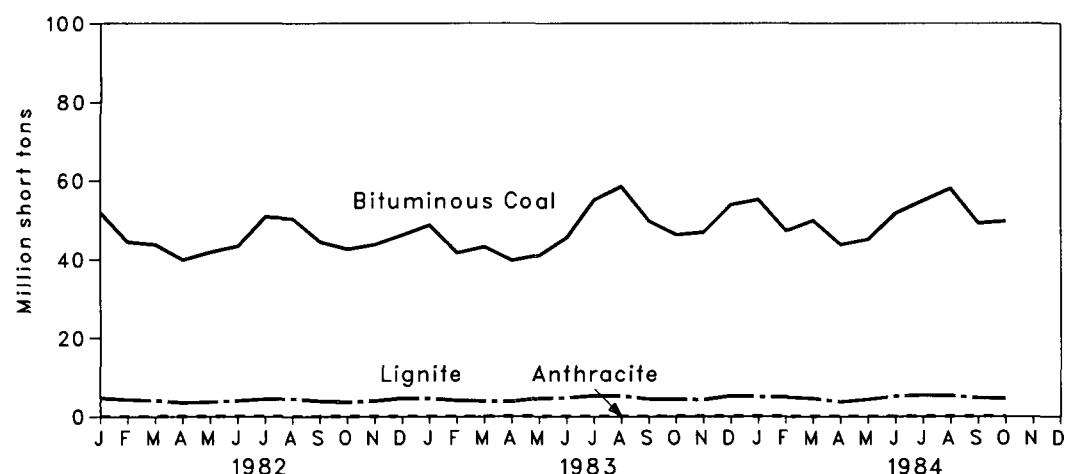
• Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration (EIA), 1973 through February 1980: FPC Form 5, "Monthly Statement of Electric Operating Revenue and Income"; March 1980 through December 1982: FERC Form 5, "Electric Utility Company Monthly Statement"; January 1983 forward: Form EIA 826, "Electric Utility Company Monthly Statement."

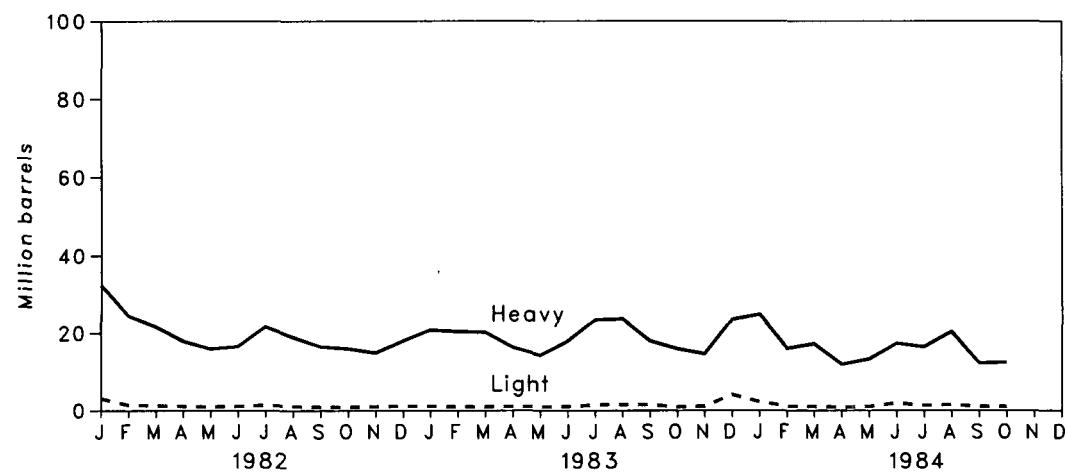
## Electric Utilities

### Primary Energy Consumed to Produce Electricity

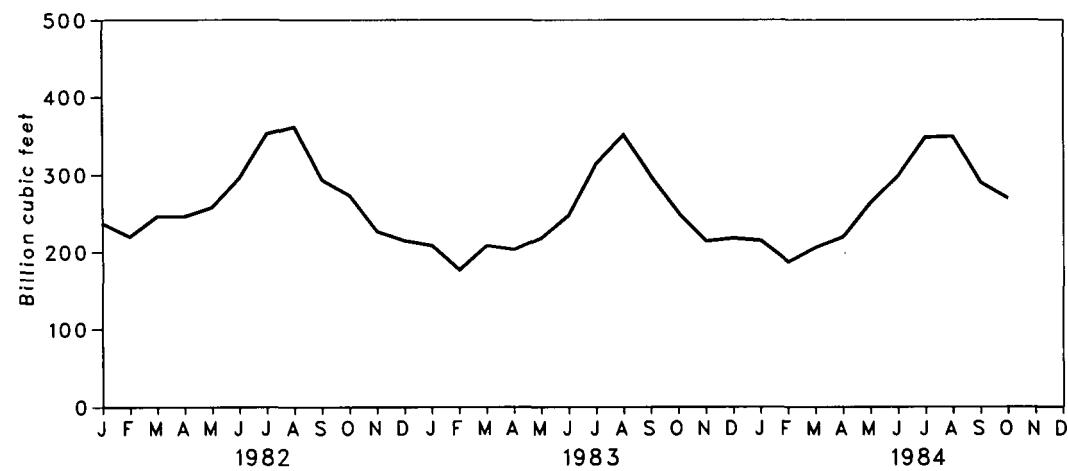
#### Coal Consumption



#### Petroleum Consumption



#### Natural Gas Consumption



# Electric Utilities

## Primary Energy Consumed to Produce Electricity

		Coal			Petroleum			Natural Gas <sup>1</sup>		
		Anthracite	Bituminous Coal	Lignite	Total	Heavy <sup>2</sup>	Light <sup>3</sup>	Total Liquids	Petroleum Coke	
Thousand short tons										
1973	Total	1,443	376,975	10,794	389,212	(*)	(*)	560,248	507	3,660,172
1974	Total	1,498	378,643	11,670	391,811	(*)	(*)	536,274	625	3,443,428
1975	Total	1,480	388,523	15,960	405,962	(*)	(*)	506,128	70	3,157,669
1976	Total	1,350	425,205	21,817	448,371	(*)	(*)	555,920	68	3,080,868
1977	Total	1,425	451,051	24,650	477,126	(*)	(*)	623,705	98	3,191,200
1978	Total	1,064	448,763	31,407	481,235	(*)	(*)	635,839	398	3,188,363
1979	Total	1,046	488,129	37,876	527,051	(*)	(*)	523,297	268	3,490,523
1980	Total	951	526,680	41,642	569,274	391,163	29,051	420,214	179	3,681,595
1981	Total	1,221	550,784	44,792	596,797	329,798	21,313	351,111	139	3,640,154
1982	January	89	52,014	4,723	56,825	32,269	3,131	35,399	10	237,675
	February	83	44,478	4,317	48,878	24,351	1,421	25,772	9	220,032
	March	73	43,751	4,060	47,884	21,617	1,304	22,921	4	246,550
	April	88	39,888	3,515	43,490	17,913	1,132	19,045	11	246,344
	May	98	41,845	3,678	45,622	15,939	991	16,930	12	257,848
	June	94	43,340	3,990	47,424	16,539	1,053	17,592	13	295,557
	July	108	50,769	4,371	55,248	21,550	1,360	22,910	11	352,818
	August	95	50,283	4,460	54,838	18,873	1,053	19,926	13	361,351
	September	67	44,431	3,916	48,414	16,544	921	17,464	9	293,232
	October	81	42,598	3,650	46,330	15,990	870	16,860	17	273,003
	November	100	43,756	3,943	47,799	14,908	1,007	15,916	18	226,477
	December	99	46,192	4,622	50,914	17,940	1,094	19,035	22	214,630
	Total	1,075	543,346	49,245	593,666	234,434	15,337	249,771	149	3,225,518
1983	January	73	48,695	4,583	53,351	20,728	1,110	21,838	17	208,341
	February	73	41,668	4,032	45,772	20,305	984	21,289	19	176,965
	March	75	43,165	3,870	47,110	20,174	945	21,119	16	208,013
	April	92	39,716	3,781	43,589	16,374	1,054	17,429	24	202,917
	May	104	41,002	4,585	45,691	14,360	937	15,297	30	218,184
	June	88	45,560	4,690	50,338	17,892	1,020	18,912	23	247,825
	July	89	55,082	5,219	60,390	23,383	1,433	24,815	25	314,357
	August	92	58,475	5,200	63,767	23,622	1,543	25,165	24	352,031
	September	86	49,745	4,381	54,212	18,021	1,507	19,529	25	298,517
	October	91	46,263	4,335	50,689	15,993	870	16,863	22	251,151
	November	86	46,883	4,216	51,185	14,690	1,075	15,766	17	214,275
	December	88	53,854	5,176	59,117	23,440	4,034	27,474	21	218,191
	Total	1,036	570,108	54,067	625,211	228,984	16,512	245,497	261	2,910,767
1984	January	98	55,141	4,985	60,224	24,745	2,176	26,921	24	215,215
	February	75	47,279	4,904	52,257	16,099	1,065	17,165	21	187,322
	March	69	49,921	4,543	54,534	17,274	1,016	18,291	18	206,177
	April	83	43,767	3,703	47,553	11,971	835	12,806	22	220,009
	May	99	45,115	4,294	49,507	13,327	1,012	14,339	23	264,283
	June	102	51,709	5,112	56,923	17,363	1,927	19,289	23	298,674
	July	100	54,928	5,331	60,359	16,453	1,259	17,712	22	348,840
	August	97	58,026	5,273	63,396	20,337	1,523	21,860	20	349,875
	September	81	49,235	4,675	53,991	12,235	996	13,231	21	290,608
	October	83	49,746	4,578	54,407	12,450	965	13,415	19	269,630

<sup>1</sup>Includes supplemental gaseous fuels.

<sup>2</sup>Heavy oil includes Grade Nos. 4, 5, and 6, and residual fuel oils.

<sup>3</sup>Light oil includes Grade No. 2 heating oil, kerosene, and jet fuel.

<sup>4</sup>Prior to 1980, petroleum consumption data were not disaggregated by type of fuel. Disaggregation by prime mover type is provided in the last table of this section.

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

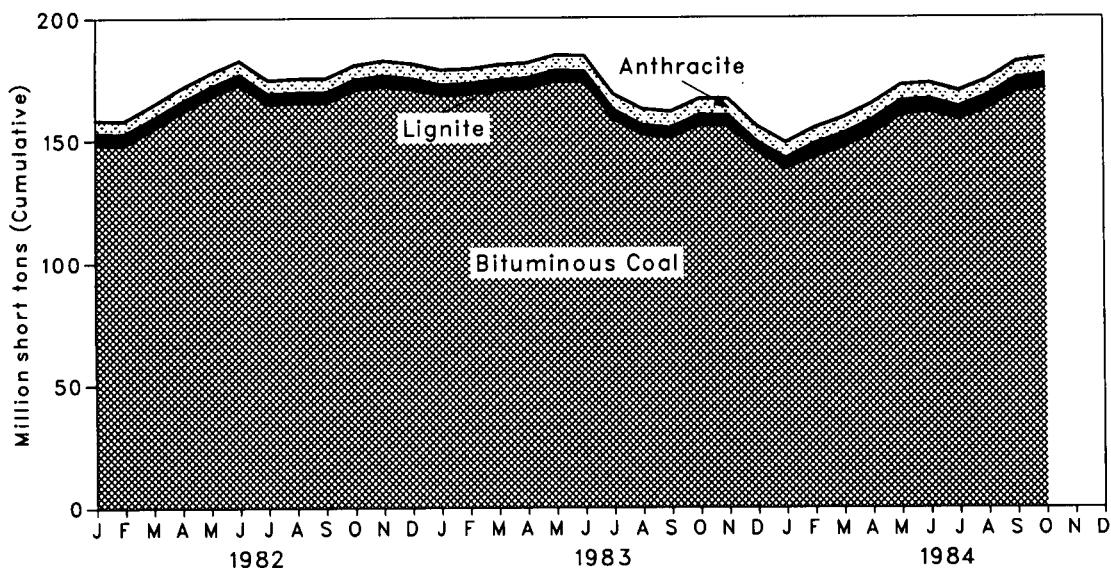
• Totals may not equal sum of components due to independent rounding.

Sources: • 1973 through September 1977: Federal Power Commission, Form 4, "Monthly Power Plant Report"; October 1977 through 1981: Federal Energy Regulatory Commission, FPC Form 4, "Monthly Power Plant Report"; 1982 forward: Energy Information Administration Form 759, "Monthly Power Plant Report."

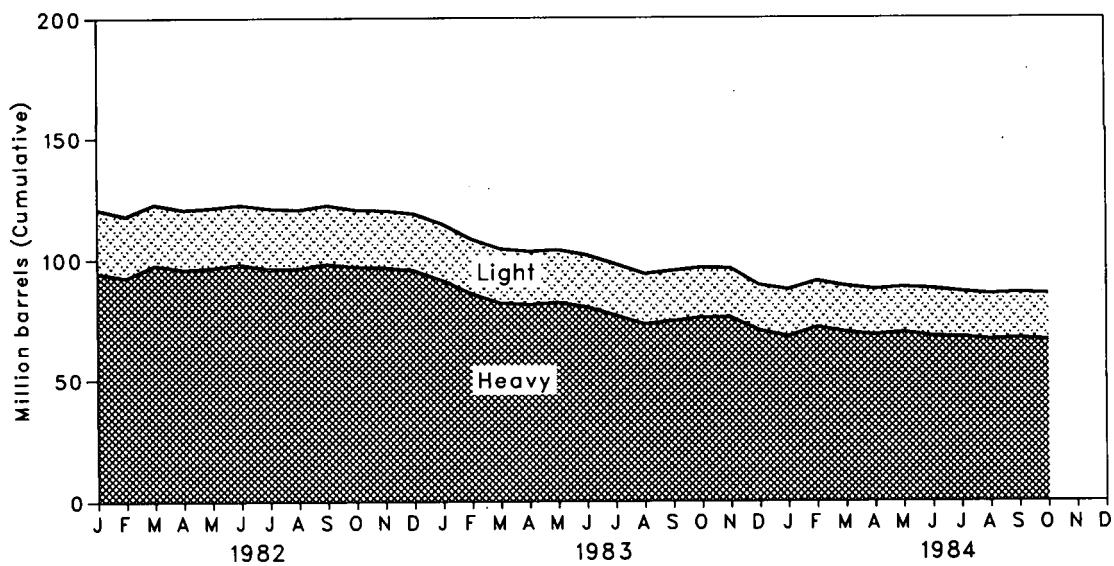
## Electric Utilities

### Coal and Petroleum Stocks at End of Period

#### Coal Stocks



#### Petroleum Stocks



# Electric Utilities

## Coal and Petroleum Stocks at End of Period

	Coal				Petroleum			
	Anthracite	Bituminous Coal	Lignite	Total	Heavy <sup>1</sup>	Light <sup>2</sup>	Total Liquids	Petroleum Coke
					Thousand short tons		Thousand barrels	
1973	1,066	84,941	961	86,967	(3)	(3)	89,216	312
1974	930	81,712	867	83,509	(3)	(3)	112,917	35
1975	982	107,927	1,815	110,724	(3)	(3)	125,257	31
1976	1,000	114,130	2,306	117,436	(3)	(3)	121,696	32
1977	2,321	128,210	2,688	133,219	(3)	(3)	144,031	44
1978	2,178	123,020	3,027	128,225	(3)	(3)	118,788	198
1979	3,274	152,981	3,459	159,714	(3)	(3)	131,422	183
1980	4,741	174,154	4,115	183,010	105,351	30,023	135,374	52
1981	5,537	158,258	5,098	168,893	102,042	26,094	128,136	42
1982	January	5,437	148,404	4,628	158,469	94,609	26,162	120,771
	February	5,401	148,118	4,617	158,136	92,622	25,418	118,040
	March	5,488	154,724	4,305	164,518	97,706	25,136	122,842
	April	5,542	161,720	4,128	171,390	95,984	24,636	120,620
	May	5,569	167,805	4,088	177,461	96,607	24,796	121,403
	June	5,603	172,819	4,092	182,513	97,959	24,647	122,606
	July	5,658	164,688	4,157	174,503	96,085	25,008	121,093
	August	5,791	165,182	4,221	175,194	96,345	24,193	120,538
	September	5,896	165,065	4,264	175,225	98,160	24,225	122,385
	October	5,992	170,281	4,298	180,571	96,920	23,595	120,515
	November	6,060	171,832	4,476	182,368	96,618	23,553	120,171
	December	6,080	170,480	4,573	181,132	95,515	23,369	118,884
1983	January	6,107	168,287	4,210	178,604	91,523	23,183	114,706
	February	6,104	168,635	4,362	179,101	85,847	22,665	108,512
	March	6,143	170,327	4,201	180,671	81,957	22,387	104,344
	April	6,120	170,815	4,436	181,371	81,243	21,967	103,211
	May	6,145	173,969	4,453	184,567	82,091	21,758	103,849
	June	6,230	173,483	4,524	184,236	80,197	21,471	101,667
	July	6,299	158,701	3,566	168,566	76,881	21,101	97,982
	August	6,380	152,140	4,038	162,557	73,266	20,763	94,029
	September	6,435	150,778	4,171	161,384	74,560	20,696	95,256
	October	6,506	156,012	4,056	166,574	75,949	20,568	96,517
	November	6,531	155,931	3,995	166,457	75,930	20,271	96,201
	December	6,507	145,250	3,841	155,598	70,573	18,801	89,375
1984	January	6,500	138,346	3,877	148,723	68,049	19,390	87,439
	February	6,510	142,949	5,352	154,811	71,827	19,238	91,065
	March	6,519	146,879	5,500	158,897	69,882	19,056	88,937
	April	6,515	152,306	5,777	164,597	68,669	18,875	87,544
	May	6,532	159,963	5,656	172,150	69,787	18,674	88,461
	June	6,541	161,229	5,179	172,949	68,098	19,710	87,809
	July	6,530	158,324	4,883	169,737	67,754	18,771	86,525
	August	6,583	162,457	5,358	174,397	66,725	18,760	85,485
	September	6,628	169,514	5,536	181,678	67,247	18,905	86,151
	October	6,674	170,923	5,552	183,149	66,617	18,963	85,580

<sup>1</sup>Heavy oil includes Grade Nos. 4, 5, and 6, and residual fuel oils.

<sup>2</sup>Light oil includes Grade No. 2 heating oil, kerosene, and jet fuel.

<sup>a</sup>Prior to 1980, petroleum stock data were not disaggregated by type of fuel. Disaggregation by prime mover type is provided in the last table of this section.

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

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

Sources: • 1973 through September 1977: Federal Power Commission, Form 4, "Monthly Power Plant Report"; October 1977 through 1981: Federal Energy Regulatory Commission, FPC Form 4, "Monthly Power Plant Report"; 1982 forward: Energy Information Administration Form 759, "Monthly Power Plant Report."

# Electric Utilities

## Petroleum Consumption and Stocks by Prime Mover Type

Petroleum Consumption				Petroleum Stocks at End of Period		
	Steam Plants	GT/IC <sup>1</sup>	Total Liquids	Steam Plants	GT/IC <sup>1</sup>	Total Liquids
Thousand barrels						
1973 Total	513,190	47,058	560,248	79,121	10,095	89,216
1974 Total	483,146	53,128	536,274	97,718	15,199	112,917
1975 Total	467,221	38,907	506,128	108,825	16,432	125,257
1976 Total	514,077	41,843	555,920	106,993	14,703	121,696
1977 Total	574,869	48,837	623,705	124,750	19,281	144,031
1978 Total	588,319	47,520	635,839	102,402	16,386	118,788
1979 Total	492,606	30,691	523,297	111,121	20,301	131,422
1980 Total	401,863	18,351	420,214	117,227	18,147	135,374
1981 Total	339,680	11,431	351,111	112,380	15,756	128,136
1982 January	33,832	1,567	35,399	105,475	15,296	120,771
February	25,249	524	25,772	102,883	15,157	118,040
March	22,371	550	22,921	108,142	14,699	122,842
April	18,553	492	19,045	106,143	14,477	120,620
May	16,614	316	16,930	106,701	14,702	121,403
June	17,241	351	17,592	108,189	14,417	122,606
July	22,192	718	22,910	106,170	14,923	121,093
August	19,508	418	19,926	106,438	14,100	120,538
September	17,146	318	17,464	108,177	14,208	122,385
October	16,547	313	16,860	106,701	13,813	120,515
November	15,591	325	15,916	106,361	13,809	120,171
December	18,694	341	19,035	105,287	13,597	118,884
<b>Total</b>	<b>243,537</b>	<b>6,234</b>	<b>249,771</b>			
1983 January	21,373	465	21,838	101,394	13,312	114,706
February	20,885	404	21,289	95,459	13,053	108,512
March	20,728	392	21,119	91,394	12,750	104,344
April	16,997	432	17,429	90,667	12,544	103,211
May	14,968	330	15,297	91,360	12,489	103,849
June	18,437	475	18,912	89,283	12,384	101,667
July	23,927	888	24,815	85,891	12,091	97,982
August	24,166	999	25,165	82,307	11,722	94,029
September	18,532	996	19,529	83,511	11,745	95,256
October	16,518	345	16,863	84,873	11,644	96,517
November	15,336	430	15,766	84,804	11,397	96,201
December	25,978	1,496	27,474	78,285	11,090	89,375
<b>Total</b>	<b>237,845</b>	<b>7,652</b>	<b>245,497</b>			
1984 January	25,838	1,082	26,921	76,188	11,251	87,439
February	16,718	447	17,165	79,885	11,180	91,065
March	17,881	410	18,291	77,905	11,032	88,937
April	12,500	306	12,806	76,636	10,908	87,544
May	13,896	442	14,339	77,548	10,913	88,461
June	17,997	1,293	19,289	76,124	11,685	87,809
July	17,085	627	17,712	75,667	10,858	86,525
August	20,957	903	21,860	74,681	10,804	85,485
September	12,795	436	13,231	75,457	10,695	86,151
October	13,019	396	13,415	74,805	10,774	85,580

<sup>1</sup>GT/IC=Gas turbine and internal combustion plants.

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

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

Sources: • 1973 through September 1977: Federal Power Commission, Form 4, "Monthly Power Plant Report"; October 1977 through 1981: Federal Energy Regulatory Commission, FPC Form 4, "Monthly Power Plant Report"; 1982 forward: Energy Information Administration Form 759, "Monthly Power Plant Report."

# Part 8

## Nuclear

### Nuclear

In October 1984, U.S. nuclear powerplants generated a total of 24.8 billion net kilowatt-hours of electricity (kWhe), 4.0 percent below the comparable output for October 1983. Nuclear power supplied 13.0 percent of the electricity distributed in October 1984.

On October 18, Callaway-1, a 1,135-net-megawatts-electric (MWe) pressurized water reactor (PWR), operated by Union Electric Company in Missouri, was issued a full-power license by the Nuclear Regulatory Commission, to begin power ascension for commercial operation. Callaway-1 first produced electricity on October 24. On October 19, LaSalle-2, a 1,036-net-MWe PWR, operated by Commonwealth Edison in Illinois, was declared commercially operable. On October 26, Philadelphia Electric Company's Limerick-1, a 1,065-net-MWe boiling-water reactor in Pennsylvania, was issued a license for fuel-loading and low-power testing. On October 31, Commonwealth Edison's Byron-1, a 1,120 net-MWe PWR in Illinois, was issued a license for fuel-loading and low-power testing.

With the addition of Callaway-1, there were 85 operable U.S. nuclear power reactors as of

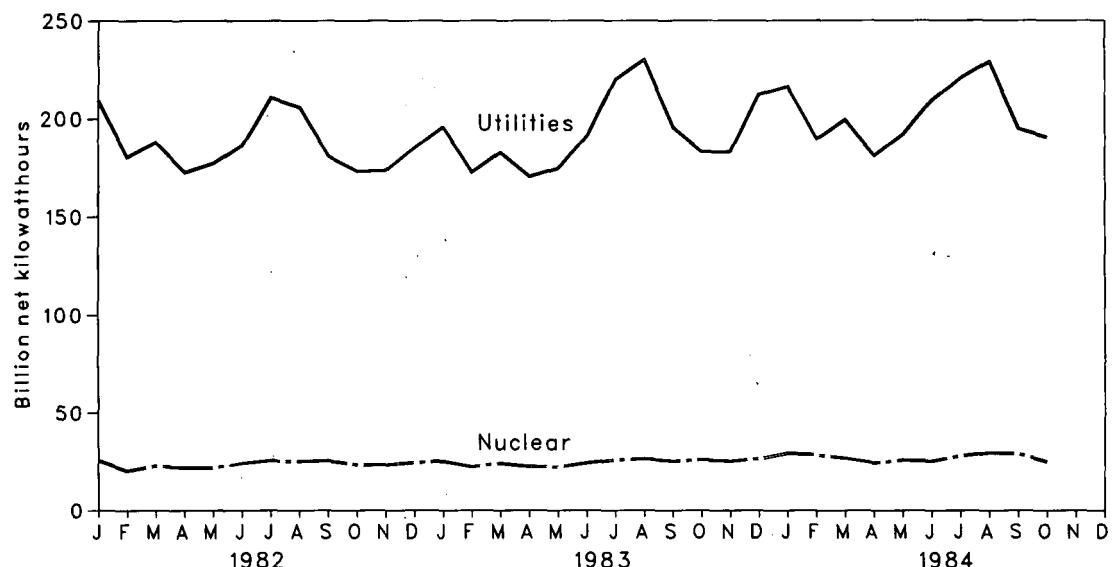
October 31, 1984, with a collective net generating capacity of 68.5 thousand MWe. Of these 85 operable reactors, 4 units were in power ascension (Callaway-1, Grand Gulf-1, Susquehanna-2, and WNP-2), and 31 units generated no electricity or operated substantially below capacity in October (Arnold, Browns Ferry-2, Browns Ferry-3, Brunswick-2, Connecticut Yankee, Cooper, Davis-Besse, Dresden-2, Fitzpatrick, Fort St. Vrain, Hanford-1, Hatch-1, Indian Point-2, LaSalle-1, Monticello, North Anna-2, Oconee-1, Oyster Creek, Palisades, Peach Bottom-2, Pilgrim, Point Beach-2, Rancho Seco, Robinson-2, Salem-1, Salem-2, San Onofre-1, Sequoyah-2, Summer, Surry-1, and Three Mile Island-1). Three units had licenses from the Nuclear Regulatory Commission authorizing fuel-loading and low-power testing (Byron-1, Diablo Canyon-1, and Limerick-1).

As of October 31, 1984, there were 132 domestic nuclear powerplants in all stages of planning, construction, and operation, with an aggregate design capacity of 123 million net kilowatts.

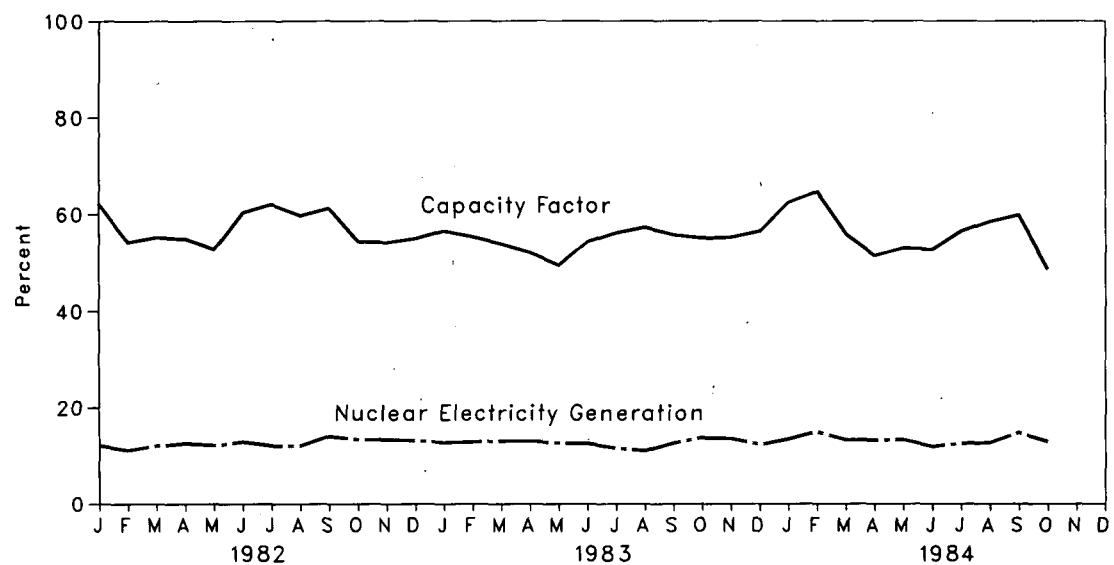
# Nuclear

## 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.

# Nuclear

## Nuclear Powerplant Operations

	Operable Reactors <sup>1,2</sup>	Nuclear-Based Electricity Generation	Nuclear Portion of Domestic Electricity Generation	Maximum Dependable Capacity of Operable Reactors <sup>1,3</sup>	Capacity Factor <sup>4</sup>
		Million net kilowatthours	Percent	Million net kilowatts	Percent
1973	39	83,479	4.5	22,900	52.9
1974	48	113,976	6.1	31,710	48.3
1975	54	172,505	9.0	33,312	59.7
1976	60	191,104	9.4	43,277	57.8
1977	65	250,883	11.8	46,046	64.1
1978	70	276,403	12.5	49,629	65.7
1979	68	255,155	11.4	49,326	58.7
1980	70	251,116	11.0	51,059	57.1
1981	74	272,674	11.9	55,534	58.4
1982	January	25,678	12.2	55,481	62.2
	February	20,188	11.2	55,476	54.2
	March	22,755	12.1	55,421	55.2
	April	21,785	12.6	55,230	54.9
	May	21,639	12.2	55,230	52.7
	June	24,026	12.9	55,320	60.3
	July	25,467	12.1	55,195	62.0
	August	24,986	12.1	56,293	59.7
	September	25,391	14.1	57,600	61.2
	October	23,248	13.4	57,345	54.4
	November	23,235	13.4	59,531	54.2
	December	24,376	13.2	59,552	55.0
	Year	282,773	12.6	59,552	57.2
1983	January	25,073	12.8	59,532	56.6
	February	22,198	12.9	59,632	55.4
	March	23,890	13.1	59,632	53.9
	April	22,335	13.1	59,658	52.1
	May	22,051	12.7	59,883	49.5
	June	24,152	12.6	61,686	54.4
	July	25,602	11.6	61,230	56.2
	August	26,201	11.1	61,440	57.3
	September	25,007	12.7	62,227	55.8
	October	25,797	13.8	62,876	55.1
	November	25,010	13.6	62,809	55.3
	December	26,361	12.4	62,809	56.5
	Year	293,677	12.6	62,809	54.8
1984	January	29,135	13.5	62,772	62.4
	February	28,340	15.0	62,942	64.7
	March	26,613	13.3	64,036	55.9
	April	24,109	13.3	65,049	51.5
	May	25,673	13.4	64,986	53.1
	June	25,117	12.0	66,091	52.8
	July	27,764	12.6	66,091	56.5
	August	29,322	12.8	67,341	58.5
	September	28,884	14.8	67,066	59.8
	October	24,774	13.0	†68,497	†48.6

<sup>1</sup>Monthly data are the status as of the last day of the month. Yearly data are the status as of December 31 of each year.

<sup>2</sup>See Note 1 on the last page of this section for the definition.

<sup>3</sup>When possible, net maximum dependable capacity (MDC) is used. When a reactor has not operated long enough to permit determination of a net MDC, the net design electrical rating (DER) is used. The capacities for some units have been reduced to reflect the imposition of a "power limit" by the Nuclear Regulatory Commission or by the operating utility. For the definitions of net MDC and net DER, see Note 3 on the last page of this section.

<sup>4</sup>For an explanation of the method of calculating the capacity factor, see Note 4 on the last page of this section.

†Preliminary data.

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

Sources: • See the last page of this section.

# Nuclear

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

	Licensed for Operation		Construction Permits				Total Design Capacity <sup>4</sup>
	Operable <sup>2</sup>	In Startup <sup>3</sup>	Granted	Pending	On Order	Announced	
Million net kilowatts							
1973	39	3	51	58	48	20	219 212
1974	48	5	58	80	28	16	235 234
1975	54	2	69	73	19	19	236 236
1976	60	1	72	66	16	19	234 236
1977	65	1	80	52	13	9	220 220
1978	70	0	90	32	9	4	205 204
1979	68	0	91	21	3	0	183 179
1980	70	2	82	12	3	0	169 163
1981	74	0	75	11	3	0	163 157
1982	January	74	0	73	11	3	161 154
	February	74	1	72	6	2	0 155
	March	74	1	72	6	2	0 155
	April	74	2	71	6	2	0 155
	May	74	2	71	6	2	0 155
	June	74	2	70	6	2	0 154
	July	74	4	67	6	2	0 153
	August	75	4	64	5	2	0 150
	September	76	3	64	3	2	0 148
	October	75	3	64	3	2	0 147
	November	77	2	60	3	2	0 144
	December	77	2	60	3	2	0 144
1983	January	77	2	60	3	2	0 144
	February	77	2	60	3	2	0 144
	March	77	3	59	3	2	0 144
	April	77	4	57	3	2	0 143
	May	78	3	57	3	2	0 143
	June	79	2	57	3	2	0 143
	July	79	2	57	3	2	0 143
	August	79	2	57	3	2	0 143
	September	80	1	57	3	2	0 143
	October	80	1	56	2	2	0 141
	November	80	1	56	0	2	0 139
	December	80	3	53	0	2	0 138
1984	January	80	3	51	0	2	0 136
	February	80	3	51	0	2	0 136
	March	81	3	50	0	2	0 136
	April	82	3	49	0	2	0 136
	May	82	3	49	0	2	0 136
	June	83	3	48	0	2	0 136
	July	83	3	48	0	2	0 136
	August	84	2	44	0	2	0 132
	September	84	2	44	0	2	0 132
	October	85	3	42	0	2	0 132

<sup>1</sup>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.

<sup>2</sup>See Note 1 on the last page of this section for the definition.

<sup>3</sup>See Note 2 on the last page of this section for the definition.

<sup>4</sup>Net design electrical rating (DER) is used because many of the units have not had the operational experience needed to determine a net maximum dependable capacity (MDC). See Note 3 on the last page of this section.

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

Sources: • See the last page of this section.

## Notes and Sources for the Nuclear Section

### Notes

**1. Operable Reactors:** Units that have received Operating Licenses, completed low-power testing, and are authorized to operate at full power (i.e., in receipt of a Full Power Amendment) by the Nuclear Regulatory Commission (NRC), plus the Hanford-N reactor operated by the Department of Energy (DOE). The Hanford-N reactor, with a net capacity of 860 megawatts electric (MWe), is included, although it is not licensed by the NRC, because electricity produced from its output steam is distributed commercially. Similarly, the Shippingport reactor (net capacity of 60 MWe) operated by DOE, was included prior to retirement from service on October 1, 1982, except for the interval from March 1974 through August 1977 when it was excluded because of a major core modification outage. The DOE-operated Experimental Breeder Reactor-2 (EBR-2) is not included because the electricity it generates is not distributed commercially. Five units, each of which has been inoperative for at least 4 years prior to January 1, 1984, are deleted from entries subsequent to their removal from service: Peach Bottom-1 (net capacity of 40 MWe) and Indian Point-1 (net capacity of 265 MWe), both out of service since November 1974; Humboldt Bay (net capacity of 65 MWe), down since August 1976 for major seismic modifications and subsequently officially retired; Dresden-1 (net capacity of 200 MWe), out of service since January 1979 for major modifications and officially retired in August 1984; and Three Mile Island-2 (net capacity of 906 MWe), whose core was severely damaged by a loss-of-coolant accident in March 1979. A sister unit, Three Mile Island-1 (net capacity of 819 MWe), continues to be listed as "Operable" because it could, in theory, return to service once the restraining order imposed by the NRC is lifted.

**2. In Startup:** Units that have received Operating Licenses authorizing fuel loading and low-power testing but have not received a Full Power Amendment from the NRC. Without the amendment, these units cannot distribute electricity commercially.

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

(a) Net Maximum Dependable Capacity (MDC)—The gross electrical output measured at the output terminals of the turbine generator(s) during the most restrictive seasonal conditions (usually summer) less the station service load. The typical station service load for a nuclear plant is about 5

percent of its gross generation.

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

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

### Sources

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

**Electricity Generation:** • 1973 through September 1977—Federal Power Commission, Form 4, "Monthly Power Plant Report."

• October 1977 through 1981—Federal Energy Regulatory Commission, FPC Form 4, "Monthly Power Plant Report."

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

**Maximum Dependable Capacity:** Nuclear Regulatory Commission Report NUREG-0020, "Licensed Operating Reactors."

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

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

• July 1982 forward—Nuclear Regulatory Commission Report NUREG-0871, "Summary Information Report," Nuclear Regulatory Commission Report NUREG-0020, "Licensed Operating Reactors," and various trade journals.

**Total Design Capacity:** Nuclear Regulatory Commission Report NUREG-0020, "Licensed Operating Reactors" and Nuclear Regulatory Commission Report NUREG-0871, "Summary Information Report."

# Part 9 Price

## Price

### Crude Oil

The average price of domestic crude oil purchased at the wellhead was \$25.91 per barrel in October 1984. This was 0.2 percent below the previous month's level and 0.5 percent below the level in October 1983.

During October 1984, the composite refiner acquisition cost of crude oil was \$28.56 per barrel, 0.1 percent below the previous month's price of \$28.60. The price of imported crude oil increased \$0.09 per barrel from the September 1984 price to \$28.79 per barrel in October. This was 3.0 percent below the October 1983 price. The price of domestic crude oil in October 1984 was \$28.46, \$0.10 below the September 1984 average.

### Motor Gasoline

The national city average retail price of leaded regular gasoline at all types of stations was \$1.12 per gallon in November 1984, 0.3 percent lower than the price in October 1984. The average price of unleaded regular gasoline at all types of stations was \$1.21 per gallon in November, 0.2 percent lower than the price in the previous month. The price of unleaded premium gasoline averaged \$1.36 per gallon in November, 0.1 percent lower than during October 1984.

### Residual Fuel Oil

The average price, excluding taxes, of residual fuel oil sold to end users (utilities, industry, and other ultimate consumers) in October 1984 was \$0.68 per gallon, 0.4 percent above the previous month's price but 1.3 percent below the October 1983 average. The average price, excluding taxes, of residual fuel oil sold for resale (to other-than-ultimate consumers) in October 1984 was \$0.65 per gallon, 0.8 percent above the September 1984 average and 0.5 percent above the October 1983 average.

### Aviation Fuel

The average price, excluding taxes, of aviation gasoline sold to end users in October 1984 was \$1.23 per gallon, 0.3 percent below the price in the previous month and 1.1 per-

cent below the price in October 1983. The average price, excluding taxes, of kerosene-type jet fuel sold to end users in October 1984 was \$0.84 per gallon, up 0.6 percent from the previous month's price but down 2.8 percent from the price 1 year earlier.

### No. 2 Distillate Fuel Oil

The national average price of heating oil sold to residential customers in October 1984 was \$1.05 per gallon. This was 1.3 percent above the price in September 1984 but 1.0 percent below the October 1983 price. The average price for resale was \$0.81 per gallon in October 1984, 3.2 percent below the price in October 1983.

### Natural Gas

In September 1984, the average wellhead price of marketed natural gas production was \$2.59 per thousand cubic feet (Mcf), \$0.01 per Mcf less than in August 1984 and \$0.08 per Mcf (3.0 percent) less than the September 1983 price. The average price of natural gas delivered to electric utility plants was \$3.82 per Mcf in September 1984, \$0.04 per Mcf higher than the August 1984 price and \$0.12 per Mcf (3.2 percent) above the September 1983 price. The average price of natural gas used by residential consumers in November 1984 was \$6.12 per Mcf, \$0.13 per Mcf (2.1 percent) less than in October 1984 but \$0.08 per Mcf more than the November 1983 price.

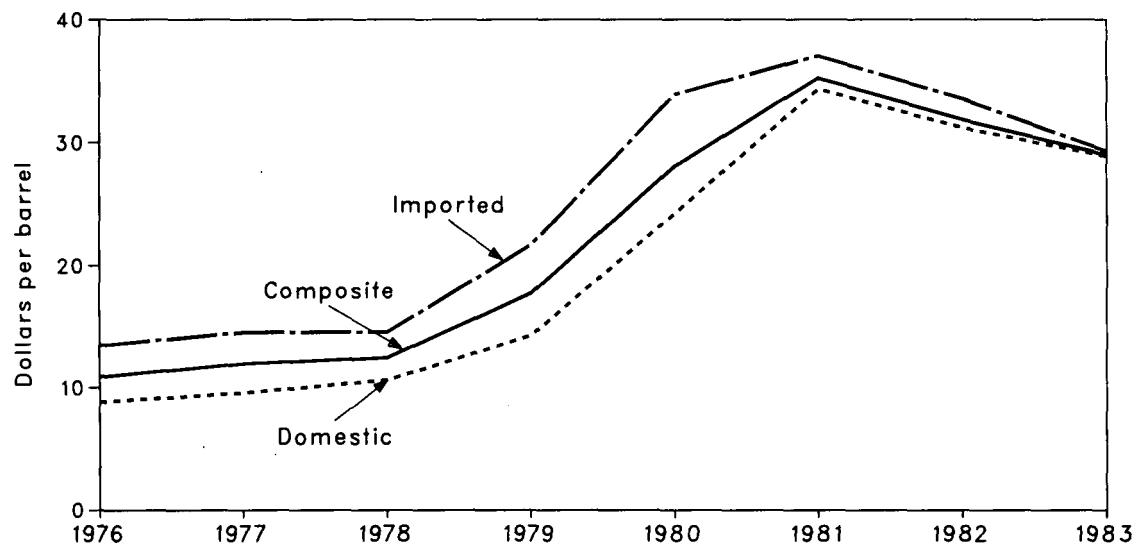
### Electricity

The average retail price of electricity sold by selected privately owned utilities to residential consumers in October 1984 was 7.95 cents per kilowatthour (kWh), a decrease of 1.2 percent from the September 1984 price but 6.0 percent above the October 1983 price. The average price of electricity sold to commercial consumers was 7.63 cents per kWh in October 1984, slightly below the previous month's price but up 6.1 percent from the October 1983 price. The average electricity price to industrial users during October 1984 was 5.14 cents per kWh, a decrease of 2.3 percent from the price in the previous month but 2.6 percent more than in October 1983.

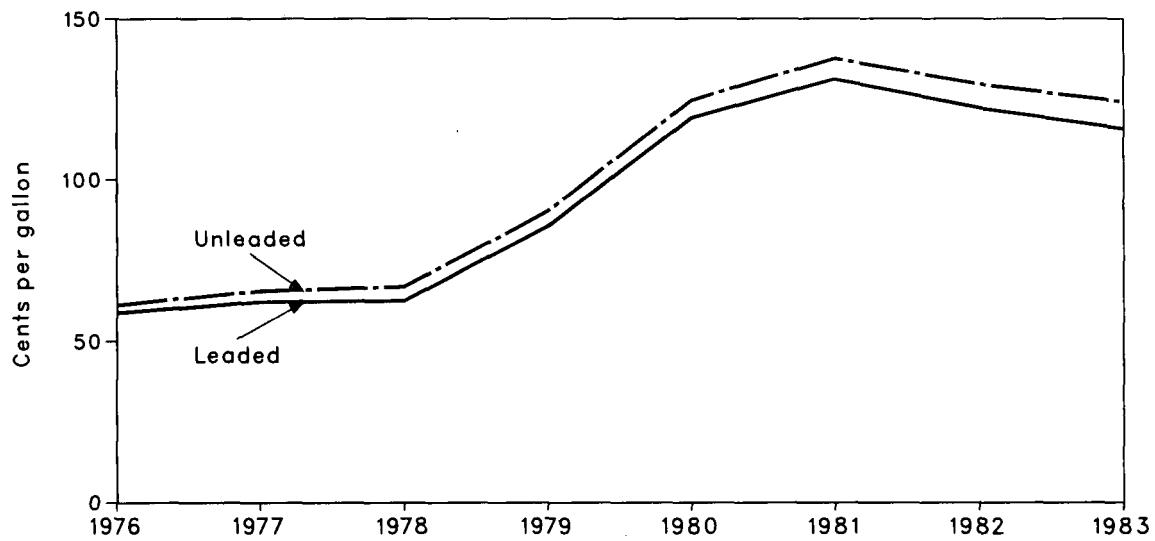
## Price

### Selected Petroleum Series

#### Refiner Acquisition Cost of Crude Oil



#### Regular Motor Gasoline Prices (Including Tax)



# Price

## Crude Oil Price Summary

	Actual Domestic Average Wellhead Price <sup>1</sup>	Average FOB Cost of Crude Oil Imports <sup>2</sup>	Average Landed Cost of Crude Oil Imports <sup>3</sup>	Refiner Acquisition Cost of Crude Oil <sup>4</sup>		
				Domestic	Imported	Composite
Dollars per barrel						
1976	Average	8.19	12.17	13.34	8.84	13.48
1977	Average	8.57	13.24	14.31	9.55	14.53
1978	Average	9.00	13.30	14.38	10.61	14.57
1979	Average	12.64	20.19	21.65	14.27	21.67
1980	Average	21.59	32.27	33.95	24.23	33.89
1981	Average	31.77	35.10	36.52	34.33	37.05
1982	January	30.87	34.12	35.23	33.39	35.54
	February	29.76	33.60	34.63	32.71	35.48
	March	28.31	32.15	33.31	31.08	34.07
	April	27.65	31.65	32.77	30.27	32.82
	May	27.67	31.65	32.70	30.37	32.78
	June	28.11	32.31	33.47	30.79	33.79
	July	28.33	32.22	33.31	30.92	33.44
	August	28.18	31.33	32.34	30.85	32.95
	September	27.99	31.57	32.49	30.76	33.03
	October	28.74	32.02	33.01	31.38	33.28
	November	28.70	31.76	32.86	31.57	33.09
	December	28.12	31.19	32.32	30.80	32.85
	Average	28.52	32.11	33.18	31.22	33.55
1983	January	27.22	29.47	30.62	30.55	31.40
	February	26.41	27.79	29.08	29.16	30.76
	March	26.08	26.88	27.84	28.69	28.43
	April	25.85	27.18	28.24	28.45	27.95
	May	26.08	27.36	28.55	28.68	28.53
	June	25.98	27.71	29.00	28.67	29.23
	July	25.86	27.84	28.99	28.74	28.76
	August	26.03	27.89	29.22	28.58	29.50
	September	26.08	27.88	29.24	28.69	29.54
	October	26.04	27.84	29.08	28.88	29.67
	November	26.09	27.75	28.93	28.76	29.09
	December	25.88	27.50	28.58	28.62	29.30
	Average	26.19	27.73	28.93	28.87	29.30
1984	January	25.93	27.56	28.49	28.62	28.80
	February	26.06	27.78	28.89	28.76	28.91
	March	26.05	27.70	28.69	28.75	28.95
	April	25.93	27.84	28.91	28.63	29.11
	May	26.00	27.87	28.94	28.65	29.26
	June	26.09	27.78	28.89	28.58	29.19
	July	26.11	27.19	28.32	28.70	29.00
	August	26.02	27.29	28.20	28.59	28.92
	September	R25.97	R27.14	R28.14	28.56	28.70
	October	†25.91	†26.95	†27.98	28.46	28.79
						28.56

<sup>1</sup>See Note 1 in the Notes and Sources for this section.

<sup>2</sup>See Note 2 in the Notes and Sources for this section.

<sup>3</sup>See Note 3 in the Notes and Sources for this section.

<sup>4</sup>See Note 4 in the Notes and Sources for this section.

†Preliminary data. R=Revised data.

Note: • Geographic coverage is the 50 States and the District of Columbia, except for the refiner acquisition cost of crude oil, which is the 50 States, the District of Columbia, Puerto Rico, Guam, and the Virgin Islands.

Sources: • See the Notes and Sources for this section.

## Price

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

		Algeria	Indonesia	Iran	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela
Dollars per barrel									
1976	Average	13.05	12.76	11.61	NA	13.08	11.69	NA	11.32
1977	Average	14.36	13.57	12.67	13.42	14.44	12.37	NA	12.68
1978	Average	14.10	13.64	12.65	13.24	14.04	12.70	13.82	12.45
1979	Average	20.65	19.35	23.71	20.29	21.80	17.63	21.20	17.37
1980	Average	36.57	32.37	( <sup>2</sup> )	31.11	35.82	28.53	34.58	24.78
1981	Average	39.09	35.93	( <sup>2</sup> )	33.13	38.53	32.48	36.08	28.86
1982	January	36.96	35.53	( <sup>2</sup> )	29.67	36.23	33.40	36.20	29.07
	February	35.56	35.59	( <sup>2</sup> )	30.92	35.92	33.50	34.00	28.94
	March	31.50	35.74	( <sup>2</sup> )	27.86	34.94	33.77	30.78	22.89
	April	30.54	35.69	( <sup>2</sup> )	26.96	33.80	33.49	32.49	21.89
	May	33.32	34.82	31.11	28.53	35.22	32.97	32.43	22.31
	June	34.72	35.95	W	28.18	35.18	33.80	33.67	22.25
	July	34.35	35.22	31.44	28.32	35.15	33.26	33.66	23.50
	August	33.03	35.63	31.17	27.67	35.13	32.63	33.17	20.71
	September	34.20	35.24	W	27.95	34.70	32.98	33.30	23.58
	October	34.26	35.25	W	27.82	35.05	33.54	33.93	22.93
	November	34.44	34.99	29.80	27.63	35.02	33.59	34.08	23.74
	December	34.86	34.73	29.09	27.63	33.18	34.04	33.21	26.21
	Average	34.23	35.27	30.93	28.07	35.13	33.50	33.46	23.77
1983	January	W	34.71	W	26.90	W	W	32.77	21.58
	February	W	33.74	W	25.69	W	W	30.95	21.82
	March	31.07	29.69	W	24.53	29.52	30.03	29.16	20.04
	April	29.37	29.57	W	24.18	29.63	W	30.07	20.05
	May	29.54	29.31	W	24.60	29.72	W	29.61	19.88
	June	29.80	29.59	W	24.13	29.57	W	28.92	20.80
	July	30.15	29.73	28.41	24.92	29.81	27.91	30.00	19.89
	August	30.32	29.60	28.19	25.15	29.92	27.83	29.88	21.56
	September	30.33	29.77	28.03	25.10	29.59	27.73	30.33	21.81
	October	29.98	29.81	28.29	25.72	30.23	28.24	29.73	23.58
	November	29.75	30.34	W	25.76	29.99	28.22	29.42	23.17
	December	W	29.77	28.30	26.20	29.60	27.18	29.05	24.17
	Average	30.06	29.93	28.25	25.19	29.78	28.03	29.84	21.48
1984	January	27.60	29.89	W	26.22	29.80	27.76	29.29	24.21
	February	28.56	29.09	W	26.04	29.98	26.72	29.70	23.55
	March	28.69	W	NA	26.30	29.89	28.39	29.95	23.86
	April	28.90	29.50	W	26.07	29.93	28.17	29.85	23.93
	May	28.98	29.44	W	26.36	29.67	27.43	29.93	24.07
	June	28.52	29.35	NA	26.58	29.34	W	29.67	24.23
	July	27.43	29.21	W	26.62	29.22	W	28.91	24.37
	August	26.97	W	W	26.71	29.02	W	28.13	23.91
	September	R26.90	28.83	NA	R26.34	29.24	W	R27.99	R24.57
	October†	27.47	W	NA	26.39	28.40	W	28.43	24.57

<sup>1</sup>The Free on Board (FOB) cost excludes all costs related to insurance and transportation. See Note 2 in the Notes and Sources for this section.

<sup>2</sup>No crude oil was imported.

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

Note: • Prices through 1980 reflect the period of reporting; prices since then reflect the period of loading. Annual averages are the weighted average of the 12 monthly prices including those prices that were not published.

Sources: • See the Notes and Sources for this section.

# Price

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

		Algeria	Canada	Indonesia	Iran	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela
Dollars per barrel										
1975	Average	12.72	12.72	13.79	12.21	NA	12.62	12.30	NA	11.65
1976	Average	13.81	13.57	13.82	12.82	NA	13.80	13.04	NA	11.80
1977	Average	15.20	14.21	14.63	13.80	13.75	15.25	13.61	NA	13.13
1978	Average	14.91	14.50	14.64	13.88	13.54	14.86	13.92	NA	12.83
1979	Average	21.90	20.43	20.69	25.02	20.86	22.96	19.15	22.16	18.18
1980	Average	37.90	30.47	33.92	( <sup>2</sup> )	31.80	37.05	30.02	35.88	25.86
1981	Average	40.49	32.16	37.57	( <sup>2</sup> )	33.78	39.70	34.19	37.24	29.87
1982	January	38.19	31.05	36.88	( <sup>2</sup> )	30.21	37.37	34.44	36.78	29.82
	February	37.09	28.80	36.81	( <sup>2</sup> )	31.47	37.06	34.51	35.04	30.09
	March	32.25	26.71	37.17	( <sup>2</sup> )	28.69	35.81	34.92	31.35	23.92
	April	31.66	24.86	36.87	( <sup>2</sup> )	27.58	34.82	34.80	33.19	23.09
	May	34.24	24.90	36.50	32.01	29.18	36.06	34.28	33.22	23.44
	June	35.41	24.63	37.35	W	28.76	36.15	35.20	34.41	23.43
	July	35.26	26.62	37.04	32.08	28.95	36.19	35.04	34.67	24.61
	August	33.87	26.40	36.81	31.84	28.19	36.16	34.28	33.88	21.90
	September	34.88	26.52	36.65	W	28.50	35.56	34.45	34.01	24.53
	October	35.41	26.91	36.83	33.28	28.22	35.98	35.21	34.56	23.90
	November	35.82	26.78	36.49	32.66	28.17	36.04	35.41	34.74	24.91
	December	35.70	27.35	36.19	32.73	28.19	34.54	36.43	34.05	27.09
	Average	35.28	26.92	36.75	32.40	28.64	36.17	35.00	34.28	24.82
1983	January	33.20	27.62	36.12	W	27.50	W	W	33.48	23.20
	February	32.17	26.19	35.07	W	26.15	32.24	W	33.33	23.36
	March	31.24	24.78	31.17	W	25.06	30.49	31.63	29.92	21.48
	April	30.55	24.35	31.14	W	24.65	30.63	W	30.84	21.45
	May	30.48	24.32	30.82	W	25.17	30.75	W	30.60	21.24
	June	30.88	24.88	31.40	29.10	24.81	30.56	W	30.02	22.07
	July	31.36	25.45	31.46	30.06	25.34	30.91	29.53	30.86	21.30
	August	31.85	25.45	31.65	29.57	25.80	31.21	29.39	30.83	22.82
	September	31.78	25.71	31.27	29.31	25.66	30.70	29.53	31.39	23.12
	October	30.97	26.01	31.14	29.73	26.44	31.16	29.98	30.79	24.75
	November	30.96	25.83	31.30	W	26.29	31.02	29.88	30.33	24.68
	December	30.23	26.69	31.12	28.57	26.88	30.57	28.83	30.00	24.91
	Average	31.26	25.63	31.57	29.81	25.78	30.84	29.76	30.87	22.94
1984	January	29.19	26.44	31.22	W	26.85	30.62	29.67	30.09	25.28
	February	29.73	26.40	30.91	W	26.73	31.29	28.38	30.77	25.21
	March	30.31	26.01	30.81	NA	26.92	30.93	30.20	30.98	24.75
	April	29.81	26.10	31.02	W	26.68	31.08	29.95	30.73	24.86
	May	29.96	27.12	30.80	W	26.92	30.96	28.95	30.75	24.93
	June	29.62	26.00	31.21	NA	27.24	31.05	29.90	30.43	25.29
	July	28.63	27.16	30.26	W	26.98	30.07	W	29.54	25.24
	August	28.16	26.95	30.59	W	26.99	29.99	W	28.93	24.95
	September	R27.94	27.03	R30.05	W	R26.66	R30.60	W	28.81	R25.29
	October†	28.47	26.82	29.90	W	26.81	29.47	28.22	29.24	25.66

<sup>1</sup>See Note 3 in the Notes and Sources for this section.

<sup>2</sup>No crude oil was imported.

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

Note: • Prices through 1980 reflect the period of reporting; prices since then reflect the period of loading. Annual averages are the weighted average of the 12 monthly prices including those prices that were not published.

Sources: • See the Notes and Sources for this section.

## Price

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

		Leaded Regular	Unleaded Regular	Unleaded Premium	Average for All Types <sup>2</sup>
Cents per gallon, including tax					
1974	Average	53.2	NA	NA	NA
1975	Average	56.7	NA	NA	NA
1976	Average	59.0	61.4	NA	NA
1977	Average	62.2	65.6	NA	NA
1978	Average	62.6	67.0	NA	65.2
1979	Average	85.7	90.3	NA	88.2
1980	Average	119.1	124.5	NA	122.1
1981	Average <sup>3</sup>	131.1	137.8	147.0	135.3
1982	January	128.5	135.8	146.6	134.1
	February	126.0	133.4	144.8	131.8
	March	120.6	128.4	140.8	126.8
	April	114.8	122.5	135.1	121.0
	May	116.6	123.7	135.5	122.4
	June	124.2	130.9	141.8	129.6
	July	126.3	133.1	144.3	131.8
	August	125.4	132.3	143.9	131.0
	September	123.6	130.8	142.9	129.5
	October	121.9	129.5	142.1	128.0
	November	120.7	128.3	141.2	126.8
	December	118.1	126.0	139.4	124.4
	Average	122.2	129.6	141.5	128.1
1983	January	114.6	122.8	137.6	121.3
	February	109.9	118.7	133.8	117.0
	March	106.4	115.1	130.8	113.5
	April	113.1	121.5	136.0	119.8
	May	117.7	125.9	139.7	124.3
	June	119.7	127.7	141.1	126.1
	July	120.7	128.8	142.1	127.2
	August	120.3	128.5	141.9	126.9
	September	118.9	127.4	141.0	125.7
	October	117.2	125.5	139.5	123.9
	November	115.6	124.1	138.4	122.4
	December	114.6	123.1	137.6	121.5
	Average	115.7	124.1	138.3	122.5
1984	January	113.1	121.6	136.9	120.0
	February	112.5	120.9	136.1	119.3
	March	112.5	121.0	136.2	119.4
	April	114.5	122.7	137.5	121.1
	May	115.4	123.6	138.0	122.1
	June	114.7	122.9	137.7	121.4
	July	112.9	121.2	137.0	119.7
	August	111.6	119.6	135.5	118.4
	September	112.0	120.3	136.0	118.9
	October	112.7	120.9	136.5	R119.5
	November	112.4	120.7	136.4	119.3

<sup>1</sup>See Note 5 in the Notes and Sources for this section.

<sup>2</sup>Also includes types of gasoline not shown separately.

<sup>3</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.

R=Revised data. NA=Not available.

Note: • Geographic coverage for 1974 through 1977 is 56 urban areas. For 1978 forward it is 85 urban areas.

Sources: • See the Notes and Sources for this section.

## Price

### Refiner and Gas Plant Operator Sales Prices of Residual Fuel Oil<sup>1</sup>

		Residual Fuel Oil Sulfur Content Less Than or Equal to 1 Percent		Residual Fuel Oil Sulfur Content Greater Than 1 percent		Average	
		Sales for Resale	Sales to End Users	Sales for Resale	Sales to End Users	Sales for Resale	Sales to End Users
Cents per gallon, excluding tax							
1978	Average	29.3	31.4	24.5	27.5	26.3	29.8
1979	Average	45.0	46.8	36.6	38.9	39.9	43.6
1980	Average	60.8	67.5	47.9	52.3	52.8	60.7
1981	Average	74.8	82.9	62.2	67.3	66.3	75.6
1982	January	71.8	77.7	57.0	60.7	62.0	68.8
	February	71.5	77.4	54.6	58.4	60.2	69.1
	March	68.4	75.6	54.1	57.1	59.1	67.4
	April	66.8	73.5	54.6	57.8	58.5	65.1
	May	68.4	74.0	58.0	61.5	61.0	66.7
	June	68.1	75.1	58.6	63.2	61.5	68.8
	July	67.9	72.7	56.3	62.9	60.1	68.1
	August	67.1	71.8	58.7	61.5	60.7	66.2
	September	68.1	72.1	58.3	61.6	61.2	66.3
	October	72.6	75.9	59.5	62.9	63.5	68.1
	November	72.6	76.3	60.7	64.1	65.3	70.0
	December	69.2	72.0	58.2	61.9	61.7	66.4
	Average	69.5	74.7	57.2	61.1	61.2	67.6
1983	January	65.0	70.5	57.0	60.1	60.3	64.2
	February	63.0	66.0	55.7	58.5	58.5	62.0
	March	60.0	66.2	55.9	57.0	57.7	60.9
	April	60.1	64.3	56.5	58.7	57.7	61.0
	May	62.6	66.9	57.8	59.7	59.2	63.2
	June	63.2	69.2	58.5	60.1	60.2	64.7
	July	65.2	70.4	60.5	61.4	62.2	65.9
	August	66.7	71.6	62.0	63.2	63.8	67.7
	September	67.0	72.6	63.3	65.3	64.6	69.0
	October	68.8	72.1	62.6	64.9	64.7	68.7
	November	66.5	70.7	62.2	64.4	63.6	67.4
	December	67.3	72.0	60.2	63.1	62.3	67.2
	Average	64.3	69.5	59.1	61.1	60.9	65.1
1984	January	71.0	73.6	62.3	64.6	64.8	69.0
	February	71.4	75.1	65.7	65.8	67.5	70.4
	March	70.5	73.1	61.9	64.7	64.5	68.5
	April	69.2	73.1	64.7	66.5	66.2	69.1
	May	68.3	72.7	65.0	67.4	66.0	69.5
	June	69.8	73.2	66.1	68.9	67.2	71.0
	July	66.8	71.5	64.0	66.7	65.0	69.0
	August	65.6	69.5	62.7	65.0	63.6	67.1
	September	R65.9	70.0	63.8	64.9	R64.5	67.5
	October†	66.5	70.8	64.3	65.8	65.0	67.8

<sup>1</sup>Sales for Resale are those made to purchasers who are other-than-ultimate consumers, that is, wholesale sales. Sales to End Users are those made directly to the ultimate consumer including bulk customers such as agriculture, industry, and utilities, as well as residential and commercial customers.

†Preliminary data. R=Revised data.

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

•Prices prior to January 1983 are Energy Information Administration backcast estimates. See Note 8 in the Notes and Sources for this section for additional information.

Sources: •See the Notes and Sources for this section.

# Price

## Refiner and Gas Plant Operator Sales Prices of Petroleum Products for Resale<sup>1</sup>

		Finished Motor Gasoline <sup>2</sup>	Finished Aviation Gasoline	Kerosene- Type Jet Fuel	Kerosene	No. 2 Fuel Oil	No. 2 Diesel Fuel	Propane (Consumer Grade)
Cents per gallon, excluding tax								
1978	Average	43.4	53.7	38.6	40.4	36.9	36.5	23.7
1979	Average	63.7	72.1	66.0	62.4	56.9	57.4	29.1
1980	Average	94.1	112.8	86.8	86.4	80.3	80.1	41.5
1981	Average	106.4	125.0	101.2	106.6	97.6	97.2	46.6
1982	January	102.3	128.8	100.5	108.5	98.0	96.7	42.4
	February	98.9	128.4	99.2	106.3	93.9	93.5	37.8
	March	92.6	123.1	96.8	99.9	86.6	89.0	35.3
	April	89.6	119.3	92.2	95.1	83.3	85.4	34.4
	May	94.1	115.3	91.0	95.5	86.5	87.9	34.9
	June	100.5	120.7	93.3	97.4	89.8	92.2	36.4
	July	101.7	126.7	93.5	97.0	91.0	92.1	39.2
	August	101.0	123.9	94.2	96.9	90.3	91.0	43.2
	September	99.6	121.8	94.7	100.6	92.0	91.1	48.8
	October	98.4	122.7	97.6	105.7	96.5	94.4	50.4
	November	96.4	124.6	97.3	105.3	97.3	96.1	52.5
	December	92.4	125.9	92.9	98.2	89.5	90.0	48.9
	Average	97.3	122.8	95.3	101.8	91.4	91.4	42.7
1983	January	88.5	124.8	91.8	94.2	85.7	85.5	47.0
	February	85.4	123.7	89.9	90.0	80.1	80.7	46.7
	March	82.9	121.2	84.5	83.1	76.0	75.2	47.4
	April	86.5	120.0	82.9	84.2	78.9	76.8	50.0
	May	90.4	120.2	84.3	87.7	80.9	80.2	50.5
	June	91.5	115.0	84.1	84.6	80.9	80.3	50.9
	July	92.3	115.2	84.8	85.2	81.7	80.8	50.7
	August	91.5	114.7	85.4	86.7	83.4	81.7	49.8
	September	90.2	113.7	86.3	91.9	85.1	83.5	50.1
	October	88.1	118.9	86.4	90.8	83.5	83.0	49.9
	November	86.6	118.7	84.4	90.4	82.6	82.0	47.3
	December	83.8	118.8	83.6	88.6	80.7	80.1	45.4
	Average	88.2	117.8	85.4	89.2	81.5	80.8	48.4
1984	January	83.2	116.7	86.4	95.9	87.5	82.6	47.7
	February	83.8	116.5	86.5	100.4	89.2	84.5	47.4
	March	84.7	117.1	84.6	91.5	81.3	81.0	45.3
	April	86.9	116.8	84.2	90.7	82.8	80.8	44.6
	May	86.6	117.1	84.3	90.9	83.2	81.9	44.4
	June	84.5	116.8	84.2	88.1	82.4	81.9	44.1
	July	81.7	117.2	82.8	87.6	79.4	79.3	42.3
	August	81.1	116.7	81.0	86.0	77.8	77.7	43.2
	September	82.8	116.8	81.7	88.8	80.0	78.4	44.8
	October†	83.6	116.4	82.9	88.6	80.8	80.0	45.7

<sup>1</sup>Sales for Resale are those made to purchasers who are other-than-ultimate consumers, that is, wholesale sales. Sales to End Users are those made directly to the ultimate consumer including bulk customers such as agriculture, industry, and utilities, as well as residential and commercial customers.

<sup>2</sup>See Note 5 in the Notes and Sources for this section.

†Preliminary data.

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

•Prices prior to January 1983 are Energy Information Administration backcast estimates. See Note 8 in the Notes and Sources for this section for additional information.

Sources: • See the Notes and Sources for this section.

## Price

### Refiner and Gas Plant Operator Sales Prices of Petroleum Products to End Users<sup>1</sup>

		Finished Motor Gasoline <sup>2</sup>	Finished Aviation Gasoline	Kerosene- Type Jet Fuel	Kerosene	No. 2 Fuel Oil	No. 2 Diesel Fuel	Propane (Consumer Grade)
Cents per gallon, excluding tax								
1978	Average	48.4	51.6	38.7	42.1	40.0	37.7	33.5
1979	Average	71.3	68.9	54.7	58.5	51.6	58.5	35.7
1980	Average	103.5	108.4	86.8	90.2	78.8	81.8	48.2
1981	Average	114.7	130.3	102.4	112.3	91.4	99.5	56.5
1982	January	110.8	132.0	101.0	111.2	94.4	98.7	57.8
	February	108.6	132.8	100.4	110.7	95.0	96.7	57.7
	March	102.2	133.6	99.0	112.2	90.6	91.9	57.3
	April	98.3	131.5	96.2	103.1	85.0	90.1	57.3
	May	102.1	131.5	94.9	105.1	84.4	91.5	57.8
	June	109.3	131.3	94.7	109.4	85.1	95.8	57.7
	July	110.4	133.2	94.7	109.0	83.6	94.8	55.1
	August	108.9	131.4	94.8	101.9	86.3	93.1	56.7
	September	107.7	128.8	94.5	102.7	86.2	93.5	59.9
	October	106.4	130.3	95.2	107.7	89.8	95.7	60.7
	November	105.1	129.5	95.8	113.7	94.2	97.7	63.2
	December	102.2	129.1	95.0	108.3	93.9	94.0	64.2
	Average	106.0	131.2	96.3	108.9	90.5	94.2	59.2
1983	January	97.1	129.2	94.5	104.5	100.9	89.2	72.7
	February	92.5	127.2	92.6	101.4	97.0	84.0	71.7
	March	89.8	126.6	90.6	97.1	93.0	78.0	68.1
	April	94.7	125.2	88.8	93.4	89.1	78.8	68.6
	May	96.6	125.4	87.8	93.8	89.5	81.8	72.2
	June	97.8	125.6	86.3	90.0	87.3	81.5	67.3
	July	98.8	125.1	85.6	89.0	85.1	82.0	66.4
	August	98.4	125.9	85.5	90.8	86.1	83.0	68.9
	September	96.9	124.2	86.1	92.7	88.0	84.8	74.9
	October	95.4	124.7	86.0	98.9	89.0	84.2	69.6
	November	93.9	124.5	85.8	100.0	90.1	83.5	72.8
	December	92.4	124.4	85.5	96.6	92.1	82.2	76.4
	Average	95.4	125.5	87.8	96.1	91.6	82.6	70.9
1984	January	90.6	123.9	85.8	106.8	97.7	84.4	76.8
	February	90.2	123.7	86.5	117.9	104.6	87.4	76.3
	March	90.7	123.8	85.6	111.3	94.7	83.2	76.4
	April	92.9	124.4	85.1	105.8	91.9	82.4	76.5
	May	93.4	123.9	85.2	102.4	90.9	83.2	70.4
	June	92.5	124.6	84.5	94.3	86.9	84.0	70.6
	July	90.4	124.3	84.1	90.6	84.3	81.3	69.6
	August	89.2	123.2	83.4	92.8	82.8	79.7	71.9
	September	R89.7	R123.7	83.1	99.2	R84.3	80.2	73.4
	October†	90.5	123.3	83.6	102.6	86.1	81.6	71.3

<sup>1</sup>Sales for Resale are those made to purchasers who are other-than-ultimate consumers, that is, wholesale sales. Sales to End Users are those made directly to the ultimate consumer including bulk customers such as agriculture, industry, and utilities, as well as residential and commercial customers.

<sup>2</sup>See Note 5 in the Notes and Sources for this section.

†Preliminary data. R=Revised data.

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

•Prices prior to January 1983 are Energy Information Administration backcast estimates. See Note 8 in the Notes and Sources for this section for additional information.

Sources: • See the Notes and Sources for this section.

## Price

### Sales Prices of No. 2 Distillate to Residences for Selected States<sup>1</sup>

		CT	ME	MA	NH	RI	VT	DE	DC	MD	NJ	NY	PA	VA
Cents per gallon, excluding tax														
1978	Average	50.1	48.6	48.8	50.3	50.7	50.8	47.8	50.7	49.2	49.6	50.1	48.8	49.1
1979	Average	72.0	68.8	70.9	72.5	72.8	72.5	68.2	74.2	70.1	71.0	71.2	69.8	70.4
1980	Average	98.0	96.3	97.8	100.4	101.1	101.5	95.4	102.6	97.9	97.9	98.2	96.4	98.5
1981	Average	121.7	120.4	121.3	123.7	123.8	125.4	117.3	127.4	121.4	121.5	123.2	118.1	120.5
1982	January	122.6	120.0	123.8	123.3	125.8	126.2	114.4	128.5	120.3	122.0	125.4	119.5	121.7
	February	120.3	118.8	121.9	121.2	123.0	125.0	114.3	127.9	120.3	120.0	124.0	118.3	119.5
	March	114.8	111.3	116.7	116.8	116.5	120.5	110.3	125.4	115.5	115.7	119.5	109.5	117.2
	April	110.6	108.6	113.7	112.3	114.7	115.3	108.6	120.5	112.8	113.4	114.4	111.0	114.1
	May	112.4	113.2	115.1	114.3	115.9	116.0	107.4	122.7	114.3	113.8	117.6	110.8	115.7
	June	115.9	114.9	114.7	117.2	117.9	118.5	109.9	120.4	115.8	116.3	118.4	112.8	116.6
	July	116.4	115.8	114.4	116.7	119.2	118.2	108.4	122.5	116.6	116.4	118.2	110.5	116.2
	August	118.3	116.7	115.4	115.4	118.7	113.3	109.3	121.5	115.9	116.6	118.6	111.5	115.8
	September	119.5	116.7	115.4	115.8	120.0	118.8	109.9	122.6	117.9	115.7	119.1	106.4	118.3
	October	122.6	117.6	118.8	116.7	123.9	121.1	114.2	126.2	117.2	120.0	122.4	117.3	119.1
	November	123.6	117.9	121.5	121.2	124.5	124.5	116.1	128.9	119.7	121.3	124.4	119.5	120.2
	December	122.4	114.7	119.5	118.3	121.0	124.1	113.2	126.6	118.1	117.7	123.8	117.1	117.6
	Average	118.3	115.5	117.6	117.4	120.1	120.1	111.3	124.5	117.1	117.4	120.5	113.7	117.7
1983	January	119.5	109.0	116.3	111.6	116.2	121.5	110.5	122.8	115.4	115.7	120.6	113.7	116.0
	February	115.8	103.7	113.2	105.5	112.2	116.9	108.2	119.7	112.6	110.4	117.6	109.6	112.0
	March	108.3	97.4	105.4	100.8	106.8	109.6	103.9	115.3	108.2	104.6	110.2	104.0	106.9
	April	104.5	99.5	104.4	100.9	108.8	110.6	103.0	113.1	107.9	104.4	106.9	101.8	106.7
	May	105.9	101.6	107.0	102.6	109.6	111.2	104.6	112.9	108.6	105.5	108.2	103.3	107.2
	June	104.3	102.6	105.9	101.2	112.0	112.8	107.3	114.7	108.3	104.6	110.5	102.2	106.8
	July	104.2	102.6	105.3	104.3	109.1	112.3	107.8	112.8	107.2	104.5	109.9	101.3	107.4
	August	103.8	105.6	105.4	103.5	107.9	111.7	102.5	113.3	107.0	105.5	110.0	101.6	107.7
	September	103.8	103.8	106.2	104.0	108.1	111.0	103.5	113.9	108.1	106.1	110.5	102.8	108.1
	October	104.3	102.9	105.6	103.1	108.0	109.4	103.5	113.4	108.7	105.4	110.3	103.3	104.8
	November	104.1	101.8	106.1	101.5	108.7	109.8	103.7	113.5	108.8	104.6	110.2	103.7	104.9
	December	105.6	102.2	108.1	103.7	109.4	110.0	105.5	114.7	109.2	106.7	110.9	104.6	105.2
	Average	109.1	102.8	109.1	104.1	110.5	112.9	106.0	117.0	110.3	107.9	112.1	105.8	108.7
1984	January	115.7	110.2	114.4	114.0	113.7	116.6	114.8	122.0	115.6	114.1	118.3	112.9	111.4
	February	121.7	112.6	119.7	117.8	117.5	118.9	118.4	128.6	121.9	119.5	124.3	117.4	117.5
	March	114.5	103.3	113.1	108.8	111.7	115.1	111.1	122.6	116.2	113.5	117.0	110.9	112.6
	April	113.4	103.3	112.4	107.7	110.7	113.3	109.9	119.9	115.6	110.6	116.0	107.8	110.8
	May	112.5	102.7	112.5	108.8	111.4	112.2	109.0	119.5	113.0	109.1	114.5	105.8	111.1
	June	110.6	103.7	110.5	104.5	110.8	112.8	107.2	116.3	109.9	107.1	115.0	103.3	108.7
	July	107.4	102.5	107.3	101.9	109.3	108.6	103.7	116.5	109.0	104.9	112.8	99.7	107.2
	August	104.7	98.0	105.5	98.6	106.0	108.0	103.7	109.8	105.2	103.6	110.2	99.6	105.2
	September	105.4	R99.1	106.0	R101.0	105.9	106.9	102.1	R109.9	106.7	R104.3	109.3	100.9	R105.9
	October†	106.2	101.7	106.8	102.1	107.3	108.0	103.7	111.8	109.5	105.7	111.8	101.5	106.7

<sup>1</sup>The States are listed by geographic region of the country. State names are abbreviated as follows: CT - Connecticut, ME - Maine, MA - Massachusetts; NH - New Hampshire, RI - Rhode Island, VT - Vermont, DE - Delaware, DC - District of Columbia, MD - Maryland, NJ - New Jersey, NY - New York, PA - Pennsylvania, VA - Virginia, WV - West Virginia, IL - Illinois, IN - Indiana, MI - Michigan, MN - Minnesota, OH - Ohio, WI - Wisconsin, ID - Idaho, AK - Alaska, OR - Oregon, WA - Washington.  
Footnotes continued on following page.

## Price

### Sales Prices of No. 2 Distillate to Residences for Selected States<sup>1</sup> (continued)

		WV	IL	IN	MI	MN	OH	WI	ID	AK	OR	WA	U.S. Average
Cents per gallon, excluding tax													
1978	Average	46.2	46.5	48.5	47.9	47.8	47.4	44.7	43.6	53.2	45.8	48.6	49.0
1979	Average	65.1	68.8	72.7	70.9	72.4	68.6	67.3	62.1	68.2	68.0	69.7	70.4
1980	Average	92.2	95.8	99.6	97.8	99.9	91.9	91.5	91.6	97.8	97.3	100.8	97.4
1981	Average	115.0	114.9	118.5	118.3	118.4	113.2	109.1	110.4	118.0	111.4	116.5	119.4
1982	January	114.3	114.2	119.6	118.3	118.5	113.7	111.0	113.1	121.7	113.5	120.1	120.6
	February	111.1	113.1	118.0	116.8	118.3	110.5	110.2	113.1	121.8	113.5	119.4	119.2
	March	105.1	107.3	112.9	110.9	111.4	105.2	106.9	111.2	119.9	111.3	118.1	113.9
	April	102.1	104.2	108.9	108.4	115.4	105.4	105.8	109.3	117.2	110.3	115.9	111.7
	May	105.8	107.0	114.6	112.8	110.2	108.4	105.4	109.7	118.6	110.9	115.6	113.0
	June	111.6	113.9	117.7	114.6	115.8	112.2	107.4	109.8	116.4	110.4	115.8	114.8
	July	110.3	114.0	115.1	113.1	114.5	112.1	108.1	107.9	115.1	110.4	115.3	114.4
	August	107.6	110.6	110.7	112.6	114.0	110.7	106.2	110.0	116.2	110.5	116.2	114.4
	September	110.0	110.9	110.9	112.8	114.1	110.0	106.9	109.7	115.2	110.3	117.1	113.7
	October	111.7	113.3	114.7	115.5	117.4	111.8	107.2	109.7	115.7	111.5	118.4	118.2
	November	111.6	113.9	116.5	116.0	117.7	112.9	109.7	110.9	116.3	112.8	120.8	120.1
	December	110.7	109.0	112.1	114.2	114.3	110.2	108.6	110.7	115.0	113.6	119.3	118.2
	Average	109.3	110.9	114.3	113.9	115.1	110.2	107.8	110.4	117.4	111.6	117.6	116.0
1983	January	105.6	103.8	105.7	110.6	107.8	107.9	108.5	109.1	114.6	113.6	117.7	115.0
	February	104.7	99.5	102.8	108.5	101.6	104.4	104.5	104.8	NA	107.8	114.3	111.6
	March	99.2	96.6	95.7	103.7	96.5	98.2	96.8	99.6	110.7	101.4	109.0	105.1
	April	97.5	97.7	96.8	102.5	100.5	95.8	97.1	99.0	106.6	99.1	106.0	103.5
	May	96.1	100.3	98.2	102.7	101.9	96.5	98.7	99.2	106.0	99.0	105.5	104.8
	June	97.3	100.2	98.2	110.7	102.4	96.1	98.7	98.7	105.0	99.4	105.4	106.0
	July	94.9	99.6	99.4	105.3	102.6	97.3	99.0	99.3	105.8	97.8	105.2	105.0
	August	96.1	100.7	98.9	102.2	104.4	95.2	99.2	98.1	105.1	98.7	104.0	104.9
	September	100.7	102.5	101.4	103.9	103.7	101.2	100.7	98.9	106.2	100.5	105.6	105.7
	October	100.6	101.0	101.5	105.8	104.8	100.2	101.8	99.5	106.1	101.4	106.3	106.0
	November	100.5	100.8	100.7	105.4	104.4	101.0	100.4	99.5	105.5	102.1	106.4	106.0
	December	101.5	99.6	101.1	106.8	104.2	102.1	100.5	100.3	105.5	101.8	106.1	106.7
	Average	101.0	100.4	100.7	106.4	103.1	101.3	101.2	101.8	108.8	103.6	109.0	107.8
1984	January	108.5	104.7	106.0	107.3	106.6	104.6	101.5	100.1	104.1	100.5	103.6	112.0
	February	109.9	105.9	107.3	108.0	102.8	105.7	102.8	101.3	106.5	100.9	103.8	116.9
	March	104.9	102.3	100.6	105.6	105.1	101.7	101.7	97.2	107.3	100.9	104.6	111.3
	April	101.6	100.3	103.4	104.8	103.9	101.9	101.4	96.2	107.3	100.6	105.0	109.8
	May	98.9	102.3	102.4	105.2	105.3	103.1	101.0	98.1	107.2	99.5	104.2	108.4
	June	99.5	101.6	105.9	103.3	104.2	101.7	100.5	93.8	107.8	98.2	103.3	107.2
	July	96.2	99.4	101.4	102.6	105.1	101.8	100.5	93.1	107.2	97.1	100.4	104.8
	August	96.6	98.9	100.3	101.8	104.5	99.5	100.0	97.4	107.3	94.9	99.7	103.3
	September	96.9	98.6	R100.7	R103.2	103.5	100.1	98.8	98.4	105.0	R95.9	R100.4	103.6
	October†	98.3	97.2	100.9	103.1	103.0	101.2	100.7	98.4	107.8	96.7	100.9	104.9

Footnotes continued.

†Preliminary data. R=Revised data. NA=Not available.

Note: • Prices prior to January 1983 are Energy Information Administration backcast estimates. See Note 8 in the Notes and Sources for this section for additional information.

Sources: • See the Notes and Sources for this section.

# Price

## National Average Natural Gas Prices

		Wellhead Price	Imports by Major Interstate Pipeline Companies	Purchased from Producers by Major Interstate Pipeline Companies	Industrial Sales by Major Interstate Pipeline Companies <sup>1</sup>	Purchased by Electric Plants <sup>1,2</sup>	Residential Price <sup>1,3</sup>
Dollars per thousand cubic feet							
1973	Average	0.22	NA	NA	NA	0.35	1.29
1974	Average	0.30	NA	NA	NA	0.49	1.43
1975	Average	0.45	NA	NA	NA	0.77	1.71
1976	Average	0.58	NA	NA	NA	1.06	1.98
1977	Average	0.79	NA	NA	NA	1.33	2.35
1978	Average	0.91	2.21	0.83	1.54	1.48	2.56
1979	Average	1.18	2.60	1.22	2.01	1.80	2.98
1980	Average	1.59	4.42	1.63	2.53	2.28	3.68
1981	Average	1.98	4.84	2.15	3.11	2.91	4.29
1982	January	2.23	4.94	2.47	3.59	3.07	4.65
	February	2.30	4.96	2.50	3.58	3.18	4.69
	March	2.35	4.94	2.52	3.61	3.25	4.78
	April	2.40	4.94	2.54	3.61	3.32	4.86
	May	2.45	4.93	2.68	3.60	3.42	5.17
	June	2.45	4.86	2.83	3.66	3.57	5.20
	July	2.47	5.00	2.79	3.71	3.69	5.23
	August	2.53	5.07	2.86	3.75	3.67	5.23
	September	2.56	5.05	2.78	3.88	3.67	5.41
	October	2.60	5.02	2.93	3.91	3.68	5.66
	November	2.62	5.01	2.89	3.98	3.61	5.68
	December	2.62	4.94	2.96	4.06	3.64	5.74
	Average	2.46	4.94	2.72	3.73	3.49	5.17
1983	January	2.66	5.03	3.06	4.38	3.57	5.86
	February	2.66	5.09	3.15	4.41	3.41	5.87
	March	2.58	5.01	3.01	4.24	3.45	6.00
	April	2.53	4.58	2.90	4.44	3.35	6.06
	May	2.53	4.40	2.98	4.24	3.55	6.22
	June	2.59	4.41	2.95	4.22	3.58	6.20
	July	2.52	4.31	2.96	4.28	3.72	6.21
	August	2.58	3.93	2.90	4.23	3.75	6.18
	September	2.67	4.02	2.87	4.08	3.70	6.19
	October	2.58	4.03	2.86	4.22	3.60	6.10
	November	2.60	4.26	2.84	4.26	3.53	6.04
	December	2.61	4.33	2.73	4.12	3.49	6.06
	Average	2.59	4.51	2.93	4.26	3.58	6.06
1984	January	2.63	4.40	2.80	4.25	3.56	5.98
	February	2.66	4.37	2.82	3.97	3.59	6.01
	March	2.57	4.40	2.80	4.18	3.50	5.98
	April	2.54	4.23	2.95	4.11	3.55	6.00
	May	2.57	4.15	2.86	4.17	3.74	6.19
	June	2.59	4.25	2.89	4.06	3.74	6.13
	July	2.58	4.15	2.95	4.04	3.86	6.17
	August	2.60	4.12	2.95	4.07	3.78	6.20
	September	2.59	4.34	2.84	4.10	3.82	6.26
	October	NA	NA	NA	NA	NA	6.25
	November	NA	NA	NA	NA	NA	6.12

<sup>1</sup>Includes supplemental gaseous fuels.

<sup>2</sup>Data through December 1982 cover all steam-electric utility plants with a capacity of 25 megawatts or greater. From 1974 through 1982, data include peaking units. Beginning with January 1983, data cover steam-electric utility plants with a capacity of 50 megawatts or greater.

<sup>3</sup>Monthly residential prices are Energy Information Administration calculations. See Note 6 in the Notes and Sources for this section for estimation procedures.

NA=Not available.

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

• Data for 1973 through December 1982 are final. All other data are preliminary unless otherwise indicated.

Sources: • See the Notes and Sources for this section.

# Price

## Electricity

		Cost of Fossil Fuels Delivered to Steam-Electric Utility Plants <sup>1</sup>				Average Retail Electricity Prices for Privately Owned Utilities <sup>2</sup>					
		Coal	Heavy Oil <sup>3</sup>	Natural Gas <sup>4</sup>	All Fossil Fuels <sup>3</sup>	Residential	Commercial	Industrial	Other	Total <sup>5</sup>	
		Cents per million Btu					Cents per kilowatthour				
1973	Average	40.5	78.5	33.8	47.6	2.54	2.41	1.25	2.10	1.96	
1974	Average	70.9	189.0	48.2	91.4	3.10	3.04	1.69	2.75	2.49	
1975	Average	81.4	200.5	75.2	104.4	3.51	3.45	2.07	3.08	2.92	
1976	Average	84.8	195.2	103.4	111.9	3.73	3.69	2.21	3.27	3.09	
1977	Average	94.7	219.8	129.1	129.7	4.05	4.09	2.50	3.51	3.42	
1978	Average	111.6	212.5	142.2	141.1	4.31	4.36	2.79	3.62	3.69	
1979	Average	122.4	298.8	174.9	163.9	4.64	4.68	3.05	3.96	3.99	
1980	Average	135.1	426.7	219.9	192.8	5.36	5.48	3.69	4.76	4.73	
1981	Average	153.2	533.4	280.5	225.6	6.20	6.29	4.29	5.28	5.46	
1982	January	160.9	489.2	297.4	229.4	6.22	6.49	4.66	5.44	5.74	
	February	164.1	493.6	307.8	223.1	6.35	6.68	4.70	5.83	5.84	
	March	165.7	477.1	314.2	221.9	6.58	6.79	4.83	6.38	5.97	
	April	164.6	487.0	320.7	216.9	6.72	6.81	4.84	5.77	5.99	
	May	165.1	494.2	327.6	217.7	6.94	6.86	4.95	5.91	6.09	
	June	167.0	488.3	341.8	226.8	7.08	6.94	4.92	6.01	6.18	
	July	164.5	477.8	353.3	241.0	7.18	6.98	5.12	6.13	6.38	
	August	164.7	467.1	353.4	230.2	7.22	6.91	5.15	6.09	6.40	
	September	165.9	475.3	354.7	229.4	7.18	6.97	5.25	6.07	6.41	
	October	164.9	490.2	355.9	222.2	7.21	7.09	5.09	5.81	6.33	
	November	165.3	501.0	349.8	220.8	6.94	7.04	4.88	5.69	6.14	
	December	162.9	461.9	352.5	218.8	6.71	6.78	5.01	5.85	6.11	
	Average	164.7	483.2	337.6	224.9	6.86	6.86	4.95	5.92	6.13	
1983	January	166.8	448.9	347.1	216.7	6.65	6.78	5.03	5.91	6.13	
	February	167.8	441.4	331.9	213.9	6.73	6.86	4.96	5.97	6.12	
	March	168.1	426.0	336.1	215.5	6.93	6.93	5.07	6.16	6.23	
	April	168.5	431.6	326.1	215.8	6.91	6.86	4.92	6.15	6.12	
	May	165.0	446.6	344.3	216.6	7.20	7.04	4.89	6.60	6.21	
	June	167.3	453.6	347.2	220.9	7.41	7.13	4.96	6.62	6.35	
	July	165.3	467.0	361.1	237.4	7.50	7.13	5.11	6.24	6.53	
	August	164.3	470.4	363.2	230.1	7.52	7.06	5.01	6.37	6.51	
	September	163.9	482.8	358.1	226.4	7.55	7.15	5.00	6.58	6.52	
	October	164.6	479.6	350.1	219.8	7.50	7.19	5.01	6.66	6.41	
	November	163.6	472.2	340.5	212.2	7.25	7.13	4.83	6.63	6.23	
	December	162.2	468.7	338.7	219.2	6.97	6.91	4.81	6.40	6.14	
	Average	165.6	457.8	347.4	220.6	7.18	7.01	4.97	6.36	6.29	
1984	January	161.4	488.2	344.0	221.1	6.76	6.79	4.86	6.34	6.13	
	February	165.0	495.8	347.5	217.8	6.98	7.00	4.86	6.53	6.20	
	March	164.1	484.0	339.8	209.2	7.16	7.12	4.88	6.69	6.26	
	April	165.5	493.5	344.4	210.8	7.32	7.23	4.87	6.59	6.29	
	May	168.5	486.9	360.4	220.3	7.58	7.28	4.92	6.86	6.39	
	June	168.8	487.9	360.9	223.0	7.89	7.48	5.10	6.79	6.66	
	July	168.0	474.4	372.5	231.0	7.99	7.51	5.22	6.99	6.83	
	August	167.0	460.4	365.0	223.4	8.05	7.51	5.16	6.77	6.83	
	September	167.3	472.1	368.0	217.5	8.05	7.64	5.26	7.07	6.89	
	October†	NA	NA	NA	NA	7.95	7.63	5.14	6.88	6.71	

<sup>1</sup>Data through December 1982 cover all steam-electric utility plants with a capacity of 25 megawatts or greater. From 1974 through 1982, data include peaking units. Beginning with January 1983, data cover steam-electric utility plants with a capacity of 50 megawatts or greater.

<sup>2</sup>Data through 1979 cover privately owned electric utilities in Classes A and B. Data for 1980 forward cover selected privately owned electric utilities in Class A whose electric operating revenues were \$100 million or more during the previous year.

<sup>3</sup>See Note 7 in the Notes and Sources for this section.

<sup>4</sup>Includes supplemental gaseous fuels.

<sup>5</sup>Average price for total sales to ultimate consumers.

†Initial estimates. NA=Not available.

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

Sources: • See the Notes and Sources for this section.

## Notes and Sources for the Price Section

### Notes

1. 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.

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

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

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

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

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

5. Several different series of motor gasoline prices are published in this section. U.S. City Average Retail Prices for Motor Gasoline are calculated monthly by the Bureau of Labor Statistics during the development of the Consumer Price Index (CPI). These prices include all Federal, State, and local taxes paid at the time of sale. For the period 1974 through 1978, prices were collected in 56 urban areas. For the period 1978 forward, prices were collected from a new sample of service stations in 85 urban areas selected to represent all urban consumers-about 80 percent of the total

U.S. population. The service stations are selected initially, and on a replacement basis, in such a way that they represent the purchasing habits of the CPI population. Service stations in the current sample include those providing all types of service (i.e., full-, mini-, and self-serve).

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

6. The monthly national average price of residential natural gas is based on data from the Bureau of Labor Statistics Consumer Price Index for All Urban Consumers (CPI-U) for natural gas (piped) and on data from Form EIA-176. Initial monthly estimates are obtained by multiplying the annual average price of residential natural gas collected on Form EIA-176 by the ratio of monthly values of the natural gas CPI-U for consecutive months. When a subsequent year's annual average price becomes available, the initial monthly estimates are adjusted to this annual average.

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

8. Starting in January 1983, Form EIA-782, "Monthly Petroleum Product Sales Report," replaced 10 previous surveys. Every attempt was made to continue the most important price series. However, prices published through December 1982 and those published since January 1983 do not necessarily form continuous data series due to changes in survey forms, definitions, instructions, populations, samples, processing systems, and statistical procedures. To provide historical data, continuous annual data series have been generated for 1978-1980, and monthly series for 1981 and 1982, by estimating the prices that would have been published had the EIA-782 survey and system been in operation at that time. This form of estimation, referred to as back-casting, was performed after detailed adjustment for product and sales type matching, and for discontinuity due to other factors. An important difference between the previous and present prices is the distinction between wholesale and resale, and between retail and end-user. The resale category continues to include sales among resellers. However, bulk sales to utility, industrial, and commercial accounts previously included in the wholesale category are now counted as made to end users. The end user category continues to include retail sales through company owned and operated outlets but also includes the bulk utility, industrial, and commercial sales. Additional information may be found in "Estimated Historic Time Series for the EIA-782," a feature article reprinted from the December 1983 [3] *Petroleum Marketing Monthly* published by the Energy Information Administration.

(Notes and Sources for the Price Section are continued on the next page.)

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

### Sources

**Petroleum and Petroleum Products:** • Actual domestic average wellhead prices—Economic Regulatory Administration (ERA), January 1976: FEA Form 90, "Crude Petroleum Production Monthly Report"; February 1976 through September 1979: FEA Form P124, "Domestic Crude Oil Purchaser's (Monthly) Report"; October 1979 through December 1982: ERA Form 182, "Domestic Crude Oil First Purchase Report"; January 1983 forward: EIA Form 182, "Domestic Crude Oil First Purchase Report." • Crude oil imports costs—Energy Information Administration (EIA), 1975 through January 1979: FEA Form F701-M-0, "Transfer Pricing Report"; February 1979 through September 1982: ERA Form 51, "Transfer Pricing Report"; October 1982 through June 1984: EP Form 51, "Monthly Foreign Crude Oil Transaction Report"; July 1984 forward: Form EIA-856, "Monthly Foreign Crude Oil Acquisition Report." • Refiner acquisition costs—EIA, January 1976: FEO Form 96, "Monthly Cost Allocation Report"; February 1976 through June 1978: FEA Form P110-M-1, "Refiners' Monthly Cost Allocation Report"; July 1978 through December 1980: ERA Form 49, "Domestic Crude Oil Entitlements Program Refiners Monthly Report"; January 1981 forward: EIA Form 14, "Refiners' Monthly Cost Report." • U.S. City average retail motor gasoline prices—Bureau of Labor Statistics. • No. 2 Distillate to Residences—January 1983 forward, EIA Form-782A, "Refiners/Gas Plant Operators' Monthly Petroleum Product Sales Report" and EIA-782B, "Resellers/Retailers' Monthly Petroleum Product Sales Report." Prices prior to January 1983 are EIA backcast estimates using data from FEA Form P112-M-1/EIA-9, "No. 2 Heating Oil Supply/Price Monitoring Report" and EIA Form 9A, "No. 2 Distillate Price Monitoring Report." See Note 8 on the

previous page for additional information on the backcast data.

• All other petroleum products—January 1983 forward, EIA Form-782A, "Refiners/Gas Plant Operators' Monthly Petroleum Product Sales Report." Prices prior to January 1983 are EIA backcast estimates using data from FEA Form 302-M-1/EIA-460, "Petroleum Industry Monthly Report for Product Prices." See Note 8 on the previous page for additional information on the backcast data.

**Natural Gas:** • Average wellhead price—annual data from EIA, *Natural Gas Annual*, 1973 through 1982. Monthly data are estimated primarily on the basis of values reported by State agencies in New Mexico, Oklahoma, and Texas. These States together account for almost 50 percent of total U.S. marketed production. Monthly data are adjusted to conform with final reported annual data.

• Imports, Purchased from Producers, and Industrial Sales by Major Interstate Pipeline Companies—FERC Form 11, "Interstate Pipeline Company Purchases, and Industrial Sales".

• Electric plant data—EIA, FPC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."

• Residential Price—Annual data from EIA, *Natural Gas Annual*, 1973 through 1982. Monthly data are EIA estimates based on the Bureau of Labor Statistics Urban Consumer Price Index (CPI-U) for natural gas and are adjusted to conform with final reported annual data. See Note 6 on the previous page for estimation procedures.

**Electricity:** • Cost of fossil fuels—EIA, FPC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."

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

# Part 10 International

## International

### Crude Oil Production

World crude oil production during October 1984 was 53.3 million barrels per day, up 0.4 million barrels per day (0.8 percent) from the September 1984 level.

Organization of Petroleum Exporting Countries (OPEC) output during October 1984 averaged 16.8 million barrels per day, up 0.2 million barrels per day from the level during the previous month. Average production by Arab members of OPEC was 9.5 million barrels per day, down 0.3 million barrels per day from the September 1984 level. In October 1984, production levels remained the same as during the previous month in Algeria, Libya, and Saudi Arabia. Production decreased in both Iraq and Kuwait by 100,000 barrels per day, and in both Qatar and the United Arab Emirates by 50,000 barrels per day, during October 1984. Among non-Arab OPEC countries in October 1984, Iran and Nigeria reported increases in production of 300,000 and 200,000 barrels per day, respectively. Indonesia had an increase in production of 30,000 barrels per day. Production decreased in Venezuela by 50,000 barrels per day during the month.

Of the non-OPEC nations, the United Kingdom, and the United States reported increases in production of 150,000 and 88,000 barrels per day, respectively, during October 1984. Mexico had a decrease in production of 30,000 barrels per day during the month.

### Petroleum Consumption

Preliminary petroleum consumption data for October 1984 were available for France, Italy, and the United States. In comparison to October 1983 levels, consumption in the United States and France increased by 669,000 and 75,000 barrels per day, respectively. Con-

sumption in Italy decreased by 125,000 barrel per day compared to the level 1 year earlier.

### Petroleum Stocks

Preliminary data for October 1984 indicate that petroleum stock levels were up compared to October 1983 levels in four of the six countries reporting. Petroleum stocks were up in Japan by 11.3 percent, in Canada by 4.5 percent, in the United States by 2.5 percent, and in Italy by 0.6 percent. The United Kingdom and West Germany reported decreases in petroleum stocks of 7.0 and 5.6 percent, respectively.

Petroleum stocks for all Organization for Economic Cooperation and Development members stood at 3,307 million barrels on June 30, 1984 (latest data available), an increase of 104 million barrels (3.2 percent) compared to stocks held on June 30, 1983.

### Nuclear Electricity Production

In October 1984, the 20 non-Communist nations with significant nuclear power capacity generated 88.9 gross terawatthours (billion kilowatthours) of nuclear-based electricity, up 10.3 percent compared to the October 1983 output.

There were 265 operable power reactors in the non-Communist countries as of October 31, 1984, with a collective gross generating capacity of 190.5 gigawatts (million kilowatts). This was 10.0 percent more than the capacity on October 31, 1983, when there were 250 operable power reactors. In October 1984, the 85 operable U.S. units accounted for 73.3 gross gigawatts (38.5 percent) of this capacity, compared to the 38.9 percent of total capacity supplied by the 80 U.S. units in October 1983.

## International

### Crude Oil Production for Major Petroleum Producing Countries

		Algeria	Iraq	Kuwait <sup>1</sup>	Libya	Qatar	Saudi Arabia <sup>1</sup>	United Arab Emirates	Arab Members of OPEC <sup>2</sup>	Indonesia	Iran
Thousand barrels 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	Average	1,012	2,514	1,656	1,787	472	9,900	1,709	19,050	1,577	1,662
1981	Average	805	1,000	1,125	1,140	405	9,815	1,474	15,764	1,605	1,380
1982	January	800	1,560	800	993	407	8,680	1,483	14,723	1,487	1,100
	February	700	1,560	835	595	377	8,465	1,407	13,939	1,447	1,200
	March	600	1,560	740	595	302	7,166	1,396	12,359	1,397	1,800
	April	600	940	675	695	231	6,650	1,243	11,034	1,242	1,800
	May	620	780	715	795	322	5,888	1,151	10,271	1,237	2,500
	June	650	780	835	993	412	6,690	1,238	11,598	1,302	2,500
	July	650	830	865	1,290	277	6,189	1,187	11,288	1,302	2,500
	August	700	830	915	1,290	342	5,938	1,180	11,195	1,237	2,200
	September	800	830	880	1,390	287	5,702	1,180	11,069	1,297	2,700
	October	800	830	855	1,688	382	5,677	1,180	11,412	1,367	2,700
	November	800	830	910	1,688	312	5,632	1,180	11,352	1,397	2,700
	December	800	830	845	1,737	307	5,266	1,180	10,965	1,357	2,800
	Average	710	1,012	823	1,150	330	6,483	1,250	11,758	1,339	2,214
1983	January	700	850	780	1,100	255	4,950	1,060	9,695	1,225	2,700
	February	600	850	895	900	200	3,510	1,060	8,015	1,015	2,400
	March	600	900	965	900	170	3,910	1,035	8,480	1,180	2,200
	April	700	950	880	1,000	260	3,930	1,145	8,865	1,400	2,000
	May	600	1,000	1,030	1,100	275	4,725	1,175	9,905	1,400	2,300
	June	700	1,000	920	1,100	300	4,620	1,180	9,820	1,400	2,500
	July	700	1,050	1,086	1,100	300	5,536	1,175	10,947	1,490	2,800
	August	700	1,100	1,181	1,100	265	5,931	1,185	11,462	1,490	2,500
	September	700	1,050	1,376	1,150	310	6,026	1,185	11,797	1,470	2,700
	October	700	1,100	1,305	1,150	320	6,005	1,165	11,745	1,520	2,400
	November	700	1,150	1,265	1,150	460	5,915	1,195	11,835	1,560	2,300
	December	700	1,050	1,075	1,150	420	5,825	1,195	11,415	1,440	2,300
	Average	675	1,005	1,064	1,076	295	5,086	1,147	10,348	1,385	2,426
1984	January	650	1,150	1,080	1,100	440	5,130	1,200	10,750	1,470	2,000
	February	600	1,000	1,235	1,100	340	5,035	1,200	10,510	1,575	2,350
	March	600	1,200	1,290	1,100	380	4,840	1,205	10,615	1,560	2,400
	April	600	1,200	1,115	1,150	325	5,120	1,205	10,715	1,600	2,300
	May	650	1,200	1,100	1,150	350	5,000	1,200	10,650	1,470	2,100
	June	700	1,225	1,135	1,180	450	5,435	1,225	11,350	1,520	2,200
	July	650	1,200	1,100	1,100	430	5,000	1,090	10,570	1,390	2,400
	August	650	1,250	1,090	980	410	4,490	990	9,860	1,410	1,800
	September	650	1,300	1,190	R1,000	R480	4,090	1,110	R9,820	1,400	1,800
	October	650	1,200	1,090	1,000	430	4,090	1,060	9,520	1,430	2,100

<sup>1</sup>Includes about one-half of the production in the former Kuwait-Saudi Arabia Neutral Zone. In October 1984, total production in this region amounted to approximately 380,000 barrels per day.

<sup>2</sup>Arab members of the Organization of Petroleum Exporting Countries (OPEC) include Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and the United Arab Emirates.

OPEC total includes production in Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, United Arab Emirates, Indonesia, Iran, Nigeria, Venezuela, Ecuador, and Gabon.

Footnotes continued on following page.

## International

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

		Nigeria	Vene-zuela	Total OPEC <sup>a</sup>	Canada	Mexico	United Kingdom	United States	China	USSR	Other <sup>b</sup>	World
Thousand barrels per day												
1973	Average	2,054	3,366	30,989	1,800	465	2	9,208	1,090	8,465	3,655	55,674
1974	Average	2,255	2,976	30,729	1,684	571	2	8,774	1,315	9,000	3,777	55,852
1975	Average	1,783	2,346	27,155	1,439	705	12	8,375	1,490	9,625	4,079	52,880
1976	Average	2,067	2,294	30,738	1,295	831	245	8,132	1,670	10,143	4,258	57,312
1977	Average	2,085	2,238	31,298	1,320	981	768	8,245	1,874	10,682	4,517	59,685
1978	Average	1,897	2,166	29,805	1,313	1,209	1,082	8,707	2,082	11,185	4,674	60,057
1979	Average	2,302	2,356	30,928	1,496	1,461	1,568	8,552	2,122	11,460	4,948	62,535
1980	Average	2,055	2,168	26,891	1,435	1,936	1,622	8,597	2,114	11,773	5,170	59,538
1981	Average	1,433	2,102	22,646	1,285	2,313	1,811	8,572	2,012	11,909	5,352	55,900
1982	January	1,765	1,992	21,391	1,346	2,314	1,864	8,509	2,037	11,926	5,588	54,975
	February	1,395	1,736	20,050	1,408	2,549	1,913	8,702	2,037	11,926	5,655	54,240
	March	945	1,877	18,708	1,306	2,544	1,957	8,667	2,037	11,926	5,445	52,590
	April	890	1,496	16,809	1,025	2,779	2,065	8,591	2,042	11,926	5,613	50,850
	May	1,310	1,485	17,160	1,231	2,714	2,041	8,683	2,042	11,926	5,638	51,435
	June	1,645	1,506	18,939	1,469	2,789	2,094	8,646	2,042	11,926	5,585	53,490
	July	1,280	1,807	18,542	1,364	2,789	2,075	8,658	2,042	12,026	5,609	53,105
	August	1,105	2,007	18,135	1,436	2,794	2,080	8,634	2,042	12,026	5,648	52,795
	September	1,170	1,997	18,608	1,436	2,829	2,129	8,701	2,042	12,026	5,599	53,370
	October	1,480	2,168	19,527	1,447	2,899	2,119	8,701	2,057	12,437	5,588	54,775
	November	1,355	2,309	19,512	1,569	2,939	2,173	8,697	2,057	12,437	5,776	55,160
	December	1,215	2,334	19,080	1,436	3,024	2,266	8,598	2,057	12,437	5,837	54,735
	Average	1,295	1,895	18,868	1,372	2,748	2,065	8,649	2,045	12,080	5,631	53,458
1983	January	880	2,060	16,952	1,288	2,980	2,135	8,697	2,085	12,410	5,913	52,460
	February	675	1,758	14,250	1,425	2,295	2,315	8,758	2,110	12,410	6,014	49,577
	March	905	2,055	15,192	1,461	2,415	2,265	8,700	2,110	12,410	5,949	50,502
	April	1,150	1,694	15,506	1,320	2,670	2,170	8,776	2,120	12,000	6,110	50,672
	May	1,625	1,664	17,266	1,383	2,795	2,235	8,631	2,120	11,900	6,095	52,425
	June	1,535	1,669	17,326	1,577	2,775	2,045	8,667	2,120	11,900	6,195	52,605
	July	1,710	1,674	19,033	1,551	2,685	2,280	8,636	2,120	11,900	6,187	54,392
	August	1,300	1,709	18,878	1,488	2,775	2,290	8,679	2,130	11,900	6,092	54,232
	September	1,220	1,704	19,278	1,504	2,735	2,385	8,784	2,130	11,900	6,157	54,873
	October	1,290	1,718	19,075	1,456	2,660	2,355	8,771	2,130	11,900	6,266	54,613
	November	1,245	1,748	19,075	1,483	2,730	2,490	8,770	2,130	11,900	6,386	54,964
	December	1,310	1,753	18,620	1,467	2,690	2,530	8,397	2,130	11,900	6,421	54,155
	Average	1,241	1,768	17,562	1,450	2,686	2,291	8,688	2,120	12,034	6,150	52,981
1984	January	1,360	1,810	17,780	1,310	2,670	2,515	8,659	2,190	11,900	6,556	53,580
	February	1,565	1,815	18,205	1,440	2,755	2,585	8,726	2,190	11,900	6,629	54,430
	March	1,460	1,815	18,245	1,455	2,710	2,455	8,718	2,190	11,750	6,532	54,055
	April	1,300	1,815	18,135	1,400	2,770	2,470	8,688	2,190	11,750	6,602	54,005
	May	1,200	1,840	17,660	1,400	2,840	2,439	8,752	2,190	11,900	6,654	53,835
	June	1,300	1,805	18,595	1,410	2,875	2,325	8,743	2,190	11,900	6,747	54,785
	July	1,200	1,860	17,840	1,485	2,845	2,450	8,769	2,220	11,870	6,811	54,290
	August	1,100	1,820	16,400	1,395	2,680	2,300	8,781	2,220	11,870	R6,814	R52,460
	September	1,300	R1,850	16,590	1,400	2,705	2,435	8,759	2,230	11,790	R6,906	R52,815
	October	1,500	1,800	16,750	1,400	2,675	2,585	8,847	2,230	11,790	6,973	53,250

Footnotes continued.

<sup>a</sup>Other is a calculated total derived from the difference between world production and the nations represented above.

R = Revised data.

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

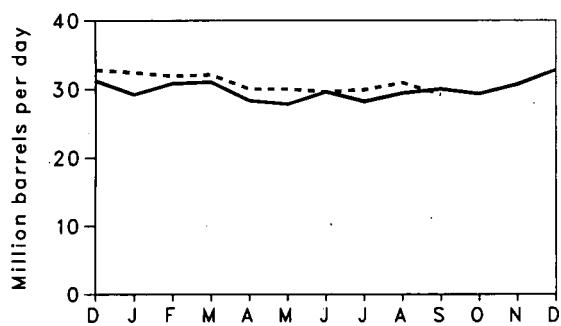
• Monthly data are often preliminary figures and may not average to the annual totals because of rounding or because updates to the preliminary monthly data are not available.

Sources: • See the last page of this section.

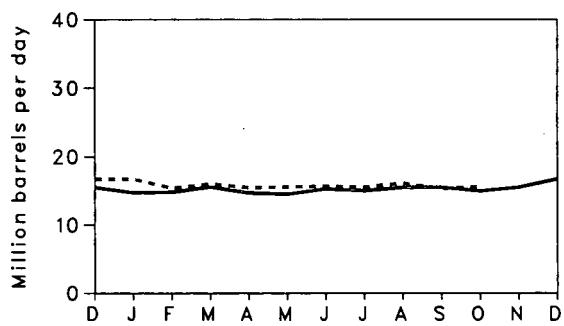
# International

## Petroleum Consumption for Major Non-Communist Industrialized Countries

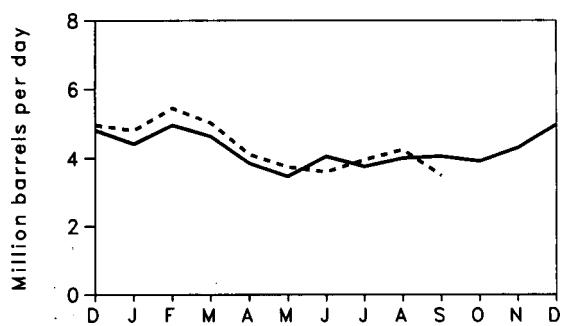
Total IEA



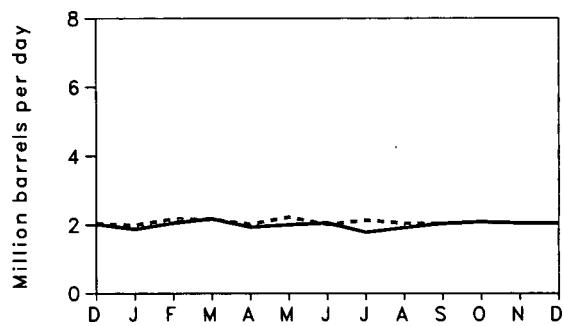
United States



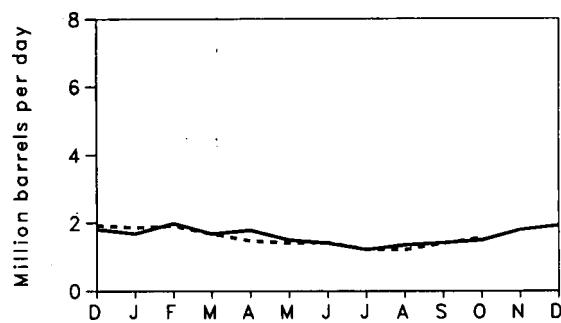
Japan\*



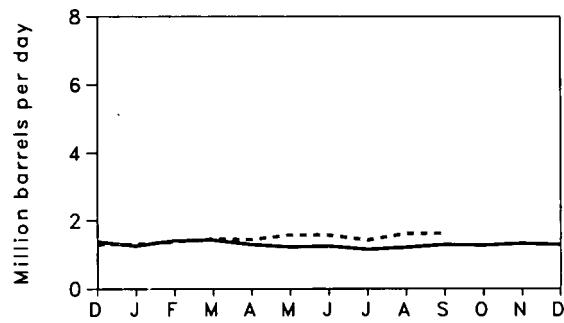
West Germany



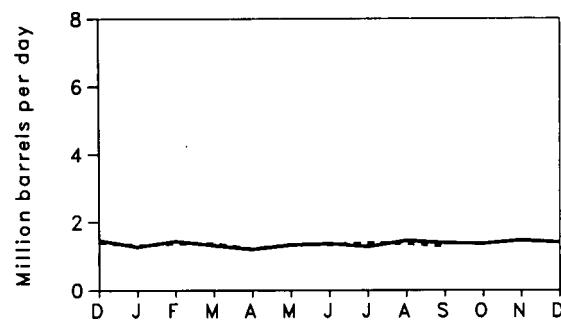
France\*\*



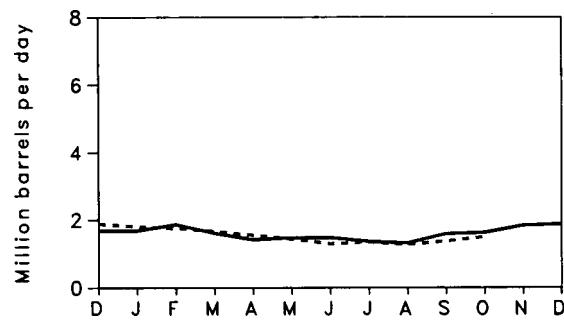
United Kingdom



Canada



Italy\*\*\*



\*Excludes liquefied petroleum gases and condensates.

\*\*\*Principal products only.

\*\*Not a member of IEA.

— 1983    - - - 1984

# International

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

		Canada	France <sup>2</sup>	Italy	Japan	United Kingdom	United States	West Germany	Other IEA <sup>3</sup>	Total IEA <sup>4</sup>
Thousand barrels per 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	35,900
1980	Average	1,730	1,965	1,602	4,680	1,420	17,056	2,360	4,152	33,000
1981	Average	1,615	1,745	1,705	4,445	1,325	16,058	2,120	4,032	31,300
1982	January	1,530	1,770	1,800	4,645	1,400	16,124	1,935	3,766	31,200
	February	1,715	1,815	1,795	5,275	1,465	16,001	2,230	4,219	32,700
	March	1,510	1,940	1,805	4,640	1,560	15,560	2,340	4,185	31,600
	April	1,350	1,730	1,560	4,015	1,340	16,046	2,125	3,964	30,400
	May	1,325	1,580	1,510	3,515	1,210	14,847	1,770	3,623	27,800
	June	1,430	1,505	1,520	3,780	1,280	14,998	2,115	3,877	29,000
	July	1,390	1,455	1,475	3,995	1,235	14,821	1,955	3,729	28,600
	August	1,500	1,295	1,410	3,705	1,170	14,839	2,105	3,671	28,400
	September	1,410	1,510	1,630	3,865	1,295	15,022	2,035	4,043	29,300
	October	1,335	1,605	1,555	3,830	1,305	14,859	1,922	3,894	28,700
	November	1,470	1,735	1,650	4,355	1,415	15,009	2,005	4,196	30,100
	December	1,460	1,815	1,670	4,810	1,380	15,487	2,025	4,368	31,200
	Average	1,450	1,645	1,614	4,196	1,337	15,296	2,045	3,962	29,900
1983	January	1,260	1,685	1,675	4,410	1,260	14,722	1,875	3,998	29,200
	February	1,430	1,985	1,865	4,950	1,415	14,792	2,060	4,288	30,800
	March	1,305	1,685	1,605	4,625	1,430	15,541	2,180	4,314	31,000
	April	1,190	1,785	1,415	3,850	1,300	14,692	1,940	3,913	28,300
	May	1,320	1,500	1,470	3,460	1,230	14,505	2,010	3,805	27,800
	June	1,360	1,405	1,475	4,040	1,255	15,289	2,060	4,121	29,600
	July	1,265	1,210	1,365	3,745	1,160	15,019	1,785	3,861	28,200
	August	1,440	1,350	1,315	3,990	1,220	15,480	1,920	4,035	29,400
	September	1,380	1,415	1,590	4,040	1,300	15,506	2,040	4,144	30,000
	October	1,360	1,495	1,625	3,900	1,280	14,962	2,090	4,083	29,300
	November	1,460	1,800	1,840	4,290	1,340	15,500	2,055	4,215	30,700
	December	1,400	1,930	1,880	4,960	1,300	16,726	2,050	4,484	32,800
	Average	1,345	1,600	1,590	4,185	1,290	15,231	2,005	4,054	29,700
1984	January	1,300	1,860	1,800	4,800	1,310	16,726	2,000	4,464	32,400
	February	1,370	1,915	1,750	5,450	1,380	15,389	2,180	4,381	31,900
	March	1,350	1,680	1,660	5,020	1,470	16,017	2,170	4,413	32,100
	April	1,200	1,475	1,550	4,110	1,450	15,484	2,030	4,176	30,000
	May	1,329	1,410	1,435	3,740	1,590	15,566	2,230	4,110	30,000
	June	1,330	1,420	1,295	3,590	1,585	15,687	2,020	4,093	29,600
	July	1,370	1,225	1,350	3,950	1,440	15,547	2,140	4,103	29,900
	August	1,365	1,210	1,270	R4,230	1,630	16,130	R2,050	4,225	R30,900
	September	1,280	1,400	R1,370	3,490	1,635	15,315	2,040	4,070	29,200
	October	NA	1,570	1,500	NA	NA	15,631	NA	NA	NA

<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.

<sup>2</sup>Not a member of the International Energy Agency (IEA).

<sup>3</sup>Other is a calculated total derived from the difference between total IEA consumption and the IEA nations represented above.

<sup>4</sup>The 21 signatory nations of the IEA are listed in Note 1 on the last page of this section.

R=Revised data. NA=Not available.

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

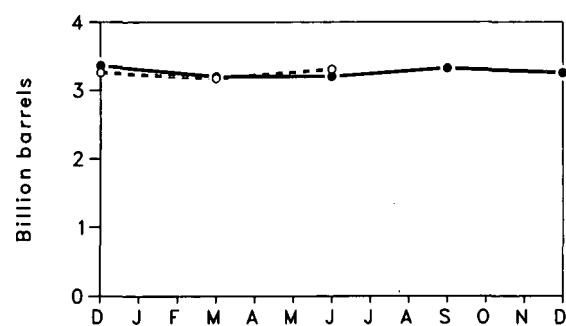
• Data for 1982 through 1984 are preliminary.

Sources: • See the last page of this section.

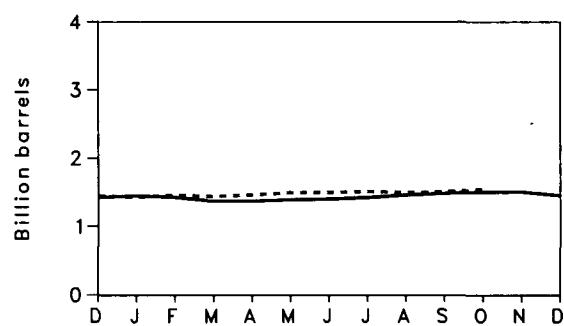
## International

### Petroleum Stocks for Major Non-Communist Industrialized Countries at End of Period

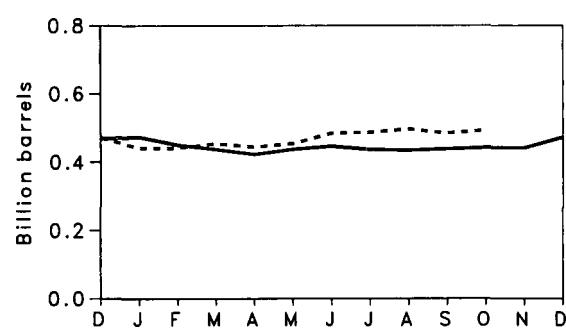
Total OECD



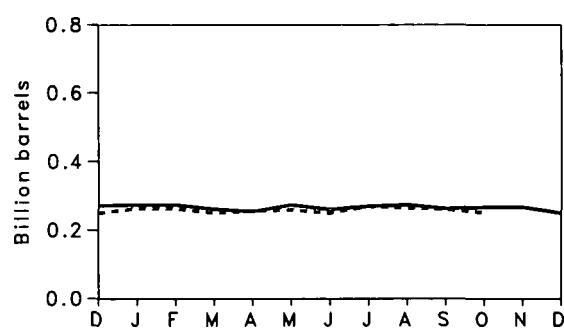
United States



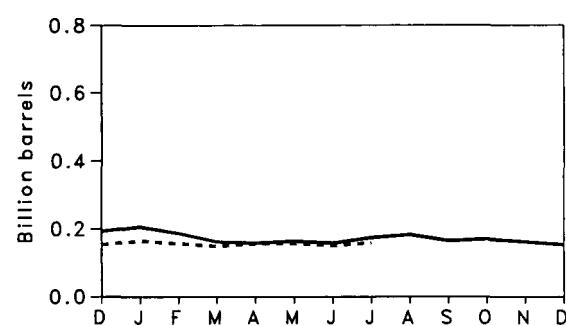
Japan



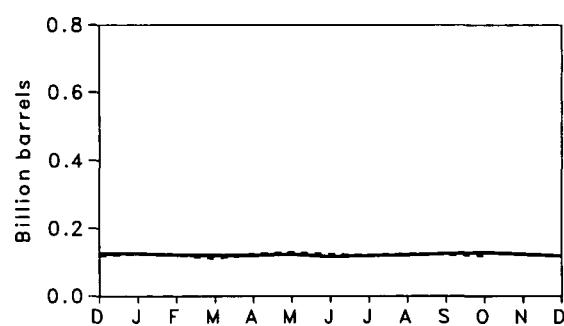
West Germany



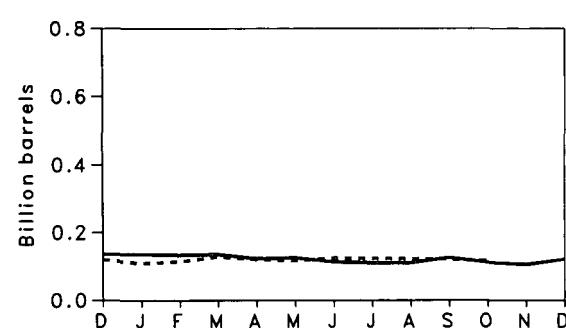
France



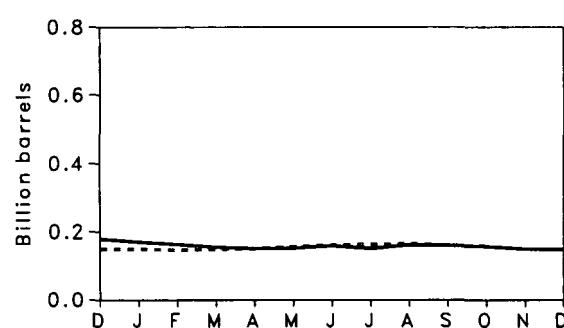
United Kingdom



Canada



Italy



●—● 1983    ○---○ 1984

## International

### 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 barrels									
1973	149	203	NA	303	156	1,008	NA	NA	NA
1974	164	240	169	370	161	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	167	239	161	409	148	1,312	225	524	3,185
1978	144	201	154	413	157	1,278	238	512	3,097
1979	150	226	163	460	169	1,341	272	594	3,375
1980	164	243	170	495	168	1,392	319	636	3,587
1981	161	214	167	482	143	1,484	297	583	3,531
1982	January	163	222	165	464	NA	1,456	280	NA
	February	156	215	162	460	NA	1,428	280	NA
	March	148	198	158	479	133	1,392	279	541
	April	148	201	154	483	NA	1,346	312	NA
	May	147	193	154	484	NA	1,347	310	NA
	June	144	192	156	477	141	1,360	287	564
	July	130	205	160	460	134	1,393	286	NA
	August	137	207	179	470	139	1,408	311	NA
	September	145	207	179	470	134	1,414	280	570
	October	135	212	177	471	135	1,432	279	NA
	November	138	213	174	472	130	1,455	280	NA
	December	136	193	179	468	125	1,430	272	557
1983	January	136	206	170	473	125	1,452	274	NA
	February	133	187	163	450	121	1,430	274	NA
	March	135	162	155	456	120	1,372	262	539
	April	123	158	151	422	120	1,374	255	NA
	May	125	164	152	437	123	1,394	274	NA
	June	113	158	159	460	116	1,405	261	531
	July	110	174	151	436	119	1,426	270	NA
	August	110	183	161	433	121	1,460	274	NA
	September	125	165	160	452	125	1,485	263	549
	October	111	170	157	441	129	1,508	267	NA
	November	105	162	150	440	124	1,510	267	NA
	December	120	153	149	471	119	1,454	250	542
1984	January	109	165	149	441	125	1,430	264	NA
	February	114	157	146	441	121	1,464	263	NA
	March	128	149	148	454	112	1,444	251	489
	April	120	156	151	444	123	1,465	256	NA
	May	117	157	157	454	128	1,497	260	NA
	June	124	150	161	484	122	1,502	250	514
	July	123	159	163	486	120	1,514	269	NA
	August	122	NA	165	495	123	1,500	265	NA
	September	120	NA	160	483	123	1,514	261	NA
	October	116	NA	158	491	120	1,545	252	NA

<sup>1</sup>Petroleum stocks include crude oil (including strategic reserves), unfinished oils, natural gas plant liquids, and refined products. Petroleum stocks include all nonmilitary petroleum held for storage, regardless of ownership, within each country in bulk terminals, refinery tanks, pipeline tankage, intercoastal tankers, tankers in port, and inland ship bunkers. Data exclude oil held in pipelines (except for the United States), rail and truck cars, sea-going ships' bunkers, service stations, retail stores, and tankers at sea.

<sup>2</sup>"Other OECD" includes Organization for Economic Cooperation and Development (OECD) members not shown.

<sup>3</sup>The members of OECD are listed in Note 2 on the last page of this section.

NA=Not available.

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

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

• In the United States in January 1975, 1981, and 1983, numerous respondents were added to bulk terminal and pipeline surveys affecting subsequent stocks reported. Using the new basis, the end-of-year U.S. stocks, in million barrels, would have been 1,121 in 1974, 1,420 in 1980, and 1,462 in 1982.

Sources: • See the last page of this section.

# International

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

	Argen-tina	Belgium	Brazil	Canada	Finland	France	India	Italy	Japan	Nether-lands	Paki-stan
	Billion gross kilowatthours										
1973 Total	0	0	0	18.3	0	11.6	1.9	3.1	9.4	1.1	0.5
1974 Total	1.0	0.1	0	15.4	0	14.7	2.5	3.4	18.1	3.3	0.6
1975 Total	2.5	6.8	0	13.2	0	18.3	2.5	3.8	22.2	3.3	0.5
1976 Total	2.6	10.0	0	18.0	0	15.8	3.2	3.8	36.7	3.9	0.5
1977 Total	1.6	11.9	0	26.8	2.7	17.9	2.8	3.4	28.1	3.7	0.3
1978 Total	2.9	12.5	0	32.9	3.3	30.5	2.3	4.4	53.2	4.1	0.2
1979 Total	2.7	11.4	0	38.4	6.7	39.9	3.2	2.6	62.0	3.5	(s)
1980 Total	2.3	12.5	0	40.4	7.0	61.2	2.9	2.2	82.8	4.2	0.1
1981 Total	2.8	12.8	0	43.3	14.5	105.2	3.1	2.7	86.0	3.7	0.2
1982	January	0.3	1.3	0	4.1	1.5	11.0	0.2	0.6	8.1	0.4
	February	0.2	0.8	0	3.2	1.5	10.0	0.2	0.7	7.7	0.1
	March	0.3	0.5	0	3.5	1.7	10.6	0.2	0.7	9.2	(s) 0
	April	0.3	1.0	(s)	3.7	1.6	10.1	0.2	0.5	9.7	0.3
	May	0.3	1.3	(s)	3.1	1.3	9.0	0.2	0.7	9.5	0.4
	June	0.3	1.2	(s)	3.3	0.9	7.8	0.1	0.6	9.5	0.4
	July	0.2	1.3	0	3.6	1.2	8.3	0.1	0.6	9.8	0.4
	August	0	1.2	0	3.9	1.5	7.0	0.2	0.4	9.7	0.4
	September	(s)	0.7	0	3.2	1.5	7.2	0.1	0.6	8.0	0.4
	October	0	1.7	0	4.0	1.4	6.6	0.2	0.6	7.5	0.4
	November	(s)	1.8	0	3.3	1.3	8.3	0.3	0.3	7.8	0.4
	December	0.2	1.8	0	3.8	1.3	13.0	0.2	0.5	8.1	0.4
	Total	1.9	15.6	0.1	42.6	16.5	108.9	2.2	6.8	104.5	3.9
1983	January	0.2	1.9	0	4.3	1.7	13.8	0.2	0.2	8.0	0.4
	February	0.2	1.4	0	4.5	1.5	10.9	0.1	0.1	6.8	(s) (s)
	March	0.2	0.7	(s)	4.6	1.6	11.3	0.2	0.1	7.9	(s) (s)
	April	0.2	1.6	(s)	4.3	1.5	10.5	0.2	0.1	8.4	0.2
	May	0.2	2.5	0	3.9	1.2	9.6	0.3	0.7	9.2	0.3
	June	0.2	2.5	0	4.4	1.0	9.3	0.3	0.7	9.1	0.4
	July	0.3	2.5	0	4.8	1.3	11.0	0.2	0.7	9.6	0.4
	August	0.1	2.4	0	3.8	1.6	12.1	0.3	0.5	10.5	0.4
	September	0.2	2.2	0	4.4	1.5	12.4	0.3	0.6	10.1	0.4
	October	0.2	2.2	0	4.7	1.4	13.0	0.3	0.6	10.2	0.4
	November	0.2	2.0	(s)	4.2	1.5	13.4	0.2	0.7	9.2	0.4
	December	0.2	2.1	0.1	5.0	1.7	16.8	0.3	0.7	10.0	0.4
	Total	2.5	24.1	0.2	53.0	17.4	144.2	2.9	5.8	108.4	3.6
1984	January	0.2	2.7	(s)	5.0	1.7	18.0	0.3	0.4	10.1	0.3
	February	0.2	2.3	0.2	4.6	1.6	17.1	0.4	0.6	9.2	0.4
	March	0.2	1.9	0.1	5.1	1.7	17.8	0.3	0.7	8.8	0.2
	April	0.2	2.4	(s)	4.3	1.6	15.4	0.4	0.3	8.9	0.2
	May	0.2	2.0	0.1	3.6	1.2	14.2	0.5	0.3	10.4	0.4
	June	0.2	2.6	0.0	3.7	1.3	13.1	0.4	0.3	9.8	0.4
	July	0.1	2.4	0.0	4.3	1.4	13.1	0.5	0.3	10.5	0.2
	August	0.1	1.9	(s)	4.5	1.4	13.2	0.4	0.8	10.9	0.3
	September	0.1	1.9	0.3	3.6	1.5	14.7	0.6	0.8	11.2	0.4
	October	0.1	2.5	0.5	4.1	1.8	16.0	0.4	0.8	11.4	0.4

<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.

(s)=Less than 0.05 billion gross kilowatthours.

Footnotes continued on following page.

# International

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

		South Africa	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 gross kilowatthours												
1973	Total	0	0	6.5	2.1	6.2	0	28.0	11.9	100.7	88.0	188.7
1974	Total	0	0	7.2	1.6	7.0	0	34.0	12.0	121.1	104.5	225.6
1975	Total	0	0	7.5	12.0	7.7	0	30.5	21.7	152.7	181.7	334.4
1976	Total	0	0	7.6	16.0	7.9	0	36.8	24.5	187.3	201.8	389.1
1977	Total	0	0.1	6.5	19.9	8.1	0.1	38.1	35.8	207.8	263.3	471.0
1978	Total	0	2.3	7.6	23.8	8.3	2.7	36.7	35.9	263.6	292.7	556.3
1979	Total	0	3.2	6.7	21.0	11.8	6.3	38.5	42.2	300.1	270.6	570.7
1980	Total	0	3.5	5.2	26.7	14.3	8.2	37.2	43.7	354.4	265.4	619.8
1981	Total	0	2.9	9.4	37.7	15.2	10.7	38.9	53.4	442.4	288.5	730.9
1982	January	0	0.4	1.0	4.0	1.5	0.8	3.4	5.9	44.5	27.1	71.6
	February	0	0.4	0.9	3.3	1.3	1.0	3.5	5.4	40.0	21.3	61.3
	March	0	0.4	0.5	3.8	1.5	1.0	4.1	5.3	43.2	24.0	67.1
	April	0	0.2	0.4	3.8	1.4	0.8	3.3	5.3	42.5	22.8	65.3
	May	0	0	0.5	2.5	1.2	0.8	2.6	5.6	39.0	22.8	61.8
	June	0	(s)	0.7	1.9	0.6	1.0	3.3	4.2	35.6	25.3	60.9
	July	0	0.3	0.6	1.2	0.9	1.2	3.3	4.5	37.6	26.8	64.4
	August	0	0.4	0.7	2.0	1.0	1.2	3.7	4.5	37.7	26.4	64.1
	September	0	0.4	0.7	3.7	1.2	1.3	4.2	5.4	38.6	26.7	65.3
	October	0	0.4	1.0	4.2	1.5	1.4	3.7	5.2	39.8	25.4	65.3
	November	0	0.4	0.9	4.0	1.4	1.1	3.8	5.8	41.0	24.2	65.3
	December	0	0.4	0.9	4.2	1.5	1.4	5.1	6.5	49.2	25.8	75.0
	Total	0	3.8	8.8	38.8	15.0	13.1	44.1	63.4	489.9	298.6	788.5
1983	January	0	0.5	1.0	4.2	1.5	1.5	4.3	6.5	50.0	27.4	77.4
	February	0	0.4	0.9	3.7	1.4	0.8	4.3	5.6	42.7	23.8	66.5
	March	0	0.6	0.9	4.1	1.5	1.8	4.9	6.0	46.7	25.0	71.7
	April	0	0.4	0.8	3.3	1.5	1.7	4.3	4.0	43.1	23.4	66.5
	May	0	0.2	0.4	2.4	1.2	2.0	3.4	2.9	40.6	23.9	64.5
	June	0	0.7	0.6	2.4	0.5	2.0	3.9	4.2	42.4	25.7	68.2
	July	0	0.7	0.6	1.6	1.2	1.6	3.3	5.1	44.9	27.3	72.2
	August	0	1.1	1.0	2.7	1.0	1.4	3.7	4.6	47.3	27.9	75.1
	September	0	1.1	1.0	3.0	1.4	1.2	4.4	6.0	50.2	26.4	76.6
	October	0	0.8	1.1	3.6	1.5	1.6	3.7	7.6	53.0	27.6	80.6
	November	0	1.2	1.1	4.5	1.4	1.6	3.9	7.1	52.8	26.6	79.3
	December	0	1.3	1.4	5.0	1.5	1.7	5.5	6.2	59.8	28.6	88.4
	Total	0	9.0	10.7	40.5	15.5	18.9	50.0	65.8	572.6	313.6	886.3
1984	January	0	1.3	1.5	5.3	1.5	1.7	4.4	6.9	61.4	30.8	92.2
	February	0	1.2	1.5	5.0	1.4	1.8	4.6	7.4	59.4	29.4	88.8
	March	0	1.0	1.4	5.4	1.5	2.0	4.8	7.1	60.2	28.6	88.8
	April	0.1	0.9	1.3	4.5	1.5	1.8	4.2	6.4	54.2	24.7	78.9
	May	0.1	0.8	1.9	3.3	1.3	1.4	4.3	7.2	53.2	27.3	80.5
	June	0.3	0.7	2.2	2.8	0.6	1.8	4.7	7.1	51.9	26.4	78.3
	July	0.5	0.7	2.5	2.4	1.3	2.4	3.7	6.1	52.4	29.3	81.7
	August	0.7	0.9	2.3	3.5	1.0	2.4	3.6	6.2	54.1	31.6	85.7
	September	0.7	0.9	2.6	4.2	1.4	2.6	4.9	7.9	60.3	30.0	90.3
	October	0.7	1.3	1.8	5.0	1.5	2.0	4.1	8.1	62.4	26.4	88.9

Footnotes continued.

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

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

Sources: • See the last page of this section.

## Notes and Sources for the International Section

### Notes

1. The 21 signatory nations of the International Energy Agency (IEA) are Australia, Austria, Belgium, Canada, Denmark, West Germany, Greece, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the 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.
2. The members of the Organization for Economic Cooperation and Development (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 includes the U.S. Territories.

### Sources

**Crude Oil Production:** • 1973-1983 annual data (except the United States): Energy Information Administration (EIA), *1983 International Energy Annual*.

• 1973-1984 U.S. annual and monthly data: EIA, *Petroleum Supply Monthly*.

• 1982-1984 monthly data (except U.S. and World): Central Intelligence Agency, "International Energy Statistical Review," and other industry sources.

• 1982-1984 monthly data for World: Sum of data for all countries using above sources.

**Petroleum Consumption:** • Central Intelligence Agency, "International Energy Statistical Review" (except the United States).

• U. S. data: EIA, *Petroleum Supply Monthly*.

• International Energy Agency totals for latest months are EIA estimates.

**Petroleum Stocks:** • U. S. data: EIA, *Petroleum Supply Monthly*.

• Other OECD data: OECD, *Quarterly Oil Statistics*; Comite Professionnel du Petrole, *Bulletin Mensuel*.

• Total OECD data: Sum of data for all OECD member countries using above sources.

**Nuclear Electricity Generation:** • *Nucleonics Week*.

# Conversion Factors

## Conversion Factors

### Units of Measure

#### Weight

1 metric ton	contains	1,000 kilograms or 2,204.62 pounds
1 long ton	contains	2,240 pounds
1 short ton	contains	2,000 pounds

#### 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 ( $U_3O_8$ )	contains	0.769 metric tons of uranium
1 short ton ( $UF_6$ )	contains	0.613 metric tons of uranium
1 metric ton ( $UF_6$ )	contains	0.676 metric tons of uranium

### Price Indexes, 1972=100.0

	Gross National Product Implicit Price Deflator	Consumer Price Index, All Urban Consumers, All Items
1972	100.0	100.0
1973	105.75	106.2
1974	115.08	117.9
1975	125.79	128.7
1976	132.34	136.1
1977	140.05	144.9
1978	150.42	155.9
1979	163.42	173.5
1980	178.42	197.0
1981	195.14	217.4
1982	206.88	230.7
1983	215.67	238.1

Sources: Gross National Product Implicit Price Deflator—U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*. Consumer Price Index, All Urban Consumers, All Items—1967=100.0 from U.S. Department of Labor, Bureau of Labor Statistics. Rebased to 1972=100.0 by Energy Information Administration.

### Approximate Heat Content of Refined Petroleum Products

	MILLION BTU per Barrel
Asphalt.....	6.636
Aviation gasoline.....	5.048
Butane.....	4.326
Butane-propane mixture <sup>1</sup> .....	4.130
Distillate fuel oil.....	5.825
Ethane.....	3.082
Ethane-propane mixture <sup>2</sup> .....	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° F or less.....	5.248
Other oils over 400° F.....	5.825
Still gas.....	6.000
Petroleum coke.....	6.024
Plant condensate.....	5.418
Propane.....	3.836
Residual fuel oil.....	6.287
Road oil.....	6.636
Special naphtha.....	5.248
Still gas.....	6.000
Unfinished oils.....	5.825
Unfractionated stream.....	5.418
Wax.....	5.537
Miscellaneous.....	5.796

<sup>1</sup> 60 percent butane and 40 percent propane.

<sup>2</sup> 70 percent ethane and 20 percent propane.

## Approximate Heat Content of Fuels

	Units	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983-84‡
<b>Coal</b>												
Production.....	Million Btu/short ton	23.27	22.96	22.81	22.85	22.49	22.17	22.38	22.35	22.25	22.20	22.02
Consumption.....	Million Btu/short ton	22.94	22.56	22.39	22.39	22.14	21.93	22.01	21.87	21.65	21.63	21.55
Non-utility.....	Million Btu/short ton	24.48	24.38	24.35	24.45	24.33	24.12	24.23	24.35	24.15	23.92	23.80
Electric utility.....	Million Btu/short ton	22.24	21.78	21.64	21.68	21.47	21.27	21.37	21.29	21.08	21.20	21.16
Imports.....	Million Btu/short ton	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Exports.....	Million Btu/short ton	26.59	26.70	26.56	26.60	26.55	26.48	26.55	26.28	26.08	26.22	26.29
<b>Anthracite</b>												
Production.....	Million Btu/short ton	23.17	22.56	23.39	22.77	23.18	23.52	23.59	23.35	23.69	23.69	23.75
Consumption.....	Million Btu/short ton	22.71	21.95	21.74	22.15	22.69	22.97	22.70	22.16	22.10	23.00	22.80
Non-utility.....	Million Btu/short ton	24.34	23.75	23.65	23.84	24.99	25.17	25.20	23.74	25.12	25.37	25.20
Electric utility'.....	Million Btu/short ton	17.92	17.20	17.06	17.53	17.24	17.10	17.45	17.65	18.17	18.16	18.15
Imports and exports.....	Million Btu/short ton	25.40	25.40	25.40	25.40	25.40	25.40	25.40	25.40	25.40	25.40	25.40
<b>Bituminous coal and lignite</b>												
Production.....	Million Btu/short ton	23.267	22.970	22.802	22.849	22.482	22.157	22.374	22.343	22.243	22.188	22.015
Consumption.....	Million Btu/short ton	22.937	22.564	22.402	22.393	22.142	21.921	22.014	21.874	21.645	21.624	21.547
Residential and commercial.....	Million Btu/short ton	22.887	22.523	22.258	22.819	22.594	22.078	21.884	22.488	22.191	22.373	22.300
Coke plants.....	Million Btu/short ton	26.000	26.000	26.000	26.000	26.000	26.000	26.000	26.000	26.000	26.000	26.000
Other industrial & transp.....	Million Btu/short ton	22.585	22.420	22.439	22.528	22.290	22.175	22.436	22.690	22.572	22.694	22.650
Electric utility.....	Million Btu/short ton	22.260	21.800	21.660	21.690	21.480	21.280	21.380	21.300	21.090	21.200	21.160
Imports.....	Million Btu/short ton	25.000	25.000	25.000	25.000	25.000	25.000	25.000	25.000	25.000	25.000	25.000
Exports.....	Million Btu/short ton	26.612	26.716	26.573	26.613	26.561	26.501	26.570	26.404	26.176	26.231	26.300
<b>Coal coke</b>												
Production.....	Million Btu/short ton	26.00	26.00	26.00	26.00	26.00	26.00	26.00	26.00	26.00	26.00	26.00
<b>Crude petroleum<sup>2</sup></b>												
Production.....	Million Btu/barrel	5.800	5.800	5.800	5.800	5.800	5.800	5.800	5.800	5.800	5.800	5.800
Imports.....	Million Btu/barrel	5.817	5.827	5.821	5.808	5.810	5.802	5.810	5.812	5.818	5.826	5.824
Exports.....	Million Btu/barrel	5.800	5.800	5.800	5.800	5.800	5.800	5.800	5.800	5.800	5.800	5.800
<b>Crude petroleum and products</b>												
Imports.....	Million Btu/barrel	5.897	5.884	5.858	5.856	5.834	5.839	5.810	5.796	5.775	5.775	5.768
Exports.....	Million Btu/barrel	5.752	5.774	5.748	5.745	5.797	5.808	5.832	5.820	5.821	5.820	5.800
<b>Petroleum products<sup>3</sup></b>												
Consumption.....	Million Btu/barrel	5.515	5.504	5.494	5.504	5.518	5.519	5.494	5.479	5.448	5.415	5.410
Residential and commercial.....	Million Btu/barrel	5.387	5.377	5.358	5.383	5.389	5.382	5.471	5.468	5.409	5.392	5.381
Industrial.....	Million Btu/barrel	5.565	5.537	5.527	5.536	5.552	5.546	5.416	5.376	5.310	5.262	5.279
Transportation.....	Million Btu/barrel	5.397	5.394	5.392	5.396	5.402	5.407	5.430	5.440	5.434	5.423	5.412
Electric utility.....	Million Btu/barrel	6.245	6.238	6.250	6.251	6.249	6.251	6.258	6.254	6.258	6.258	6.254
Imports.....	Million Btu/barrel	5.983	5.959	5.935	5.980	5.908	5.955	5.811	5.748	5.659	5.664	5.660
Exports.....	Million Btu/barrel	5.752	5.773	5.747	5.743	5.796	5.814	5.864	5.841	5.837	5.829	5.800
LPG consumption average <sup>4</sup> .....	Million Btu/barrel	3.746	3.730	3.715	3.711	3.677	3.669	3.680	3.674	3.643	3.615	3.612
<b>Natural gas plant liquid</b>												
Production.....	Million Btu/barrel	4.049	4.011	3.984	3.964	3.941	3.925	3.955	3.914	3.930	3.872	3.859
<b>Natural gas, dry</b>												
Production.....	Btu/cubic foot	1,021	1,024	1,021	1,020	1,021	1,019	1,021	1,026	1,027	1,028	1,028
Consumption <sup>1</sup> .....	Btu/cubic foot	1,021	1,024	1,021	1,020	1,021	1,019	1,021	1,026	1,027	1,028	1,028
Non-utility consumption.....	Btu/cubic foot	1,020	1,024	1,020	1,019	1,019	1,016	1,018	1,024	1,026	1,026	1,026
Electric utility consumption <sup>1</sup> .....	Btu/cubic foot	1,024	1,022	1,026	1,023	1,029	1,034	1,034	1,034	1,033	1,035	1,035
Imports <sup>1</sup> .....	Btu/cubic foot	1,026	1,027	1,026	1,025	1,026	1,026	1,030	1,037	1,022	1,014	1,018
Exports <sup>1</sup> .....	Btu/cubic foot	1,023	1,016	1,014	1,013	1,013	1,013	1,013	1,013	1,011	1,011	1,011
Wet natural gas production.....	Btu/cubic foot	1,093	1,097	1,095	1,093	1,093	1,088	1,092	1,098	1,103	1,107	1,107

## Approximate Heat Rates for Electricity

Hydroelectric power generation <sup>5</sup> .....	Btu/kWh	10,389	10,442	10,406	10,373	10,435	10,361	10,353	10,388	10,453	10,470	10,470
Nuclear power generation <sup>6</sup> .....	Btu/kWh	10,903	11,161	11,013	11,047	10,769	10,941	10,879	10,908	11,030	11,015	11,015
Geothermal power generation <sup>7</sup> .....	Btu/kWh	21,674	21,674	21,611	21,611	21,611	21,611	21,545	21,639	21,639	21,594	21,594
Electricity consumption.....	Btu/kWh	3,412	3,412	3,412	3,412	3,412	3,412	3,412	3,412	3,412	3,412	3,412

<sup>1</sup> Based on data reported in Energy Information Administration (and predecessor) surveys.

<sup>2</sup> Includes lease condensate.

<sup>3</sup> Weighted averages of the products included in each category are calculated using heat content values shown on the previous page.

<sup>4</sup> LPG consumption average is the annual weighted average of the LPG product supplied components: ethane, ethylene, propane, propylene, butane, butylene, butane-propane mixture, ethane-propane mixture, and isobutane. It is obtained by using heat content values shown on the previous page.

<sup>5</sup> There is no generally accepted practice for measuring hydroelectric power thermal conversion rates. The hydroelectric power factors on this page are the prevailing rate factors at fossil fuel steam electric powerplants. By using the heat rate factor, it is possible

to evaluate fossil fuel requirements for replacing hydroelectric power production during periods of drought. Furthermore, it allows for better comparisons with certain other countries such as Norway, where hydroelectric power is the principal means for producing electricity. Similarly, the nuclear power and geothermal power conversion factors represent the thermal conversion equivalent of the uranium and geothermal steam consumed at powerplants. The heat content of a kilowatthour of electricity produced, regardless of the generation process, is 3,412 Btu per kilowatthour.

<sup>6</sup> Preliminary data.

Note: A listing of sources for the approximate heat content values is published in the *Annual Energy Review 1983*, DOE/EIA-0384(83).

# Glossary

## Glossary

**Anthracite.** A hard, jet black, high-luster coal containing a high percentage of fixed carbon and a low percentage of volatile matter and having an ignition temperature of about 900° F. Domestic anthracite is mined almost exclusively in northeastern Pennsylvania and is often referred to as hard coal. It is used for generating electricity and for space heating. It includes meta-anthracite and semianthracite and conforms to ASTM Specification D388 for anthracite.

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

**Bituminous Coal.** A dense, black coal that often has well-defined bands of bright and dull material. It has a volatility greater than anthracite and a calorific value greater than lignite. In the United States, it is often referred to as soft coal and is used for electricity generation, coke production, and space heating. It includes subbituminous coal and conforms to ASTM Specification D388 for bituminous coal and subbituminous coal.

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

**Butane.** A normally gaseous, colorless, paraffinic hydrocarbon ( $C_4H_{10}$ ) extracted from natural gas and refinery gas streams. Included are isobutane, a branch-chain configuration of  $(CH_3)_2CH$  with a boiling point of 10.9° F. and normal butane, a straight-chain configuration of  $C_4H_{10}$  with a boiling point of 31.1° F. Butane is used primarily for blending into motor gasoline, for residential and commercial heating, and for industrial uses, especially the manufacture of chemicals and synthetic rubber.

**Coal.** Includes all ranks of coal—anthracite, bituminous coal (including subbituminous coal), and lignite—conforming to ASTM Specification D388.

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

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

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

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

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

**Degree-Days.** See **Cooling Degree-Days**, **Heating Degree-Days**, **Population-Weighted Degree-Days**, and **Degree-Day Normals**.

**Distillate Fuel Oil.** Light fuel oils distilled during the refining process. Included are products known as No. 1, No. 2, and No. 4 fuel oils; and No. 1, No. 2, and No. 4 diesel fuels that 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 fuel for agricultural machinery), and electric power generation.

**Electricity Generation.** 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.

**Ethane.** A normally gaseous, colorless, paraffinic, straight-chain hydrocarbon ( $C_2H_6$ ) with a boiling point of -127.48° F. extracted from natural gas and refinery gas streams. Ethane

is used primarily as petrochemical feedstock for production of chemicals and plastic materials.

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

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

**Imports.** Receipts into the 50 States and the District of Columbia of foreign goods (including 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 warehouses for consumption," including withdrawals from bonded warehouses 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 warehouses and into U.S. territories and U.S. Foreign Trade Zones.

**Isobutane.** See Butane.

**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, and license (ticket) fees. Averages are based on major importers, which account for an estimated 90 to 95 percent total crude oil imports. Coverage includes the United States and its territories.

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

**Lignite.** A brownish-black coal with a high moisture content. It is also referred to as brown coal. Domestic lignite is mined in North Dakota, Montana, and Texas and is used mainly for electric power generation. It conforms to ASTM Specification D388 for lignite.

**Line Miles of Seismic Exploration.** The distance along the earth's surface that is covered by seismic surveying.

**Liquefied Petroleum Gases.** Ethane, ethylene, propane, propylene, normal butane, butylene, and isobutane produced at refineries or natural gas processing

plants, including plants that fractionate raw natural gas plant liquids.

**Maximum Dependable Capacity, Net.** The dependable main-unit net capacity of nuclear powerplant reactors and generally varies throughout the year because the unit efficiency varies with seasonal cooling water temperature variations. The maximum dependable capacity is the highest net dependable output of the turbine generator during the most restrictive seasonal conditions (usually summer).

**Motor Gasoline, Finished.** A complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives, that have been blended to form a fuel suitable for use in spark-ignition engines and conforming to ASTM Specification D439. Included are finished leaded gasoline, finished unleaded gasoline, and gasohol. Excludes blendstock until blending has been completed and excludes alcohol that is to be used in the blending of gasohol.

**Motor Gasoline, Premium Grade.** Finished motor gasoline that has an antiknock designation of 3 or more for unleaded motor gasoline and 4 or more for leaded motor gasoline.

**Motor Gasoline, Regular Grade.** Motor gasoline that has an antiknock designation of 2 or less for unleaded motor gasoline and 3 or less for leaded motor gasoline.

**Motor Gasoline, Total.** This includes finished leaded motor gasoline, finished unleaded motor gasoline, motor gasoline blending components, and gasohol.

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

**Natural Gas Plant Liquids.** Natural gas liquids recovered from natural gas processing plants, and in some situations, from natural gas field facilities. Natural gas liquids extracted by fractionators are also included. These liquids are defined according to the published specifications of the ASTM and the Gas Processors Association and are classified as follows: ethane, propane, normal butane, isobutane, pentanes plus, and other products from natural gas processing plants (i.e., products meeting the standards for finished petroleum products such as finished motor gasoline, finished aviation gasoline, special naphthas, kerosene, distillate fuel oil, and miscellaneous products).

**Normal Butane.** See Butane.

**Pentanes Plus.** A mixture of hydrocarbons, mostly pentanes and heavier, extracted from natural gas. This product includes isopentane, natural gasoline, and plant condensate.

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

**Petroleum Coke.** A residue that is the final product of the cracking process in petroleum refining. It consists of aromatic hydrocarbons very poor in hydrogen. Calcination of petroleum coke can yield almost pure carbon or artificial graphite suitable for production of carbon or graphite electrodes, structural graphite, motor brushes, dry cells, and similar products. This product is reported as marketable or catalyst coke.

**Petroleum Products.** Petroleum products are obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds. Petroleum products include unfinished oils, liquefied petroleum gases, pentanes plus, aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, naphtha less than 400° F. end-point, other oils over 400° F. end-point, special naphthas, lubricants, waxes, petroleum coke, asphalt, road oil, still gas, and miscellaneous products.

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

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

the Nation is divided into nine Census regions comprised of from three to eight States which are assigned weights based on the ratio of the population of the region to the total population of the Nation. Degree-day readings for each region are multiplied by the corresponding population weight for each region and these products are then summed to arrive at the national population-weighted degree-day figure.

**Propane.** A normally gaseous, colorless, paraffinic, straight-chain hydrocarbon ( $C_3H_8$ ) with a boiling point of -43.67° F. It is extracted from natural gas and refinery gas streams. Propane is used primarily for residential and commercial heating and cooling, and also as a fuel for transportation and industrial uses, including petrochemical feedstocks.

**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 calculated by adding production, imports, and crude oil burned directly; and subtracting exports and changes in primary stocks (net withdrawals is a plus quantity and net additions is a minus quantity).

**Refiner Acquisition Cost.** The cost of crude oil to the refiner, including transportation and fees. The composite cost is the weighted average of domestic and imported crude oil costs.

**Residual Fuel Oil.** The heavier oils that remain after the distillate fuel oils and lighter hydrocarbons are distilled away in refinery operations. Included are products known as No. 5 and No. 6 fuel oils that conform to ASTM Specification D396 and Navy Special Fuel Oil specifications, as well as Bunker C fuel oil. Residual fuel oil is used for the production of electric power, space heating, vessel bunkering, and various industrial purposes. Imports of residual fuel oil include imported crude oil burned as fuel.

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

**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.

**Strategic Petroleum Reserve (SPR).** Petroleum stocks maintained by the Federal Government for use during periods of major supply interruption.

**Supplemental Gaseous Fuels.** Mainly synthetic natural gas, propane-air, and refinery gas. May also include coke oven gas, biomass gas, manufactured gas, and air injected for Btu stabilization.

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

**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 crude oil input, exports of crude oil, crude oil burned as fuel, and crude oil losses.

**Wells, Exploratory and Development.** Holes drilled for the purpose of finding or producing crude oil or natural gas. They include wells classified as oil wells, gas wells, or dry holes.

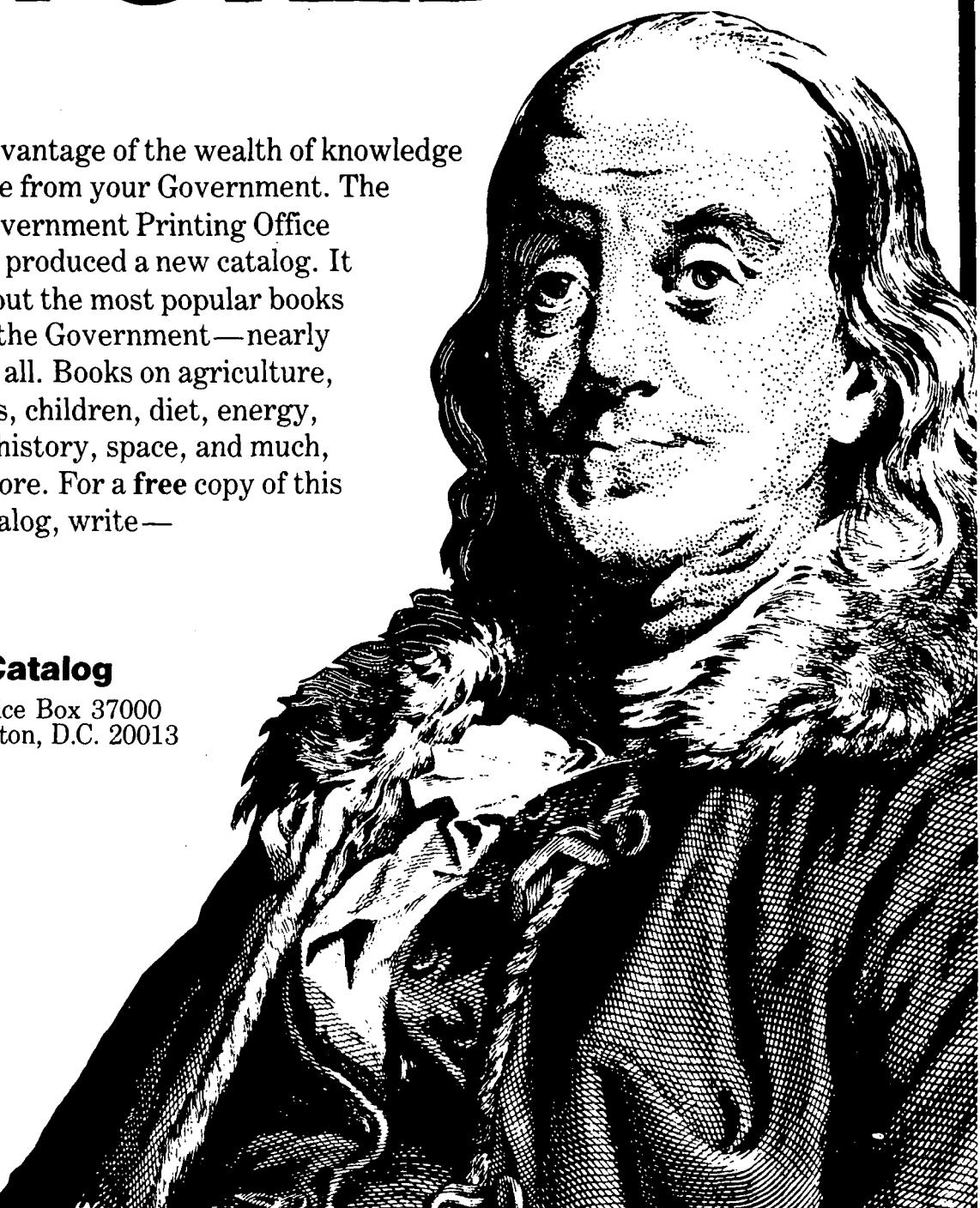


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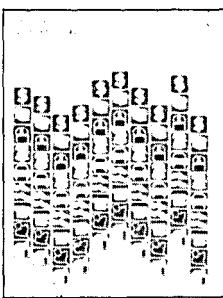
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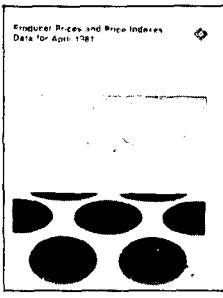
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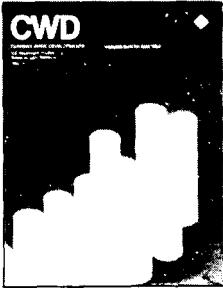
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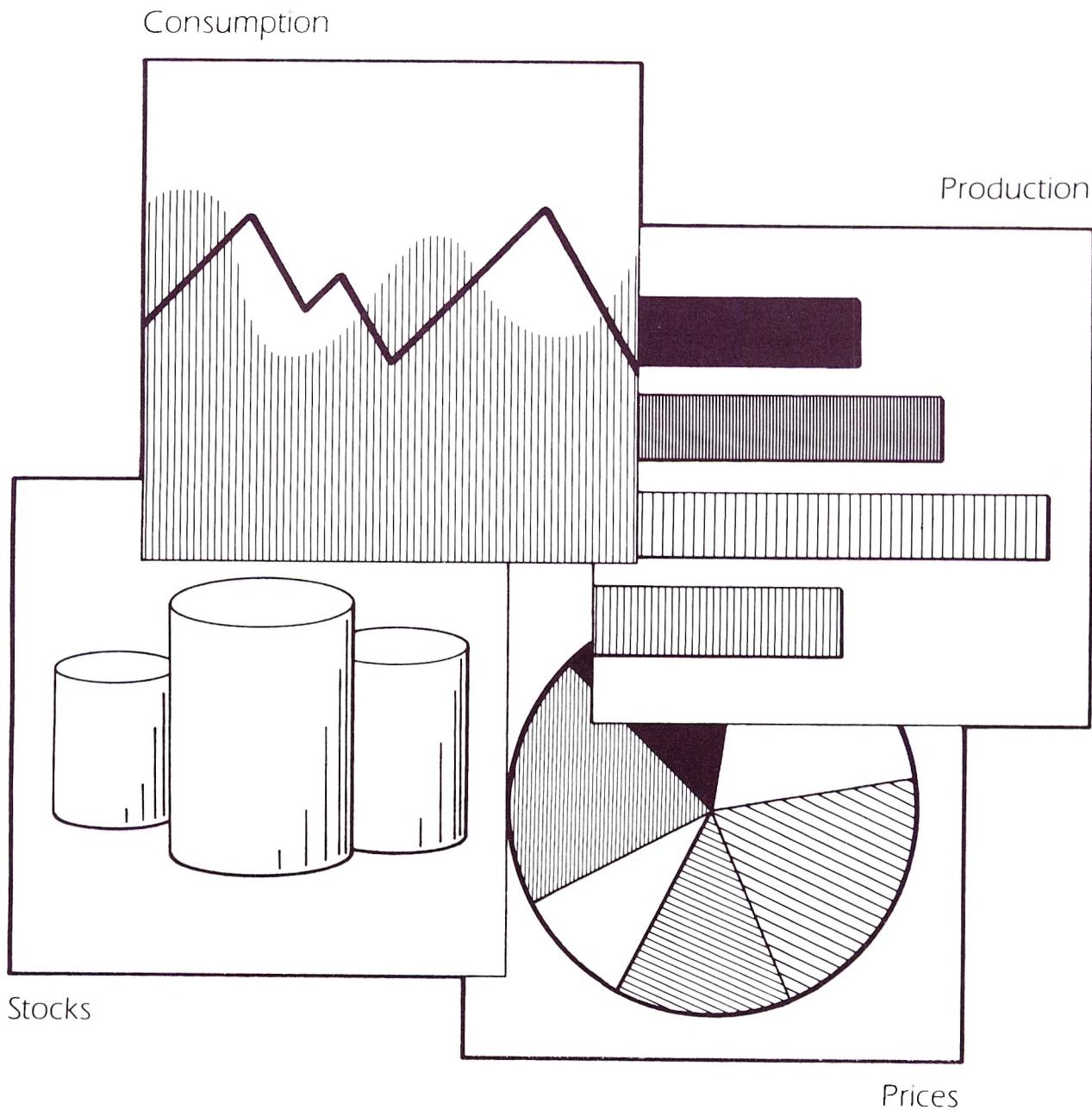
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