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**SEARLES**  
**Monthly  
Energy  
Review**



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Feature articles appearing in previous issues:

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Nuclear Power — April 1975

The Price of Crude Oil — June 1975

U.S. Coal Resources and Reserves — July 1975

Propane, A National Energy Resource —  
September 1975

Short-Term Energy Supply and Demand Forecasting  
at FEA — October 1975

Curtailments of Natural Gas Service — January 1976

Home Heating Conservation Alternatives and the  
Solar Collector Industry — March 1976

Trends in United States Petroleum Imports —  
September 1976

Crude Oil Entitlements Program — January 1977

Motor Gasoline Supply and Demand — July 1977

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May 1978

The Energy Requirements of U.S. Agriculture —  
July 1979

Three Mile Island — Possible Regulatory Responses  
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# Reduction in Natural Gas Requirements Due to Fuel Switching

by James W. McCarrick, Jr.  
Office of Oil and Gas Statistics  
Energy Information Administration

As a result of natural gas supply shortages and the resulting curtailments some consumers of natural gas have switched permanently from natural gas to alternate fuels. In August 1978, the Energy Information Administration conducted a survey to determine the extent of this fuel switching.<sup>1</sup>

The mandatory survey was directed to all companies and municipalities, inter- and intrastate, that sold natural gas directly to end-use consumers in the United States during 1977. Responses were received from 1,503 of the 1,517 suppliers serving end-users directly. Of these, 1,372 reported that none of their customers switched permanently to another fuel and 131 reported switching by one or more customers during the 5-year period (April 1973 through March 1978) covered by the survey.

For the purpose of the survey, fuel switching was defined as "the permanent switching of all, or any part, of a consumer's fuel requirements from natural gas to another fuel as evidenced by (1) the complete or partial termination of the sales-purchase contract; (2) removal or abandonment in place of gas metering and/or delivery facilities; or (3) the replacement by or modification of customer gas burning equipment with, or to, equipment designed to utilize other fuels exclusively." Temporary substitution of alternative fuels to offset natural gas curtailments, regardless of the depth or duration of curtailments, was explicitly excluded from the definition.

The survey shows that 985 natural gas consumers switched to other fuels during the 5-year period. This switching reduced annual natural gas requirements<sup>2</sup> by approximately 375.2 billion cubic feet, as shown in Table 1.

**Table 1. Annual Reduction in Requirements Due to Fuel Switching, by Year.**

Heating Year (April — March)	Consumers	Annual Reduction	
		Billion Cubic Feet	Percent
1973 - 1974	83	9.7	2.6
1974 - 1975	149	14.8	3.9
1975 - 1976	274	46.9	12.5
1976 - 1977	232	169.9	45.3
1977 - 1978	247	133.9	35.7
<b>Total<sup>2</sup></b>	<b>985</b>	<b>375.2</b>	<b>100.0</b>

<sup>1</sup>The results of the survey were published in January 1979 *Energy Data Reports*, "Reduction in Natural Gas Requirements Due to Fuel Switching, April 1973 — March 1978".

<sup>2</sup>Annual natural gas requirements of consumers switching to other fuels are the volume of natural gas delivered to the consumer, in addition to the volume curtailed as a result of natural gas supply deficiencies, in the 12 months immediately preceding the customer's switching.

The survey also shows that the number of consumers switching from natural gas to another fuel peaked at 274 during the 1975-1976 heating season. In volumetric terms, a major reduction of 169.9 billion cubic feet in annual natural gas requirements occurred during the 1976-1977 heating year. During the survey period, the largest volumetric reduction in natural gas requirements occurred because large industrial consumers switched to other fuels.<sup>3</sup> The survey indicates that 196 large industrial consumers permanently switched annual fuel requirements of 293.3 billion cubic feet of natural gas to alternate fuels (see Table 2). This represents approximately 78 percent of the total reduction in annual natural gas requirements by consumers due to fuel switching during the 5-year survey period. Natural gas requirements of 62 large electric utilities were reduced by an additional 66.7 billion cubic feet. The 360.0 billion cubic feet reduction in requirements by large industrial and electric utility consumers accounts for 96 percent of the total volumetric reduction.

**Table 2. Annual Reduction in Requirements Due to Fuel Switching by Consumer Type, April 1973 through March 1978**

Type of Consumer	Number of Consumers	Annual Reduction	
		Billion Cubic Feet	Percent
Industrial			
Large	196	299.3	78.2
Small	296	4.3	1.1
<b>Subtotal</b>	<b>492</b>	<b>297.6</b>	<b>79.3</b>
Commercial			
Large	23	4.5	1.2
Small	380	5.1	1.4
<b>Subtotal</b>	<b>403</b>	<b>9.6</b>	<b>2.6</b>
Electric Utilities			
Large	62	66.7	17.8
Small	28	1.3	0.3
<b>Subtotal</b>	<b>90</b>	<b>68.0</b>	<b>18.1</b>
<b>Total<sup>4</sup></b>	<b>985</b>	<b>375.2</b>	<b>100.0</b>

<sup>3</sup>Large customers are those with annual natural gas requirements in excess of 100 million cubic feet.

<sup>4</sup>Deliveries to consumers include those quantities of natural gas used at producer-owned industrial facilities, such as refineries and petrochemical plants, but exclude quantities used for lease, gas processing plants, and pipeline fuel.

Between April 1973 and March 1978, the major shift in demand from natural gas to other fuels occurred in DOE Southeast Region 4. The annual natural gas requirements in Region 4 were reduced by 156.3 billion cubic feet, as indicated in Table 3. The northeastern DOE Regions 1 and 2 experienced the least amount of fuel switching, with a combined total annual reduction in requirements of 0.6 billion cubic feet.

**Table 3. Annual Reduction in Requirements Due to Fuel Switching, by DOE Region, April 1973 through March 1978**

DOE Region	Annual Reduction	
	Billion Cubic Feet	Percent
Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont)	0.3	0.1
Region 2 (New Jersey, New York)	0.3	0.1
Region 3 (Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia)	9.1	2.4
Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee)	156.3	41.6
Region 5 (Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin)	33.3	8.9
Region 6 (Arkansas, Louisiana, New Mexico, Oklahoma, Texas)	12.0	3.2
Region 7 (Iowa, Kansas, Missouri, Nebraska)	52.0	13.9
Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming)	24.1	6.4
Region 9 (Arizona, California, Hawaii, Nevada)	83.4	22.2
Region 10 (Alaska, Idaho, Oregon, Washington)	4.4	1.2
<b>Total</b>	<b>375.2</b>	<b>100.0</b>

Major areas affected by permanent fuel switching from natural gas are coal, wood and wood byproducts, and residual fuel oils. Relatively small amounts were shifted to electricity, propane/butane, and middle distillates. These permanent consumer switches are presented in Table 4.

**Table 4. Annual Reduction in Requirements Due to Fuel Switching, by Type of Fuel, April 1973 through March 1978**

Fuel Type	Annual Reduction	
	Billion Cubic Feet	Percent
Residual Fuel Oil	99.9	26.6
Middle Distillates	8.4	2.2
Electricity	29.9	8.0
Coal	117.5	31.3
Propane/ Butane	15.3	4.1
Wood and Wood Byproducts	102.5	27.3
Unknown	1.6	0.5
<b>Total</b>	<b>375.2</b>	<b>100.0</b>

The total annual reduction in natural gas requirements of 375.2 billion cubic feet due to fuel switching during the 5-year period was equivalent to only 2.2 percent of the total 1977 deliveries to consumers<sup>4</sup> of 17,328.8 billion cubic feet as reported in *Energy Data Reports*, "Natural Gas Production and Consumption: 1977." Fuel switching by industrial consumers was responsible for an annual reduction in requirements totaling 297.6 billion cubic feet, equivalent to 4.4 percent of the total 6,817.3 billion cubic feet of natural gas delivered to this type of consumer during 1977. The total annual reduction in requirements of 68.0 billion cubic feet by electric utilities was equivalent to 2.1 percent of the 3,189.2 billion cubic feet of natural gas delivered to this type of user in 1977, and the reduction of 9.6 billion cubic feet in commercial requirements was equivalent to only 0.4 percent of deliveries to commercial consumers.

<sup>4</sup>Deliveries to consumers include those quantities of natural gas used at producer-owned industrial facilities, such as refineries and petrochemical plants, but exclude quantities used for lease, gas processing plants, and pipeline fuel.

# Part 1 Executive Summary

## Overview

Domestic energy production in September 1979 was 5.1 quadrillion Btu, 7.0 percent lower than in August and 1.0 percent higher than in September 1978. In September 1979 total domestic energy was produced from the following sources: natural gas, 1.5 quadrillion Btu, or 29.6 percent; crude oil, 1.5 quadrillion Btu, or 29.0 percent of the total; coal, 1.5 quadrillion Btu, or 28.9 percent; and 0.6 quadrillion Btu, or 12.6 percent of the total from nuclear electric, hydroelectric power, natural gas plant liquids, and electricity produced from geothermal power and wood and waste.

While the United States produced a total of 5.1 quadrillion Btu of energy in September 1979, it consumed a total of 5.8 quadrillion Btu of energy. Consumption was 7.3 percent lower than in August and 2.8 percent lower than in September 1978. Petroleum consumption was 2.8 quadrillion Btu, representing 49.0 percent of the total U.S. consumption of energy. Natural gas consumption was 1.3 quadrillion Btu, or 22.0 percent of the total. Coal consumption was 1.2 quadrillion Btu, or 20.9 percent of the total. All remaining fuels provided 0.5 quadrillion Btu, or 8.0 percent of the total consumption.

Energy imports in September 1979 totaled 1.4 quadrillion Btu and supplied 23.7 percent of consumed energy in September. The September 1979 total import figure was 18.8 percent lower than during September 1978. The United States exported 0.2 quadrillion Btu of energy in September and had a domestic net import total of 1.1 quadrillion Btu. Crude oil accounted for 1.0 quadrillion Btu of the total net imports, while petroleum products accounted for 0.2 quadrillion Btu. Natural gas, electricity, and coal coke contributed small amounts to the net import total. Coal exports exceeded coal imports, causing coal to appear as a net export item of 0.1 quadrillion Btu.



# Executive Summary

## Domestic Energy Summary

		Domestic Energy Production <sup>1</sup>	Domestic Energy Consumption <sup>2</sup>	Energy Imports <sup>3</sup>	Energy Exports <sup>4</sup>
Quadrillion (10 <sup>15</sup> ) Btu					
1973	TOTAL	62.431	74.605	14.732	2.073
1974	TOTAL	61.228	72.756	14.417	2.241
1975	TOTAL	60.057	70.706	14.114	2.389
1976	TOTAL	60.091	74.513	16.840	2.213
1977	January	4.798	7.732	1.722	0.103
	February	4.649	6.554	1.749	0.130
	March	5.353	6.453	1.821	0.139
	April	5.035	5.870	1.634	0.200
	May	5.172	5.876	1.660	0.215
	June	5.089	5.967	1.665	0.214
	July	4.853	6.073	1.745	0.199
	August	5.059	6.171	1.654	0.169
	September	5.220	5.960	1.605	0.197
	October	5.288	6.160	1.632	0.191
	November	5.280	6.386	1.537	0.175
	December	4.635	7.334	1.665	0.164
	TOTAL	60.431	76.536	20.091	2.097
1978	January	R4.487	R7.618	R1.619	0.079
	February	R4.169	R6.959	R1.429	0.059
	March	R4.877	R6.851	R1.656	0.067
	April	R5.192	R6.038	R1.476	0.135
	May	R5.514	R6.209	R1.491	0.187
	June	R5.336	R6.020	R1.523	0.224
	July	R5.193	R6.205	R1.612	0.164
	August	R5.388	R6.352	R1.613	R0.180
	September	R5.060	R5.961	R1.693	0.187
	October	R5.444	R6.305	R1.628	0.227
	November	R5.364	R6.569	R1.677	0.241
	December	R5.312	R7.355	R1.815	0.213
	TOTAL	R61.337	R78.443	R19.231	R1.963
1979	January	5.284	7.947	1.752	0.175
	February	4.877	7.208	1.512	0.161
	March	5.468	6.943	1.716	0.241
	April	5.249	6.121	1.501	0.236
	May	5.471	6.134	1.580	0.257
	June	R5.176	R5.933	R1.586	R0.253
	July	R4.992	R6.031	R1.578	R0.272
	August	R5.491	R6.249	R1.520	R0.271
	September	5.109	5.795	1.374	0.238
	TOTAL (Year to date)	47.118	58.361	14.119	2.104

<sup>1</sup>See Explanatory Note 1.

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

<sup>3</sup>See Explanatory Note 3.

<sup>4</sup>See Explanatory Note 4.

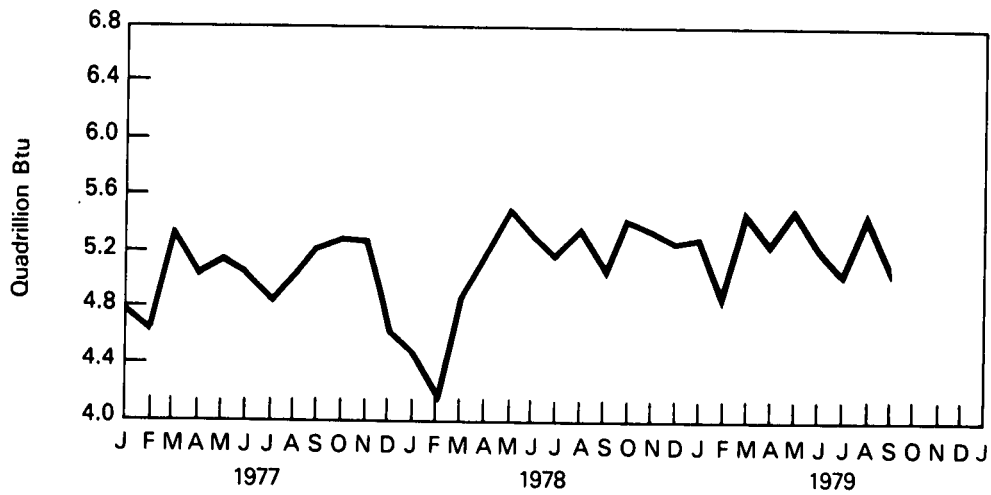
R = Revised data.

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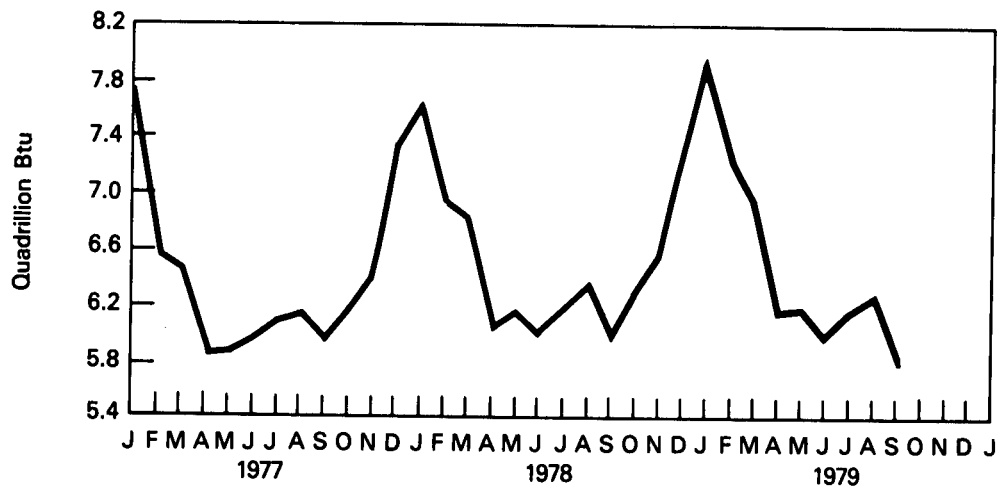
# Executive Summary

## Domestic Energy Summary

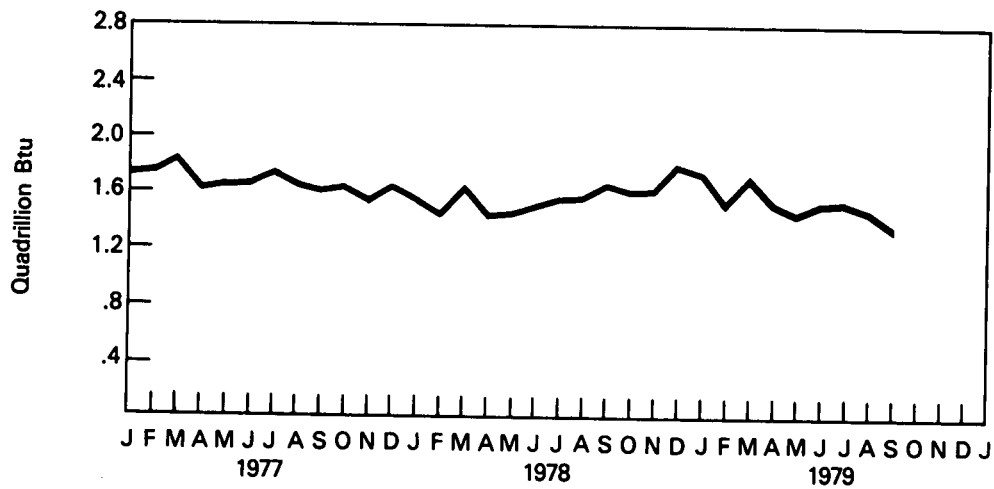
Domestic Production of Energy



Domestic Consumption of Energy



Imports of Energy



# Executive Summary

## Domestic Energy Production by Primary Type

		Coal <sup>1</sup>	Crude Oil <sup>2</sup>	NGPL <sup>3</sup>	Natural Gas (dry)	Hydro-electric Power <sup>4</sup>	Nuclear Electric Power	Other <sup>5</sup>	Total
		Quadrillion (10 <sup>15</sup> ) Btu							
1973	TOTAL	14.366	19.493	2.569	22.187	2.859	0.910	0.046	62.431
1974	TOTAL	14.468	18.575	2.471	21.211	3.175	1.272	0.056	61.228
1975	TOTAL	15.189	17.729	2.374	19.641	3.152	1.900	0.072	60.057
1976	TOTAL	15.853	17.262	2.327	19.480	2.976	2.111	0.081	60.091
1977	January	1.032	1.412	0.189	1.700	0.219	0.239	0.007	4.798
	February	1.137	1.322	0.175	1.636	0.161	0.211	0.006	4.649
	March	1.542	1.455	0.206	1.710	0.210	0.223	0.007	5.353
	April	1.397	1.417	0.197	1.606	0.198	0.214	0.006	5.035
	May	1.443	1.452	0.198	1.653	0.198	0.222	0.007	5.172
	June	1.457	1.410	0.191	1.610	0.183	0.232	0.007	5.089
	July	1.144	1.457	0.197	1.636	0.178	0.235	0.007	4.853
	August	1.335	1.494	0.195	1.607	0.177	0.245	0.006	5.059
	September	1.603	1.475	0.187	1.561	0.174	0.211	0.007	5.220
	October	1.561	1.542	0.199	1.591	0.182	0.205	0.007	5.288
	November	1.592	1.493	0.192	1.569	0.216	0.210	0.007	5.280
	December	0.719	1.526	0.200	1.687	0.241	0.256	0.007	4.635
	TOTAL	15.964	17.454	2.327	19.565	2.337	2.702	0.082	60.431
1978	January	0.539	R1.503	0.190	1.704	0.265	0.278	0.007	R4.487
	February	0.546	1.360	0.172	1.612	0.237	0.235	0.006	R4.169
	March	0.900	R1.568	0.194	1.708	0.260	0.242	0.005	R4.877
	April	1.375	R1.534	0.191	1.631	0.267	0.189	0.004	R5.192
	May	1.587	R1.587	0.187	1.626	0.303	0.220	0.004	R5.514
	June	1.516	R1.537	0.187	1.587	0.265	0.239	0.005	R5.336
	July	1.241	R1.574	0.190	1.655	0.258	0.269	0.005	R5.193
	August	1.487	R1.575	0.190	1.620	0.234	0.276	0.006	R5.388
	September	1.336	R1.531	0.183	1.541	0.224	0.239	0.007	R5.060
	October	1.614	R1.586	0.188	1.598	0.206	0.248	0.005	R5.444
	November	1.599	R1.521	0.189	1.570	0.211	0.268	0.006	R5.364
	December	1.378	R1.557	0.191	1.671	0.233	0.274	0.007	R5.312
	TOTAL	15.117	R18.434	2.255	19.524	2.963	2.977	0.068	R61.337
1979	January	1.304	1.521	0.214	1.675	0.265	0.299	0.007	5.284
	February	1.236	1.380	0.188	1.563	0.225	0.279	0.006	4.877
	March	1.510	1.544	0.211	1.659	0.274	0.262	0.008	5.468
	April	1.461	1.485	0.202	1.628	0.268	0.198	0.007	5.249
	May	1.631	1.544	0.201	1.620	0.305	0.162	0.007	5.471
	June	1.518	R1.463	R0.194	1.557	0.264	0.173	0.007	R5.176
	July	1.257	R1.502	R0.201	1.560	0.241	0.224	0.007	R4.992
	August	1.665	1.541	0.207	R1.583	0.226	0.261	0.008	R5.491
	September	1.474	1.481	0.200	1.511	0.201	0.235	0.007	5.109
	TOTAL (Year to date)	13.056	13.459	1.818	14.357	2.269	2.093	0.064	47.118

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

<sup>1</sup>Includes bituminous coal, lignite and anthracite.

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

<sup>3</sup>Natural gas plant liquids.

<sup>4</sup>Includes industrial and utility production of hydropower.

<sup>5</sup>Includes geothermal power and electricity produced from wood and waste.

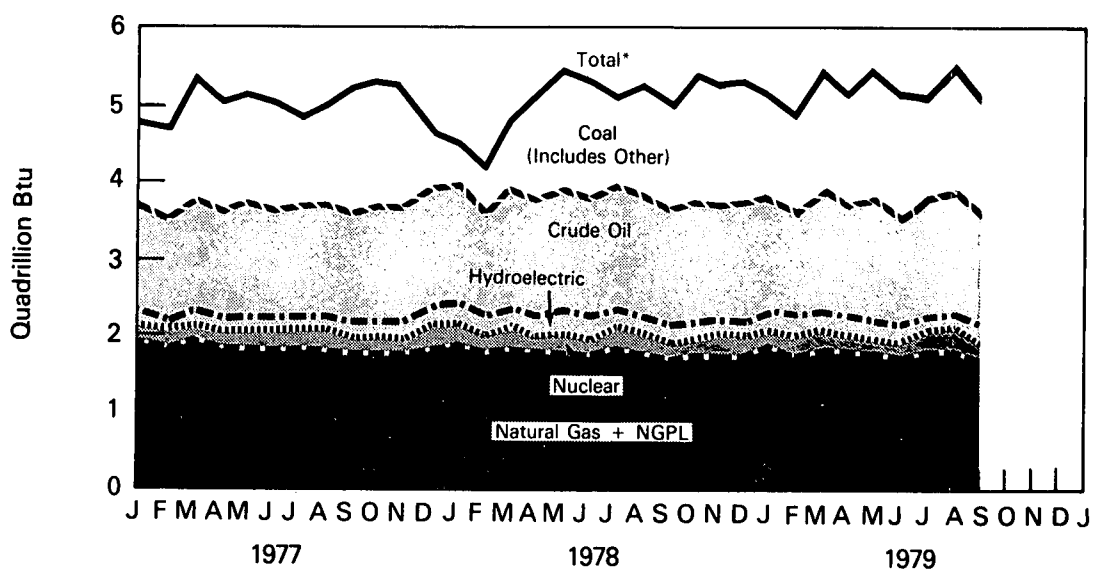
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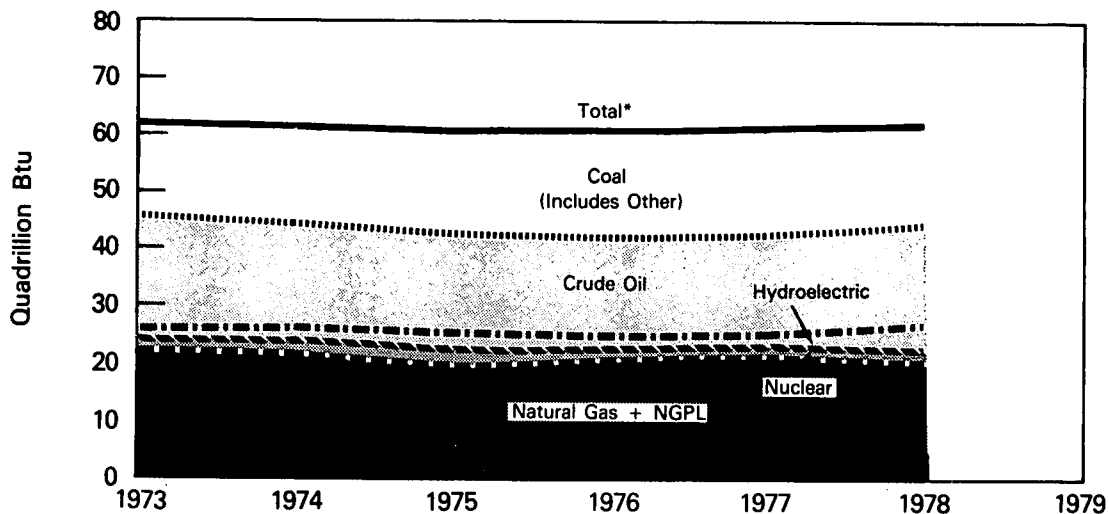
# Executive Summary

## Energy Production (Primary Energy Type)

### Monthly



### Yearly



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

# Executive Summary

## Domestic Energy Consumption by Primary Energy Type

		Coal <sup>1</sup>	Natural Gas (dry)	Petroleum	Hydro-electric Power <sup>2</sup>	Nuclear Electric Power	Net Imports of Coal Coke <sup>3</sup>	Other <sup>4</sup>	Total	Yearly Cumulative Total
Quadrillion (10 <sup>15</sup> ) Btu										
1973	TOTAL	13.300	22.512	34.837	3.008	0.910	(0.008)	0.046	74.605	
1974	TOTAL	12.876	21.732	33.454	3.307	1.272	0.059	0.056	72.756	
1975	TOTAL	12.823	19.948	32.732	3.217	1.900	0.014	0.072	70.706	
1976	TOTAL	13.733	20.345	35.178	3.065	2.111	0.000	0.081	74.513	
1977	January	1.283	2.458	3.513	0.234	0.239	(0.002)	0.007	7.732	7.732
	February	1.137	1.854	3.169	0.176	0.211	0.000	0.006	6.554	14.285
	March	1.144	1.751	3.105	0.225	0.223	(0.002)	0.007	6.453	20.739
	April	1.055	1.469	2.914	0.213	0.214	(0.002)	0.006	5.870	26.609
	May	1.118	1.408	2.907	0.213	0.222	0.000	0.007	5.876	32.485
	June	1.178	1.361	2.991	0.198	0.232	0.000	0.007	5.967	38.451
	July	1.274	1.353	3.010	0.193	0.235	0.002	0.007	6.073	44.525
	August	1.248	1.393	3.086	0.192	0.245	0.001	0.006	6.171	50.696
	September	1.151	1.457	2.937	0.189	0.211	0.007	0.007	5.960	56.656
	October	1.143	1.550	3.053	0.198	0.205	0.004	0.007	6.160	62.816
	November	1.155	1.725	3.057	0.231	0.210	0.001	0.007	6.386	69.202
	December	1.222	2.152	3.435	0.256	0.256	0.006	0.007	7.334	76.536
	TOTAL	14.110	19.931	37.176	2.519	2.702	0.015	0.082	76.536	
1978	January	1.236	2.432	R3.384	0.280	0.278	0.001	0.007	R7.618	R7.618
	February	1.048	2.184	R3.234	0.252	0.235	0.001	0.006	R6.959	R14.578
	March	0.998	1.958	R3.367	0.276	0.242	0.005	0.005	R6.851	R21.428
	April	1.037	1.571	R2.942	0.282	0.189	0.012	0.004	R6.038	R27.467
	May	1.110	1.409	R3.123	0.319	0.220	0.025	0.004	R6.209	R33.676
	June	1.184	1.275	R3.027	0.280	0.239	0.009	0.005	R6.020	R39.696
	July	1.261	1.361	R3.021	0.273	0.269	0.015	0.005	R6.205	R45.901
	August	1.302	1.312	R3.193	0.249	0.276	0.013	0.006	R6.352	R52.252
	September	1.228	1.261	R2.976	0.239	0.239	0.012	0.007	R5.961	R58.214
	October	1.191	1.470	R3.155	0.221	0.248	0.015	0.005	R6.305	R64.518
	November	1.188	1.693	R3.176	0.226	0.268	0.013	0.006	R6.569	R71.088
	December	1.288	2.112	R3.417	0.248	0.274	0.009	0.007	R7.355	R78.443
	TOTAL	14.070	20.039	R38.014	3.145	2.977	0.131	0.068	R78.443	
1979	January	1.400	2.422	3.536	0.280	0.299	0.004	0.007	7.947	7.947
	February	1.213	2.194	3.273	0.240	0.279	0.003	0.006	7.208	15.156
	March	1.224	1.873	3.286	0.289	0.262	0.002	0.008	6.943	22.099
	April	1.146	1.611	2.870	0.283	0.198	0.005	0.007	6.121	28.220
	May	1.203	1.398	3.032	0.321	0.162	0.011	0.007	6.134	34.353
	June	1.243	1.291	R2.930	0.279	0.173	0.010	0.007	R5.933	R40.286
	July	1.341	1.299	R2.896	0.256	0.224	0.008	0.007	R6.031	R46.317
	August	R1.355	R1.299	3.076	0.241	0.261	0.009	0.008	R6.249	R52.566
	September	1.212	1.276	2.840	0.216	0.235	0.008	0.007	5.795	58.361
	TOTAL (Year to date)	11.337	14.662	27.739	2.405	2.093	0.061	0.064	58.361	

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

<sup>1</sup>Includes bituminous coal, lignite, and anthracite.

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

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

<sup>4</sup>Includes geothermal power and electricity produced from wood and waste.

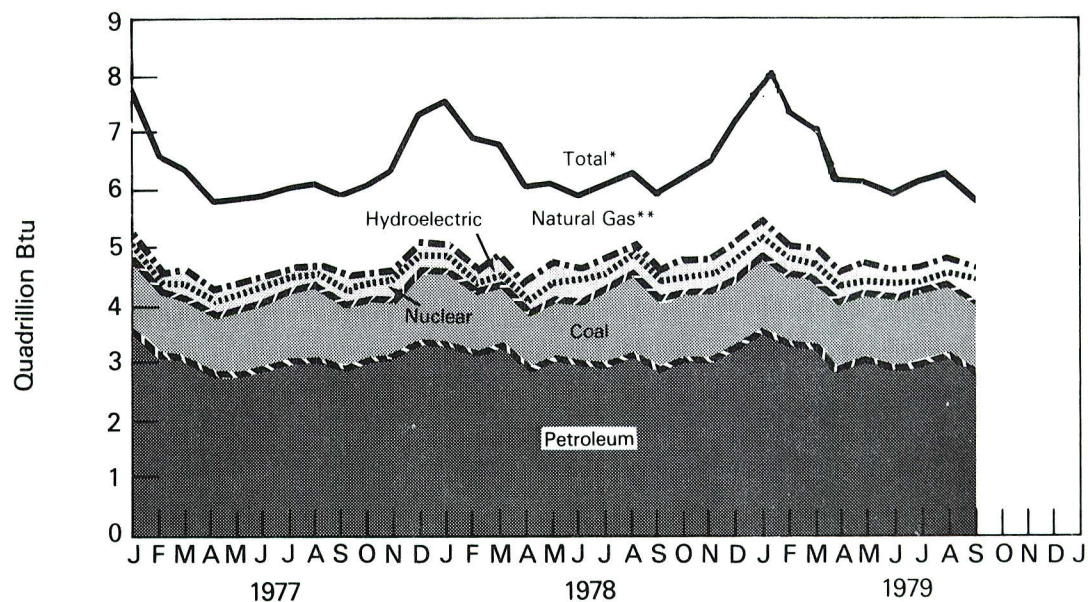
R = Revised data.

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

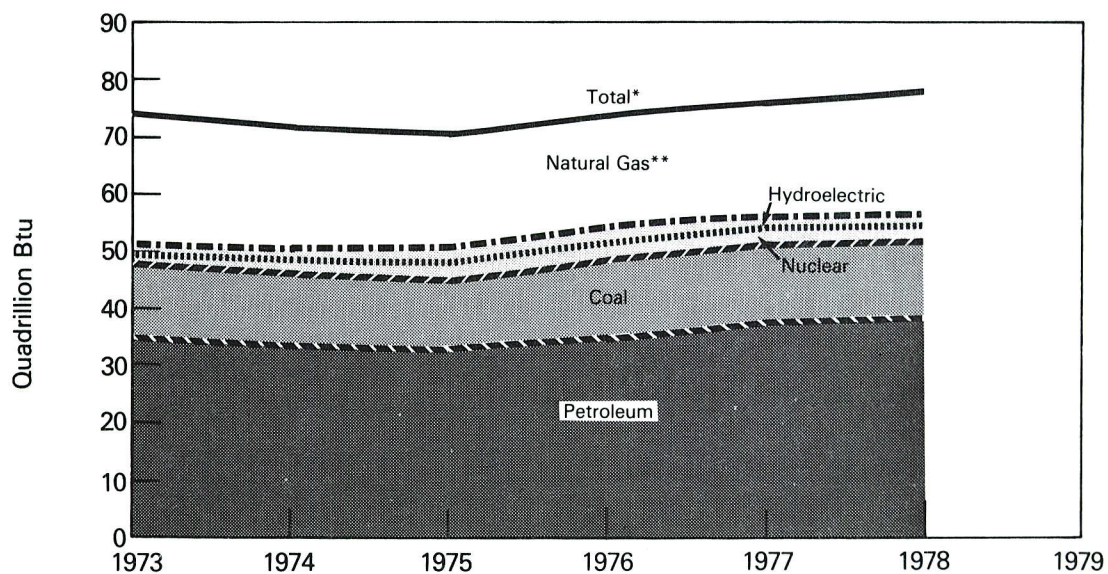
# Executive Summary

## Energy Consumption (Primary Energy Type)

Monthly



Yearly



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

# Executive Summary

## Domestic Energy Consumption by Economic Sector<sup>1</sup>

		Residential and Commercial	Industrial	Transportation	Total
Quadrillion (10 <sup>15</sup> ) Btu					
<b>1973</b>	<b>TOTAL</b>	<b>26.534</b>	<b>29.144</b>	<b>18.927</b>	<b>74.605</b>
<b>1974</b>	<b>TOTAL</b>	<b>25.912</b>	<b>28.430</b>	<b>18.414</b>	<b>72.756</b>
<b>1975</b>	<b>TOTAL</b>	<b>25.981</b>	<b>26.207</b>	<b>18.518</b>	<b>70.706</b>
<b>1976</b>	<b>TOTAL</b>	<b>27.180</b>	<b>27.924</b>	<b>19.408</b>	<b>74.513</b>
<b>1977</b>	January	3.349	2.636	1.746	7.732
	February	2.901	2.050	1.603	6.554
	March	2.447	2.336	1.670	6.453
	April	2.052	2.182	1.636	5.870
	May	1.882	2.377	1.617	5.876
	June	1.927	2.381	1.659	5.967
	July	2.077	2.319	1.678	6.073
	August	2.072	2.400	1.699	6.171
	September	1.916	2.421	1.623	5.960
	October	1.959	2.541	1.660	6.160
	November	2.158	2.574	1.654	6.386
	December	2.804	2.706	1.823	7.334
	<b>TOTAL</b>	<b>27.545</b>	<b>28.923</b>	<b>20.068</b>	<b>76.536</b>
<b>1978</b>	January	R3.210	R2.688	R1.721	R7.618
	February	R3.064	R2.261	1.634	R6.959
	March	R2.791	R2.264	R1.796	R6.851
	April	R2.186	R2.223	1.629	R6.038
	May	R2.060	R2.397	R1.752	R6.209
	June	1.986	2.322	R1.712	R6.020
	July	2.115	2.396	1.693	R6.205
	August	R2.139	R2.431	1.781	R6.352
	September	R1.990	R2.342	1.630	R5.961
	October	R1.997	R2.587	R1.721	R6.305
	November	2.232	R2.611	R1.726	R6.569
	December	R2.809	R2.727	R1.819	R7.355
	<b>TOTAL</b>	<b>R28.579</b>	<b>R29.250</b>	<b>20.614</b>	<b>R78.443</b>
<b>1979</b>	January	3.433	2.731	1.784	7.947
	February	3.207	2.317	1.685	7.208
	March	2.800	2.394	1.749	6.943
	April	2.301	2.237	1.584	6.121
	May	2.063	2.412	1.659	6.134
	June	R1.978	R2.359	R1.595	R5.933
	July	R2.093	R2.358	R1.580	R6.031
	August	R2.167	R2.415	R1.666	R6.249
	September	1.965	2.301	1.529	5.795
	<b>TOTAL</b> (Year to date)	<b>22.006</b>	<b>21.524</b>	<b>14.831</b>	<b>58.361</b>

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

<sup>1</sup>See Explanatory Note 5 for definitions of the Residential and Commercial, Industrial, and Transportation sectors. The methodology used for sector calculations is provided in the footnotes on page 22.

R = Revised data.

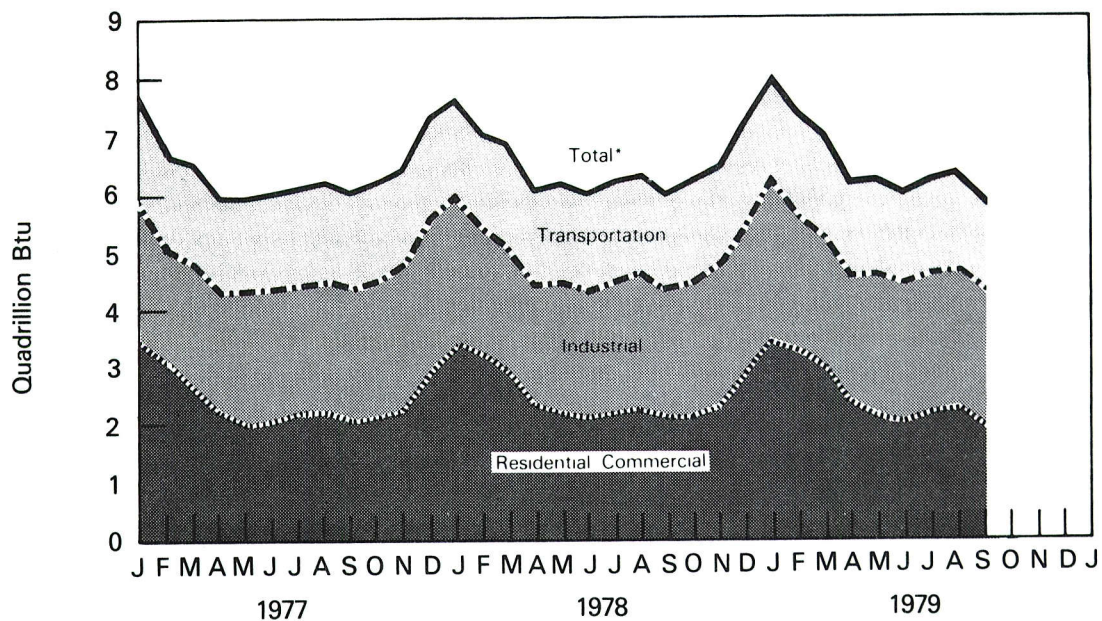
Source: • See Footnotes on page 22.



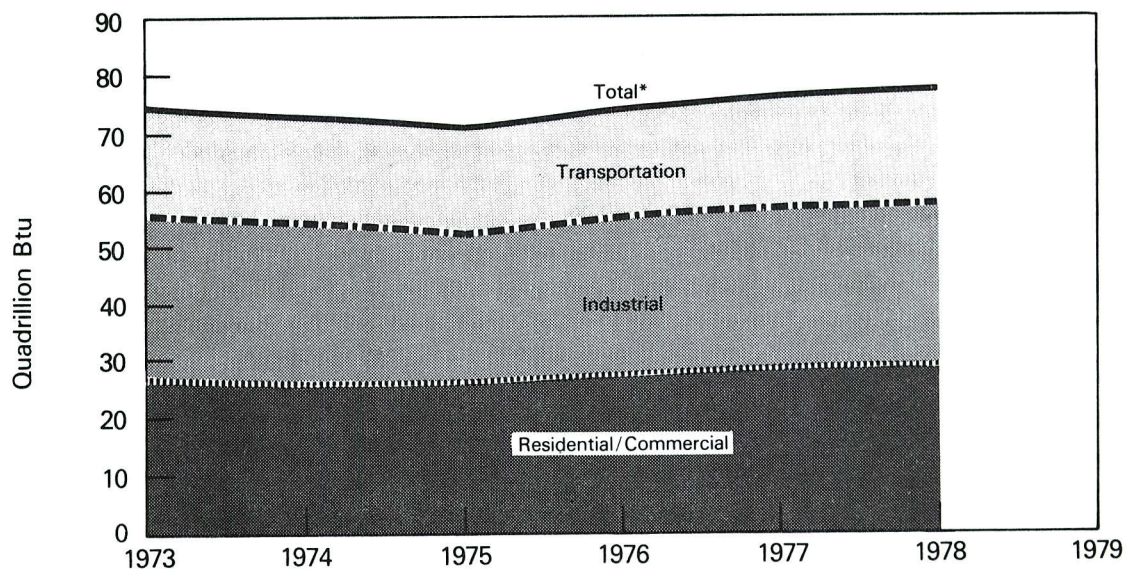
# Executive Summary

## Energy Consumption (Economic Sector)

Monthly



Yearly



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



# Executive Summary

## Domestic Net Imports of Energy<sup>1</sup>

		Coal <sup>2</sup>	Crude Oil <sup>3</sup>	Refined Petroleum Products <sup>4</sup>	Natural Gas (Dry)	Electricity <sup>5</sup>	Coal Coke	Net Imports
		Quadrillion (10 <sup>15</sup> ) Btu						
1973	TOTAL	(1.443)	6.883	6.097	0.981	0.148	(0.008)	12.659
1974	TOTAL	(1.585)	7.389	5.273	0.907	0.133	0.059	12.175
1975	TOTAL	(1.766)	8.709	3.799	0.904	0.064	0.014	11.725
1976	TOTAL	(1.590)	11.222	3.982	0.922	0.089	0.000	14.626
1977	January	(0.056)	1.129	0.448	0.084	0.015	(0.002)	1.619
	February	(0.082)	1.074	0.524	0.090	0.014	0.000	1.619
	March	(0.092)	1.201	0.460	0.100	0.015	(0.002)	1.682
	April	(0.148)	1.186	0.301	0.083	0.015	(0.002)	1.435
	May	(0.153)	1.212	0.285	0.085	0.015	0.000	1.445
	June	(0.161)	1.230	0.294	0.073	0.015	0.000	1.451
	July	(0.138)	1.263	0.335	0.068	0.015	0.002	1.545
	August	(0.114)	1.145	0.364	0.073	0.015	0.001	1.485
	September	(0.134)	1.105	0.343	0.072	0.015	0.007	1.408
	October	(0.126)	1.156	0.311	0.082	0.015	0.004	1.442
	November	(0.119)	1.094	0.288	0.083	0.015	0.001	1.362
	December	(0.100)	1.127	0.366	0.087	0.015	0.006	1.501
	TOTAL	(1.424)	13.921	4.320	0.981	0.182	0.015	17.995
1978	January	(0.021)	R1.106	R0.355	0.083	0.015	0.001	R1.540
	February	(0.012)	R0.936	R0.357	0.074	0.014	0.001	R1.370
	March	(0.004)	R1.099	R0.391	0.083	0.015	0.005	R1.589
	April	(0.060)	R0.965	R0.332	0.077	0.015	0.012	R1.341
	May	(0.113)	R1.009	R0.296	0.071	0.015	0.025	R1.304
	June	(0.139)	R1.093	R0.255	0.066	0.015	0.009	R1.299
	July	(0.089)	R1.115	0.322	0.069	0.015	0.015	R1.448
	August	(0.092)	R1.126	R0.299	0.071	0.015	0.013	R1.433
	September	(0.088)	R1.186	0.312	0.069	0.015	0.012	R1.505
	October	(0.127)	R1.139	R0.279	0.079	0.015	0.015	R1.401
	November	(0.160)	R1.153	R0.325	0.090	0.015	0.013	R1.435
	December	(0.118)	R1.215	R0.374	0.106	0.015	0.009	R1.601
	TOTAL	(1.023)	R13.143	R3.898	0.937	0.182	0.131	R17.268
1979	January	(0.093)	1.187	0.366	0.098	0.015	0.004	1.577
	February	(0.067)	0.999	0.310	0.092	0.014	0.003	1.351
	March	(0.122)	1.069	0.395	0.116	0.015	0.002	1.475
	April	(0.138)	1.020	0.254	0.109	0.015	0.005	1.265
	May	(0.165)	1.084	0.281	0.095	0.015	0.011	1.323
	June	(0.156)	R1.107	R0.258	0.099	0.015	0.010	R1.333
	July	(0.168)	R1.066	R0.280	0.105	0.015	0.008	R1.306
	August	(0.160)	R1.081	R0.213	R0.090	0.015	0.009	R1.249
	September	(0.134)	0.972	0.178	0.098	0.015	0.008	1.136
	TOTAL (Year to date)	(1.203)	9.585	2.535	0.901	0.136	0.061	12.014

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

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

<sup>2</sup>Includes bituminous coal, lignite, and anthracite.

<sup>3</sup>Includes crude oil, lease condensate, and imports of crude oil for the Strategic Petroleum Reserve.

<sup>4</sup>Includes refined petroleum products, unfinished oils, natural gasoline, and plant condensate.

<sup>5</sup>Only yearly totals are available for electricity imports. Figures shown are estimates derived by dividing the yearly total by the number of days in the year and multiplying by the number of days in the month.

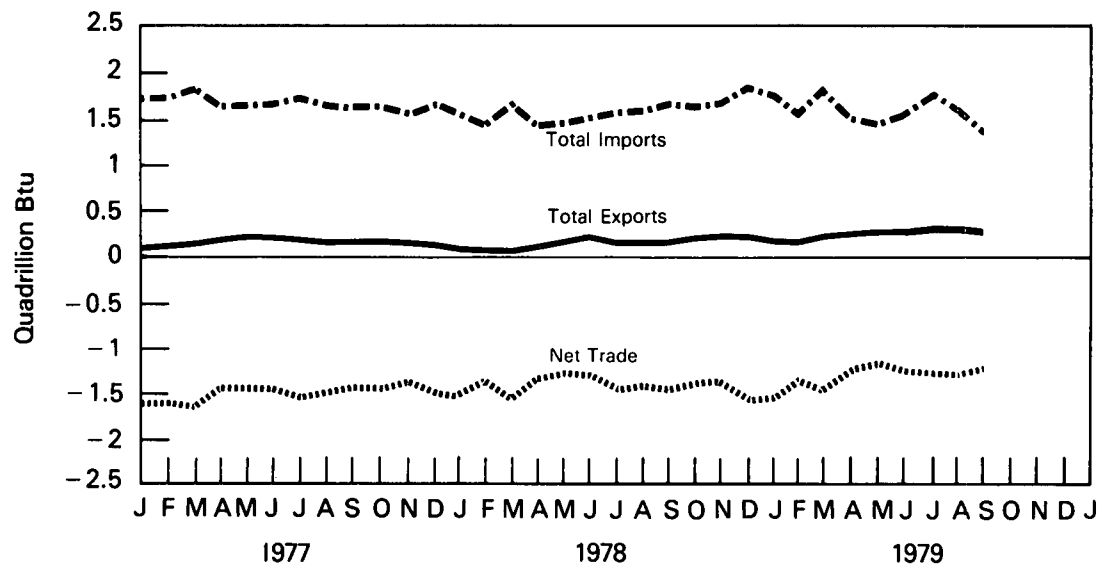
R = Revised data.

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

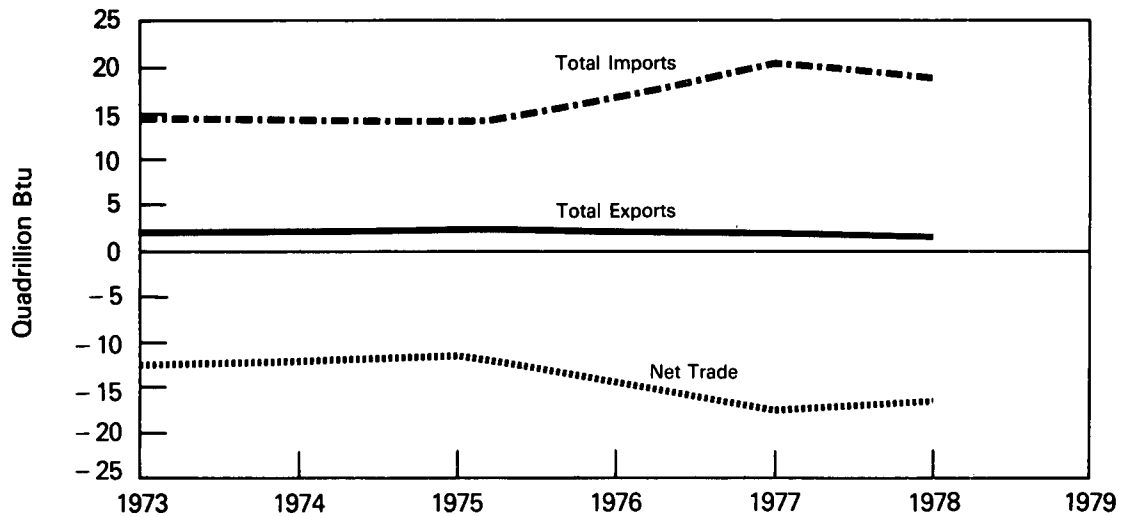
# Executive Summary

## Energy Imports and Exports

### Monthly



### Yearly



# Executive Summary

## Domestic Merchandise Trade Value<sup>1</sup>

		Exports				Imports			
		Energy	Manu- factured Products	Agricultural, Chemical, and Other	Total	Energy	Manu- factured Products	Agricultural, Chemical, and Other	Total
Million dollars									
<b>1973</b>	<b>TOTAL</b>	<b>1,671</b>	<b>38,954</b>	<b>29,598</b>	<b>70,223</b>	<b>8,101</b>	<b>42,352</b>	<b>18,668</b>	<b>69,121</b>
<b>1974</b>	<b>TOTAL</b>	<b>3,444</b>	<b>54,704</b>	<b>38,996</b>	<b>97,144</b>	<b>25,454</b>	<b>51,205</b>	<b>23,592</b>	<b>100,251</b>
<b>1975</b>	<b>TOTAL</b>	<b>4,470</b>	<b>62,260</b>	<b>39,372</b>	<b>106,102</b>	<b>26,476</b>	<b>47,384</b>	<b>22,256</b>	<b>96,116</b>
<b>1976</b>	<b>TOTAL</b>	<b>4,226</b>	<b>67,282</b>	<b>41,811</b>	<b>113,319</b>	<b>33,997</b>	<b>60,005</b>	<b>26,676</b>	<b>120,678</b>
<b>1977</b>	January	218	5,191	3,570	8,979	3,521	4,868	2,255	10,644
	February	268	5,330	3,744	9,342	3,857	5,261	2,475	11,593
	March	292	6,491	4,079	10,862	4,775	5,681	2,686	13,142
	April	398	5,998	3,940	10,336	3,512	5,609	2,814	11,935
	May	432	6,249	4,102	10,783	2,793	5,789	2,676	11,258
	June	398	5,935	3,735	10,068	4,306	6,687	3,053	14,046
	July	398	5,337	3,846	9,581	3,911	6,041	2,479	12,431
	August	334	5,105	3,370	8,809	3,651	5,856	2,538	12,045
	September	402	6,021	3,734	10,157	3,721	6,142	2,589	12,452
	October	367	5,571	3,426	9,364	3,635	6,512	2,350	12,497
	November	362	5,583	3,578	9,523	3,703	6,072	2,495	12,270
	December	315	6,488	4,398	11,201	3,153	7,066	3,153	13,372
	<b>TOTAL</b>	<b>4,184</b>	<b>69,299</b>	<b>45,522</b>	<b>119,005</b>	<b>44,538</b>	<b>71,584</b>	<b>31,563</b>	<b>147,685</b>
<b>1978</b>	January	189	5,348	3,680	9,217	3,422	6,604	2,692	12,718
	February	141	5,480	3,721	9,342	3,502	7,062	2,722	13,286
	March	165	7,091	4,580	11,836	3,431	7,896	3,220	14,547
	April	285	6,942	4,633	11,860	3,514	7,908	3,064	14,486
	May	364	7,141	4,745	12,250	3,234	7,840	3,125	14,199
	June	424	7,025	4,823	12,272	3,472	8,085	2,958	14,515
	July	322	6,204	4,254	10,780	3,380	8,309	3,015	14,704
	August	335	6,480	4,614	11,429	3,677	7,554	2,793	14,024
	September	348	7,166	4,992	12,506	3,699	7,799	2,919	14,417
	October	422	7,661	4,843	12,926	3,492	8,466	3,160	15,118
	November	466	7,568	5,400	13,434	3,536	8,412	3,107	15,055
	December	418	7,823	5,063	13,304	3,746	7,990	3,220	14,956
	<b>TOTAL</b>	<b>3,879</b>	<b>81,929</b>	<b>55,348</b>	<b>141,156</b>	<b>42,105</b>	<b>93,925</b>	<b>35,995</b>	<b>172,025</b>
<b>1979</b>	January	350	7,035	4,965	12,350	4,228	8,391	3,227	15,846
	February	292	7,446	4,966	12,704	3,525	7,480	2,771	13,776
	March	436	8,842	6,020	15,298	3,948	8,432	3,385	15,765
	April	467	8,038	5,506	14,011	4,241	8,550	3,381	16,172
	May	471	8,474	5,584	14,529	4,166	8,690	3,655	16,512
	June	500	8,527	6,054	15,081	4,528	9,247	3,661	17,436
	July	534	7,879	6,077	14,490	5,075	8,778	3,262	17,115
	August	496	7,981	6,237	14,714	5,460	8,988	3,482	17,931
	September	438	8,086	6,142	14,666	6,084	8,539	3,452	18,076
	October	567	9,072	7,352	16,991	6,559	9,255	3,430	19,243
	<b>TOTAL</b> (Year to date)	<b>4,551</b>	<b>81,380</b>	<b>58,903</b>	<b>144,834</b>	<b>47,814</b>	<b>86,350</b>	<b>33,706</b>	<b>167,872</b>

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

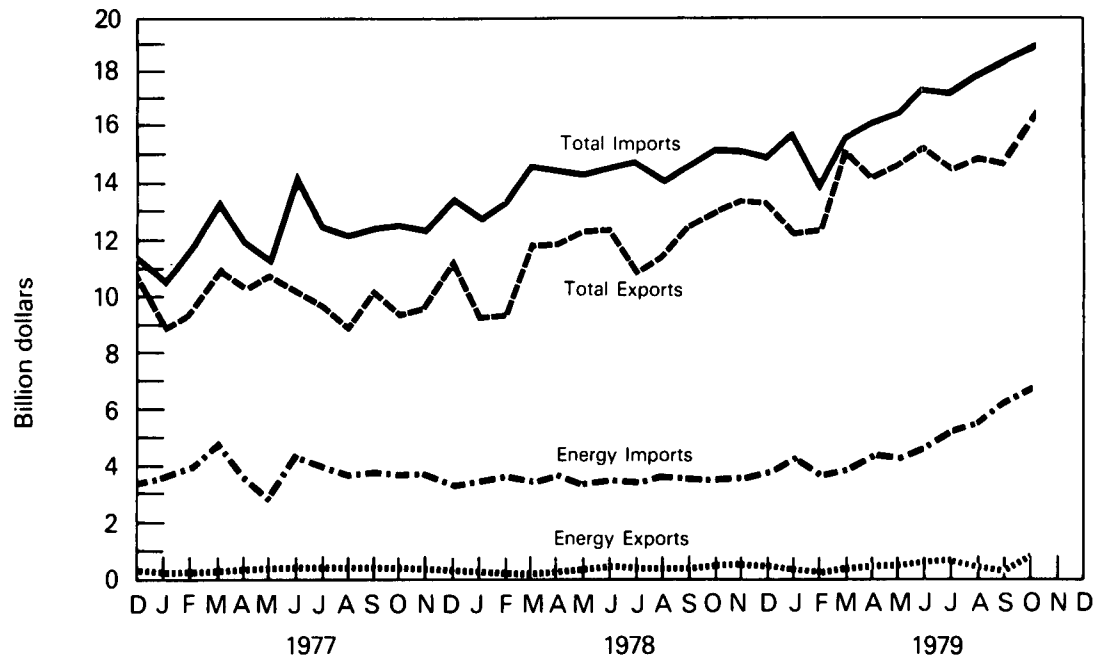
<sup>1</sup>Data presented are free alongside ship (f.a.s.) basis and are unadjusted for seasonality and working days. Beginning January 1979, the data excludes U.S. Department of Defense Military Assistance Program Grant-Aid Shipments. Commodity categories shown above include groups of BOC sections as follows: Energy—BOC section 3. (Mineral fuels, lubricants, and related materials). Manufactured products—BOC sections 6. (Manufactured goods classified chiefly by material), 7. (Machinery and transport equipment), and 8. (Miscellaneous manufactured articles, not elsewhere classified). Agricultural, chemical, and other—BOC sections 0. (Food and live animals), 1. (Beverages and tobacco), 2. (Crude material inedible, except fuels), 4. (Animal and vegetable fats and oils), 5. (Chemicals), and 9. (Commodities and transactions not classified according to kind).

Source: • U.S. Department of Commerce, Bureau of the Census (BOC) publication FT 900, *Summary of U.S. Export and Import Merchandise Trade*.

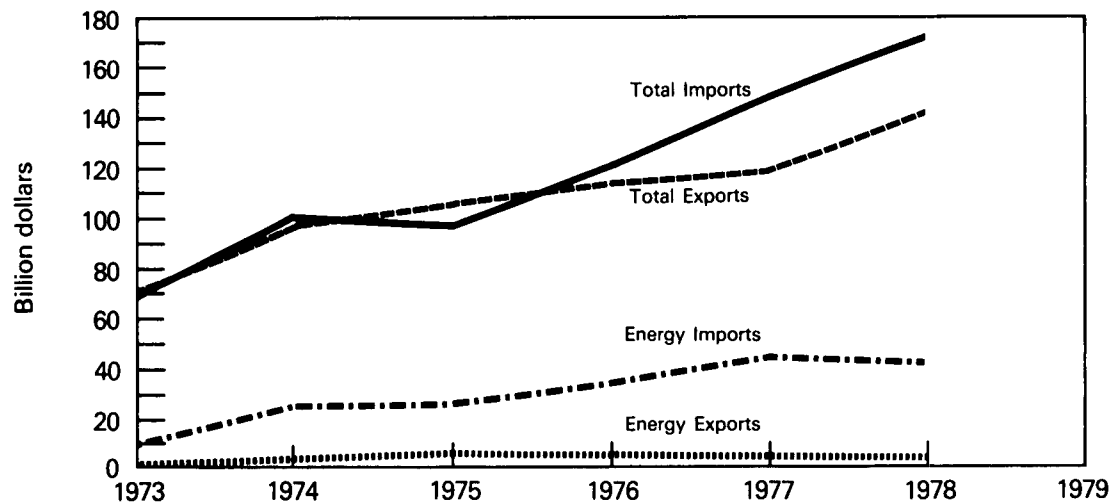
# Executive Summary

## Merchandise Trade Value

### Monthly



### Yearly



# Executive Summary

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

Petroleum Administration For Defense (PAD) Districts	October 29 through December 2					Cumulative July 1 through December 2				
	1979	1978 <sup>2</sup>		Normal (1941-70) <sup>2</sup>		1979	1978 <sup>2</sup>		Normal (1941-70) <sup>2</sup>	
PAD District I	518.8	543.1	(-4.5)	600.5	(-13.6)	845.3	875.0	(-3.4)	864.5	(-2.2)
New England	674.7	824.9	(-18.2)	769.1	(-12.3)	1,206.9	1,408.9	(-14.3)	1,203.8	(0.3)
Conn., Maine, Mass., N.H., R.I., Vt.										
Middle Atlantic	609.7	664.4	(-8.2)	703.1	(-13.3)	1,000.7	1,063.8	(-5.9)	1,021.1	(-2.0)
Del., Md., N.J., N.Y., Pa.										
Lower Atlantic	313.6	237.1	(32.3)	372.3	(-15.8)	453.1	357.0	(26.9)	480.0	(-5.6)
Fla., Ga., N.C., S.C., Va., W.Va.										
PAD District II	835.8	778.7	(7.3)	836.0	(0.0)	1,279.8	1,195.9	(7.0)	1,221.4	(4.8)
Ill., Ind., Iowa, Kans., Ky., Mich., Minn., Mo., Nebr., N. Dak., Ohio, Okla., S. Dak., Tenn., Wisc.										
PAD District III	416.9	219.6	(89.8)	333.6	(25.0)	467.1	283.4	(64.9)	399.2	(17.0)
Ala., Ark., La., Miss., N. Mex., Tex.										
PAD District IV	1,098.3	1,024.2	(7.2)	935.9	(17.3)	1,433.1	1,547.5	(-7.4)	1,472.5	(-2.7)
Colo., Idaho, Mont., Utah, Wyo.										
PAD District V	349.4	408.9	(-14.5)	362.0	(-3.5)	477.8	597.3	(-20.0)	628.1	(-23.9)
Ariz., Calif., Nev., Oreg., Wash.										
<b>U.S. AVERAGE</b>	<b>600.9</b>	<b>574.9</b>	<b>(4.5)</b>	<b>620.5</b>	<b>(-3.2)</b>	<b>905.1</b>	<b>887.5</b>	<b>(2.0)</b>	<b>907.7</b>	<b>(-0.3)</b>

<sup>1</sup>See Explanatory Note 6 for explanation of degree-days.

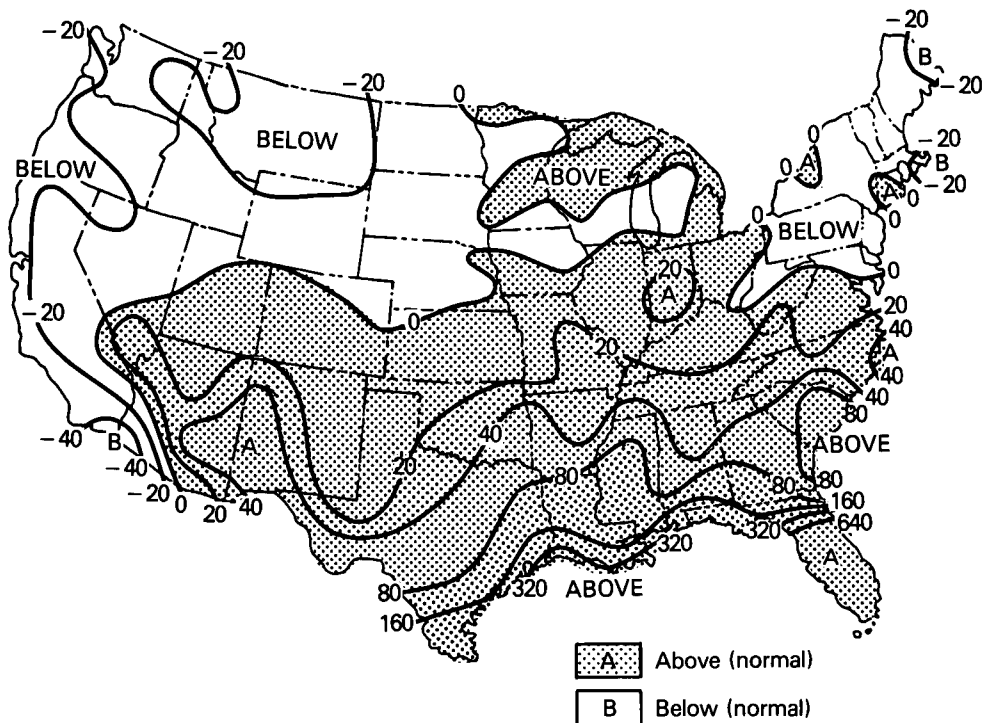
<sup>2</sup>Percentage change in parentheses.

# Executive Summary

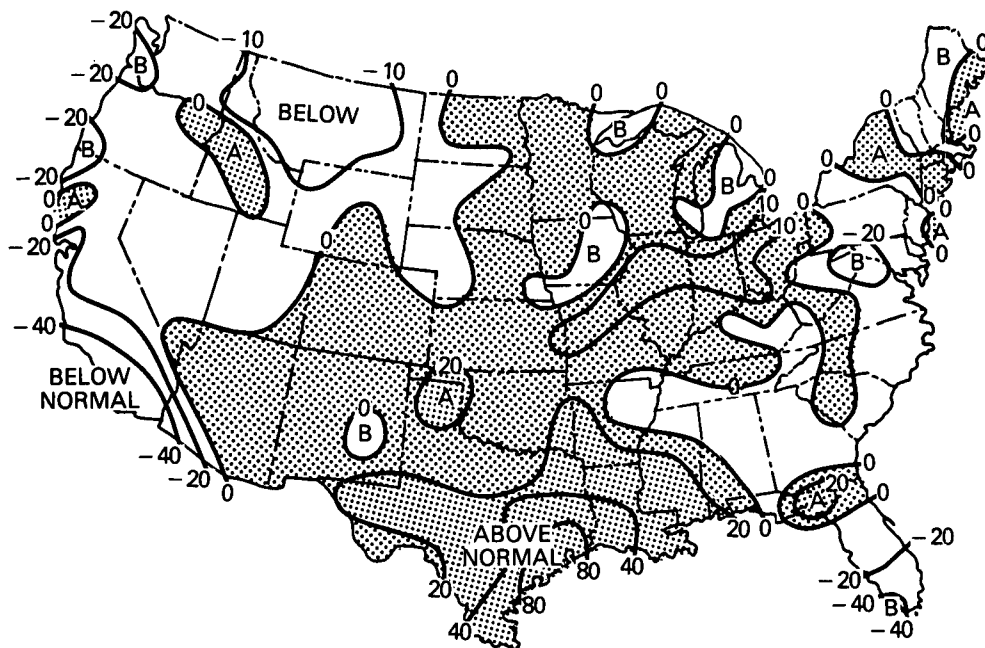
## Heating Degree-Days

Heating Degree-Days Accumulated from July 1 through December 2.

Percent Departure from 1978



Percent Departure from Normal (1941-70)



Note: Above normal heating degree-days correspond to below normal temperatures.

Source: • Department of Commerce — NOAA.

# Executive Summary

## Energy Indicators —

### Energy Consumption per GNP Dollar

		Energy Consumption per GNP Dollar <sup>1</sup>	Yearly Rate of Energy Consumption	Gross National Product	
				Current Dollars	1972 Dollars <sup>2</sup>
ANNUAL RATE		Quadrillion Btu		Trillion dollars	
1973	AVERAGE	60.4	74.605	1.307	1.235
1974	AVERAGE	59.9	72.756	1.413	1.214
1975	AVERAGE	59.3	70.706	1.516	1.192
1976	AVERAGE	58.6	74.513	1.700	1.271
1977	1st Qtr	64.4	84.108	1.807	1.307
	2nd Qtr	53.6	71.047	1.867	1.326
	3rd Qtr	53.7	72.222	1.917	1.344
	4th Qtr	58.2	78.872	1.958	1.355
	AVERAGE	57.4	76.536	1.887	1.333
1978	1st Qtr	R64.2	R86.902	1.992	1.354
	2nd Qtr	R53.0	R73.269	2.088	1.383
	3rd Qtr	R52.8	R73.468	2.136	1.391
	4th Qtr	R56.8	R80.256	2.212	1.413
	AVERAGE	R56.6	R78.443	2.107	1.385
1979	1st Qtr	62.3	89.620	2.265	1.416
	2nd Qtr	R51.3	R72.952	2.330	1.422
	3rd Qtr	50.0	71.711	2.395	1.434

### U.S. Dependence on Petroleum Imports

Direct Imports			Domestic Petroleum Products Supplied
From Arab/OPEC Countries	From OPEC Countries	Total All Countries	
Million barrels per day			
0.91	2.99	6.26	17.31
0.75	3.28	6.11	16.65
1.38	3.60	6.06	16.32
2.42	5.07	7.31	17.46
3.05	6.38	9.41	19.68
3.40	6.42	8.74	17.53
3.19	6.20	8.75	17.77
3.09	5.78	8.34	18.77
3.18	6.19	8.81	18.43
R2.90	R5.75	R8.32	R20.07
R2.76	R5.31	R7.79	R18.08
R2.98	R5.81	R8.53	R18.08
R3.17	R6.08	R8.80	19.17
R2.95	R5.74	R8.36	R18.84
R3.23	5.81	8.73	20.30
R3.14	R5.38	R8.01	R17.56
2.78	5.22	7.57	17.33

<sup>1</sup>Thousand Btu per 1972 constant dollar.

<sup>2</sup>Current dollars converted to 1972 constant dollars by the formula:

$$\text{Constant 1972 dollars} = \frac{\text{Current dollars in year N}}{\text{Gross National Product implicit price deflator in year N}} \times 100$$

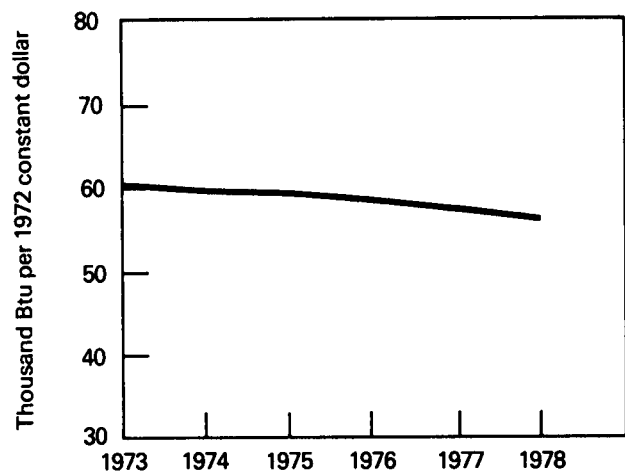
The Gross National Product deflators (1972 = 100) were determined by the Department of Commerce, Bureau of Economic Analysis.

R = Revised data.

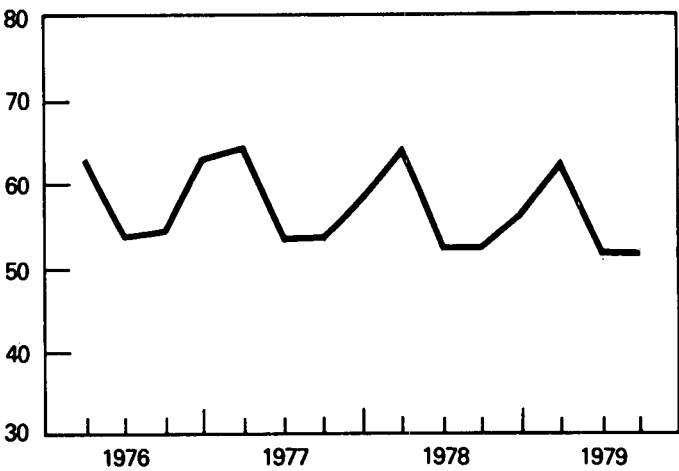
# Executive Summary

## Energy Consumption per GNP Dollar

Yearly

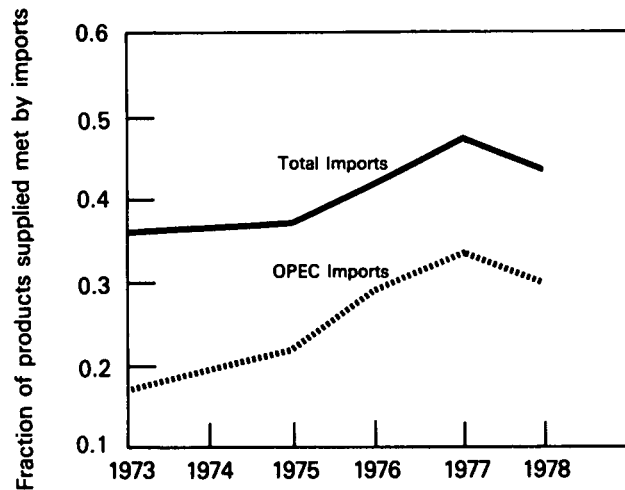


Quarterly

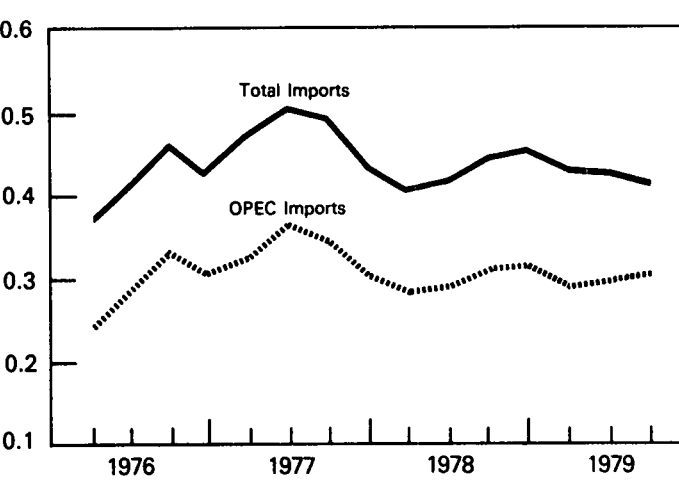


## U.S. Dependence on Petroleum Imports

Yearly



Quarterly



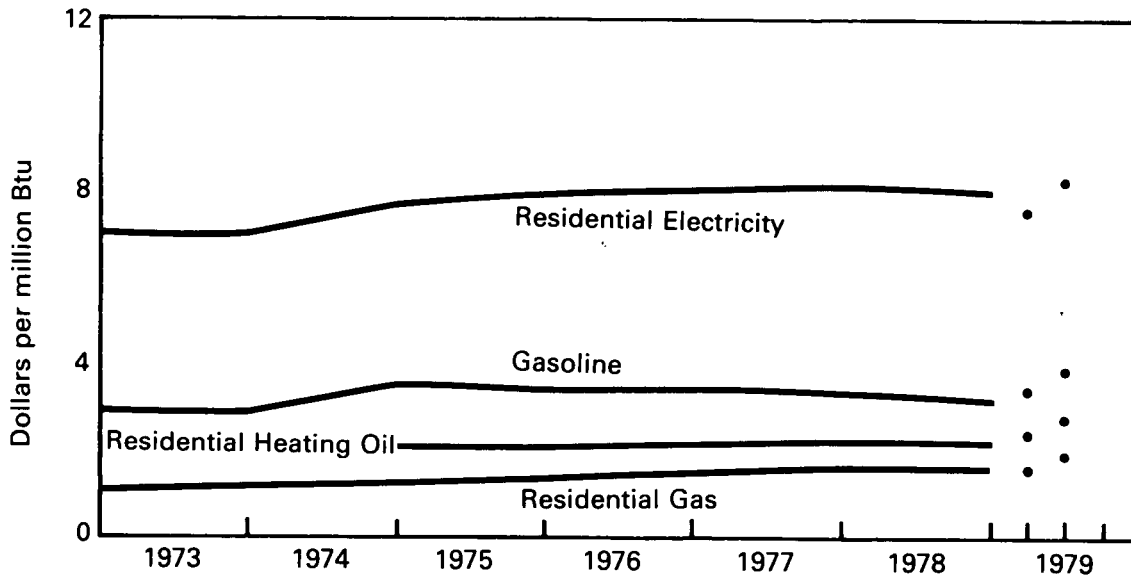


# Executive Summary

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

		Leaded Regular Motor Gasoline		Residential Heating Oil		Residential Natural Gas		Residential Electricity	
		cent/gal	\$/MMBtu	cent/gal	\$/MMBtu	cent/Mcf	\$/MMBtu	cent/kWh	\$/MMBtu
1973	AVERAGE	36.5	2.92	NA	NA	121.2	1.24	2.39	7.00
1974	AVERAGE	44.8	3.59	29.4	2.12	123.4	1.23	2.63	7.71
1975	AVERAGE	43.7	3.50	29.3	2.11	132.8	1.33	2.73	7.99
1976	AVERAGE	43.1	3.46	30.2	2.18	145.4	1.49	2.77	8.11
1977	AVERAGE	43.2	3.46	31.2	2.25	162.2	1.66	2.81	8.23
1978	1st Qtr	41.0	3.28	32.3	2.33	155.0	1.58	2.65	7.76
	2nd Qtr	40.6	3.25	31.4	2.26	169.7	1.73	2.88	8.44
	3rd Qtr	41.3	3.31	30.7	2.21	196.3	2.00	2.85	8.35
	4th Qtr	41.3	3.31	32.1	2.31	164.5	1.68	2.70	7.91
	AVERAGE	41.0	3.28	31.7	2.29	163.5	1.67	2.76	8.10
1979	1st Qtr	42.6	3.41	33.8	2.44	158.0	1.61	2.51	7.34
	2nd Qtr	47.5	3.80	37.2	2.68	171.5	1.75	2.83	8.03

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



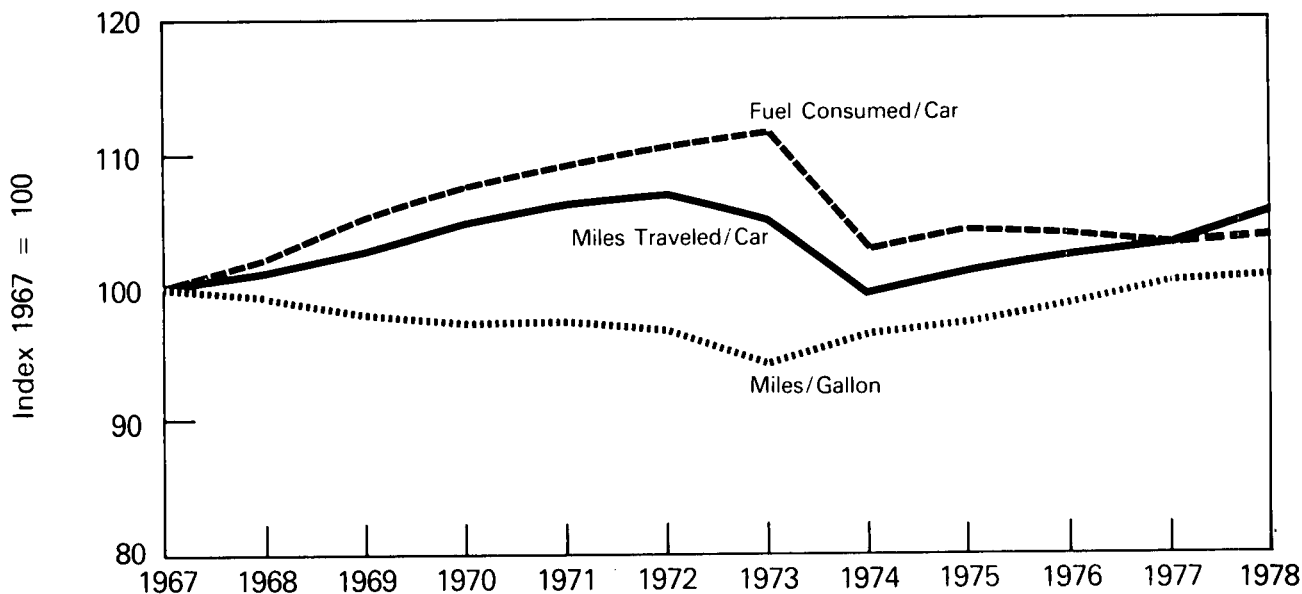
**Sources:** • Motor Gasoline — 1973 through 1977, Lundberg Survey Inc. and 1978, U.S. Department of Energy Forms EIA-8 and EIA 79, "Retail Motor Fuels Service Station Survey".  
 • Heating Oil — 1974 and 1975, form CLC-92, "No. 2 Heating Oil Monthly Price Adjustment Report," and 1976 forward, FEA Form P112 M 1, and EIA 9, "No. 2 Heating Oil Supply/Price Monitoring Report."  
 • Natural Gas — 1973 through 1977, Bureau of Mines and Energy Information Administration Form 1340 A, "Supply and Disposition of Natural Gas to Non-Producing Distributors;" and Form 1341 A, "Supply and Disposition of Natural Gas to Producers and Pipelines;" and 1978, the American Gas Association, "Quarterly Report of Gas Industry Operations."  
 • Electricity — FPC Form 5, "Reports of Classes A and B Privately Owned Electric Utilities."  
 • Deflator — The Consumer Price Index.

# Executive 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

## U.S. Passenger Car Efficiency



Source: • U.S. Department of Transportation, Federal Highway Administration, Federal Highway Statistics Division, "Highway Statistics", Table VM-1.

## Energy Consumption

Domestic energy consumption in September 1979 was 5.8 quadrillion Btu, 7.3 percent lower than during a month earlier. This figure was 2.8 percent lower than September 1978 and 1977 consumption levels.

The residential and commercial sector consumption was 2.0 quadrillion Btu in September 1979, 9.3 percent lower than in August and 1.3 percent lower than the amount consumed during September 1978. The residential and commercial sector consumed 33.9 percent of the total consumption for September 1979, up from the sector's 33.4 percent share in September 1978 and 32.1 percent share in September 1977.

The industrial sector consumption was 2.3 quadrillion Btu in September 1979, down 4.7 percent from August 1979, and down 1.8 percent from the consumption level in September 1978. The industrial sector consumed 39.7 percent of the September 1979 total, as compared to the 39.3 percent share of September 1978 and the 40.6 percent share of September 1977.

The transportation sector consumption was 1.5 quadrillion Btu in September 1979, down 8.2 percent from August 1979 and down 6.2 percent from the consumption level in September 1978. This sector consumed 26.4 percent of the September 1979 total, as compared to a 27.3 percent share in September 1978 and a 27.2 percent share in September 1977.

The electric utilities consumption was an estimated 2.0 quadrillion Btu of energy in September 1979, 12.4 percent lower than in the previous month, and 2.2 percent lower than the energy consumed in September 1978. Coal contributed 46.4 percent of the energy consumed by electric utilities in September 1979, while natural gas contributed 18.0 percent, petroleum 12.2 percent, nuclear power 12.0 percent, hydroelectric power 10.9 percent, and geothermal, wood and waste 0.4 percent. Of the total energy consumed by the electric utilities in September 1979, 53.0 percent was ultimately consumed by the residential and commercial sector (including electricity distributed and losses), 34.5 percent by the industrial sector, and 0.2 percent by the transportation sector.

# Consumption

## Energy Consumption Summary September 1979 [Quadrillion (10<sup>15</sup>) Btu]

### Sector<sup>1</sup>

Primary Energy Source	Residential and Commercial	Industrial	Transportation	Electric Utilities	TOTAL
Coal <sup>2</sup>	0.016	0.290	0.000	0.907	1.212
Natural Gas (dry) <sup>3</sup>	0.263	0.630	0.030	0.352	1.276
Petroleum <sup>4</sup>	0.505	0.602	1.495	0.238	2.840
Hydroelectric <sup>5</sup>	0.000	0.003	0.000	0.213	0.216
Nuclear <sup>6</sup>	0.000	0.000	0.000	0.235	0.235
Net Coke Imports <sup>7</sup>	0.000	0.008	0.000	0.000	0.008
Other <sup>8</sup>	0.000	0.000	0.000	0.007	0.007
<b>TOTAL PRIMARY ENERGY</b>	<b>0.784</b>	<b>1.533</b>	<b>1.525</b>	<b>1.953</b>	<b>5.795</b>
Electricity Distributed <sup>9</sup>	0.368	0.239	0.001	(0.608)	
Net Energy Consumption	1.152	1.773	1.526		4.450
Electrical Energy Loss Distributed <sup>10</sup>	0.813	0.529	0.003	(1.344)	1.344
<b>TOTAL ENERGY</b>	<b>1.965</b>	<b>2.301</b>	<b>1.529</b>		<b>5.795</b>

## Footnotes

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

<sup>1</sup>See Explanatory Note 5 for definitions of the Residential and Commercial, Industrial, Transportation, and Electric Utilities Sectors.

Footnotes 2 through 10 apply to the table above and provide explanations and sources for the three individual sector tables following in this publication:

<sup>2</sup>Bituminous coal, anthracite, and lignite. Sources: • Anthracite—1976: U.S. Department of the Interior (DOI), Bureau of Mines (BOM), *Minerals Yearbook*,

"Coal—Pennsylvania anthracite, Annual."

• 1977 through 1979, U.S. Department of Energy (DOE), Energy Information Administration, (EIA) *Energy Data Report*, "Weekly Coal Report."

• Bituminous coal and lignite—1973 through 1975, U.S. DOI, BOM, *Minerals Yearbook*, "Bituminous Coal and Lignite, Annual," Federal Power Commission (FPC), Form 4, "Monthly Power Plant Report," 1976 through 1979, DOE, EIA, *Energy Data Report*, "Weekly Coal Report."

• Electric Utility consumption of coal sources: same as footnote 6 below.

<sup>3</sup>Natural gas consumption by the Transportation Sector is mostly for pipeline use. It is estimated to be the following percentages of non-utility gas consumption: 1973: 3.76%; 1974: 3.56%; 1975: 3.25%; and 1976 through 1979: 3.26%. American Gas Association (AGA) data are used to estimate monthly consumption of natural gas by the Residential and Commercial Sector. In completed years, the AGA consumption in each month is taken as a portion of the AGA year's total: that fraction is multiplied by the DOE total for that year to obtain a monthly estimate. For incomplete years, the AGA Residential and Commercial Sector's monthly consumption of natural gas is used directly. In 1973, 36 percent of the AGA's "other" sector is added to the Residential and Commercial Sector; in 1974 this percent is increased to 39 percent; and from 1975 all of the "other" sector is added to the Residential and Commercial Sector. The industrial Sector consumption of natural gas is the difference between the total and the sum of the other sectors.

Sources: • 1973 through 1975: DOI, BOM, *Minerals Yearbook*, "Natural Gas" chapter.

• 1976 through 1979, DOE, *Energy Data Reports*, "Natural Gas Monthly Production and Consumption."

• Electric Utilities consumption: 1973 through 1976, FPC, Form 4, "Monthly Power Plant Report."

• 1977 through 1979, DOE, EIA, FPC, Form 4, "Monthly Power Plant Report." Residential and Commercial Sector annual data sources are the same as for total natural gas consumption.

<sup>4</sup>Petroleum products are allocated to the Transportation Sector as follows: motor gasoline 100% for all years; naphtha jet fuel 100% for all years; kerosene jet fuel 1973: 98.0%; 1974: 98.2%; 1975: 98.3%; 1976: 98.3%; and 1977 and 1978: 97.6%; distillate fuel oil 1973: 32.8%; 1974: 34.1%; 1975: 34.1%; 1976: 33.7%; and 1977 through 1979: 34.0%; residual fuel oil 1973: 11.3%; 1974: 11.7%; 1975: 12.9%; 1976: 13.3%; and 1977 through 1979: 13.2%; all other petroleum products 1973: 4.6%; 1974: 4.5%; 1975: 4.2%; 1976: 4.2%; and 1977 through 1979: 3.9%. The remainder is distributed to the Residential and Commercial Sector and the Industrial Sector by applying the following percentage shares by year: Residential and Commercial Sector—1973: 51.47%; 1974: 49.75%; 1975: 49.62%; 1976: 48.49%; and 1977 through 1979: 45.59%; and industrial Sector—1973: 48.53%; 1974: 50.25%; 1975: 50.38%; 1976: 51.51%; and 1977 through 1979: 48.53%. These percentages are developed on a Btu basis from the sources listed above for the other sectors.

Sources: • 1973 through 1975: DOI, BOM, *Mineral Industry Surveys*, "Petroleum Statement, Annual."

• 1976 and 1977: DOE, EIA, *Energy Data Reports*, "Petroleum Statement, Annual."

• 1978 and 1979: DOE, EIA, *Energy Data Reports*, "Petroleum Statement, Monthly" and "Monthly Petroleum Statistics Report."

• Electric Utility consumption of petroleum sources: 1973 through 1976: FPC, Form 4, "Monthly Power Plant Report."

• 1977 through 1979: DOE, FPC, Form 4, "Monthly Power Plant Report."

• Transportation Sector consumption of petroleum: 1973 through 1975, derived from DOI, BOM, *Mineral Industry Surveys*, "Fuel Oil Sales, Annual" and "Liquefied Petroleum Gas Sales, Annual."

• 1976 through 1979: DOE, *Energy Data Reports*, "Fuel Oil Sales, Annual" and "Liquefied Petroleum Gas Sales, Annual," and from the sources listed for total petroleum consumption.

<sup>5</sup>Industrial and electric utility generation of hydropower. Sources: • 1973 through 1976, FPC, Form 4, "Monthly Power Plant Report."

• 1977 through 1979: DOE, EIA, FPC, Form 4, "Monthly Power Plant Report."

• Imports and exports of electricity—Sources: FPC, Form 12, "Power System Statement."

Sources: • 1973 through 1976: FPC, Form 4, "Monthly Power Plant Report."

• 1977 through 1979: DOE, EIA, FPC, Form 4, "Monthly Power Plant Report."

<sup>7</sup>Net coke imports is coke made from coal. Sources: • 1973 through 1975, DOI, BOM, *Minerals Yearbook*, "Coke and Coal Chemicals, Annual."

• 1976 through 1979: DOE, EIA, *Energy Data Reports*, "Coke and Coal Chemicals, Monthly."

<sup>8</sup>"Other" is electricity produced from geothermal power and from wood and waste. Sources: same as footnote 6 above.

<sup>9</sup>Electricity was distributed using EIA data on kilowatt-hour sales to ultimate customers. Electrical energy consumed by railroads was distributed to the Transportation Sector.

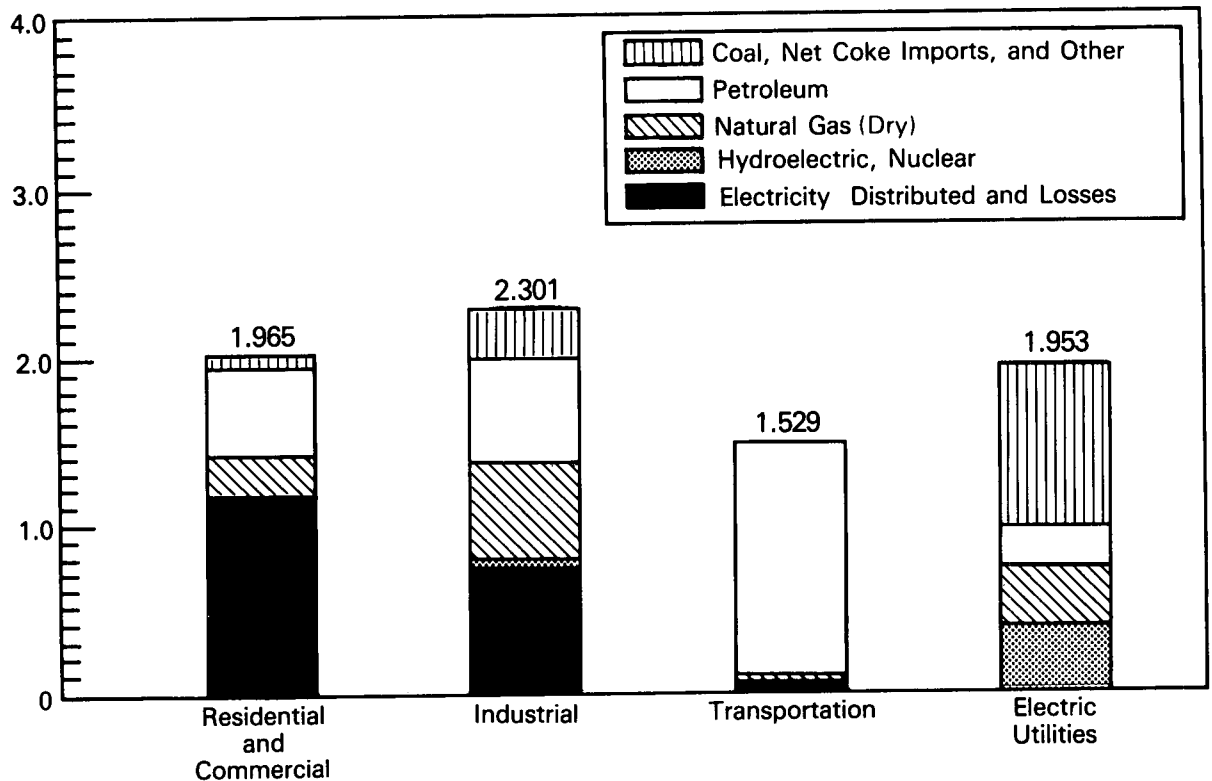
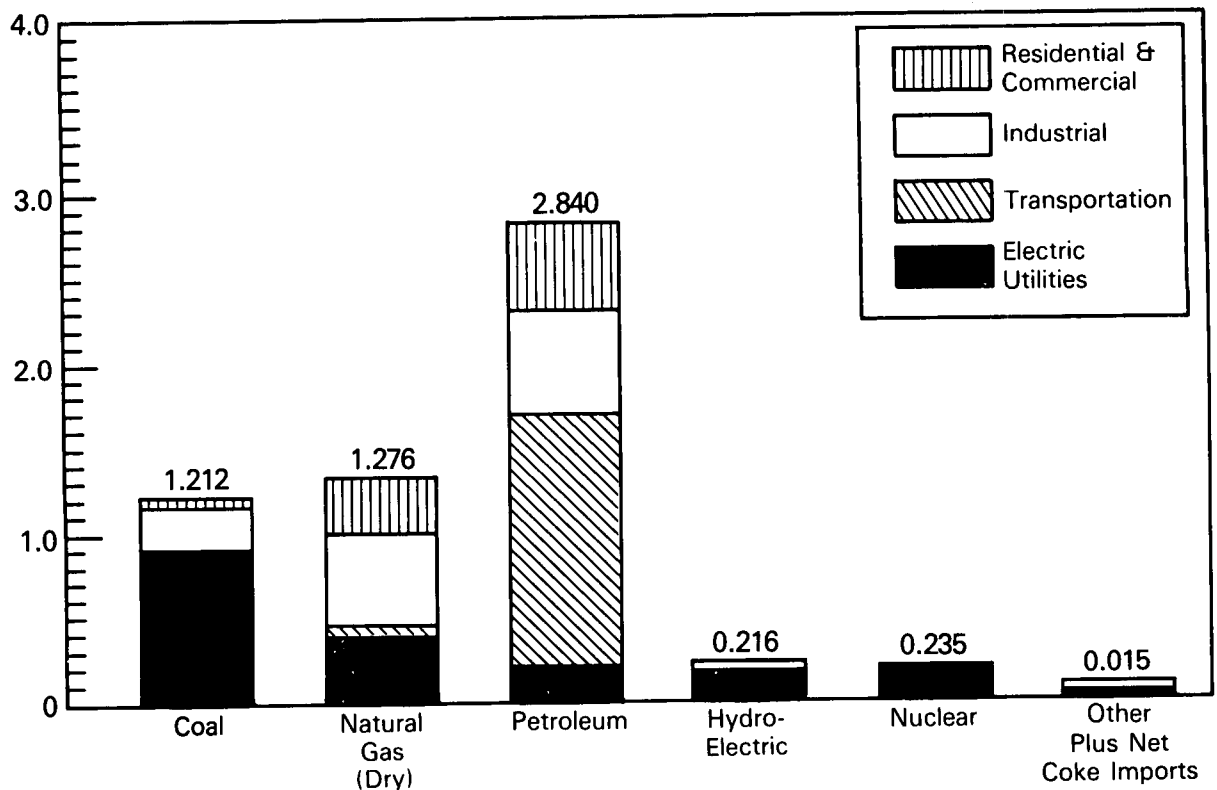
All "Other" sales, largely for use in government buildings, were distributed to the Residential and Commercial Sector. Source: • Sales data—FPC, Form 5, "Monthly Statement of Electric Operating Revenue and Income."

<sup>10</sup>In generating electricity with nuclear or fossil fuels, approximately 65 percent of the energy is lost in the form of heat. Transmission and distribution losses consume about an additional 3 percent of the energy inputs of the utility industry. In order to fully account for all energy consumed both directly and indirectly (i.e., utilities energy disposition), the electricity losses are allocated to the final end-use sectors in proportion to their direct kilowatt-hour usage.

# Consumption

Energy Consumption Summary  
September 1979

Quadrillion ( $10^{15}$ ) Btu



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

# Consumption

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

		Coal	Natural Gas (dry)	Petroleum	Electricity Distributed	Electrical Energy Loss Distributed	Total Energy Use	Yearly Cumulative Total Energy Use
Quadrillion (10 <sup>15</sup> ) Btu								
1973	TOTAL	0.293	7.626	6.831	3.489	8.295	26.534	
1974	TOTAL	0.292	7.518	6.214	3.469	8.419	25.912	
1975	TOTAL	0.248	7.581	5.839	3.584	8.729	25.981	
1976	TOTAL	0.239	7.866	6.290	3.725	9.060	27.180	
1977	January	0.032	1.362	0.630	0.371	0.954	3.349	3.349
	February	0.021	1.203	0.599	0.351	0.727	2.901	6.250
	March	0.019	0.836	0.542	0.310	0.740	2.447	8.698
	April	0.020	0.616	0.479	0.282	0.655	2.052	10.750
	May	0.015	0.401	0.471	0.277	0.718	1.882	12.632
	June	0.016	0.312	0.484	0.312	0.804	1.927	14.559
	July	0.012	0.274	0.450	0.370	0.971	2.077	16.635
	August	0.015	0.253	0.491	0.376	0.937	2.072	18.708
	September	0.014	0.263	0.489	0.355	0.795	1.916	20.624
	October	0.018	0.375	0.544	0.311	0.712	1.959	22.583
	November	0.024	0.584	0.543	0.289	0.718	2.158	24.741
	December	0.028	0.983	0.606	0.329	0.858	2.804	27.545
1978	TOTAL	0.234	7.462	6.327	3.932	9.589	27.545	
	January	0.028	1.232	R0.599	0.375	0.976	R3.210	R3.210
	February	0.029	1.257	R0.573	0.367	0.838	R3.064	R6.274
	March	0.023	1.038	R0.565	0.342	0.823	R2.791	R9.065
	April	0.020	0.683	R0.499	0.293	0.692	R2.186	R11.251
	May	0.018	0.483	R0.524	0.283	0.752	R2.060	R13.311
	June	0.017	0.313	0.485	0.324	0.846	1.986	R15.297
	July	0.015	0.264	0.478	0.376	0.982	2.115	R17.412
	August	0.016	0.246	R0.502	0.385	0.990	R2.139	R19.551
	September	0.018	R0.252	R0.500	R0.377	R0.843	R1.990	R21.541
	October	0.026	0.352	R0.550	0.322	0.747	R1.997	R23.538
	November	0.027	0.602	0.554	0.301	0.749	2.232	R25.770
	December	0.029	0.966	R0.594	0.340	0.880	R2.809	R28.579
	TOTAL	0.265	R7.687	R6.423	R4.085	R10.119	R28.579	
1979	January	0.035	1.308	0.641	0.397	1.051	3.433	3.433
	February	0.022	1.329	0.596	0.385	0.874	3.207	6.639
	March	0.017	0.993	0.619	0.349	0.822	2.800	9.439
	April	0.016	0.748	0.508	0.309	0.720	2.301	11.740
	May	0.015	0.462	0.539	0.297	0.751	2.063	13.803
	June	0.015	0.320	R0.507	0.321	0.815	R1.978	R15.781
	July	0.013	0.273	R0.491	0.362	0.954	R2.093	R17.874
	August	R0.012	0.252	0.532	0.389	R0.982	R2.167	R20.041
	September	0.016	0.263	0.505	0.368	0.813	1.965	22.006
	TOTAL	0.161	5.949	4.937	3.178	7.782	22.006	
	(Year to date)							

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

<sup>1</sup>The Residential and Commercial Sector consists of housing units, non-manufacturing business establishments (e.g., whole-sale and retail businesses), health and educational institutions, and government office buildings. Notes on the methodology used for sector calculations are provided in the footnotes on page 22.

R = Revised data.

Source: • See footnotes on page 22.

# Consumption

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

		Coal	Natural Gas (dry)	Petroleum	Hydro-electric	Net Coke Imports <sup>2</sup>	Electricity Distributed	Electrical Energy Loss Distributed	Total Energy Use	Yearly Cumulative Total Energy Use
		Quadrillion (10 <sup>15</sup> ) Btu								
1973	TOTAL	4.377	10.397	6.441	0.033	(0.008)	2.341	5.564	29.144	
1974	TOTAL	4.047	10.012	6.277	0.031	0.059	2.337	5.668	28.430	
1975	TOTAL	3.786	8.532	5.929	0.030	0.014	2.304	5.613	26.207	
1976	TOTAL	3.773	8.768	6.682	0.033	0.000	2.525	6.144	27.924	
1977	January	0.322	0.812	0.751	0.003	(0.002)	0.210	0.539	2.636	2.636
	February	0.308	0.391	0.715	0.003	0.000	0.206	0.427	2.050	4.686
	March	0.329	0.627	0.647	0.003	(0.002)	0.216	0.515	2.336	7.022
	April	0.309	0.583	0.571	0.003	(0.002)	0.216	0.502	2.182	9.204
	May	0.306	0.703	0.562	0.003	0.000	0.223	0.579	2.377	11.581
	June	0.298	0.696	0.577	0.003	0.000	0.225	0.582	2.381	13.962
	July	0.289	0.690	0.537	0.003	0.002	0.220	0.578	2.319	16.280
	August	0.277	0.744	0.586	0.003	0.001	0.226	0.563	2.400	18.680
	September	0.269	0.824	0.584	0.003	0.007	0.226	0.508	2.421	21.101
	October	0.301	0.840	0.649	0.003	0.004	0.226	0.518	2.541	23.642
	November	0.300	0.851	0.648	0.003	0.001	0.221	0.551	2.574	26.216
	December	0.306	0.880	0.724	0.003	0.006	0.218	0.569	2.706	28.923
	TOTAL	3.612	8.641	7.552	0.037	0.015	2.635	6.431	28.923	
1978	January	0.286	0.893	R0.715	0.003	0.001	0.219	0.571	R2.688	R2.688
	February	0.246	0.645	R0.684	0.003	0.001	0.208	0.475	R2.261	R4.949
	March	0.243	0.625	R0.674	0.003	0.005	0.210	0.505	R2.264	R7.213
	April	0.274	0.613	R0.596	0.003	0.012	0.215	0.509	R2.223	R9.436
	May	0.293	0.619	R0.626	0.003	0.025	0.227	0.604	R2.397	R11.833
	June	0.287	0.599	0.579	0.003	0.009	0.234	0.610	2.322	R14.155
	July	0.291	0.690	0.571	0.003	0.015	0.229	0.598	2.396	R16.552
	August	0.288	0.682	R0.599	0.002	0.013	0.237	0.609	R2.431	R18.983
	September	0.288	R0.670	R0.596	0.003	0.012	0.239	R0.534	R2.342	R21.324
	October	0.309	0.807	R0.656	0.003	0.015	0.240	0.557	R2.587	R23.911
	November	0.308	0.808	0.661	0.003	0.013	0.235	0.585	R2.611	R26.523
	December	0.319	0.858	R0.709	0.003	0.009	0.231	0.598	R2.727	R29.250
	TOTAL	3.433	R8.509	R7.666	0.036	0.131	R2.723	R6.752	R29.250	
1979	January	0.314	0.807	0.765	0.003	0.004	0.230	0.608	2.731	2.731
	February	0.287	0.567	0.711	0.003	0.003	0.228	0.517	2.317	5.047
	March	0.306	0.557	0.738	0.003	0.002	0.235	0.552	2.394	7.441
	April	0.292	0.549	0.606	0.003	0.005	0.235	0.546	2.237	9.678
	May	0.292	0.613	0.643	0.003	0.011	0.240	0.608	2.412	12.090
	June	0.275	0.608	R0.606	0.003	0.010	0.242	0.616	R2.359	R14.449
	July	0.280	0.614	R0.585	0.003	0.008	0.239	0.628	R2.358	R16.807
	August	R0.288	R0.627	R0.634	0.003	0.009	0.242	0.611	R2.415	R19.222
	September	0.290	0.630	0.602	0.003	0.008	0.239	0.529	2.301	21.524
	TOTAL	2.624	5.573	5.892	0.028	0.061	2.130	5.216	21.524	
	(Year to date)									

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

<sup>1</sup>The Industrial Sector is made up of construction, manufacturing, agriculture, and mining establishments. Notes on the methodology used for sector calculations are provided in the footnotes on page 22.

<sup>2</sup>Net Imports = imports minus exports. Parentheses indicate exports are greater than imports.

R = Revised data.

Source: • See footnotes on page 22.

# Consumption

## Energy Consumption by the Transportation Economic Sector<sup>1</sup>

		Coal	Natural Gas (dry)	Petroleum	Electricity Distributed	Electrical Energy Loss Distributed	Total Energy Use	Yearly Cumulative Total Energy Use
		Quadrillion (10 <sup>15</sup> ) Btu						
1973	TOTAL	0.003	0.743	18.132	0.014	0.034	18.927	
1974	TOTAL	0.002	0.685	17.677	0.015	0.035	18.414	
1975	TOTAL	0.001	0.595	17.872	0.015	0.035	18.518	
1976	TOTAL	0.000	0.559	18.799	0.015	0.036	19.408	
1977	January	0.000	0.073	1.668	0.001	0.004	1.746	1.746
	February	0.000	0.054	1.544	0.002	0.003	1.603	3.349
	March	0.000	0.049	1.617	0.001	0.003	1.670	5.019
	April	0.000	0.040	1.592	0.001	0.003	1.636	6.655
	May	0.000	0.037	1.576	0.001	0.003	1.617	8.272
	June	0.000	0.034	1.621	0.001	0.003	1.659	9.931
	July	0.000	0.032	1.642	0.001	0.003	1.678	11.609
	August	0.000	0.034	1.662	0.001	0.003	1.699	13.308
	September	0.000	0.037	1.583	0.001	0.003	1.623	14.931
	October	0.000	0.041	1.615	0.001	0.003	1.660	16.591
	November	0.000	0.048	1.601	0.001	0.003	1.654	18.245
	December	0.000	0.063	1.756	0.001	0.003	1.823	20.068
	TOTAL	0.000	0.543	19.476	0.014	0.035	20.068	
1978	January	0.000	0.072	R1.644	0.001	0.004	R1.721	R1.721
	February	0.000	0.064	1.565	0.001	0.003	1.634	R3.354
	March	0.000	0.056	1.735	0.001	0.003	R1.796	R5.150
	April	0.000	0.044	1.582	0.001	0.003	1.629	R6.780
	May	0.000	0.037	R1.711	0.001	0.003	R1.752	R8.532
	June	0.000	0.031	R1.677	0.001	0.003	R1.712	R10.244
	July	0.000	0.032	1.657	0.001	0.003	1.693	R11.937
	August	0.000	0.031	1.746	0.001	0.003	1.781	R13.718
	September	0.000	0.031	R1.595	0.001	0.003	1.630	R15.348
	October	0.000	0.039	1.678	0.001	0.003	R1.721	R17.069
	November	0.000	0.048	R1.674	0.001	0.003	R1.726	18.795
	December	0.000	0.061	1.753	0.001	0.004	R1.819	20.614
	TOTAL	0.000	0.546	20.017	0.015	0.037	20.614	
1979	January	0.000	0.071	1.708	0.001	0.004	1.784	1.784
	February	0.000	0.064	1.617	0.001	0.003	1.685	3.469
	March	0.000	0.052	1.692	0.001	0.003	1.749	5.218
	April	0.000	0.044	1.536	0.001	0.003	1.584	6.802
	May	0.000	0.036	1.618	0.001	0.003	1.659	8.461
	June	0.000	0.031	R1.560	0.001	0.003	R1.595	R10.056
	July	0.000	0.030	R1.546	0.001	0.003	R1.580	R11.636
	August	0.000	R0.030	1.632	0.001	0.003	R1.666	R13.302
	September	0.000	0.030	1.495	0.001	0.003	1.529	R14.831
	TOTAL	0.000	0.388	14.405	0.011	0.027	14.831	
	(Year to date)							

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

<sup>1</sup>The transportation sector consists of both private and public passenger and freight transportation, as well as government transportation, including military operations. Notes on the methodology used for sector calculations are provided in the footnotes on page 22.

R = Revised data.

Source: • See footnotes on page 22.



# Consumption

## Energy Consumption by Electric Utilities

		Coal <sup>1</sup>	Natural Gas (dry)	Petroleum	Hydro-electric Power <sup>2</sup>	Nuclear Electric Power	Other <sup>3</sup>	Total	Yearly Cumulative Total
		Quadrillion (10 <sup>15</sup> ) Btu							
<b>1973</b>	<b>TOTAL</b>	<b>8.627</b>	<b>3.746</b>	<b>3.433</b>	<b>2.975</b>	<b>0.910</b>	<b>0.046</b>	<b>19.738</b>	
<b>1974</b>	<b>TOTAL</b>	<b>8.535</b>	<b>3.518</b>	<b>3.286</b>	<b>3.276</b>	<b>1.272</b>	<b>0.056</b>	<b>19.943</b>	
<b>1975</b>	<b>TOTAL</b>	<b>8.788</b>	<b>3.241</b>	<b>3.092</b>	<b>3.187</b>	<b>1.900</b>	<b>0.072</b>	<b>20.280</b>	
<b>1976</b>	<b>TOTAL</b>	<b>9.720</b>	<b>3.153</b>	<b>3.407</b>	<b>3.032</b>	<b>2.111</b>	<b>0.081</b>	<b>21.505</b>	
<b>1977</b>	January	0.930	0.210	0.463	0.231	0.239	0.007	2.080	2.080
	February	0.807	0.206	0.311	0.173	0.211	0.006	1.716	3.795
	March	0.796	0.239	0.298	0.222	0.223	0.007	1.785	5.580
	April	0.727	0.230	0.272	0.210	0.214	0.006	1.659	7.239
	May	0.797	0.267	0.298	0.210	0.222	0.007	1.800	9.039
	June	0.864	0.319	0.310	0.195	0.232	0.007	1.927	10.966
	July	0.973	0.356	0.381	0.190	0.235	0.007	2.143	13.109
	August	0.957	0.362	0.347	0.190	0.245	0.006	2.107	15.216
	September	0.868	0.334	0.281	0.187	0.211	0.007	1.888	17.104
	October	0.824	0.294	0.246	0.194	0.205	0.007	1.771	18.875
	November	0.832	0.241	0.265	0.228	0.210	0.007	1.783	20.657
	December	0.888	0.226	0.349	0.253	0.256	0.007	1.979	22.636
	<b>TOTAL</b>	<b>10.264</b>	<b>3.285</b>	<b>3.821</b>	<b>2.482</b>	<b>2.702</b>	<b>0.082</b>	<b>22.636</b>	
<b>1978</b>	January	0.922	0.236	0.426	0.277	0.278	0.007	2.146	2.146
	February	0.772	0.218	0.412	0.249	0.235	0.006	1.892	4.037
	March	0.732	0.240	0.393	0.272	0.242	0.005	1.884	5.921
	April	0.743	0.231	0.265	0.279	0.189	0.004	1.712	7.634
	May	0.799	0.270	0.262	0.315	0.220	0.004	1.870	9.504
	June	0.880	0.332	0.286	0.277	0.239	0.005	2.019	11.523
	July	0.954	0.375	0.315	0.270	0.269	0.005	2.188	13.711
	August	0.998	0.353	0.346	0.247	0.276	0.006	2.225	15.937
	September	0.921	0.308	0.286	0.236	0.239	0.007	1.997	17.933
	October	0.856	0.272	0.272	0.218	0.248	0.005	1.871	19.804
	November	0.854	0.236	0.287	0.223	0.268	0.006	1.874	21.677
	December	0.940	0.227	0.360	0.246	0.274	0.007	2.053	23.730
	<b>TOTAL</b>	<b>10.372</b>	<b>3.297</b>	<b>3.908</b>	<b>3.109</b>	<b>2.977</b>	<b>0.068</b>	<b>23.730</b>	
<b>1979</b>	January	1.051	0.236	0.422	0.277	0.299	0.007	2.291	2.291
	February	0.904	0.235	0.348	0.238	0.279	0.006	2.009	4.300
	March	0.900	0.270	0.237	0.286	0.262	0.008	1.962	6.263
	April	0.839	0.270	0.220	0.280	0.198	0.007	1.814	8.077
	May	0.896	0.286	0.231	0.317	0.162	0.007	1.900	9.977
	June	0.954	0.331	0.258	0.276	0.173	0.007	1.998	11.974
	July	1.047	0.381	0.274	0.253	0.224	0.007	2.187	14.162
	August	1.054	R0.390	0.278	0.238	0.261	0.008	R2.229	R16.391
	September	0.907	0.352	0.238	0.213	0.235	0.007	1.953	18.343
	<b>TOTAL</b> (Year to date)	<b>8.552</b>	<b>2.751</b>	<b>2.506</b>	<b>2.378</b>	<b>2.093</b>	<b>0.064</b>	<b>18.343</b>	

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

<sup>1</sup>Includes bituminous coal, lignite, and anthracite.

<sup>2</sup>Includes net imports of electricity.

<sup>3</sup>Includes geothermal power and electricity produced from wood and waste.

R = Revised data.

Source: • See footnote on page 22.

## Crude Oil and Refined Petroleum Products

Domestic crude oil production during October\* 1979 maintained the 8.5 million barrels per day average of the first 10 months of 1979. This production rate was 4.1 percent lower than in October 1978 and 0.6 percent lower than a month ago.

Total petroleum imports\*\* averaged 8.1 million barrels per day in October 1979, 0.3 percent more than the October 1978 rate and 15.1 percent higher than in September 1979. Imports\*\* averaged 8.0 million barrels per day during the first 10 months of 1979.

In October 1979, 17.0 million barrels per day of petroleum products were supplied for domestic use. Gasoline accounted for 40.5 percent of the total, distillate fuel 16.8 percent, and residual fuel oil 12.9 percent. During the first 10 months of 1979 an average of 18.2 million barrels of petroleum products were supplied each day.

The average for motor gasoline supplied during October 1979 was 6.9 million barrels per day, 7.4 percent lower than the amount supplied in October 1978 and 0.8 percent higher than in September 1979. The January through October 1979 average was 7.1 million barrels per day.

In October 1979, 2.9 million barrels of distillate fuel oil were supplied per day, 7.2 percent lower than a year ago and 11.9 percent higher than in September. The average for the January through October 1979 period was 3.2 million barrels per day. Distillate fuel oil stocks were 245.9 million barrels at the end of October, 5.5 percent above the stock level 1 year ago and 11.7 percent higher than in September 1979.

Residual fuel oil supplied in October averaged 2.2 million barrels per day, 16.3 percent lower than in October 1978. The average over the January through October period of 1979 was 2.7 million barrels per day. Residual fuel oil stocks measured 98.9 million barrels at the end of October, 18.5 percent above the level a year ago and 12.0 percent higher than in the previous month.

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\*October 1979 estimates are based on preliminary data from the American Petroleum Institute and will be revised to conform with data from the EIA Petroleum Reporting System as available. Crude production figures are EIA estimates.

\*\*Excludes crude petroleum imported for the Strategic Petroleum Reserve.

# Petroleum

## Crude Oil

		Crude Input to Refineries	Total Domestic Production <sup>1,2</sup>	Alaskan Production	Crude Oil Imports <sup>1,3</sup>	Strategic Petroleum Reserve (SPR) Imports <sup>5</sup>	Exports	Crude Oil Stocks <sup>1,4</sup>	Strategic Petroleum Reserve (SPR) Stocks <sup>5</sup>
		Thousand barrels per day					Thousand barrels		
1973	AVERAGE	12,431	9,208	198	3,244		2	±242,478	
1974	AVERAGE	12,133	8,774	193	3,477		3	±265,020	
1975	AVERAGE	12,442	8,375	191	4,105		6	±271,354	
1976	AVERAGE	13,416	8,132	173	5,287		8	±285,471	
1977	January	14,130	7,854	172	6,281		13	294,116	
	February	14,734	8,139	167	6,659		59	291,462	
	March	14,263	8,090	164	6,699		32	299,533	
	April	14,177	8,145	163	6,821		17	318,872	
	May	14,593	8,075	166	6,818		89	328,755	
	June	14,865	8,102	285	7,065		10	333,746	
	July	14,882	8,105	371	7,068		53	335,313	
	August	14,642	8,307	638	6,395		37	338,865	
	September	14,924	8,480	861	6,429		91	334,133	
	October	14,654	8,573	839	6,409	93	85	340,549	2,646
	November	14,636	8,579	860	6,248	73	45	345,197	5,084
	December	14,748	8,487	858	6,248	79	69	339,857	7,826
	AVERAGE	14,602	8,245	464	6,594	621	50		
1978	January	R14,150	R8,360	R869	R6,126	114	98	R341,371	11,106
	February	R13,969	R8,377	R854	R5,655	109	8	R335,890	14,276
	March	R14,148	R8,720	R1,151	R6,031	132	60	R345,482	18,437
	April	R13,886	R8,818	R1,289	R5,519	108	92	R343,363	21,825
	May	R14,996	R8,825	R1,281	R5,594	133	124	R329,101	25,629
	June	R14,693	R8,832	R1,306	R6,322	146	195	R333,340	30,140
	July	R14,911	R8,756	R1,295	R6,175	154	138	R332,909	35,248
	August	R15,196	R8,758	R1,316	R6,251	184	R182	R316,866	40,968
	September	R15,085	R8,800	R1,322	R6,829	225	251	R321,172	47,090
	October	R15,005	R8,820	R1,342	R6,400	195	272	R325,081	53,113
	November	15,336	R8,741	R1,351	R6,643	188	218	R322,045	59,312
	December	15,421	R8,662	R1,347	R6,751	245	251	R309,421	66,860
	AVERAGE	R14,739	R8,707	R1,229	R6,195	161	158		
1979	January	14,658	8,457	1,351	6,562	204	177	302,728	73,142
	February	14,121	8,498	1,267	R6,249	R179	288	302,981	78,166
	March	14,062	8,585	1,355	6,180	122	370	317,432	82,501
	April	14,346	8,533	1,347	6,047	66	260	319,759	83,867
	May	14,273	8,585	1,350	6,092	97	171	316,355	86,880
	June	R14,655	R8,409	R1,247	R6,523	65	235	R325,893	88,567
	July	R14,977	R8,355	R1,405	R6,120	41	244	R312,852	90,101
	August†	14,906	8,570	1,340	6,213	35	NA	325,130	91,189
	September	R14,564	8,510	1,308	R5,821	0	NA	R324,297	91,189
	October†	14,335	8,460	1,314	6,552	NA	NA	340,636	
	AVERAGE	14,493	8,496	1,329	6,236	NA	NA		

<sup>1</sup>See Definitions.

<sup>2</sup>Includes Alaskan production.

<sup>3</sup>Excludes SPR imports.

<sup>4</sup>Excludes SPR stocks.

<sup>5</sup>Strategic Petroleum Reserve storage began in October 1977.

<sup>6</sup>This is an annual average. The average for 3 months is 80.

Estimated data in italics. These are likely to be revised next month.

†Total as of December 31.

†Preliminary data.

R = Revised data.

NA = Not available.

Sources: • 1973 through 1976: Bureau of Mines *Mineral Industry Surveys*, "Petroleum Statement, Monthly."

• 1977 and 1978: Energy Information Administration (EIA) *Energy Data Reports*, "Petroleum Statement, Annual."

• January 1979 through July 1979: EIA *Energy Data Reports*, "Petroleum Statement, Monthly."

• August 1979 through September 1979: EIA "Monthly Petroleum Statistics Report."

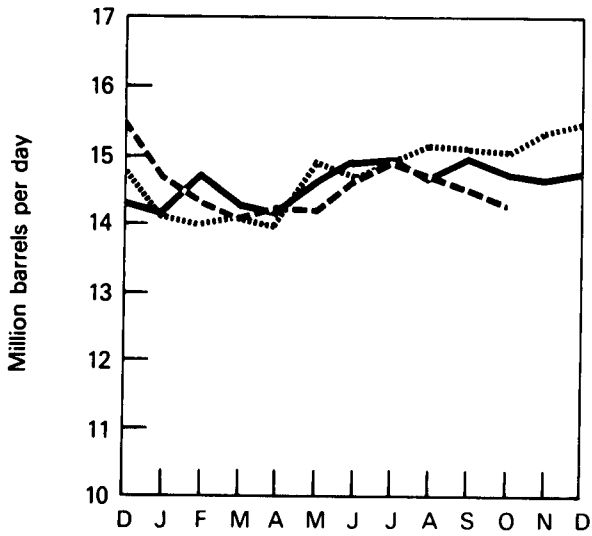
• October 1979 data are EIA estimates based on data from the American Petroleum Institute "Weekly Statistical Bulletin."

• Sources for the *Energy Data Report* and the "Monthly Petroleum Statistics Report" are: EIA Form 87 (Refinery Report), form 90 (Crude Stock Report), Economic Regulatory Administration Forms 60 (Imports), FEA P124 (First Purchasers — Crude Production); Bureau of Census publication EM 522 (Exports); and State Conservation Agencies.

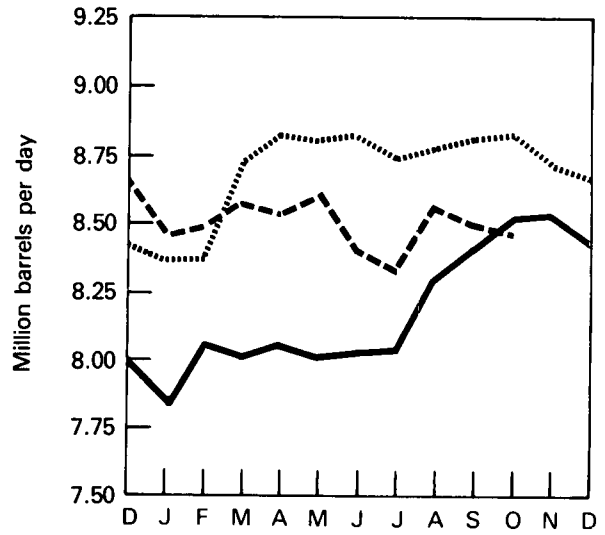
# Petroleum

## Crude Oil

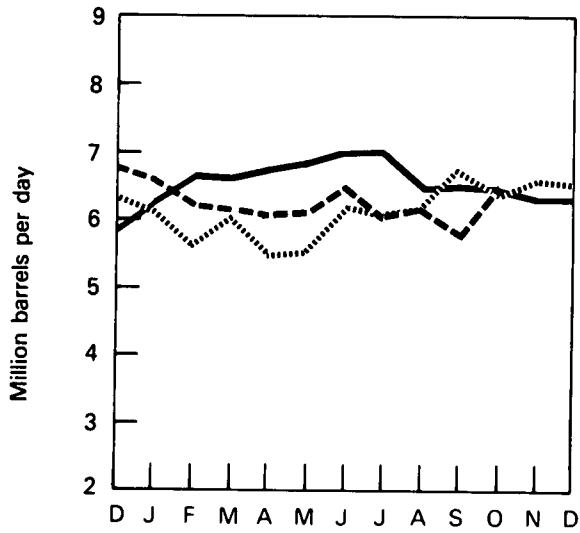
Crude Input to Refineries



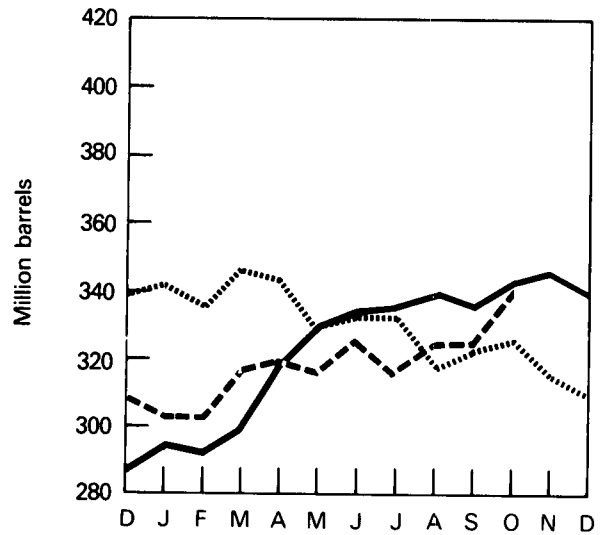
Domestic Production



Imports (Excluding Imports for SPR)



Stocks (Excluding SPR)



— 1977 EIA  
 ..... 1978 EIA  
 - - - 1979 EIA, API

# Petroleum

## Total Petroleum Products<sup>1</sup>

## Total Petroleum Imports (Crude Oil and Products)

		Products Supplied	Imports	Exports	Total Imports (Excluding SPR)	SPR Imports <sup>2</sup>	Total Imports (Including SPR) <sup>2</sup>
		Thousand barrels per day			Thousand barrels per day		
1973	AVERAGE	17,308	3,012	229	6,256		
1974	AVERAGE	16,653	2,635	218	6,112		
1975	AVERAGE	16,322	1,951	204	6,056		
1976	AVERAGE	17,461	2,026	215	7,313		
1977	January	20,504	2,622	179	8,903		8,903
	February	20,482	3,338	175	9,997		9,997
	March	18,124	2,684	175	9,383		9,383
	April	17,580	1,902	207	8,723		8,723
	May	16,972	1,753	199	8,571		8,571
	June	18,043	1,872	215	8,937		8,937
	July	17,568	2,027	201	9,095		9,095
	August	18,012	2,179	193	8,574		8,574
	September	17,714	2,137	203	8,567		8,567
	October	17,824	1,862	170	8,271	93	8,364
	November	18,437	1,814	190	8,062	73	8,135
	December	20,052	2,198	206	8,446	79	8,525
	AVERAGE	18,431	2,193	193	8,787	321	8,807
1978	January	R19,752	R2,092	158	R8,218	114	R8,332
	February	R20,900	R2,355	200	R8,010	109	R8,119
	March	R19,652	R2,338	209	R8,369	132	R8,501
	April	R17,747	R2,115	245	R7,634	108	R7,743
	May	R18,230	R1,804	189	R7,398	133	R7,531
	June	R18,260	R1,640	204	R7,962	146	R8,108
	July	R17,633	1,948	192	R8,123	154	R8,277
	August	R18,639	R1,858	229	R8,109	184	R8,292
	September	R17,954	1,983	226	R8,811	225	R9,036
	October	R18,417	R1,718	197	R8,119	195	R8,313
	November	R19,156	R2,021	191	R8,664	188	R8,852
	December	R19,944	R2,245	205	R8,996	245	R9,241
	AVERAGE	R18,847	R2,008	204	R8,202	161	R8,363
1979	January	20,640	2,205	212	8,767	204	8,970
	February	21,152	2,069	200	R8,318	R179	8,497
	March	19,180	2,385	234	8,565	122	8,687
	April	17,311	1,666	235	7,713	66	7,779
	May	17,701	1,809	278	7,901	97	7,999
	June	R17,675	R1,672	220	R8,195	65	R8,260
	July	R16,906	R1,783	258	R7,902	41	R7,943
	August†	17,957	1,416	NA	7,629	35	7,664
	September†	R17,133	R1,255	NA	R7,076	0	7,076
	October†	17,024	1,593	NA	8,145	NA	NA
	AVERAGE	18,248	1,785	NA	8,022	NA	NA

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

<sup>1</sup>See Definitions.

<sup>2</sup>Strategic Petroleum Reserve storage began in October 1977.

<sup>3</sup>This is an annual average. The average for 3 months is 80.

Estimated data in italics. These are likely to be revised next month.

R = Revised data.

NA = Not available.

†Preliminary data.

Sources: • 1973 through 1976: Bureau of Mines *Mineral Industry Surveys*, "Petroleum Statement, Annual."

• 1977 and 1978: Energy Information Administration (EIA) *Energy Data Reports*, "Petroleum Statement, Annual."

• January 1979 through July 1979: EIA *Energy Data Reports*, "Petroleum Statement, Monthly."

• August 1979 through September 1979: EIA "Monthly Petroleum Statistics Report."

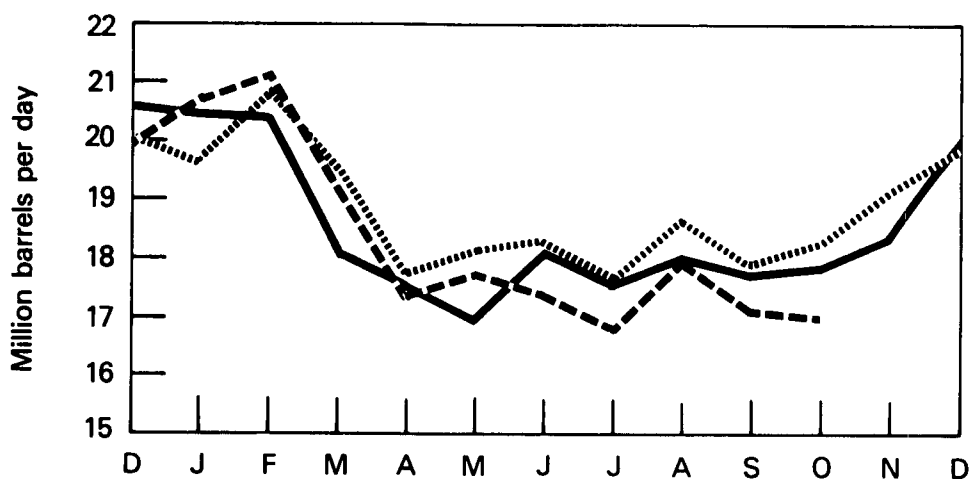
• October 1979 data are EIA estimates based on data from the American Petroleum Institute "Weekly Statistical Bulletin."

• Sources for the *Energy Data Reports* and the "Monthly Petroleum Statistics Report" are: Economic Regulatory Administration Form 60 (Imports), form FEA P133 (Imports from Puerto Rico), EIA Form 64 (Natural Gas Liquids Operations Report), form 87 (Refinery Report), form 88 (Bulk Terminal), form 89 (Pipeline Report), form 90 (Crude Stock Report), form FEA P124 (First Purchasers — Crude Production); Bureau of Census publications IM 145 (Imports), EM 522 (Exports), and FT 800 (Exports); and State Conservation Agencies.

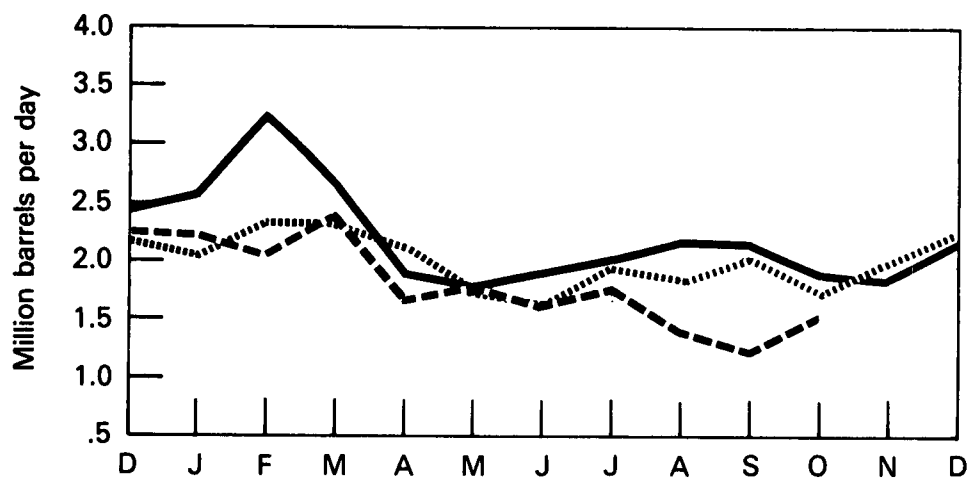
# Petroleum

## Total Petroleum Products Supplied and Imports

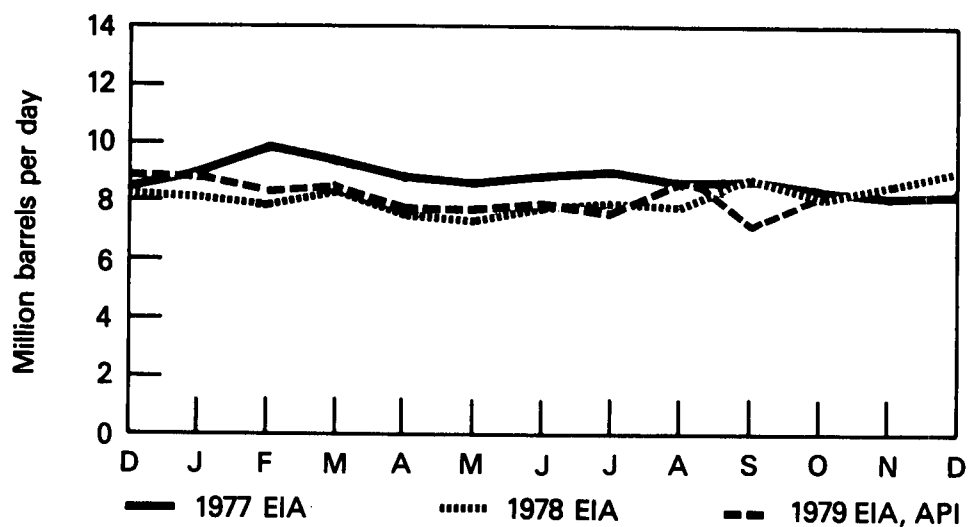
### Total Petroleum Products Supplied



### Products Imports



### Total Petroleum Imports (Excluding Imports for SPR)



— 1977 EIA

..... 1978 EIA

- - - 1979 EIA, API

# Petroleum

## Petroleum Imports from OPEC Sources

	Algeria	Indonesia	Iran	Libya	Nigeria	Saudi Arabia	United Arab Emirates	Venezuela	Other OPEC <sup>1</sup>	Total OPEC	Arab Members of OPEC
Thousand barrels per day											
<b>1973</b>											
<b>AVERAGE</b>	136.0	213.3	222.8	164.4	458.8	485.7	70.6	1,134.9	106.4	2,992.9	914.7
<b>1974</b>											
<b>AVERAGE</b>	190.1	300.4	468.8	4.4	713.4	461.3	73.9	979.1	88.4	3,279.8	752.5
<b>1975</b>											
<b>AVERAGE</b>	282.4	389.6	280.4	231.8	761.8	714.6	116.7	702.5	121.5	3,601.3	1,382.6
<b>1976</b>											
<b>AVERAGE</b>	432.2	538.8	298.5	453.3	1,024.7	1,229.8	254.4	700.1	134.0	5,065.8	2,424.1
<b>1977</b>											
January	488.0	637.2	396.8	624.5	1,272.5	1,327.1	319.5	841.8	324.4	6,231.8	2,990.9
February	666.1	581.0	412.4	652.8	1,256.3	1,441.8	316.7	937.5	241.0	6,505.5	3,118.0
March	470.8	574.5	735.0	738.3	1,299.9	1,347.8	369.5	678.9	193.1	6,407.8	3,035.8
April	664.9	523.9	517.2	782.9	1,254.5	1,437.4	323.7	666.0	250.4	6,420.9	3,367.6
May	392.8	509.5	562.9	768.7	1,072.3	1,724.1	252.5	534.4	412.3	6,229.5	3,427.8
June	453.3	671.6	562.8	841.3	1,223.0	1,432.6	438.6	668.7	338.2	6,630.0	3,399.5
July	567.8	538.9	857.3	763.4	1,194.7	1,404.9	274.3	655.6	350.8	6,606.3	3,247.9
August	632.2	552.8	500.1	640.0	975.2	1,401.0	308.6	753.1	276.9	6,039.9	3,121.5
September	550.8	391.0	448.6	679.2	1,084.8	1,487.4	348.4	744.8	201.4	5,936.4	3,215.2
October	663.0	466.8	413.0	679.7	1,159.3	1,342.9	253.3	591.5	272.1	5,841.6	3,142.4
November	590.6	514.6	422.7	846.9	943.0	1,119.2	420.1	521.3	285.0	5,663.4	3,169.3
December	574.0	533.1	573.4	656.4	989.6	1,102.8	402.4	709.5	289.2	5,830.4	2,958.3
<b>AVERAGE</b>	558.6	541.0	535.0	722.6	1,143.0	1,380.4	335.3	690.4	286.7	6,193.1	3,182.2
<b>1978</b>											
January	R707.5	R527.9	R689.6	R570.9	R834.6	R1,206.3	R348.8	R643.2	R227.8	R5,756.5	R2,969.4
February	R658.2	R405.7	R539.2	R594.4	R793.0	R971.4	R486.1	R798.1	R251.5	R5,497.5	R2,822.4
March	R715.9	R603.7	R535.2	R583.7	R960.3	R1,131.7	296.2	R894.6	R254.0	R5,975.3	R2,903.7
April	R597.5	R532.1	R441.9	R612.0	R584.2	R1,020.5	R480.5	R658.7	R228.2	R5,155.6	R2,829.7
May	R701.1	R549.6	R746.3	498.7	R779.8	786.3	R418.7	R556.6	R84.5	R5,121.7	R2,445.0
June	R776.1	R666.1	R536.0	R648.7	R858.0	R1,107.8	R345.0	R494.1	R219.3	R5,651.3	R3,029.0
July	R659.0	R648.0	532.5	R629.3	R1,003.2	R1,053.2	R293.8	R538.3	R301.3	R5,658.6	R2,831.4
August	R464.2	R575.3	574.2	R798.6	R942.6	R1,127.6	R415.9	R514.0	R206.6	R5,619.0	R2,926.0
September	R615.9	R634.0	R590.6	R762.4	1,029.6	R1,247.5	R389.2	R650.3	R261.9	R6,181.5	R3,184.5
October	R709.7	R571.5	608.2	R712.6	927.7	R1,173.1	R397.2	R524.5	112.6	R5,737.2	R3,034.7
November	R619.2	R548.6	R494.7	R758.4	R1,188.1	R1,365.2	R408.6	635.1	R222.1	R6,240.0	R3,292.5
December	561.5	R604.1	368.8	R676.3	R1,119.6	1,524.8	R356.8	841.6	345.6	R6,399.1	R3,292.4
<b>AVERAGE</b>	<b>R648.7</b>	<b>R573.3</b>	<b>R555.3</b>	<b>R653.9</b>	<b>R919.5</b>	<b>R1,143.9</b>	<b>R385.4</b>	<b>R644.9</b>	<b>R226.0</b>	<b>R5,750.9</b>	<b>R2,963.2</b>
<b>1979</b>											
January	663.1	502.8	187.1	734.9	1,115.0	1,557.1	341.4	656.9	229.0	5,987.3	3,393.9
February	723.7	504.8	85.8	609.3	963.1	1,613.4	309.8	754.8	170.7	5,735.4	3,362.0
March	579.0	400.5	22.2	598.3	1,385.5	1,296.7	298.3	843.0	272.5	5,696.0	2,936.6
April	673.5	348.3	34.9	770.8	963.0	1,483.5	285.2	612.0	129.5	5,300.7	3,297.6
May	718.0	333.1	196.5	650.5	1,104.4	1,266.9	291.9	671.2	147.6	5,380.1	2,979.7
June	R543.8	R390.5	318.3	R764.2	R932.0	R1,262.1	R290.5	R596.4	R363.9	R5,461.7	R3,152.9
July	591.4	R354.8	R410.7	R627.9	R937.6	R1,319.5	244.3	R609.2	R170.5	R5,265.9	2,880.9
August†	635.9	350.6	501.4	648.7	1,136.0	1,075.7	268.2	587.3	194.1	5,397.9	2,743.2
September†	409.2	305.4	301.8	601.3	1,064.3	1,314.1	267.8	593.6	144.9	5,002.5	2,706.7
<b>AVERAGE</b>	<b>614.9</b>	<b>387.0</b>	<b>230.4</b>	<b>667.5</b>	<b>1,068.8</b>	<b>1,351.5</b>	<b>288.5</b>	<b>657.8</b>	<b>202.8</b>	<b>5,469.2</b>	<b>3,046.9</b>

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

<sup>1</sup>Includes Ecuador, Gabon, Iraq, Kuwait, and Qatar.

†Preliminary data.

R = Revised data.

Sources: • 1973 through 1976: Bureau of Mines' *Mineral Industry Surveys*, "Petroleum Statement, Annual" and "PAD Districts Supply/Demand, Annual."

• 1977 and 1978: Energy Information Administration (EIA) *Energy Data Reports*, "PAD Districts Supply/Demand, Annual."

• January 1979 through July 1979: EIA *Energy Data Reports*, "PAD Districts Supply/Demand, Monthly."

• August 1979 through September 1979: EIA, "Monthly Petroleum Statistics Report."

• Sources for the *Energy Data Reports* and the "Monthly Petroleum Statistics Report" are: Economic Regulatory Administration Forms 60 (Imports), FEA P133 (Imports from Puerto Rico); and Bureau of Census publication IM 145 (Imports).

# Petroleum

## Petroleum Imports from Non-OPEC Sources

	Bahamas	Canada	Mexico	Netherlands Antilles	Puerto Rico	Trinidad and Tobago	Virgin Islands	Other	Total
Thousand barrels per day									
<b>1973</b>									
<b>AVERAGE</b>	174.0	1,314.8	15.7	584.7	99.5	254.8	329.4	480.3	3,263.2
<b>1974</b>									
<b>AVERAGE</b>	163.8	1,069.5	8.5	511.0	90.4	250.8	391.0	347.4	2,832.4
<b>1975</b>									
<b>AVERAGE</b>	152.4	846.4	71.4	331.8	89.7	242.4	406.4	313.9	2,454.4
<b>1976</b>									
<b>AVERAGE</b>	118.5	599.3	87.2	275.4	88.1	274.3	422.3	381.7	2,246.8
<b>1977</b>									
January	170.0	514.5	97.9	304.7	82.6	327.0	619.7	554.8	2,671.2
February	302.7	607.1	168.0	382.4	86.3	413.3	549.0	983.0	3,491.8
March	206.1	564.7	171.5	246.1	97.4	301.5	505.4	882.2	2,974.9
April	141.3	507.0	155.2	110.7	85.3	218.5	409.0	674.7	2,301.7
May	138.5	438.2	173.7	153.7	105.8	308.1	376.2	647.4	2,341.6
June	137.7	494.0	180.7	196.1	89.4	271.1	322.0	616.1	2,307.1
July	177.9	483.2	158.7	239.0	127.2	275.8	477.7	549.4	2,488.9
August	168.8	502.5	215.2	224.5	118.8	281.2	431.2	592.3	2,534.5
September	140.2	528.5	167.6	201.1	156.7	250.9	433.9	751.5	2,630.4
October	122.3	481.8	246.6	196.5	114.1	288.4	451.9	620.9	2,522.5
November	184.4	509.2	230.7	93.3	98.7	237.2	462.8	655.0	2,471.3
December	166.8	580.2	186.6	191.9	97.8	305.5	555.6	610.2	2,694.6
<b>AVERAGE</b>	170.5	516.9	179.4	210.9	105.1	289.3	466.2	675.8	2,614.1
<b>1978</b>									
January	167.5	R474.4	236.4	215.2	R111.7	295.0	466.0	R609.7	R2,575.8
February	217.6	R498.7	R211.2	R211.4	R103.1	R296.1	490.6	R592.9	R2,621.6
March	211.5	R434.7	230.9	238.1	63.6	R281.3	R505.5	R559.9	R2,525.7
April	140.9	R394.6	231.4	258.3	R99.8	R304.5	371.9	R785.9	R2,587.1
May	194.3	R389.6	257.6	230.6	R104.3	189.0	R310.2	R733.8	R2,409.3
June	144.6	R469.2	287.1	R221.3	117.6	199.3	324.5	R693.3	R2,456.7
July	166.0	R532.5	R309.3	201.6	93.8	R281.8	402.2	R631.4	R2,618.6
August	187.7	R422.4	R392.6	291.0	82.3	247.6	431.0	R618.6	R2,673.2
September	R120.1	R427.2	460.6	217.1	95.2	262.1	R431.7	R840.7	R2,854.6
October	105.9	R425.9	392.1	175.5	88.5	203.8	476.3	R708.1	R2,576.3
November	R153.7	R481.4	401.8	223.4	71.3	R230.6	R489.1	R560.8	R2,612.1
December	R111.9	R650.7	396.0	R265.0	96.3	249.6	448.3	R624.4	R2,842.2
<b>AVERAGE</b>	<b>R159.9</b>	<b>R466.8</b>	<b>317.8</b>	<b>R229.2</b>	<b>R93.8</b>	<b>R253.1</b>	<b>R428.7</b>	<b>R663.2</b>	<b>R2,612.5</b>
<b>1979</b>									
January	159.5	564.1	560.3	227.0	109.1	116.0	477.0	770.1	2,983.1
February	103.5	561.7	415.4	254.8	68.2	191.4	421.1	745.4	2,761.5
March	93.7	614.5	397.4	314.1	63.8	214.7	561.6	731.1	2,990.9
April	129.4	576.9	301.6	175.9	64.9	144.1	474.7	610.6	2,478.1
May	134.8	554.8	389.7	183.1	101.7	216.6	382.0	655.7	2,618.4
June	138.1	R468.4	R457.7	R171.4	105.7	169.5	R413.7	R874.1	R2,798.6
July	120.8	R488.6	R357.4	R208.7	117.2	R169.1	451.2	R764.7	R2,677.5
August†	14.6	447.5	425.3	246.5	92.5	237.8	357.1	444.8	2,266.1
September†	70.3	344.8	377.0	268.8	46.5	51.4	283.2	631.5	2,073.5
<b>AVERAGE</b>	<b>107.2</b>	<b>513.5</b>	<b>409.4</b>	<b>227.8</b>	<b>85.8</b>	<b>168.1</b>	<b>425.0</b>	<b>691.3</b>	<b>2,628.0</b>

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

R = Revised data.

† Preliminary data.

Sources: • 1973 through 1976: Bureau of Mines' *Mineral Industry Surveys*, "Petroleum Statement, Annual" and "PAD Districts Supply/Demand, Annual."

• 1977 and 1978: Energy Information Administration (EIA) *Energy Data Reports*, "PAD Districts Supply/Demand, Annual."

• January 1979 through July 1979: EIA *Energy Data Reports*, "PAD Districts Supply/Demand, Monthly."

• August 1979 through September 1979: EIA, "Monthly Petroleum Statistics Report."

• Sources for the *Energy Data Reports* and the "Monthly Petroleum Statistics Report" are: Economic Regulatory Administration Forms 60 (Imports), FEA P133 (Imports from Puerto Rico); and Bureau of Census publication IM 145 (Imports).



# Petroleum

## Motor Gasoline

		Product Supplied						Stocks <sup>1</sup> Thousand barrels
		Total	Unleaded	Unleaded Percent of Total	Refinery Production <sup>1</sup>	Imports	Exports	
		Thousand barrels per day						
1973	AVERAGE	6,674	NA	NA	6,527	134	4	±209,395
1974	AVERAGE	6,537	NA	NA	6,358	204	2	±218,346
1975	AVERAGE	6,675	NA	NA	6,518	184	2	±234,925
1976	AVERAGE	6,978	NA	NA	6,838	131	3	±231,387
1977	January	6,472	1,549	23.9	6,932	231	8	252,608
	February	6,900	1,773	25.7	6,815	188	2	255,519
	March	6,908	1,657	24.0	6,862	257	0	262,118
	April	7,345	1,863	25.4	6,966	269	1	258,835
	May	7,029	1,803	25.7	6,945	202	2	262,504
	June	7,593	2,142	28.2	7,144	246	1	256,446
	July	7,439	2,146	28.8	7,247	248	1	258,185
	August	7,420	2,096	28.2	7,188	190	1	256,904
	September	7,316	2,081	28.4	7,059	222	1	255,859
	October	7,130	2,135	29.9	6,930	179	1	255,194
	November	7,191	2,060	28.6	7,123	179	2	258,537
	December	7,375	2,400	32.5	7,146	197	1	257,578
	AVERAGE	7,177	1,976	27.5	7,031	217	2	
1978	January	R6,681	2,097	31.4	R6,933	R214	1	R272,064
	February	R6,876	2,162	31.4	R6,631	R200	1	R270,832
	March	R7,255	2,425	33.4	6,750	R141	1	R259,556
	April	R7,202	2,391	33.2	6,668	R177	1	R248,876
	May	R7,724	2,343	30.3	7,059	R169	2	R233,471
	June	R7,913	2,697	34.1	R7,210	R234	1	R219,441
	July	R7,576	2,629	34.7	7,264	212	2	R216,368
	August	7,872	2,834	36.0	R7,454	R179	1	R208,975
	September	R7,399	2,607	35.2	7,399	R251	2	R216,500
	October	R7,448	2,576	R34.6	7,176	R180	2	R213,666
	November	R7,503	2,713	R36.2	7,583	R147	1	R220,523
	December	R7,451	2,751	R36.9	7,831	182	1	R237,956
	AVERAGE	R7,412	2,521	R34.0	R7,167	R190	1	
1979	January	6,893	2,609	37.8	7,272	179	2	255,664
	February	7,267	2,715	37.4	6,941	160	2	251,346
	March	7,221	2,733	37.8	6,654	168	1	239,162
	April	7,068	2,786	39.4	6,765	156	1	235,192
	May	7,203	2,751	38.2	6,786	145	2	227,193
	June	R7,187	2,787	R38.8	R6,987	R261	1	R229,349
	July	R6,850	2,789	R40.7	R7,006	222	1	R241,536
	August†	7,268	2,970	40.9	6,875	146	NA	232,732
	September†	R6,842	R2,815	R41.1	R6,623	R125	NA	R229,887
	October†	6,894	2,959	42.9	6,550	144	NA	221,534
	AVERAGE	7,068	2,792	39.5	6,846	171	NA	

<sup>1</sup>See Definitions.

Estimated data in italics. These are likely to be revised next month.

±Total as of December 31.

R = Revised data.

NA = Not available.

†Preliminary data.

Note: Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with 1975.

Sources: • 1973 through 1976: Bureau of Mines *Mineral Industry Surveys*, "Petroleum Statement, Annual" (except unleaded gasoline).

• 1977 and 1978: Energy Information Administration (EIA) *Energy Data Reports*, "Petroleum Statement, Annual."

• January 1979 through July 1979: EIA *Energy Data Reports*, "Petroleum Statement, Monthly."

• August 1979 through September 1979: EIA, "Monthly Petroleum Statistics Report."

• Unleaded gasoline — August 1979 and back: EIA "Monthly Petroleum Statistics Report."

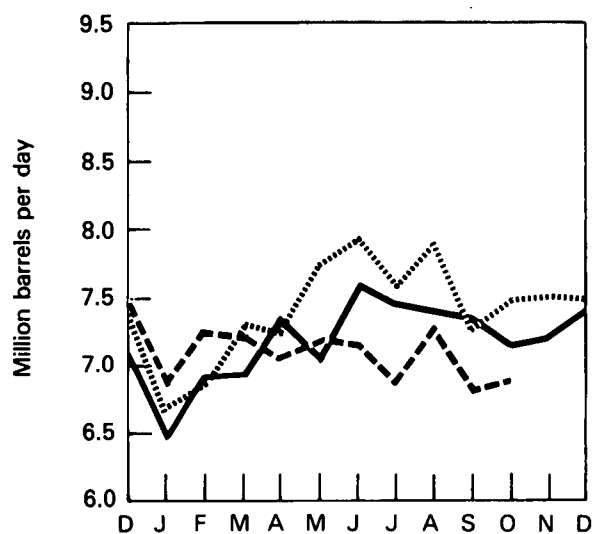
• October 1979 data are EIA estimates based on data from the American Petroleum Institute, "Weekly Statistical Bulletin."

• Sources for the *Energy Data Reports* and the "Monthly Petroleum Statistics Report" are: Economic Regulatory Administration Forms 60 (Imports), FEA P133 (Imports from Puerto Rico); EIA Form 64 (Natural Gas Liquids Operation Report), form 87 (Refinery Report), form 88 (Bulk Terminals), form 89 (Pipeline Report); Bureau of Census publications IM 145 (Imports), and FT 800 (Exports).

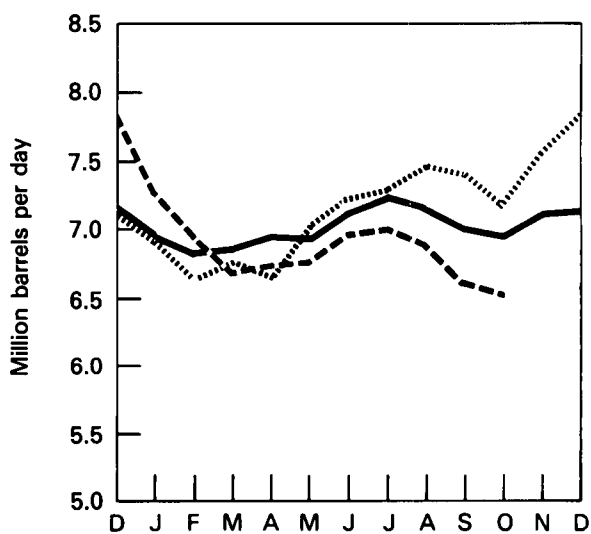
# Petroleum

## Motor Gasoline

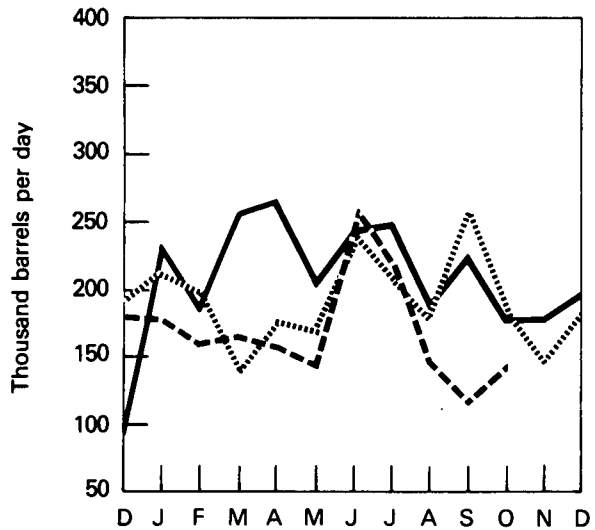
Product Supplied



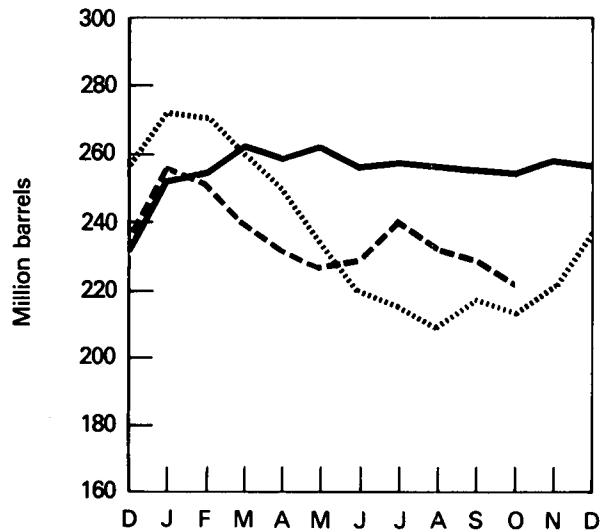
Production



Imports



Stocks



— 1977 EIA  
 ..... 1978 EIA  
 --- 1979 EIA, API

# Petroleum

## Jet Fuel

		Product Supplied	Refinery Production	Imports	Exports	Stocks
		Thousand barrels per day				Thousand barrels
1973	AVERAGE	1,059	859	212	4	‡28,544
1974	AVERAGE	993	836	163	3	‡29,435
1975	AVERAGE	1,001	871	133	2	‡30,380
1976	AVERAGE	987	918	76	2	‡32,085
1977	January	1,054	916	77	2	30,156
	February	1,036	973	74	2	30,406
	March	1,040	953	99	2	30,721
	April	1,017	989	86	4	32,337
	May	991	977	57	2	33,626
	June	988	994	30	1	34,695
	July	1,041	927	85	1	35,015
	August	1,111	1,007	71	1	33,966
	September	1,048	1,002	53	2	34,133
	October	1,016	972	67	2	34,819
	November	1,035	948	107	1	35,386
	December	1,091	976	90	2	34,548
	AVERAGE	1,039	973	75	2	
1978	January	980	R921	60	1	R34,535
	February	R1,108	R989	R76	2	R33,297
	March	R1,107	R967	98	2	R31,950
	April	R1,011	R980	R122	1	R34,631
	May	R997	R1,011	108	2	R38,372
	June	R1,044	R963	59	2	R37,654
	July	R1,014	R923	105	2	R38,050
	August	R1,126	R966	86	1	R35,747
	September	R1,077	R989	75	1	R35,328
	October	R1,067	R932	65	2	R33,104
	November	R1,107	R1,011	89	2	R32,829
	December	R1,046	R989	R86	2	R33,665
	AVERAGE	R1,057	R970	R86	1	
1979	January	1,100	950	97	1	31,993
	February	1,137	996	88	2	30,449
	March	1,088	1,097	61	1	32,607
	April	961	1,040	43	1	36,217
	May	1,008	976	75	1	37,547
	June	R1,073	956	R57	1	R35,741
	July	R1,105	R964	R90	1	R34,152
	August†	1,106	1,040	62	NA	34,059
	September†	R1,083	R957	R64	NA	R32,162
	October†	1,046	1,047	65	NA	34,864
	AVERAGE	1,070	1,003	70	NA	

Estimated data in italics. These are likely to be revised next month.

‡Total as of December 31.

R = Revised data.

NA = Not available.

†Preliminary data.

Note: Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with 1975.

Sources: • 1973 through 1976: Bureau of Mines *Mineral Industry Surveys*, "Petroleum Statement, Annual."

• 1977 and 1978: Energy Information Administration (EIA) *Energy Data Reports*, "Petroleum Statement, Annual."

• January 1979 through July 1979: EIA *Energy Data Reports*, "Petroleum Statement, Monthly."

• August 1979 through September 1979: EIA, "Monthly Petroleum Statistics Report."

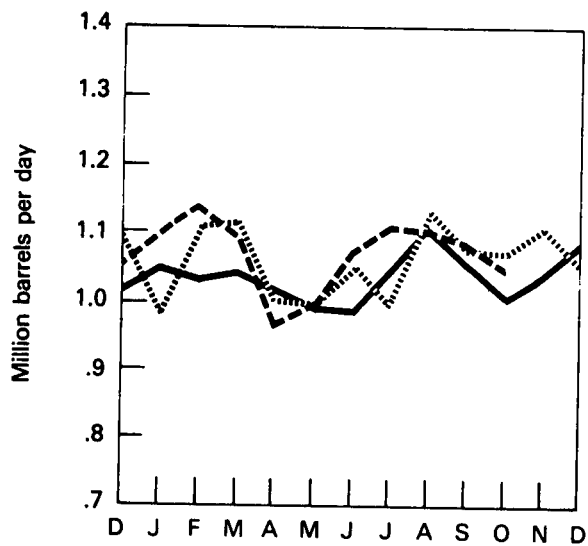
• October 1979 data are EIA estimates based on data from the American Petroleum Institute, "Weekly Statistical Bulletin."

• Sources for the *Energy Data Reports* and the "Monthly Petroleum Statistics Report" are: Economic Regulatory Administration Forms 60 (Imports), FEA P133 (Imports from Puerto Rico), EIA Form 64 (Natural Gas Liquids Operation Report), form 87 (Refinery Report), form 88 (Bulk Terminals), form 89 (Pipeline Report); Bureau of Census publications IM 145 (Imports), EM 522 (Exports), and FT 800 (Exports).

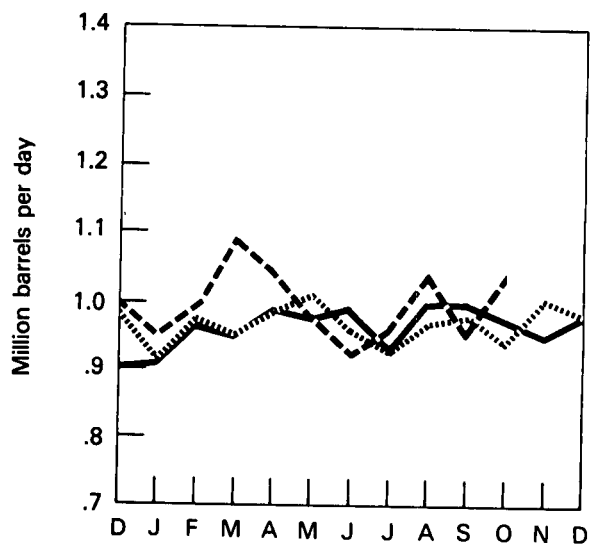
# Petroleum

## Jet Fuel

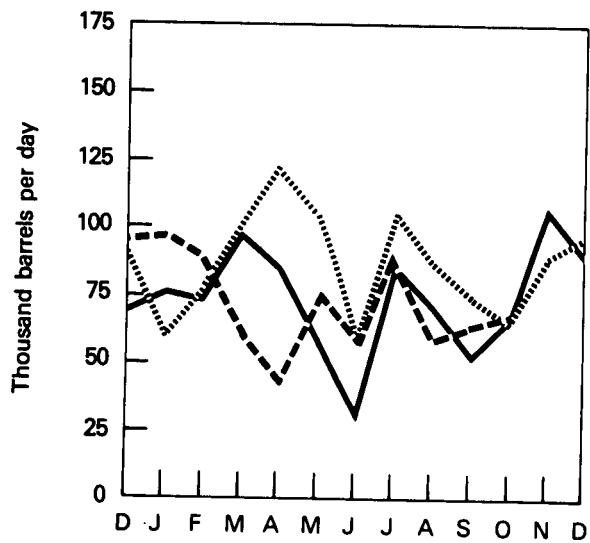
Product Supplied



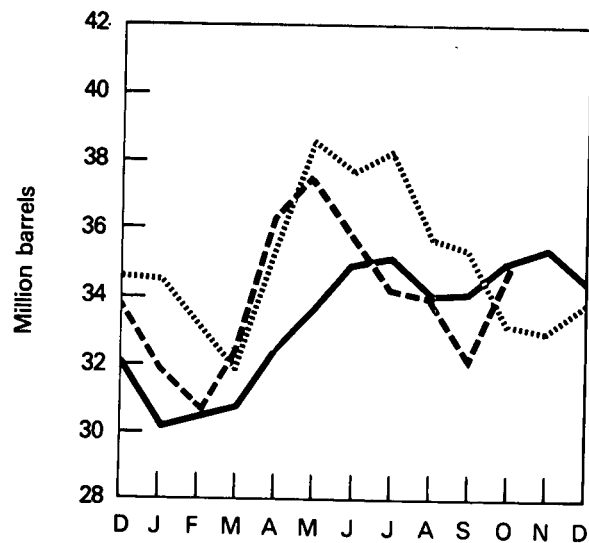
Production



Imports



Stocks



— 1977 EIA  
 ..... 1978 EIA  
 --- 1979 EIA, API

# Petroleum

## Distillate Fuel Oil

		Product Supplied	Refinery Production <sup>1</sup>	Imports	Exports	Stocks <sup>1</sup>
			Thousand barrels per day			Thousand barrels
1973	AVERAGE	3,092	2,820	392	9	‡196,421
1974	AVERAGE	2,948	2,668	289	2	‡200,029
1975	AVERAGE	2,851	2,653	155	1	‡208,787
1976	AVERAGE	3,133	2,924	146	1	‡185,948
1977	January	5,103	3,369	347	1	142,975
	February	4,708	3,695	664	1	133,246
	March	3,442	3,173	547	1	141,876
	April	2,936	2,995	153	3	148,223
	May	2,782	3,130	99	0	162,222
	June	2,770	3,191	135	0	178,835
	July	2,550	3,198	191	0	204,875
	August	2,632	3,272	161	0	229,783
	September	2,714	3,311	169	1	252,783
	October	3,037	3,362	150	5	267,392
	November	3,421	3,339	188	3	270,571
	December	4,205	3,324	227	2	250,260
	AVERAGE	3,352	3,277	250	1	
1978	January	R4,458	R3,067	R196	1	R213,245
	February	R4,848	R2,952	R212	16	R165,697
	March	R4,108	R3,014	R193	0	R137,826
	April	R3,111	R2,959	100	6	R136,143
	May	R3,103	R3,250	R125	1	R144,619
	June	2,837	R3,109	146	0	R157,237
	July	R2,522	R3,123	149	4	R180,420
	August	R2,800	R3,296	143	4	R200,157
	September	R2,664	R3,185	163	2	R220,687
	October	R3,077	R3,299	178	2	R233,082
	November	R3,583	R3,366	223	3	R233,231
	December	R4,156	R3,360	254	2	R216,439
	AVERAGE	R3,432	R3,167	R173	3	
1979	January	4,543	3,005	226	1	175,695
	February	4,792	2,863	196	7	127,034
	March	3,627	2,992	176	5	112,728
	April	3,006	2,935	149	4	114,989
	May	2,989	3,064	185	2	123,059
	June	R2,707	R3,137	R180	1	R141,365
	July	R2,552	R3,305	R219	9	R171,243
	August†	2,780	3,336	178	NA	194,490
	September†	R2,554	R3,296	R116	NA	R220,059
	October†	2,857	3,187	227	NA	245,862
	AVERAGE	3,230	3,114	185	NA	

<sup>1</sup>See Definitions.

Estimated data in italics. These are likely to be revised next month.

‡Total as of December 31.

R = Revised data.

NA = Not available.

†Preliminary data.

Note: Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators: the new coverage begins here with 1975.

Sources: • 1973 through 1976: Bureau of Mines *Mineral Industry Surveys*, "Petroleum Statement, Annual."

• 1977 and 1978: Energy Information Administration (EIA) *Energy Data Reports*, "Petroleum Statement, Annual."

• January 1979 through July 1979: EIA *Energy Data Reports*, "Petroleum Statement, Monthly."

• August 1979 through September 1979: EIA, "Monthly Petroleum Statistics Report."

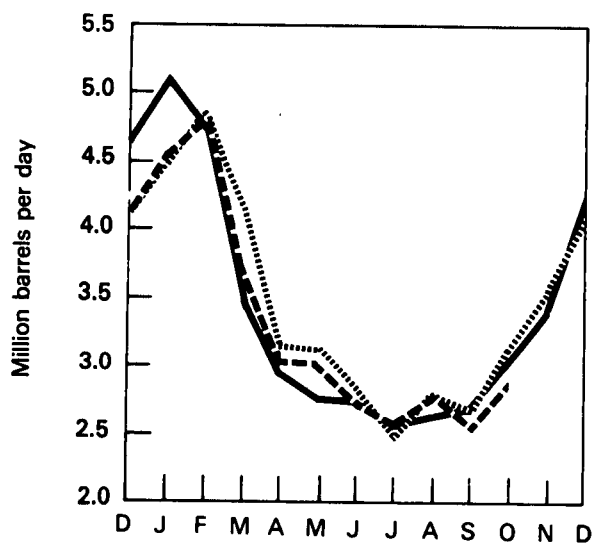
• October 1979 data are EIA estimates based on data from the American Petroleum Institute, "Weekly Statistical Bulletin."

• Sources for the *Energy Data Reports* and the "Monthly Petroleum Statistics Report" are: Economic Regulatory Administration Forms 60 (Imports), FEA P133 (Imports from Puerto Rico), EIA Form 64 (Natural Gas Liquids Operation Report), form 87 (Refinery Report), form 88 (Bulk Terminals), form 89 (Pipeline Report); Bureau of Census publications IM 145 (Imports), EM 522 (Exports), and FT 800 (Exports).

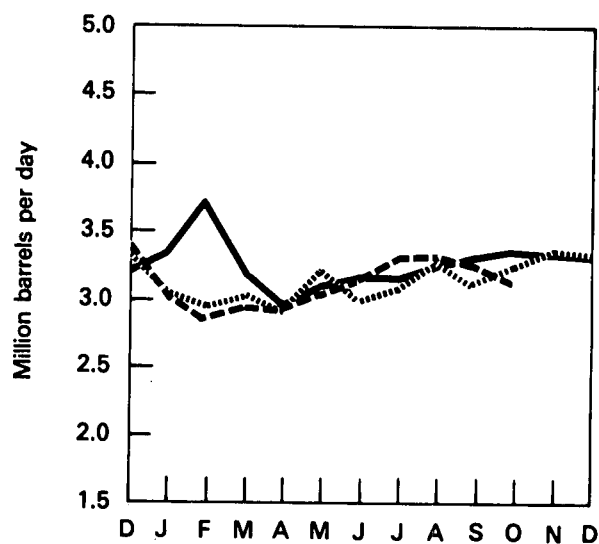
# Petroleum

## Distillate Fuel Oil

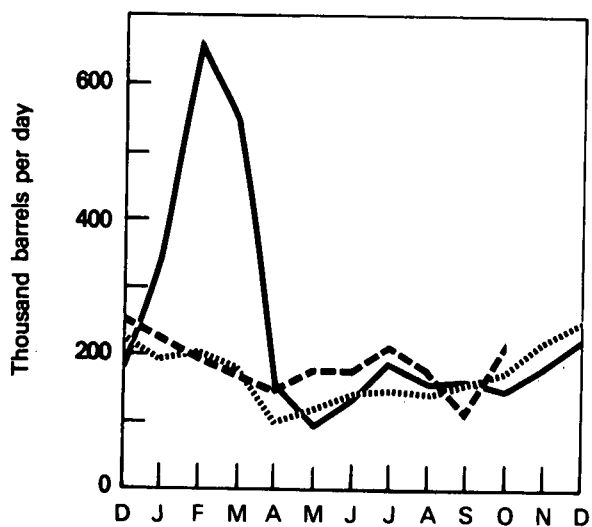
Product Supplied



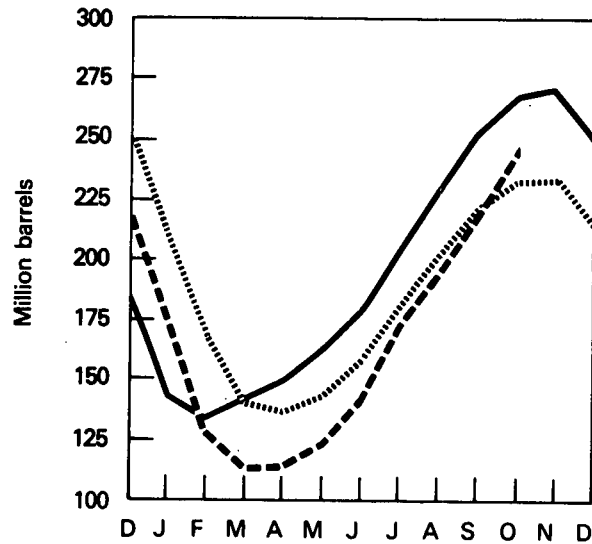
Production



Imports



Stocks



— 1977 EIA  
 ..... 1978 EIA  
 --- 1979 EIA, API

# Petroleum

## Residual Fuel Oil

		Product Supplied	Refinery Production	Imports	Exports	Stocks Thousand barrels
		Thousand barrels per day				
1973	AVERAGE	2,822	971	1,853	23	‡53,480
1974	AVERAGE	2,639	1,070	1,587	14	‡59,694
1975	AVERAGE	2,462	1,235	1,223	15	‡74,126
1976	AVERAGE	2,801	1,377	1,413	12	‡72,344
1977	January	3,761	1,892	1,615	2	64,760
	February	3,719	1,955	1,996	8	71,429
	March	3,185	1,720	1,448	3	71,192
	April	2,874	1,691	1,140	3	70,186
	May	2,729	1,682	1,145	5	73,420
	June	2,958	1,720	1,181	2	72,036
	July	2,812	1,735	1,271	18	77,840
	August	3,049	1,635	1,441	9	78,798
	September	2,926	1,750	1,458	3	87,522
	October	2,707	1,749	1,218	2	95,896
	November	2,819	1,695	1,094	7	95,155
	December	3,354	1,839	1,348	12	89,993
	AVERAGE	3,071	1,754	1,359	6	
1978	January	R3,518	R1,868	R1,380	13	R81,657
	February	R3,974	R1,795	R1,582	10	R65,091
	March	R3,540	R1,751	R1,710	22	R62,388
	April	R3,003	R1,548	R1,575	7	R66,209
	May	R2,686	R1,653	R1,231	16	R72,233
	June	R2,625	R1,572	R1,031	4	R71,860
	July	R2,772	R1,586	R1,295	10	R75,320
	August	R2,929	R1,630	R1,275	25	R74,166
	September	2,716	R1,636	R1,318	12	R81,314
	October	R2,621	R1,564	R1,120	8	R83,435
	November	R2,845	R1,662	R1,352	6	R88,729
	December	R3,107	R1,750	R1,410	19	R90,194
	AVERAGE	R3,023	R1,667	R1,355	13	
1979	January	3,533	1,907	1,355	6	81,997
	February	3,596	1,792	1,307	10	68,229
	March	3,238	1,718	1,642	14	71,968
	April	2,479	1,643	1,126	2	81,002
	May	2,502	1,588	1,034	8	84,855
	June	R2,552	R1,534	R880	8	R80,893
	July	R2,302	R1,576	R916	18	R86,631
	August†	2,339	1,575	812	NA	87,629
	September†	R2,394	R1,592	R838	NA	R88,246
	October†	2,193	1,535	888	NA	98,855
	AVERAGE	2,706	1,645	1,079	NA	

Estimated data in italics. These are likely to be revised next month.

‡Total as of December 31.

R = Revised data.

NA = Not available.

†Preliminary data.

Note: Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with 1975.

Sources: • 1973 through 1976: Bureau of Mines *Mineral Industry Surveys*, "Petroleum Statement, Annual."

• 1977 and 1978: Energy Information Administration (EIA) *Energy Data Reports*, "Petroleum Statement, Annual."

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• August 1979 through September 1979: EIA, "Monthly Petroleum Statistics Report."

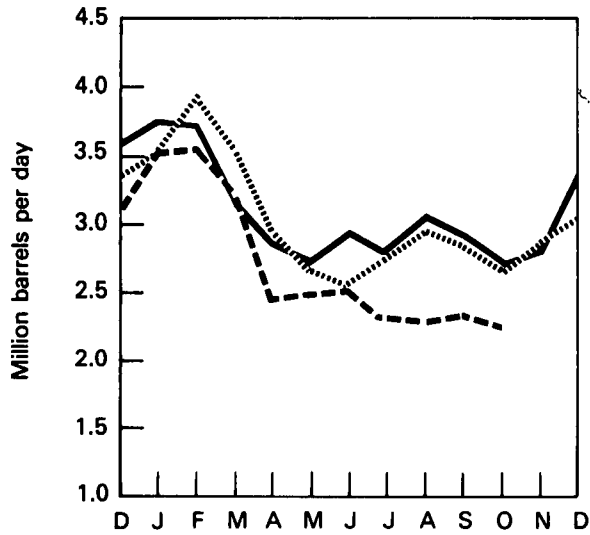
• October 1979 data are EIA estimates based on data from the American Petroleum Institute, "Weekly Statistical Bulletin."

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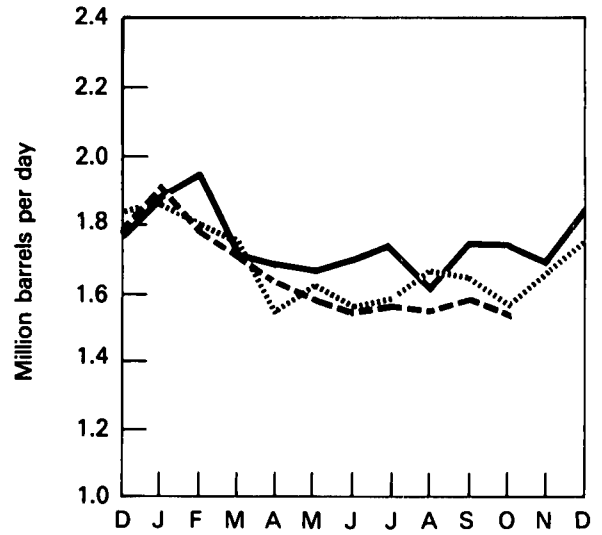
# Petroleum

## Residual Fuel Oil

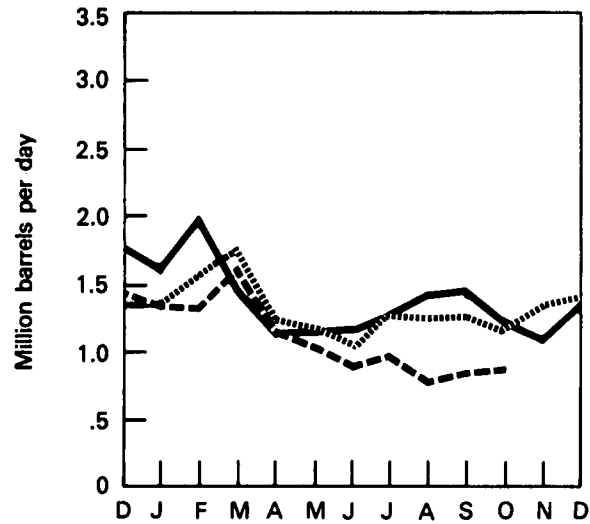
Product Supplied



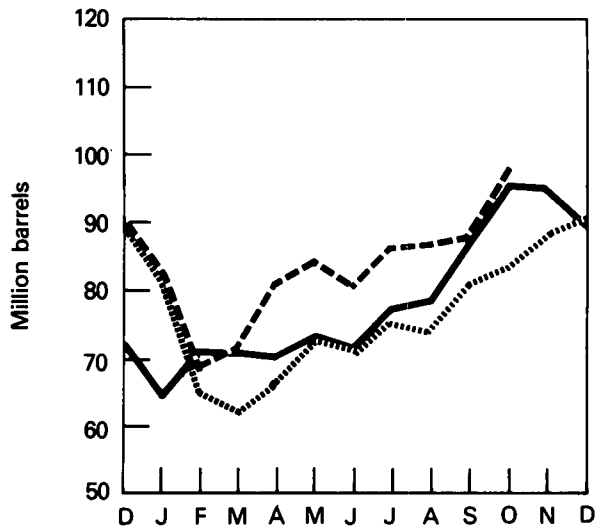
Production



Imports



Stocks



— 1977 EIA  
 ..... 1978 EIA  
 --- 1979 EIA, API



# Petroleum

## Natural Gas Plant Liquids, Including Liquefied Refinery Gases

		Products Supplied <sup>1</sup>	Production <sup>1</sup>		Used at Refineries <sup>1</sup>	Imports	Stocks <sup>1</sup>
			At processing plants	At refineries			
			Thousand barrels per day				Thousand barrels
1973	AVERAGE	1,454	1,738	375	815	239	†106,659
1974	AVERAGE	1,422	1,688	338	746	212	†120,175
1975	AVERAGE	1,352	1,633	311	710	185	†132,653
1976	AVERAGE	1,407	1,603	340	725	196	†124,518
1977	January	1,938	1,549	323	735	244	106,445
	February	1,920	1,589	336	699	270	94,037
	March	1,360	1,687	331	690	241	99,942
	April	1,234	1,664	336	673	199	108,128
	May	1,174	1,620	397	614	165	119,910
	June	1,239	1,616	364	622	203	129,223
	July	1,137	1,609	381	594	157	141,542
	August	1,185	1,593	360	659	204	150,755
	September	1,209	1,585	352	654	148	157,089
	October	1,412	1,633	353	710	168	157,615
	November	1,589	1,627	349	700	187	153,452
	December	1,762	1,637	345	732	254	144,902
	AVERAGE	1,427	1,618	352	673	203	
1978	January	R1,875	1,557	R326	R647	R200	R130,682
	February	R1,803	1,562	338	R657	207	R120,217
	March	1,429	1,590	R361	R602	132	R121,232
	April	R1,164	1,619	R352	R601	R101	R129,870
	May	R1,171	1,530	363	R494	109	139,581
	June	R1,125	1,583	R367	649	109	147,540
	July	R1,124	1,558	348	R563	122	R157,527
	August	R1,090	1,556	R351	657	93	R164,537
	September	R1,338	1,546	379	R644	R106	R165,600
	October	R1,481	1,540	352	R658	116	161,006
	November	1,588	1,602	357	R755	122	R152,519
	December	R1,832	1,566	363	R743	258	<sup>2</sup> 140,052
	AVERAGE	R1,416	1,567	R355	639	R139	
1979	January	2,222	1,748	337	763	256	124,138
	February	1,998	1,703	325	757	252	110,412
	March	1,654	1,728	333	718	257	107,759
	April	1,449	1,708	354	679	160	110,216
	May	1,357	1,647	389	655	255	118,505
	June	R1,316	R1,641	R382	R606	R175	R126,468
	July	R1,410	R1,643	R361	R565	R240	R134,523
	August	1,456	1,697	352	664	120	148,000
	September	1,417	1,693	347	656	111	150,000
	October	1,728	1,661	343	682	160	142,000
	AVERAGE	1,599	1,687	352	674	199	

<sup>1</sup>See Explanatory Note 7, and Definitions.

<sup>2</sup>EIA natural gas plant coverage was expanded in January 1979 to include approximately 80 more plants. Calculated on the new basis, January 1979 opening stocks of natural gas plant liquids totaled 140,052 thousand barrels.

†Total as of December 31.

R = Revised data.

Sources: 1973 through 1977: Bureau of Mines *Mineral Industry Surveys*, "Petroleum Statement, Annual."

• 1978: Energy Information Administration (EIA) *Energy Data Reports*, "Petroleum Statement, Annual."

• January 1979 through July 1979: Energy Information Administration (EIA) *Energy Data Reports*, "Petroleum Statement, Monthly."

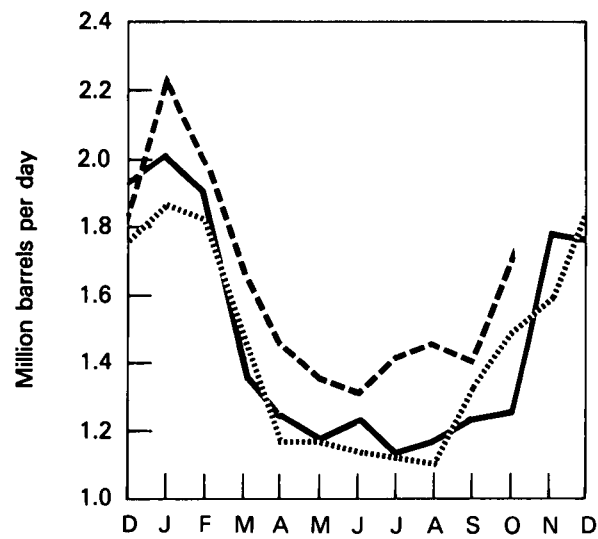
• August through October 1979: EIA estimates based on historical analyses.

• Sources for the *Energy Data Reports* are: Economic Regulatory Administration Forms 60 (Imports), FEA P133 (Imports from Puerto Rico), EIA Form 64 (Natural Gas Liquids Operation Report), form 87 (Refinery Report), form 88 (Bulk Terminals), form 89 (Pipeline Report); Bureau of Census publications IM 145 (Imports), FM 522 (Exports), and FT 800 (Exports).

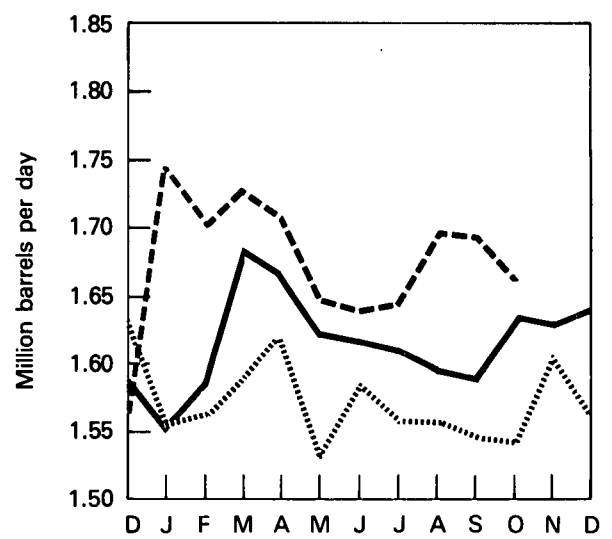
# Petroleum

## Natural Gas Plant Liquids

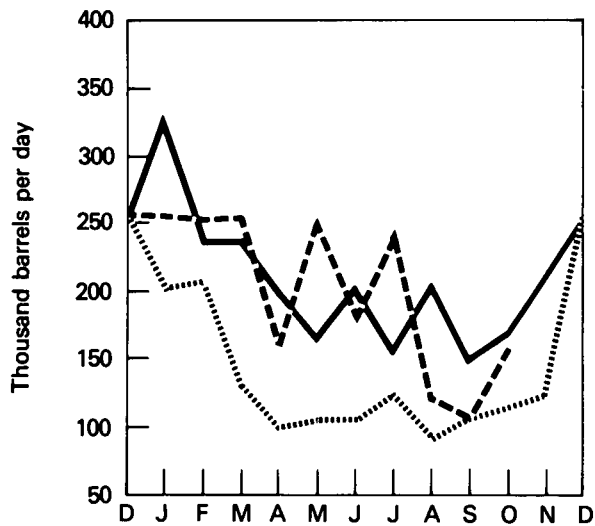
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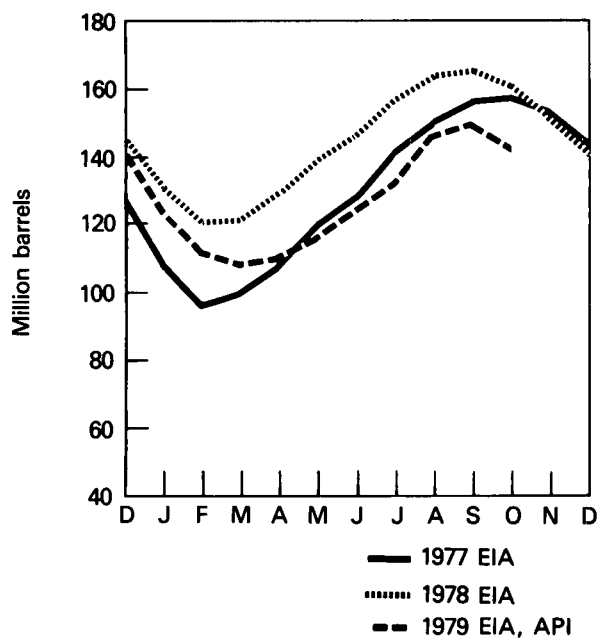
Production at Processing Plants



Imports



Stocks



— 1977 EIA  
 ..... 1978 EIA  
 - - - 1979 EIA, API

## Natural Gas

Consumption of natural gas in the United States during October 1979 was an estimated 1.46 trillion cubic feet (Tcf). This was 16.8 percent greater than in September 1979 and 1.4 percent higher than in October 1978. Estimated consumption during the first 10 months of 1979 totaled 15.82 Tcf, slightly less than during the period January through October 1978.

Production of dry natural gas in October 1979 was an estimated 1.54 Tcf, 4.1 percent greater than in September 1979 and approximately 1.6 percent less than in October 1978. Output during the first 10 months of 1979 totaled 15.60 Tcf, 2.2 percent less than during the comparable 1978 period.

Imports of natural gas in October 1979 were an estimated 0.10 Tcf, 26.3 percent higher than in the previous October. During the first 10 months of 1979 imports of natural gas totaled an estimated 1.02 Tcf. This includes Algerian liquefied natural gas (LNG) received at the Cove Point, Maryland and Elba Island, Georgia large-scale LNG terminals equivalent to approximately 0.21 Tcf. Total imports were 32.7 percent higher than during the comparable 1978 period.

Domestic producer sales to major interstate pipeline companies in August 1979 totaled 0.88 Tcf, 7.2 percent above sales for the previous August. Total sales during the first 8 months of 1979 were 6.91 Tcf, 5.5 percent above those for the same period in 1978.

Stocks of working gas\* in underground natural gas storage reservoirs at the end of October 1979 totaled 3.1 Tcf, 4.1 percent above those available a year earlier and a record high for the beginning of the winter heating season (November through March). Net injections into storage during October were 0.16 Tcf, 10.5 percent less than in October 1978.

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\*Gas available for withdrawal.

# Natural Gas

		Domestic Consumption	Production		Domestic Producer Sales to Major Interstate Pipelines	Imports	Exports
			Marketed	Dry			
Billion cubic feet							
1973	TOTAL	22,049	22,648	21,731	12,067	1,033	77
1974	TOTAL	21,223	21,601	20,714	11,462	959	77
1975	TOTAL	19,538	20,109	19,237	10,652	953	73
1976	TOTAL	19,946	19,952	19,098	10,140	964	65
1977	January	2,407	1,740	1,665	848	87	5
	February	1,816	1,674	1,602	807	92	4
	March	1,715	1,751	1,675	910	101	4
	April	1,439	1,644	1,573	830	84	3
	May	1,379	1,692	1,619	830	86	3
	June	1,333	1,648	1,577	789	76	5
	July	1,325	1,674	1,602	801	73	7
	August	1,364	1,645	1,574	784	76	5
	September	1,427	1,598	1,529	741	75	5
	October	1,518	1,628	1,558	831	85	5
	November	1,690	1,606	1,537	830	86	5
	December	2,108	1,725	1,652	882	90	5
		TOTAL	19,521	20,025	19,163	9,883	1,011
1978	January	2,382	1,743	1,669	862	86	5
	February	2,139	1,649	1,579	756	77	5
	March	1,918	1,748	1,673	861	86	5
	April	1,539	1,668	1,597	836	78	3
	May	1,380	1,664	1,593	819	74	5
	June	1,249	1,623	1,554	768	68	4
	July	1,333	1,693	1,621	821	72	5
	August	1,285	1,658	1,587	821	74	5
	September	1,235	1,576	1,509	800	73	6
	October	1,440	1,635	1,565	847	80	3
	November	1,658	1,607	1,538	838	91	3
	December	2,069	1,710	1,637	882	107	4
		TOTAL	19,627	19,974	19,122	9,911	966
1979	January	2,372	1,714	1,641	890	100	5
	February	2,149	1,599	1,531	819	94	4
	March	1,834	1,698	1,625	907	116	3
	April	1,578	1,666	1,595	871	109	3
	May	1,369	1,658	1,587	877	97	4
	June	1,264	1,593	1,525	812	101	5
	July	1,272	1,596	1,528	851	107	5
	August	R1,272	R1,619	R1,550	880	R94	6
	September	1,250	1,550	1,480	NA	100	5
	October	1,460	1,610	1,540	NA	101	5
	TOTAL (Year to date)	15,820	16,303	15,602	6,907	1,019	43

R = Revised data.

NA = Not available.

Sources: • Domestic Consumption — 1973 through 1976: U.S. Department of the Interior, Bureau of Mines, *Mineral Yearbook*, "Natural Gas" chapter.

• January 1977 forward: EIA estimates based on a supply/disposition balance calculation.

• Production — State reports to the Interstate Oil Compact Commission and EIA estimates for states that do not report monthly data on a regular or timely basis.

• Domestic Producer Sales — Federal Power Commission (FPC) Form 11 "Natural Gas Pipeline Company Monthly Statement."

• Imports — 1973 through 1978: FPC Form 14, "Imports and Exports of Natural Gas."

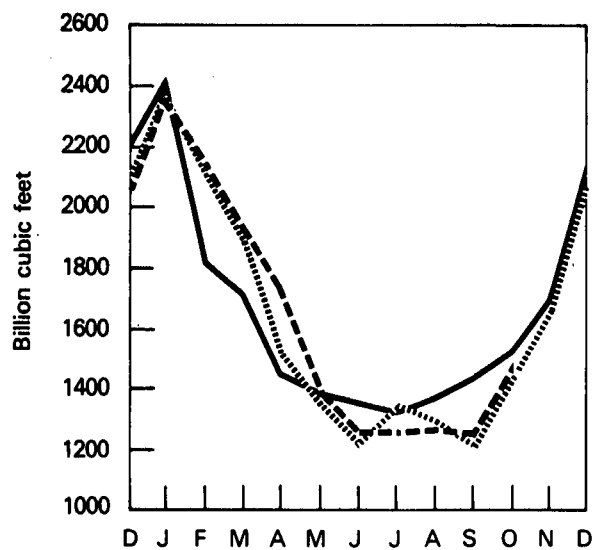
• January 1979 forward: EIA estimates based on import data from FPC Form 11.

• Exports — 1973 through 1978: FPC Form 14.

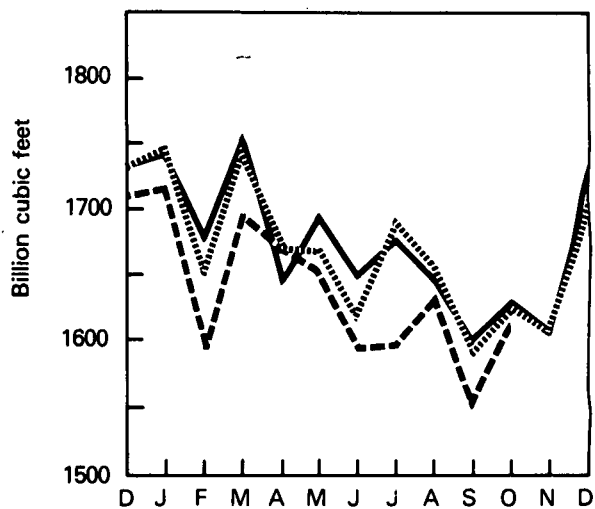
• January 1979 forward: EIA estimates based primarily on historical data reported on FPC Form 14.

# Natural Gas

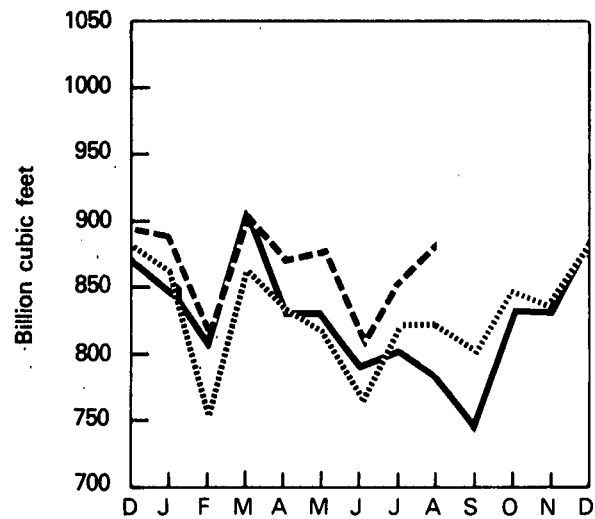
## Domestic Consumption



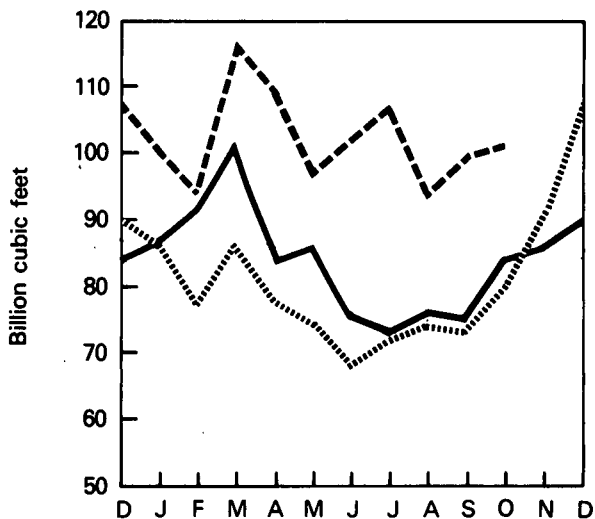
## Marketed Production



## Domestic Producer Sales to Major Interstate Pipelines



## Imports



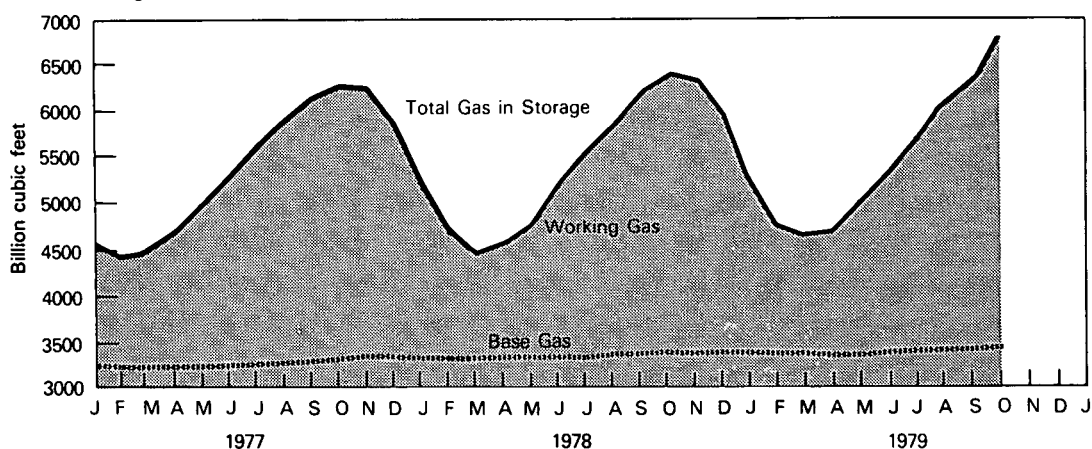
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# Natural Gas

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

		Total Gas in Storage	Base Gas	Working Gas	Storage Injections Billion cubic feet	Storage Withdrawals	Net Storage Injections <sup>2</sup>
1975		±5,358	±3,150	±2,208	NA	NA	NA
1976		±5,231	±3,310	±1,921	1,952	2,074	(122)
1977	January	4,580	3,293	1,287	18	670	(652)
	February	4,446	3,283	1,163	101	235	(134)
	March	4,501	3,286	1,215	187	132	55
	April	4,713	3,286	1,427	256	43	213
	May	5,024	3,293	1,731	329	17	312
	June	5,330	3,300	2,030	317	12	305
	July	5,665	3,317	2,348	348	15	333
	August	5,945	3,346	2,599	290	21	269
	September	6,188	3,364	2,824	262	2	260
	October	6,302	3,373	2,929	157	44	113
	November	6,224	3,403	2,821	84	160	(76)
	December	5,844	3,377	2,467	41	416	(375)
1978	January	5,193	3,374	1,819	21	668	(647)
	February	4,683	3,373	1,310	21	530	(509)
	March	4,497	3,374	1,123	92	278	(186)
	April	4,608	3,377	1,231	179	68	111
	May	4,870	3,379	1,491	291	30	261
	June	5,217	3,381	1,836	365	18	347
	July	5,550	3,386	2,164	349	16	333
	August	5,904	3,403	2,501	359	12	347
	September	6,224	3,411	2,813	329	9	320
	October	6,402	3,444	2,958	209	28	181
	November	6,352	3,425	2,927	82	135	(53)
	December	5,999	3,459	2,540	33	384	(351)
1979	January	5,348	3,458	1,890	21	673	(652)
	February	4,806	3,457	1,349	23	566	(543)
	March	4,695	3,459	1,236	94	205	(111)
	April	4,762	3,427	1,335	182	73	109
	May	5,057	3,438	1,619	308	13	295
	June	5,399	3,449	1,950	350	8	342
	July	5,743	3,459	2,284	361	19	342
	August	6,095	3,467	2,628	362	12	350
	September	6,401	3,481	2,920	326	14	312
	October	6,563	3,484	3,079	196	34	162

Gas in Storage



<sup>1</sup>See Explanatory Note 9.

<sup>2</sup>Net Storage Injections = storage injection minus storage withdrawal. Parentheses indicate withdrawal greater than injection.

±Total as of December 31.

NA = Not available.

Sources: • Federal Energy Administration System 8/EIA 191, (formerly Federal Energy Administration Form G-318-M-0), "Underground Gas Storage Report."

# Part 5 Oil and Gas Resource Development

## Oil and Gas Resource Development

The rotary rig count increased to 2,380 in October 1979, up from the 2,284 count of the month before. This represents a 1.4 percent decrease from the October 1978 count of 2,346 rotary rigs.

Wells completed in October 1979 totaled 4,033. This is a 2.4 percent increase from the number completed during October 1978.

Oil well completions in October 1979 (1,623 well completions) were up 16.3 percent from October 1978 (1,395 completions). The number of gas wells completed increased. In October 1979, 1,123 gas wells were completed, 1.9 percent above the October 1978 level. Dry holes were down 5.5 percent (1,287 as compared to 1,441 during the previous October). Total footage drilled dropped 1.4 percent (18.8 million feet as compared to 19.1 million feet the year before).

# Oil and Gas Resource Development

Rotary Rigs in Operation				Exploratory and Development Wells Drilled <sup>1,2</sup>				Total Footage of Wells Drilled <sup>1</sup>
Monthly average				Oil	Gas	Dry	Total	Thousand feet
1973	AVERAGE	1,194	TOTAL	9,902	6,385	10,305	26,592	136,391
1974	AVERAGE	1,475	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	1,656	TOTAL	17,059	9,085	13,621	39,765	181,780
1977	January	1,850		1,391	732	1,096	3,219	14,517
	February	1,856		1,321	705	999	3,025	14,443
	March	1,887		1,817	958	1,297	4,072	19,400
	April	1,907		1,405	818	1,059	3,282	15,523
	May	1,982		1,382	877	1,150	3,409	16,702
	June	2,008		1,720	952	1,270	3,942	18,767
	July	2,023		1,304	724	1,022	3,050	14,529
	August	2,066		1,400	961	1,179	3,540	16,838
	September	2,084		1,924	1,105	1,288	4,317	19,333
	October	2,101		1,562	1,024	1,254	3,840	18,000
	November	2,113		1,785	1,091	1,447	4,323	19,537
	December	2,141		1,875	1,387	1,569	4,831	21,365
		AVERAGE	2,001	TOTAL	18,912	11,378	14,692	44,982
1978	January	2,128		1,184	783	1,233	3,200	15,394
	February	2,135		1,486	851	1,239	3,576	16,933
	March	2,158		1,499	1,247	1,420	4,166	20,392
	April	2,198		1,369	971	1,112	3,452	17,559
	May	2,249		1,209	1,004	1,166	3,379	17,189
	June	2,286		1,812	1,071	1,489	4,372	21,115
	July	2,307		1,503	985	1,191	3,679	17,258
	August	2,325		1,516	1,085	1,290	3,891	18,440
	September	2,332		1,619	1,227	1,511	4,357	21,234
	October	2,346		1,395	1,102	1,441	3,938	19,109
	November	2,356		1,294	1,027	1,308	3,629	17,805
	December	2,286		1,861	1,588	1,828	5,277	24,108
		AVERAGE	2,259	TOTAL	17,775	13,064	16,218	47,057
1979	January	2,199		1,372	996	1,278	3,646	17,963
	February	2,064		1,463	1,139	1,076	3,678	18,917
	March	1,970		1,544	1,343	1,372	4,259	21,175
	April	1,943		1,138	1,083	930	3,151	16,069
	May	1,960		1,307	992	1,130	3,429	16,974
	June	1,999		1,681	1,194	1,243	4,118	19,413
	July	2,094		1,526	1,080	1,130	3,736	16,749
	August	2,222		1,523	1,246	1,368	4,137	19,565
	September	2,284		1,819	1,374	1,428	4,621	22,590
	October	2,380		1,623	1,123	1,287	4,033	18,840
	AVERAGE	2,112	TOTAL	15,081	11,661	12,357	39,099	189,419

<sup>1</sup>Excludes service wells and stratigraphic and core tests.

<sup>2</sup>Data reported for the first 2 months of each quarter cover 4 weeks of drilling activity, and data for the last month of the quarter cover 5 weeks of drilling activity.

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

Sources: • Rotary Rigs: Hughes Tool Company "Rotary Rigs Running — By State."

• Wells: Data compiled by the American Petroleum Institute (API), from the API "Monthly Drilling Report" and API "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 average		
<b>1973</b>	<b>AVERAGE</b>	<b>23</b>	<b>227</b>	<b>250</b>	<b>21,579</b>	<b>10,597</b>	<b>32,175</b>
<b>1974</b>	<b>AVERAGE</b>	<b>31</b>	<b>274</b>	<b>305</b>	<b>28,482</b>	<b>13,219</b>	<b>41,701</b>
<b>1975</b>	<b>AVERAGE</b>	<b>30</b>	<b>254</b>	<b>284</b>	<b>25,773</b>	<b>12,558</b>	<b>38,331</b>
<b>1976</b>	<b>AVERAGE</b>	<b>25</b>	<b>237</b>	<b>262</b>	<b>18,859</b>	<b>11,910</b>	<b>30,769</b>
<b>1977</b>	January	26	254	280			
	February	27	259	286			
	March	22	260	282			
	April	26	266	292			
	May	29	272	301			
	June	31	274	305			
	July	30	285	315			
	August	31	295	326			
	September	29	291	320			
	October	28	302	330			
	November	26	309	335			
	December	26	303	329			
	<b>AVERAGE</b>	<b>27</b>	<b>281</b>	<b>308</b>	<b>10,390</b>	<b>10,006</b>	<b>20,396</b>
<b>1978</b>	January	26	302	328			
	February	23	305	328			
	March	20	314	334			
	April	21	315	336			
	May	21	330	351			
	June	26	336	362			
	July	26	341	367			
	August	27	338	365			
	September	21	333	354			
	October	29	342	371			
	November	27	342	369			
	December	30	328	358			
	<b>AVERAGE</b>	<b>25</b>	<b>327</b>	<b>352</b>	<b>14,551</b>	<b>11,325</b>	<b>25,876</b>
<b>1979</b>	January	28	327	355			
	February	29	321	350			
	March	32	332	364			
	April	30	330	360			
	May	28	355	383			
	June	32	372	404			
	July	31	376	407			
	August	31	393	424			
	September	30	403	433			
	October	29	407	436			
	<b>AVERAGE</b>	<b>30</b>	<b>362</b>	<b>392</b>			

<sup>1</sup>Data not yet available for 1979.

NA = Not available.

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

## Coal

Coal production in October 1979 was 76.5 million tons, 18.8 percent above production in September 1979 and 8.6 percent higher than in October 1978. Production in the first 10 months of 1979 totaled 646.7 million tons, 22.0 percent above the amount produced in the first 10 months of 1978.

Domestic consumption of coal in September 1979 totaled 53.7 million tons, 10.5 percent lower than consumption in August 1979 and 1.3 percent below consumption in September 1978. In the first 9 months of 1979 coal consumption totaled 502.4 million tons, an increase of 41.4 million tons, or 9.0 percent above consumption in the same period for 1978. Electric utility coal consumption\* totaled 42.0 million tons in September 1979, 1.5 percent less than in September 1978. During the first 9 months of 1979 electric utilities consumed 395.6 million tons of coal, an increase of 10.5 percent above the 358.0 million tons consumed during the same period in 1978. Coke plants, the second largest coal consuming sector, used 57.1 million tons in the first 9 months of 1979, an increase of 11.1 percent above the amount consumed during the same period in 1978. Coal consumption by general industry totaled 43.4 million tons in the first 9 months of 1979, 2.3 percent below the amount consumed in the same period of 1978. The 6.3 million tons of coal delivered to retail dealers through the first 9 months of 1979 was 13.0 percent lower than in the first 9 months of 1978.

Total stocks of bituminous coal and lignite held by consumers increased 8.3 percent during the first 9 months of 1979 to 153.3 million tons at the end of September. Electric utility stockpiles\*\* increased from 126.0 million tons at the end of December 1978 to 136.7 million tons at the end of September 1979. Bituminous coal stocks held by coke plants increased from 8.2 million tons at the end of December 1978 to 8.9 million tons at the end of September of 1979. General industry stockpiles of bituminous coal

and lignite at the end of September 1979 totaled 7.3 million tons, 0.3 million tons above the level at the end of December 1978.

Imports of coal in the first 9 months of 1979 totaled 1.6 million tons, 0.7 million tons below the amount imported during the first 9 months of 1978. Exports of coal through the first 9 months of 1979 totaled 46.1 million tons, 84.2 percent more than the amount of coal exported in the first 9 months of 1978. Exports were principally to Canada (30.1 percent) and to Japan (24.7 percent).

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\*Includes bituminous, lignite and anthracite consumption, and excludes petroleum coke consumption.

\*\*Stocks includes bituminous coal and lignite, only.

# Coal

## Bituminous, Lignite, and Anthracite

		Production	Domestic Consumption	Imports	Exports
		Thousand short tons			
1973	TOTAL	598,568	562,583	127	53,587
1974	TOTAL	610,023	558,402	2,080	60,661
1975	TOTAL	654,641	562,643	940	66,309
1976	TOTAL	684,913	603,790	1,203	60,021
1977	January	45,062	56,871	123	2,180
	February	49,671	50,377	75	3,121
	March	67,343	50,713	31	3,449
	April	61,021	46,767	170	5,655
	May	63,019	49,557	94	5,757
	June	63,638	52,209	92	6,045
	July	49,962	56,461	112	5,222
	August	58,323	55,315	100	4,334
	September	70,030	51,022	175	5,131
	October	68,180	50,654	274	4,931
	November	69,546	51,194	170	4,566
	December	31,410	54,168	231	3,921
	TOTAL	697,205	625,308	1,647	54,312
1978	January	23,545	54,758	139	894
	February	23,860	46,422	159	588
	March	39,290	44,231	231	377
	April	60,050	45,953	417	2,613
	May	69,300	49,184	323	4,473
	June	66,225	52,487	291	5,429
	July	54,195	55,876	313	3,574
	August	64,945	57,705	227	3,634
	September	58,355	54,405	196	3,454
	October	70,480	52,771	371	5,053
	November	69,820	52,665	98	6,030
	December	60,180	57,067	188	4,572
	TOTAL	660,245	623,524	2,953	40,691
1979	January	56,941	62,026	186	3,605
	February	53,988	53,767	252	2,726
	March	65,952	54,232	123	4,642
	April	63,800	50,805	161	5,268
	May	71,250	53,307	112	6,215
	June	66,300	55,083	209	5,975
	July	54,895	59,417	88	6,297
	August	72,715	R60,028	320	6,248
	September	64,380	53,716	180	5,145
	October	76,510	NA	NA	NA
	TOTAL	646,731	NA	NA	NA

R = Revised data.

NA = Not available.

Sources: • 1973 through September 1977, Bureau of Mines *Mineral Industry Surveys*, "Weekly Coal Report."

• October 1977 forward, Energy Information Administration (EIA) *Energy Data Reports*, "Weekly Coal Report."

• Sources for "Weekly Coal Report" are: Production — Bituminous coal and Anthracite: October estimate based on car loadings of coal reported to the Association of American Railroads (CS form 54A). Bituminous and lignite data finalized from EIA form 7, "Bituminous Coal and Lignite Production and Mine Operation." Anthracite data finalized from: Bureau of Mines form 6-1385A, "Pennsylvania Anthracite Production;" BOM form 6-1386A, "Pennsylvania Anthracite Production, Mines Without Preparation Plants;" BOM form 6-1387A, "Pennsylvania Anthracite Production, Contractor's Report;" BOM form 6-1388A, "Pennsylvania Anthracite Production, River Coal Report."

• Consumption and Stocks — Federal Power Commission Form 4, "Monthly Power Plant Report;" EIA form 2, "Monthly Coal Report, Retail Dealers and Upper Lake Docks;" form 3, "Monthly Coal Consumption Report, Manufacturing Plants;" form 5, "Monthly Survey of Coke and Coal Chemical Materials;" Finalized coke data from form 5A.

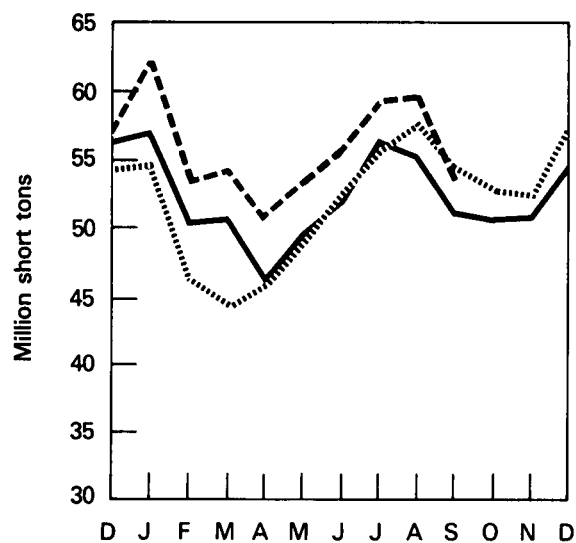
• Imports — Department of Commerce, Bureau of the Census: Bituminous coal: Schedules 5213120, 5213180.

• Exports — Department of Commerce, Bureau of the Census: Bituminous coal: Schedules 5213110, 5213120; Anthracite: Schedule 5213170.

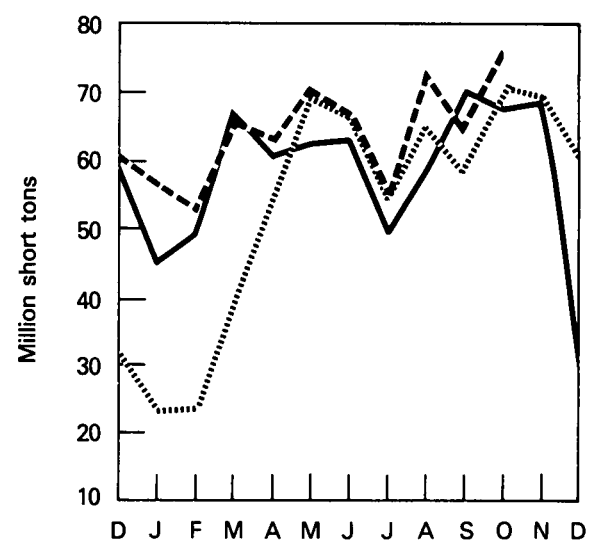
# Coal

## Bituminous, Lignite, and Anthracite

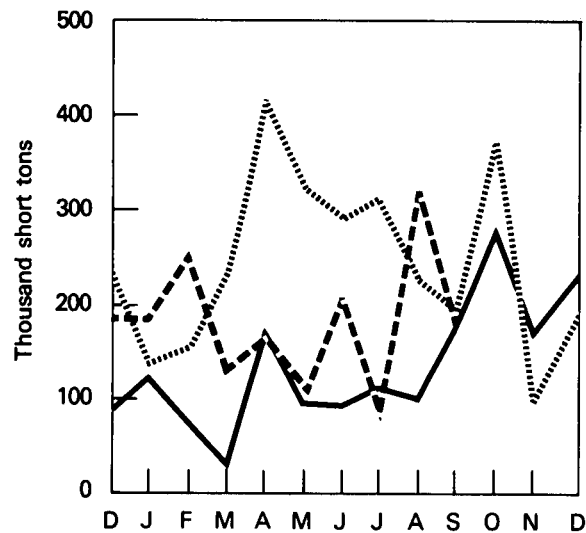
Domestic Consumption



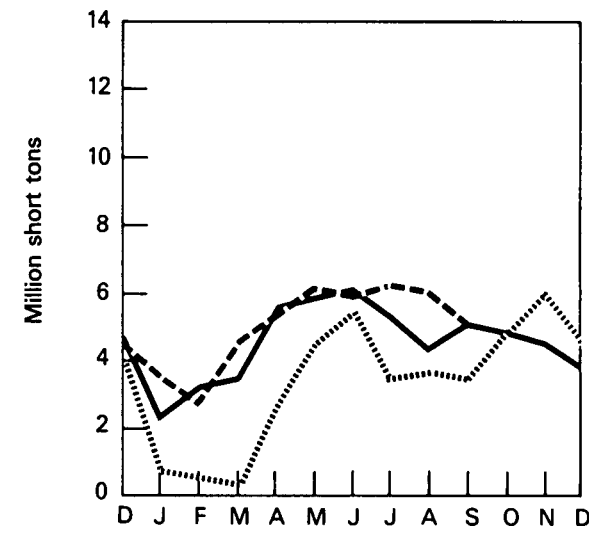
Production



Imports



Exports



— 1977  
..... 1978  
- - - 1979

### Consumption – Bituminous, Lignite and Anthracite

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

**Sources:** • 1973 through September 1977, Bureau of Mines *Mineral Industry Surveys*, "Weekly Coal Report."

- October 1977 forward, Energy Information Administration (EIA) *Energy Data Reports*, "Weekly Coal Report."

- Sources for "Weekly Coal Report" are: Production — Bituminous coal and Anthracite: September estimate based on car loadings of coal reported to the Association of American Railroads (CS form 54A). Bituminous and lignite data finalized from EIA form 7, "Bituminous Coal and Lignite Production and Mine Operation." Anthracite data finalized from: Bureau of Mines form 6-1385A, "Pennsylvania Anthracite Production;" BOM form 6-1386A, "Pennsylvania Anthracite Production, Mines Without Preparation Plants;" BOM form 6-1387A, "Pennsylvania Anthracite Production, Contractor's Report;" BOM form 6-1388A, "Pennsylvania Anthracite Production. River Coal Report."

- Consumption and Stocks—Federal Power Commission Form 4, "Monthly Power Plant Report;" EIA form 2, "Monthly Coal Report, Retail Dealers and Upper Lake Docks;" form 3, "Monthly Coal Consumption Report, Manufacturing Plants;" form 5, "Monthly Survey of Coke and Coal Chemical Materials;" Finalized coke data from form 5A.

- **Imports — Department of Commerce, Bureau of the Census: Bituminous coal: Schedules 5213120, 5213180.**

- Exports—Department of Commerce, Bureau of the Census: Bituminous coal: Schedules 5213110, 5213120; Anthracite: Schedule 5213170.

# Coal

## Bituminous and Lignite

		Production <sup>1</sup>	Domestic Consumption <sup>1</sup>	Imports	Exports <sup>2</sup>	Stocks <sup>3</sup>
		Thousand short tons				
1973	TOTAL	591,738	556,912	127	52,870	103,412
1974	TOTAL	603,406	552,954	2,080	59,926	95,477
1975	TOTAL	648,438	557,535	940	65,669	127,150
1976	TOTAL	678,685	598,750	1,203	59,406	133,555
1977	January	44,679	56,561	123	2,143	118,116
	February	49,260	50,044	75	3,079	114,408
	March	66,776	50,241	31	3,390	122,592
	April	60,549	46,349	170	5,637	129,877
	May	62,499	49,157	94	5,673	137,733
	June	63,095	51,728	92	6,019	145,375
	July	49,584	56,183	112	5,158	137,593
	August	57,751	54,834	100	4,279	137,071
	September	69,510	50,632	175	5,037	145,253
	October	67,660	50,230	274	4,871	158,322
	November	68,979	50,738	170	4,491	173,251
	December	31,002	53,808	231	3,910	152,264
	TOTAL	691,344	620,505	1,647	53,687	
1978	January	23,115	54,418	139	870	118,294
	February	23,520	46,022	159	555	93,134
	March	38,765	43,791	231	325	83,786
	April	59,530	45,493	417	2,594	96,589
	May	68,760	48,754	323	4,411	110,895
	June	65,565	51,937	291	5,398	122,624
	July	53,640	55,426	313	3,531	119,803
	August	64,395	57,225	227	3,568	122,656
	September	57,775	53,925	196	3,338	125,704
	October	69,860	52,271	371	4,911	133,579
	November	69,245	52,190	98	5,930	142,701
	December	59,630	56,637	188	4,394	141,616
	TOTAL	653,800	618,089	2,953	39,825	
1979	January	56,486	61,626	186	3,526	132,177
	February	53,628	53,377	252	2,691	125,320
	March	65,492	53,837	123	4,592	130,013
	April	63,325	50,405	161	5,227	138,411
	May	70,720	52,847	112	6,091	147,104
	June	65,835	54,653	209	5,895	150,760
	July	54,495	R59,002	88	6,249	R144,098
	August	72,100	R59,628	320	6,089	R148,053
	September	63,895	53,307	180	5,019	153,308
	October	75,910	NA	NA	NA	NA
	TOTAL	641,886	NA	NA	NA	

<sup>1</sup>See Explanatory Note 10.

<sup>2</sup>Bituminous coal only.

<sup>3</sup>Total stocks held by utilities, industrial consumers, and retail dealers at end of year or month.

R = Revised data.

NA = Not available.

Sources: • 1973 through September 1977, Bureau of Mines *Mineral Industry Surveys*, "Weekly Coal Report."

• October 1977 forward, Energy Information Administration (EIA) *Energy Data Reports*, "Weekly Coal Report."

• Sources for "Weekly Coal Report" are: Production — Bituminous coal and lignite: October estimate based on car loadings of coal reported to the Association of American Railroads (CS form 54A). Finalized from EIA form 7, "Bituminous Coal and Lignite Production and Mine Operation."

• Consumption and Stocks — Federal Power Commission Form 4, "Monthly Power Plant Report;" EIA form 2, "Monthly Coal Report, Retail Dealers and Upper Lake Docks;" form 3, "Monthly Coal Consumption Report, Manufacturing Plants;" form 5, "Monthly Survey of Coke and Coal and Chemical Materials;" Finalized coke data from form 5A.

• Imports — Department of Commerce, Bureau of the Census: Bituminous coal: Schedules 5213120, 5313180.

• Exports — Department of Commerce, Bureau of the Census: Bituminous coal: Schedules 5213110, 5213120; Anthracite: Schedule 5213170.

# Coal

## Stocks<sup>1</sup> — Bituminous and Lignite

Industry and Miscellaneous					
	Electric Utilities	Coke Plants	General Industry and Miscellaneous	Retail Dealers	Total
Thousand short tons					
1973	85,902	6,875	10,345	290	103,412
1974	82,579	6,037	6,580	280	95,477
1975	109,742	8,671	8,504	233	127,150
1976	116,436	9,804	7,075	240	133,555
1977					
January	103,919	8,107	5,960	130	118,116
February	101,085	7,463	5,719	140	114,408
March	107,382	9,025	6,030	155	122,592
April	113,678	9,898	6,161	140	129,877
May	120,573	10,625	6,375	160	137,733
June	126,505	12,035	6,660	175	145,375
July	121,182	9,816	6,395	200	137,593
August	121,488	9,043	6,350	190	137,071
September	128,023	10,410	6,580	240	145,253
October	137,323	12,599	8,125	275	158,322
November	147,331	15,500	10,060	360	173,251
December	130,898	12,721	8,425	220	152,264
1978					
January	102,965	8,130	7,017	182	118,294
February	82,441	5,067	5,507	119	93,134
March	74,925	3,750	4,997	114	83,786
April	85,899	5,602	4,953	135	96,589
May	98,481	7,129	5,110	175	110,895
June	108,534	8,237	5,543	310	122,624
July	107,455	6,604	5,454	290	119,803
August	110,055	6,276	5,970	355	122,656
September	112,935	6,202	6,205	362	125,704
October	119,374	7,272	6,576	357	133,579
November	127,176	8,520	6,625	380	142,701
December	126,044	8,162	7,050	360	141,616
1979					
January	117,755	7,437	6,620	365	132,177
February	112,258	6,553	6,191	318	125,320
March	116,364	7,352	6,022	275	130,013
April	123,554	8,317	6,265	275	138,411
May	131,550	8,854	6,385	315	147,104
June	134,282	9,448	6,703	327	150,760
July	R128,805	8,115	6,806	372	R144,098
August	R131,904	R8,583	R7,154	R412	R148,053
September	136,658	8,875	7,335	440	153,308

<sup>1</sup>Stocks held by utilities, general industry, and retail dealers at end of year or month.  
R = Revised data.

Sources: • 1973 through September 1977, Bureau of Mines *Mineral Industry Surveys*, "Weekly Coal Report."  
• October 1977 forward, Energy Information Administration (EIA) *Energy Data Reports*, "Weekly Coal Report."

• Sources for "Weekly Coal Report" are: Production — Bituminous coal and Anthracite: October estimate based on car loadings of coal reported to the Association of American Railroads (CS form 54A). Bituminous and lignite data finalized from EIA form 7, "Bituminous Coal and Lignite Production and Mine Operation." Anthracite data finalized from: Bureau of Mines form 6-1385A, "Pennsylvania Anthracite Production;" BOM form 6-1386A, "Pennsylvania Anthracite Production, Mines Without Preparation Plants;" BOM form 6-1387A, "Pennsylvania Anthracite Production, Contractor's Report;" BOM form 1388A, "Pennsylvania Anthracite Production, River Coal Report."

• Consumption and Stocks — Federal Power Commission Form 4, "Monthly Power Plant Report;" EIA form 2, "Monthly Coal Report, Retail Dealers and Upper Lake Docks;" form 3, "Monthly Coal Consumption Report, Manufacturing Plants;" form 5, "Monthly Survey of Coke and Coal Chemical Materials;" Finalized coke data from form 5A.

• Imports — Department of Commerce, Bureau of the Census: Bituminous coal: Schedules 5213120, 5213180.

• Exports — Department of Commerce, Bureau of the Census: Bituminous coal: Schedules 5213110, 5213120; Anthracite: Schedule 5213170.

## Electric Utilities

September 1979 production of electricity by utilities was 180.6 billion kilowatt-hours, 2.7 percent below the September 1978 production level. Natural gas-fired production totaled 31.4 billion kilowatt-hours, an increase of 11.5 percent above the September 1978 level. Coal-fired production totaled 85.5 billion kilowatt-hours, and petroleum-fired production totaled 22.5 billion kilowatt-hours, 1.7 and 15.5 percent, respectively, below the September 1978 output levels. Nuclear production totaled 21.8 billion kilowatt-hours, and hydroelectric production totaled 19.0 billion kilowatt-hours, 1.7 and 10.4 percent, respectively below the September 1978 levels.

Sales of electricity to all ultimate consumers in the United States in September 1979 totaled 178.2 billion kilowatt-hours, a decrease of 3.9 percent from sales of the month before, and a decrease of 1.6 percent from September 1978 sales. Sales to residential consumers during September 1979 were 59.3 billion kilowatt-hours, an increase of 3.8 percent below sales for the corresponding month in 1978. Commercial sales were 42.4 billion kilowatt-hours, 1.2 percent less than the amount for September 1978. Sales to industrial consumers totaled 70.1 billion kilowatt-hours in September 1979, about 0.1 percent over the September 1978 figure. In September 1979 other sales totaled 6.5 billion kilowatt-hours, 0.8 percent above the September 1978 level.

Electric utility petroleum consumption during September 1979 was 38.6 million barrels, a 16.9 percent drop from the September 1978 level. Coal consumption for September 1979 was 42.0 million tons, 1.5 percent below the September 1978 rate. During September 1979, consumption of natural gas by electric utilities was 339.0 billion cubic feet, 14.2 percent above the September 1978 consumption level.

On September 30, 1979, bituminous and lignite stocks reached 136.7 million tons, and anthracite stocks reached approximately 2.4 million tons, a total of 139.0 million tons of coal. Stockpiles of bituminous coal and lignite were 3.6 percent above the previous month's level and 21.0 percent above the level of September 1978. Anthracite stocks were 2.4 percent above the level of a month earlier and 7.2 percent above the level of September 1978.

Petroleum stocks on September 30, 1979, totaled 123.4 million barrels, 11.0 percent below the level for the same month of 1978.



# Electric Utilities

## Net Electricity Production By Primary Energy Source

		Coal <sup>1</sup>	Petroleum <sup>2</sup>	Natural Gas	Nuclear	Hydro	Other <sup>3</sup>	Total
		Million kilowatt-hours						
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	January	89,829	43,379	19,953	22,152	20,700	359	196,372
	February	78,735	29,446	19,481	19,601	15,150	322	162,734
	March	77,492	28,369	22,467	20,672	19,801	356	169,157
	April	70,866	25,862	21,297	19,867	18,642	319	156,853
	May	77,049	27,964	24,701	20,599	18,677	341	169,332
	June	83,117	28,971	29,621	21,517	17,226	335	180,787
	July	92,373	34,893	32,713	21,825	16,799	328	198,930
	August	90,730	32,326	33,291	22,750	16,712	317	196,126
	September	82,565	26,366	30,938	19,630	16,425	342	176,265
	October	79,382	23,074	27,356	19,041	17,189	360	166,402
	November	79,468	24,863	22,566	19,458	20,398	347	167,099
	December	83,612	32,667	21,123	23,771	22,756	337	184,267
	TOTAL	985,219	358,179	305,505	250,883	220,475	4,063	2,124,323
1978	January	85,003	39,263	22,310	25,833	25,068	357	197,834
	February	70,567	38,212	20,370	21,833	22,369	309	173,659
	March	66,620	36,982	22,269	22,449	24,630	264	173,214
	April	70,326	24,978	21,339	17,580	25,306	208	159,736
	May	76,430	24,368	25,075	20,416	28,757	187	175,234
	June	84,033	26,129	30,618	22,185	25,121	225	188,311
	July	89,606	29,117	34,247	25,007	24,453	250	202,681
	August	93,454	32,301	32,582	25,599	22,185	318	206,441
	September	87,041	26,640	28,205	22,189	21,177	318	185,571
	October	82,082	25,753	25,232	22,997	19,479	257	175,800
	November	81,725	27,310	22,003	24,901	19,953	282	176,172
	December	88,860	34,034	21,130	25,415	22,082	341	191,862
	TOTAL	975,749	365,088	305,380	276,403	280,579	3,316	2,206,515
1979	January	94,975	39,474	22,091	27,792	R25,038	326	R209,697
	February	84,745	32,274	21,845	25,911	R21,274	285	R186,335
	March	85,219	22,075	24,918	24,335	R25,930	382	R182,859
	April	80,451	20,600	24,760	18,418	25,388	342	169,959
	May	86,155	21,470	26,135	15,025	R28,939	350	178,074
	June	90,749	24,368	30,106	16,065	R24,990	347	R186,625
	July	97,753	R25,749	34,671	20,825	22,761	364	R202,123
	August	R97,854	R26,122	R34,946	24,204	R21,260	405	R204,791
	September	85,522	22,511	31,435	21,804	18,978	354	180,605
	TOTAL	803,424	234,644	250,907	194,379	214,558	3,155	1,701,066

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

<sup>1</sup>Includes Bituminous, Lignite, and Anthracite.

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

<sup>3</sup>Includes geothermal, wood and waste.

R = Revised data.

Source: • Federal Power Commission Form 4, "Monthly Power Plant Report".

# Electric Utilities

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

		Residential	Commercial	Industrial	Other <sup>2</sup>	Total
		Million kilowatt-hours				
<b>1973</b>	<b>TOTAL</b>	<b>579,231</b>	<b>388,266</b>	<b>686,085</b>	<b>59,326</b>	<b>1,712,909</b>
<b>1974</b>	<b>TOTAL</b>	<b>578,184</b>	<b>384,826</b>	<b>684,875</b>	<b>58,039</b>	<b>1,705,924</b>
<b>1975</b>	<b>TOTAL</b>	<b>584,712</b>	<b>401,674</b>	<b>675,271</b>	<b>68,153</b>	<b>1,729,810</b>
<b>1976</b>	<b>TOTAL</b>	<b>602,863</b>	<b>423,640</b>	<b>739,964</b>	<b>69,558</b>	<b>1,836,025</b>
<b>1977</b>	January	65,332	37,598	61,481	6,274	170,685
	February	61,423	36,105	60,439	5,770	163,737
	March	50,859	34,248	63,294	6,158	154,559
	April	44,414	33,180	63,278	5,425	146,297
	May	41,568	34,291	65,418	5,613	146,890
	June	48,419	37,658	66,064	5,601	157,742
	July	60,969	41,863	64,622	5,931	173,385
	August	62,282	42,483	66,300	5,831	176,896
	September	57,248	41,062	66,362	5,948	170,620
	October	48,741	36,655	66,295	5,982	157,673
	November	44,959	34,075	64,833	5,887	149,754
	December	54,919	35,714	63,906	6,068	160,606
	<b>TOTAL</b>	<b>641,133</b>	<b>444,932</b>	<b>772,292</b>	<b>70,488</b>	<b>1,928,844</b>
<b>1978</b>	January	65,455	38,125	64,195	6,581	174,356
	February	64,140	37,465	60,823	6,274	168,703
	March	58,391	36,282	61,506	6,032	162,212
	April	47,118	33,625	63,103	5,355	149,201
	May	43,748	33,995	66,618	5,586	149,947
	June	50,511	39,080	68,563	5,826	163,981
	July	61,327	42,839	67,081	6,359	177,607
	August	63,434	43,694	69,402	6,136	182,666
	September	R61,584	R42,935	R70,067	R6,428	R181,015
	October	50,765	37,944	70,396	6,057	165,162
	November	46,720	35,476	68,815	6,332	157,341
	December	56,391	37,244	67,577	6,268	167,479
	<b>TOTAL</b>	<b>R669,584</b>	<b>R458,704</b>	<b>R798,146</b>	<b>R73,234</b>	<b>R1,999,670</b>
<b>1979</b>	January	69,912	40,200	67,341	6,689	184,142
	February	67,470	39,670	66,847	6,192	180,179
	March	58,806	37,938	68,770	6,002	171,515
	April	49,647	35,731	68,777	5,589	159,744
	May	45,378	36,259	70,421	5,630	157,688
	June	49,109	39,474	70,968	5,705	165,256
	July	58,054	42,528	69,938	5,975	176,495
	August	64,168	43,915	71,058	6,377	185,519
	September	59,251	42,416	70,075	6,479	178,220
	<b>TOTAL</b>	<b>521,795</b>	<b>358,131</b>	<b>624,195</b>	<b>54,638</b>	<b>1,558,757</b>
	(Year to date)					

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

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

<sup>2</sup>Includes street lighting and transportation uses.

R = Revised data.

Source: • Federal Power Commission form 5, "Monthly Statement of Electric Operating Revenue and Income."

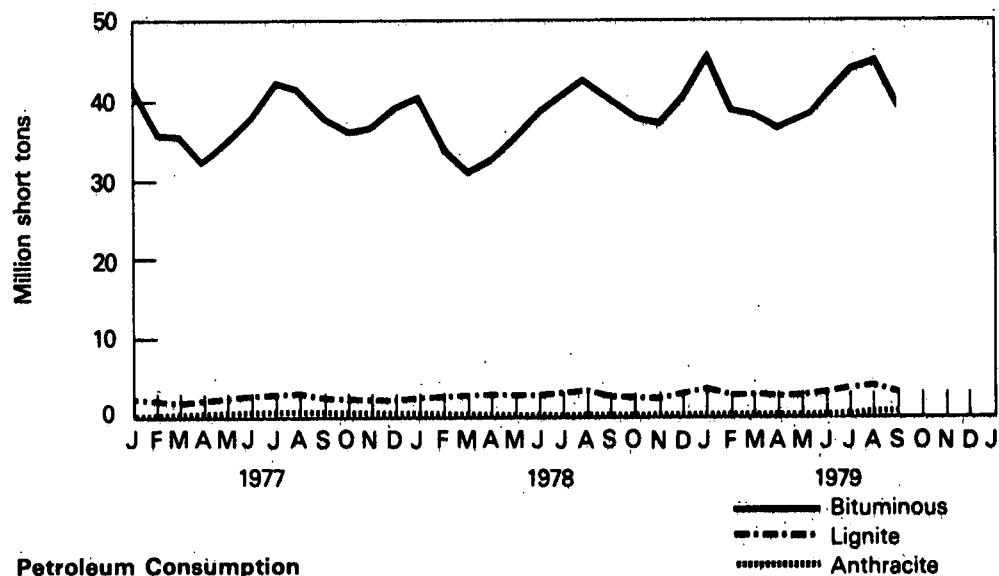
# Electric Utilities

## Primary Energy Resources Consumed to Produce Electricity

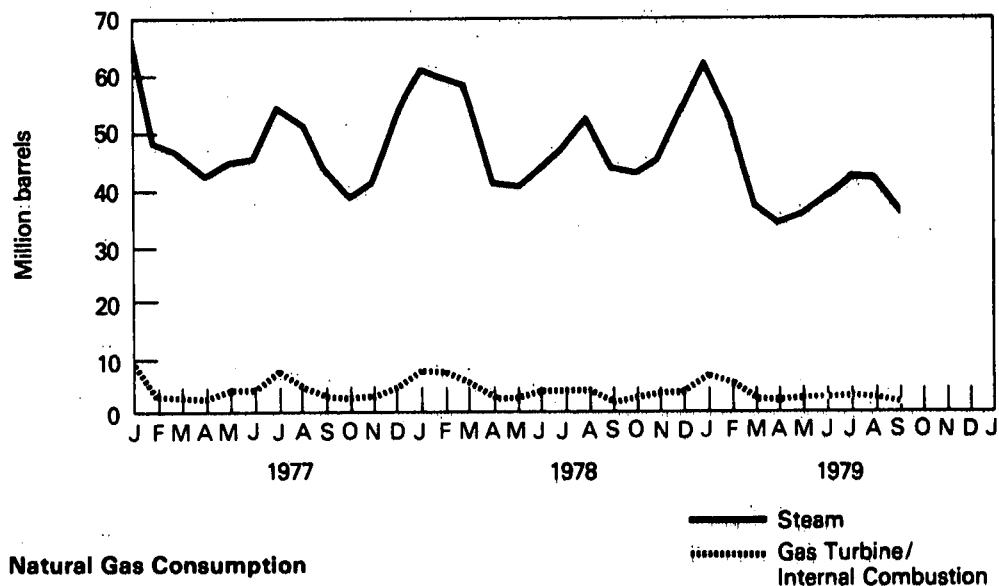
		Coal				Petroleum			Natural Gas
		Anthracite	Bituminous	Lignite	Total	Steam	Gas Turb./ Int. Comb.	Coke	
		Thousand short tons				Thousand barrels			Million cubic feet
						</			

# Electric Utilities

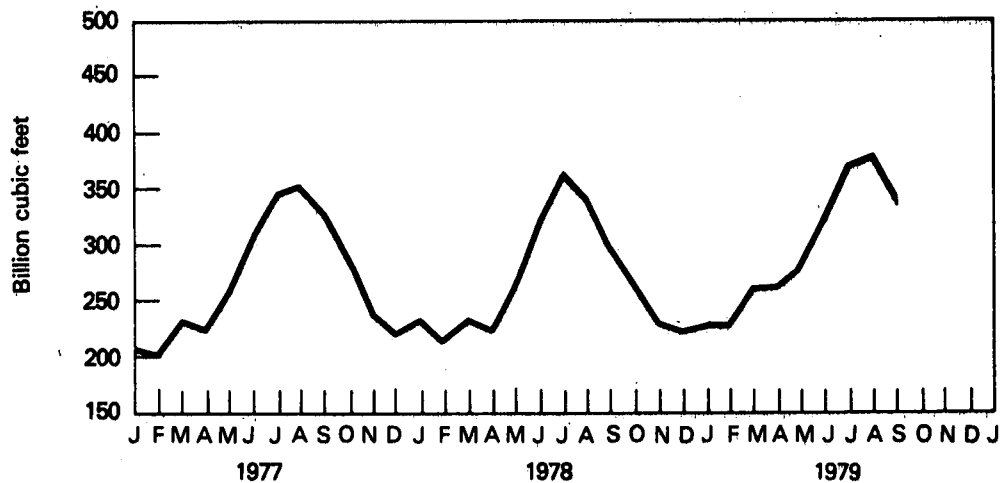
## Coal Consumption



## Petroleum Consumption



## Natural Gas Consumption



# Electric Utilities

## End-of-Month Coal and Petroleum Stocks

		Coal				Petroleum		
		Anthracite	Bituminous	Lignite	Total	Steam	Gas Turb./ Int. Comb.	Coke
		Thousand short tons				Thousand barrels		Thousand short tons
1973	TOTAL	1,066	84,941	961	86,967	79,121	10,095	312
1974	TOTAL	930	81,712	867	83,509	97,718	15,199	35
1975	TOTAL	982	107,927	1,815	110,724	108,825	16,432	31
1976	TOTAL	1,000	114,130	2,306	117,436	106,993	14,703	32
1977	January	2,232	101,730	2,189	106,151	90,104	12,740	32
	February	2,190	98,923	2,162	103,275	95,934	14,098	32
	March	2,207	105,216	2,166	109,589	98,147	15,478	29
	April	2,209	111,326	2,352	115,888	101,631	15,817	25
	May	2,230	118,084	2,489	122,803	103,884	15,826	25
	June	2,258	124,081	2,424	128,763	107,715	15,615	30
	July	2,169	118,763	2,419	123,352	113,033	15,998	37
	August	2,310	119,018	2,470	123,798	119,381	17,062	41
	September	2,290	125,358	2,665	130,313	124,865	17,832	42
	October	2,310	134,422	2,901	139,634	127,957	19,096	44
	November	2,325	144,365	2,966	149,656	129,206	19,079	46
	December	2,321	128,210	2,688	133,219	124,750	19,281	44
1978	January	2,280	100,547	2,418	105,245	114,174	16,260	40
	February	2,112	80,092	2,349	84,553	111,158	17,043	197
	March	2,091	72,369	2,556	77,016	112,347	17,269	182
	April	2,083	83,287	2,612	87,982	116,101	17,386	164
	May	2,145	95,699	2,782	100,626	118,940	16,972	167
	June	2,215	105,611	2,923	110,749	120,186	17,581	167
	July	2,241	104,606	2,849	109,696	121,509	17,580	176
	August	2,208	106,915	3,140	112,263	119,358	17,389	173
	September	2,224	109,748	3,187	115,159	121,115	17,538	181
	October	2,220	115,943	3,431	121,594	117,681	17,355	189
	November	2,199	124,058	3,118	129,376	112,219	17,240	199
	December	2,178	123,017	3,027	128,222	102,401	16,385	198
1979	January	2,154	114,941	2,814	119,909	R89,479	R15,629	181
	February	2,136	109,532	2,726	114,394	81,996	15,536	166
	March	2,170	113,660	2,704	118,533	95,952	16,380	170
	April	2,220	120,874	2,680	125,774	99,378	R16,827	170
	May	2,231	128,950	2,600	133,781	105,890	R16,966	159
	June	2,233	131,787	2,495	136,515	R104,390	17,173	150
	July	2,290	R126,327	2,478	R131,094	R104,047	17,571	160
	August	2,328	R128,734	R3,170	R134,231	R103,843	R17,902	163
	September	2,385	133,519	3,139	139,043	104,703	18,688	164

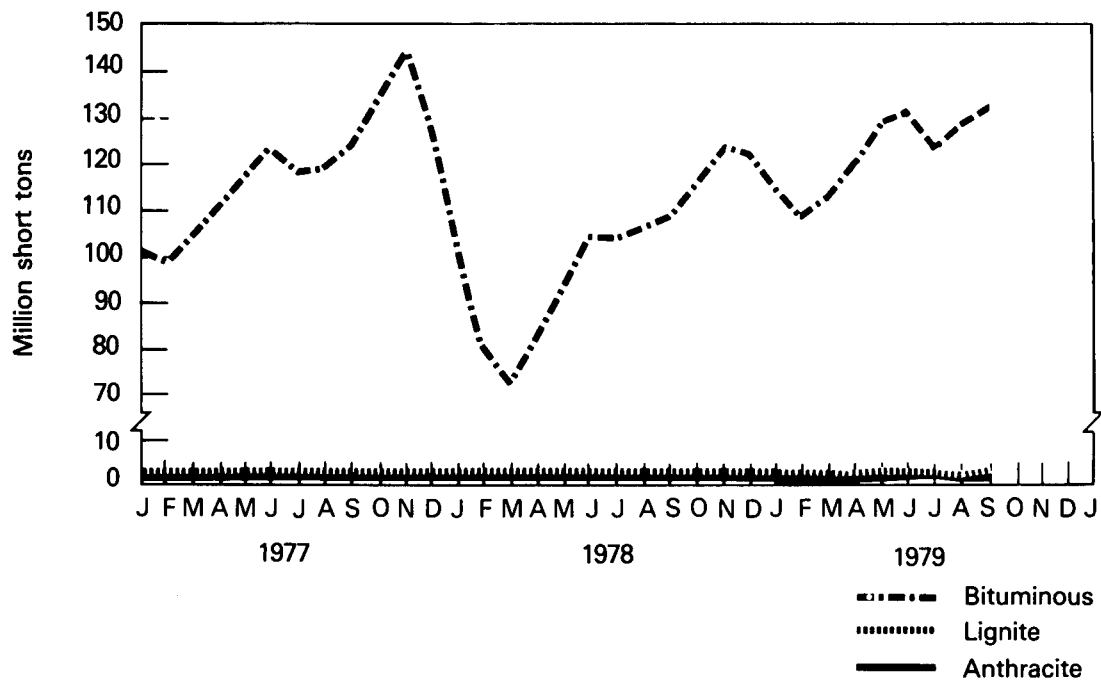
Totals may not equal sum of components due to independent rounding.

R = Revised data.

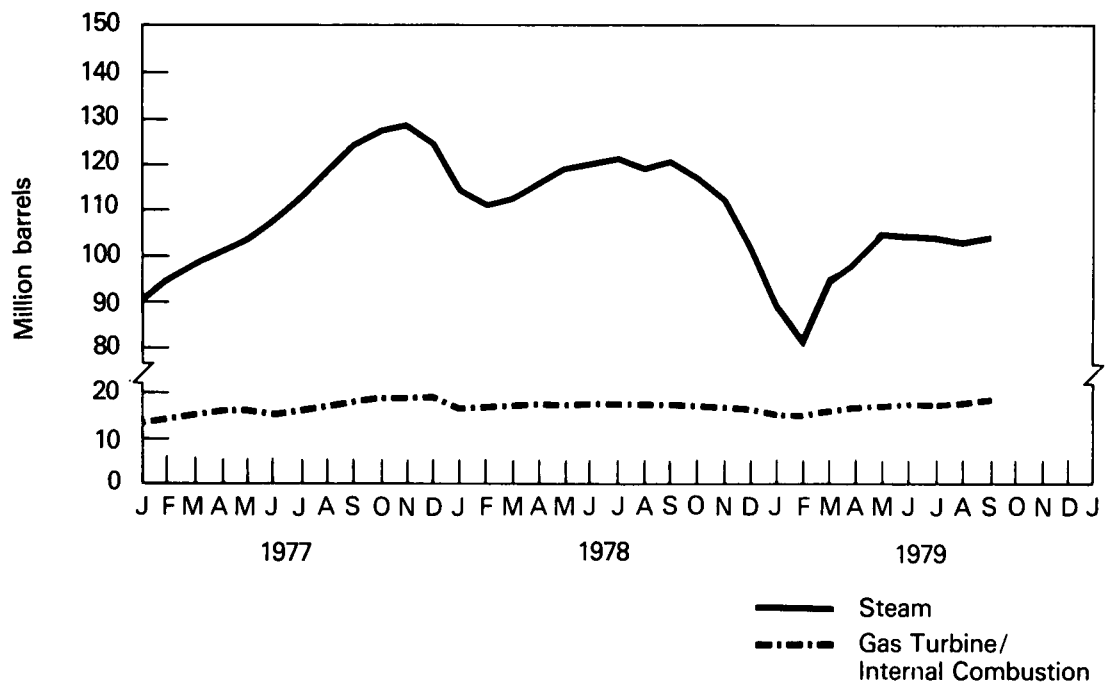
Source: • Federal Power Commission Form 4, "Monthly Power Plant Report."

# Electric Utilities

## Coal Stocks



## Petroleum Stocks



## Nuclear Power

During October, nuclear powerplants generated 21.2 billion net kilowatt-hours\* of electricity, approximately 11.6 percent of total net domestic electricity for the month. Nuclear generation for October 1979 represented decreases of 2.8 and 7.8 percent, respectively, from September 1979 and October 1978 generations.

The status of nuclear powerplants remained essentially unchanged from last month with 190 domestic nuclear reactors having a total capacity of 185 million net kilowatts in operation or planning.

In 18 noncommunist countries there were a total of 192 operable nuclear reactors during October. These reactors had a gross capacity of 113.8 million kilowatts and during October their electricity generation totaled 48.6 billion gross kilowatt-hours.

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\*Preliminary data.

# Nuclear Power

## Domestic Nuclear Powerplant Operations

		Maximum Dependable Capacity <sup>1</sup>		Average Power <sup>2</sup>		Electricity Generation <sup>3</sup>	Percent of Total Domestic Electricity Generation
		All Plants <sup>4</sup>	Fully Operable Plants <sup>5</sup>	All Plants <sup>4</sup>	Fully Operable Plants <sup>5</sup>	Million net kilowatt-hours	
		Million net kilowatts					
1973	AVERAGE	13.850	NA	8.760	NA	83,479	4.5
1974	AVERAGE	29.921	NA	13.011	NA	113,976	6.1
1975	AVERAGE	35.671	NA	19.692	NA	172,505	9.0
1976	AVERAGE	40.642	36.170	21.756	21.356	191,104	9.4
1977	January	44.316	39.371	29.774	27.858	22,152	11.3
	February	44.282	39.320	29.167	27.072	19,601	12.0
	March	44.289	42.006	27.785	26.632	20,672	12.2
	April	45.131	42.882	27.631	27.062	19,867	12.7
	May	45.222	42.818	27.687	27.059	20,599	12.2
	June	45.991	43.908	29.885	29.885	21,517	11.9
	July	45.984	43.901	29.334	29.334	21,825	11.0
	August	45.982	43.898	30.578	30.560	22,750	11.6
	September	46.051	43.898	27.264	26.863	19,630	11.1
	October	46.088	44.935	25.558	25.298	19,041	11.4
	November	46.088	44.793	27.025	26.440	19,458	11.6
	December	47.133	45.710	31.950	31.649	23,771	12.9
	AVERAGE	45.554	43.054	28.640	27.988	250,883	11.8
1978	January	47.167	45.727	34.722	34.681	25,833	13.1
	February	48.080	45.744	32.490	32.489	21,833	12.6
	March	48.062	45.744	30.173	30.166	22,449	13.0
	April	48.926	45.746	24.451	24.106	17,580	11.0
	May	48.924	45.744	27.441	26.736	20,416	11.6
	June	49.714	46.627	30.813	30.164	22,185	11.8
	July	49.719	47.714	33.612	33.496	25,007	12.3
	August	49.815	47.810	34.407	34.396	25,599	12.4
	September	49.815	47.810	30.818	30.757	22,189	12.0
	October	50.776	47.864	30.910	30.489	22,997	13.2
	November	50.776	47.864	34.585	34.118	24,901	14.1
	December	50.774	48.742	34.160	33.676	25,415	13.2
	AVERAGE	49.385	46.937	31.556	31.280	276,403	12.5
1979	January	50.771	48.745	37.355	37.148	27,792	13.3
	February	50.720	48.762	38.558	38.400	25,911	13.9
	March	50.720	48.762	32.708	32.708	24,335	13.3
	April	50.705	48.747	25.616	25.516	18,418	10.8
	May	50.705	48.747	20.195	20.195	15,025	8.4
	June	50.705	48.747	22.313	22.079	16,065	8.6
	July	50.759	49.131	27.990	27.329	20,825	10.3
	August	50.732	49.105	32.532	31.717	24,204	11.8
	September	R50.781	R49.869	R30.283	R30.178	R21,804	R12.1
	October†	50.781	49.869	28.493	28.453	21,199	11.6
AVERAGE		50.738	49.050	29.551	29.328	215,578	11.4

<sup>1</sup>See definitions.

<sup>2</sup>Average power represents generated electricity on an average hourly basis.

<sup>3</sup>Figures for 1973-1976 and annual figures for 1977-1979 represent totals rather than averages.

<sup>4</sup>Includes all units authorized to generate commercial electricity, including units in start-up testing (see definitions) and those owned by the Government.

<sup>5</sup>Units in start-up testing are not included.

†Preliminary data.

R = Revised data.

NA = Not available.

Sources: • Capacity data for units in commercial operation or start-up testing — Nuclear Regulatory Commission.

• Average power data for October 1979 computed from *Nuclear Week* magazine.

• Nuclear Regulatory Commission Report NUREG 0020, "Operating Units Status Report."

• Remaining data from Federal Power Commission form 4, "Monthly Power Plant Report."



# Nuclear Power

## Status of Nuclear Powerplants<sup>1</sup>

		In Operation or Startup Testing				Construction Permits Granted or Pending				Plants Ordered	Total
		Boiling Water Reactors	Pressurized Water Reactors	Other	Total <sup>2</sup>	Boiling Water Reactors	Pressurized Water Reactors	Other	Total <sup>2</sup>	All Types	All Types
<b>1976</b>		<b>±24</b>	<b>±37</b>	<b>±0</b>	<b>±62</b>	<b>±41</b>	<b>±93</b>	<b>±4</b>	<b>±138</b>	<b>±16</b>	<b>±235</b>
<b>1977</b>	January	24	38	0	63	41	92	4	137	15	234
	February	24	38	0	63	41	92	4	137	11	234
	March	25	37	0	63	41	92	4	137	11	230
	April	25	38	0	64	41	91	4	136	9	230
	May	25	38	0	64	40	94	4	138	9	230
	June	25	39	0	65	40	93	4	137	11	230
	July	25	39	0	65	40	93	4	137	11	230
	August	25	39	0	65	40	93	4	137	13	230
	September	25	39	0	65	40	93	4	137	13	230
	October	25	39	0	65	40	92	4	136	13	223
	November	25	40	0	66	38	91	4	133	13	221
	December	25	41	0	67	38	90	4	132	13	221
<b>1978</b>	January	25	40	2	68	37	90	3	130	13	220
	February	25	41	2	69	37	89	3	129	13	220
	March	25	41	2	69	37	91	3	131	11	220
	April	25	41	2	69	37	91	3	131	11	216
	May	25	41	2	69	37	89	3	129	10	214
	June	26	41	2	70	36	89	3	128	9	214
	July	25	41	2	70	36	87	3	126	10	212
	August	26	41	2	70	36	87	3	126	10	212
	September	26	41	2	70	36	87	3	126	9	211
	October	26	41	2	71	36	87	3	126	9	211
	November	25	42	2	71	36	85	3	124	9	210
	December	26	42	2	71	36	83	3	122	9	206
<b>1979</b>	January	26	42	2	71	35	84	1	122	5	199
	February	26	42	2	71	35	84	1	120	5	199
	March	26	42	2	71	35	84	1	120	5	199
	April	26	42	2	71	35	83	1	119	5	198
	May	26	42	2	71	35	83	1	119	5	198
	June	26	42	2	71	35	83	1	119	5	198
	July	26	42	2	71	35	80	1	117	5	195
	August	26	42	2	71	35	80	1	116	5	192
	September	26	42	2	71	35	80	1	116	3	190
	October	26	42	2	71	35	80	1	116	3	190

<sup>1</sup>Monthly data are recorded the last day of the month.

<sup>2</sup>Includes minimal numbers of high temperature gas reactors.

±Recorded December 31, 1976.

Sources: • Compiled by the Energy Information Administration from various sources, but primarily from the Nuclear Regulatory Commission (NRC), Report NUREG 0380, "Program Summary Report."

# Nuclear Power

## Domestic Uranium Enrichment

	Separative Work Performed			Cost			Product Quantity			Feed Requirements		
	Metric tons of separative work units			Million dollars			Metric tons of uranium					
	Dom-estic	Foreign Custo-mers	Total	Dom-estic	Foreign Custo-mers	Total	Dom-estic	Foreign Custo-mers	Total	Dom-estic	Foreign Custo-mers	Total
1979												
January	655.047	548.602	1,203.649	55.549	47.706	103.255	138.719	143.481	282.200	813.357	721.309	1,534.666
February	299.404	248.788	548.192	24.910	20.550	45.460	60.214	60.529	120.743	370.606	320.028	690.634
March	989.610	380.652	1,370.262	84.348	32.310	116.658	234.912	85.011	319.923	1,265.799	477.475	1,763.274
April	508.870	100.395	609.265	44.155	8.449	52.564	130.867	26.689	157.556	665.046	132.536	797.582
May	199.210	150.411	349.651	17.660	13.408	31.068	71.692	40.649	112.341	291.130	199.847	490.977
June	1,608.744	623.327	2,232.071	143.209	55.478	198.687	434.332	123.670	558.092	2,126.413	766.576	2,892.989
July	414.619	63.165	477.784	37.480	5.599	43.079	128.509	13.321	141.830	573.690	78.151	651.841
August	1,201.944	345.488	1,547.432	110.856	30.881	141.737	313.017	100.790	413.807	1,689.330	470.168	2,159.498
September	1,769.941	1,441.346	3,211.287	158.734	128.854	287.588	463.689	360.788	824.477	2,304.109	1,867.129	4,171.238

Source: • U.S. Department of Energy, Oak Ridge, Report U3341.

## Nuclear Power Generation by Noncommunist Countries — October 1979

Country	Number of Reactors <sup>1</sup>	Capacity <sup>1</sup> Thousand gross electrical kilowatts	Electricity Generation Million gross kilowatt-hours	Percent of Design Capacity Used			
				Year <sup>2</sup>			October
				1976	1977	1978	1979
<b>Asia</b>							
Japan	21	13,940	5,686	64	40	55	55
India	3	620	314	59	51	42	68
Pakistan	1	140	0	41	28	19	0
South Korea	1	590	282	NA	NA	45	54
Taiwan	2	1,270	509	NA	21	49	53
<b>Europe</b>							
Belgium	3	1,740	1,119	65	78	82	86
England <sup>3</sup>	33	9,010	2,771	62	55	51	45
Finland	2	1,150	780	NA	92	81	91
France	16	8,760	3,808	59	52	59	59
Germany (FR)	11	8,350	3,456	57	64	58	56
Italy	4	1,490	203	69	61	51	18
Netherlands	2	520	267	84	81	89	69
Spain	3	1,120	676	77	67	78	81
Sweden	6	3,850	2,048	55	59	70	72
Switzerland	3	1,060	788	85	87	90	100
<b>North America</b>							
Canada <sup>4</sup>	9	5,590	3,316	80	76	79	80
United States	71	54,220	22,315	55	64	65	55
<b>South America</b>							
Argentina	1	360	247	86	55	91	92
<b>Total</b>	<b>192</b>	<b>113,780</b>	<b>48,585</b>	<b>59</b>	<b>62</b>	<b>63</b>	<b>58</b>

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

<sup>1</sup>Includes fully operational units and those in startup testing which generated electricity during, or prior to, the current month. Capacity and generation figures are shown as gross values, as opposed to net values shown in previous tables of this chapter.

<sup>2</sup>Averages are computed for those units in operation, including startup units beginning with first month of electricity generation.

<sup>3</sup>October figures for 22 units are based on a 4-week period; figures for remaining units are for 31 days.

<sup>4</sup>October figures are based on 5-week period.

NA = Not available.

Source: • Compiled from *Nucleonics Week* magazine, published by McGraw-Hill, Inc.

# Nuclear Power

## Summary of Monthly Fuel Cycle — August 1979

Fuel Cycle Activity	Product	Processed Material <sup>1</sup>	Percent Utilization of Industry Capacity	Energy Content of Processed Material <sup>2</sup>	Energy Consumed in Fuel Cycle Activity <sup>3</sup>
		MTU except where noted		Billion Btu	
Milling	Yellowcake (U <sub>3</sub> O <sub>8</sub> ) Deliveries	521	40	189,000	287
Conversion	Uranium Hexafluoride (UF <sub>6</sub> ) Deliveries	1,130	462	385,000	170
Enrichment	Enriched UF <sub>6</sub> Deliveries	414 (1,547 MT-SWU)	NA	848,000	3,772
Fabrication	Finished Fuel Assemblies Shipped	184	NA	376,000	52
Powerplant Operation	Electricity Generated	24,204 (million kWh)	64	261,000	1,527 (million kWh)
Spent Fuel	Stored at Reactor Site	NA	NA	NA	NA
	Stored at Non-Reactor Sites	0	0	0	0

<sup>1</sup>Units of measure are discussed in Explanatory Notes 11 and 12.

<sup>2</sup>Assumes 25,000 MWD/MTU for heat content of enriched uranium and a 6.1 feed to product ratio at the enrichment plant.

<sup>3</sup>Energy requirements for processing are obtained from U.S. Atomic Energy Commission Report No. WASH 1248.

<sup>4</sup>Figure for conversion utilization represents material shipped.

NA = Not available.

Sources: • U.S. Department of Energy NMMSS Report TJ-21-MOD-5.

• Federal Power Commission form 4, "Monthly Power Plant Report."

## Price

### Crude Oil

During September 1979, the composite refiner acquisition cost of crude oil was \$20.14 per barrel, an increase of 39 cents per barrel from the previous month's price. The price of imported crude oil was \$25.06 per barrel, \$1.08 per barrel higher than the August level. This price was a 72.5 percent increase over the September 1978 level. The domestic average price was \$16.05, an increase of 32 cents per barrel from the August average.

The average price of domestic crude oil purchased at the wellhead was \$14.06 per barrel in August 1979. The Alaskan north slope price of \$15.82 per barrel decreased less than 1 percent from the July 1979 figure. Actual stripper's price of \$26.01 per barrel was 5.0 percent higher than in July 1979, and the Naval Petroleum Reserve crude oil price of \$20.77 per barrel increased 3.2 percent over the July 1979 price. The upper tier price of \$13.38 per barrel increased 4.6 percent over the previous month's figure, and the lower tier price of \$6.09 per barrel increased 1.5 percent over the June 1979 price.

### Motor Gasoline

The national average price for all grades and all types of motor gasoline was 101.6 cents per gallon in September. Leaded regular gasoline at full serve stations sold for an average of 98.1 cents per gallon in September, 2.5 cents higher than the price in August. The price for unleaded regular gasoline at full serve stations was 103.1 cents per gallon in September, 3.0 cents higher than the revised price in August. The differential between unleaded regular and leaded regular increased to 5.0 cents per gallon.

### Heating Oil

The national average price of heating oil sold to residential customers rose 3.0 cents in September to 81.4 cents per gallon. The resulting figure was a 66.1 percent increase from the price during September 1978. The average residential distributor margin in September was 13.0 cents per gallon, 22.6 percent above the margin during September 1978. Refiner's national average selling price to resellers and retailers was 67.4 cents per gallon,

82.6 percent above the September 1978 average.

### Residual Fuel Oil

The average price, excluding taxes, for No. 6 residual fuel oil sold to utilities, industry, and other ultimate consumers in September 1979 was \$20.90 per barrel, 57 cents above the previous month's price. This was a 68.1 percent increase over the September 1978 average. The average price, excluding taxes, for No. 6 residual fuel oil sold to resellers, bulk plants, jobbers, and other wholesale accounts was \$19.62 per barrel, 18 cents above the August average. This was a 74.2 percent increase over the August 1978 average.

### Aviation Fuel

The average price, excluding taxes, for kerosene-type jet fuel sold to commercial airlines, Department of Defense, and other ultimate consumers in September 1979 was 65.9 cents per gallon, 4.9 cents over the previous month's average. This was a 67.7 percent increase over the September 1978 average.

### Diesel Fuel

The average price, excluding taxes, for No. 2 diesel fuel sold at truck stops and other retail outlets in September 1979 was 71.8 cents per gallon, 3.5 cents higher than during the previous month. This was an 80.4 percent increase over the price in September 1978. The average price, excluding taxes, for No. 2 diesel fuel sold to resellers, jobbers and other wholesale accounts was 69.0 cents per gallon, 3.0 cents above the previous month's price. This was an 86.0 percent increase over the September 1978 average.

### Liquified Petroleum Gases

The average wholesale price for propane during September 1979, excluding taxes, was 33.3 cents per gallon, 2.5 cents above the previous month's level. In September 1979, the average wholesale price for butane, excluding taxes, was 51.9 cents per gallon, a 3.9 cents decrease from the previous month's price. Butane's September 1979 price was 138.1 percent higher than the September 1978 average.

# Price

## Domestic Prices and Percentages of Crude Oil Purchased at the Wellhead<sup>1</sup>

		Lower Tier <sup>2</sup>		Upper Tier <sup>2</sup>		Actual Stripper <sup>3</sup>		Alaskan North Slope <sup>4</sup>		Naval Petroleum Reserve <sup>5</sup>		Actual Domestic Average <sup>6</sup>	Imputed Domestic Average <sup>6</sup>
		Dollars per barrel											
		Price	Percent	Price	Percent	Price	Percent	Price	Percent	Price	Percent	Price	Price
1976	AVERAGE	5.13	54.4	11.71	31.5	12.16	14.1	NA	NA	NA	NA	8.19	8.06
1977	January	5.17	50.6	11.44	36.7	13.27	12.7	NA	NA	NA	NA	8.50	8.28
	February	5.18	49.5	11.39	37.2	13.32	13.3	NA	NA	NA	NA	8.57	8.33
	March	5.15	49.2	11.03	37.2	13.31	13.6	NA	NA	NA	NA	8.45	8.19
	April	5.15	49.5	10.97	36.9	13.28	13.6	NA	NA	NA	NA	8.40	8.14
	May	5.18	48.4	10.98	37.6	13.26	14.0	NA	NA	NA	NA	8.49	8.23
	June	5.16	48.8	10.92	37.0	13.28	14.2	NA	NA	NA	NA	8.44	8.17
	July	5.16	46.75	11.00	36.59	13.31	13.30	6.84	2.58	12.21	0.75	8.48	8.21
	August	5.18	43.31	10.93	36.65	13.95	13.32	6.91	5.79	12.29	0.91	8.62	8.25
	September	5.20	42.78	11.20	34.07	14.01	13.14	6.98	9.06	12.33	0.91	8.63	8.26
	October	5.23	42.23	11.42	34.58	14.01	12.92	6.66	9.09	12.38	1.15	8.72	8.36
	November	5.24	41.41	11.63	34.67	13.98	13.00	5.73	9.84	12.40	1.05	8.72	8.35
	December	5.25	40.42	11.76	34.61	13.98	13.00	5.73	10.92	12.36	1.03	8.77	8.40
	AVERAGE	5.19	45.92	11.22	36.11	13.59	13.32	6.35	4.14	12.34	0.51	8.57	8.27
1978	January	5.28	41.73	11.78	34.19	13.89	12.69	5.30	10.17	12.38	1.19	8.68	8.34
	February	5.29	40.78	11.81	34.35	13.90	13.68	5.68	9.94	12.46	1.23	8.84	8.48
	March	5.34	39.24	11.87	34.06	13.97	13.98	5.00	11.76	12.60	0.92	8.80	8.41
	April	5.35	37.94	11.94	34.04	13.95	13.72	5.15	13.26	12.67	1.02	8.82	8.44
	May	5.38	38.16	11.98	34.03	13.93	13.76	4.87	13.05	12.70	0.97	8.81	8.43
	June	5.46	36.79	12.08	35.01	13.95	13.89	5.63	13.45	13.08	0.84	9.05	8.68
	July	5.46	37.61	12.16	34.39	13.95	13.55	5.26	13.46	13.07	0.97	8.96	8.62
	August	5.50	36.49	12.22	34.45	13.93	14.42	5.09	13.66	13.04	0.95	9.05	8.67
	September	5.55	35.92	12.35	34.64	13.96	14.44	5.12	13.79	13.17	1.18	9.15	8.78
	October	5.60	36.27	12.42	34.38	13.97	14.15	5.21	13.95	13.08	1.22	9.17	8.81
	November	5.65	36.22	12.53	34.56	13.94	14.02	5.12	14.08	13.00	1.09	9.20	8.85
	December	5.68	33.65	12.59	34.74	14.08	15.88	5.40	14.42	12.92	1.28	9.47	9.07
	AVERAGE	5.46	37.54	12.15	34.41	13.95	14.03	5.22	12.96	12.85	1.08	9.00	8.63
1979	January	5.75	35.51	12.66	34.25	14.55	14.14	5.79	14.88	13.10	1.20	9.46	9.04
	February	5.76	35.20	12.78	34.97	14.88	15.08	5.87	13.71	13.94	1.01	9.69	9.21
	March	5.82	34.59	12.84	34.56	14.88	14.95	6.66	14.58	13.97	1.29	9.83	9.37
	April	5.85	33.98	12.94	34.93	16.71	15.27	7.45	14.52	14.56	1.28	10.33	9.60
	May	5.91	33.53	13.02	34.78	17.53	15.62	8.47	14.71	15.85	1.32	10.71	9.86
	June	6.07	29.31	13.14	38.22	20.24	16.01	8.97	13.61	16.02	1.34	11.74	10.48
	July	6.00	26.98	12.79	37.49	24.76	16.01	13.35	15.87	20.13	1.38	13.22	11.31
	August†	6.09	22.02	13.38	36.85	26.01	16.97	14.14	15.82	20.77	1.33	14.06	11.88
	AVERAGE	5.88	31.87	13.01	35.75	18.92	15.51	8.99	14.73	16.20	1.37	11.16	NA

<sup>1</sup>See Explanatory Note 14.

<sup>2</sup>See Definitions.

<sup>3</sup>Stripper oil was exempt from price controls beginning September 1, 1976. From February through August 1976 stripper oil was subject to upper tier price ceilings. Annual average is for 12 months (January through December 1976).

<sup>4</sup>Alaskan North Slope (ANS) crude oil prices are treated as Upper Tier for determining the applicable wellhead ceiling price. ANS is included in both the Actual Domestic Average and the Imputed Domestic Average price determinations.

<sup>5</sup>The Naval Petroleum Reserves (NPR) are exempt from pricing regulations but have been reported here as Upper Tier prior to July 1977. NPR is included in the Actual Domestic Average price determinations, but not in the Imputed Domestic Average.

<sup>6</sup>See Explanatory Note 15.

†Preliminary data.

R = Revised data.

NA = Not available.

Sources: • January 1976: FEA form 90, "Crude Petroleum Production Monthly Report."

• February 1976 through August 1976: FEA form P124-M-0, "Domestic Crude Oil Purchasers Report" for Lower Tier percentages and EIA estimates for Upper Tier percentages.

• September 1976 forward: FEA form P124-M-0, "Domestic Crude Oil Purchasers Report." Data provided by the Economic Regulatory Administration.

# Price

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

		Algeria	Canada	Indonesia	Iran	Libya	Mexico	Nigeria	Saudi Arabia	United Arab Emirates	United Kingdom	Venezuela
		Dollars per barrel										
<b>1976</b>	<b>AVERAGE</b>	<b>13.05</b>	<b>NA</b>	<b>12.76</b>	<b>11.61</b>	<b>12.55</b>	<b>NA</b>	<b>13.08</b>	<b>11.69</b>	<b>11.94</b>	<b>NA</b>	<b>11.32</b>
<b>1977</b>	January	14.03	NA	13.41	12.03	13.64	13.39	14.11	11.92	12.53	NA	13.39
	February	14.31	NA	13.43	12.36	13.89	13.42	14.24	12.04	12.33	NA	13.30
	March	14.29	NA	13.58	12.79	13.87	13.40	14.32	12.24	12.51	NA	12.98
	April	14.34	NA	13.55	12.79	13.98	13.38	14.51	12.23	12.53	NA	12.62
	May	14.31	NA	13.57	12.78	13.93	13.42	14.56	12.23	12.56	NA	12.60
	June	14.35	NA	13.55	12.68	13.94	13.41	14.55	12.21	12.44	NA	12.53
	July	14.43	NA	13.61	12.78	13.99	13.42	14.52	12.40	12.70	NA	12.48
	August	14.48	NA	13.63	12.80	13.95	13.45	14.54	12.56	13.15	NA	12.37
	September	14.43	NA	13.64	12.73	13.99	13.43	14.56	12.72	13.20	NA	12.55
	October	14.43	NA	13.65	12.79	13.93	13.42	14.48	12.70	13.22	NA	12.72
	November	14.37	NA	13.65	12.75	13.88	13.41	14.53	12.73	13.33	NA	12.71
	December	14.44	NA	13.61	12.71	13.85	13.41	14.45	12.77	13.27	NA	12.56
<b>1978</b>	January	14.29	NA	13.67	12.62	13.77	13.45	14.18	12.70	13.23	NA	12.73
	February	14.21	NA	13.62	12.68	13.91	13.43	14.18	12.78	13.18	NA	12.61
	March	14.19	NA	13.62	12.68	13.75	13.44	14.13	12.80	13.20	13.80	12.86
	April	14.09	NA	13.61	12.68	13.62	13.42	13.91	12.74	13.23	13.65	12.54
	May	13.99	NA	13.51	12.65	13.59	13.42	13.90	12.71	13.05	13.64	12.13
	June	14.06	NA	13.63	12.58	13.59	13.32	13.90	12.67	13.28	13.65	12.32
	July	14.06	NA	13.63	12.70	13.67	13.13	13.89	12.65	13.26	13.72	12.66
	August	14.05	NA	13.63	12.63	13.66	13.17	13.86	12.66	13.27	13.80	12.23
	September	14.05	NA	13.69	12.63	13.66	13.13	13.97	12.76	13.27	13.74	12.38
	October	14.08	NA	13.63	12.64	13.73	13.15	14.08	12.59	13.24	14.14	12.32
	November	14.13	NA	13.79	12.62	13.97	13.17	14.12	12.63	13.29	13.85	12.46
	December	14.16	NA	13.65	12.67	14.07	13.13	14.29	12.77	13.39	14.06	12.42
<b>1979</b>	January	14.87	NA	14.06	12.55	14.60	13.94	14.84	13.26	13.98	15.41	13.69
	February	14.89	NA	14.18	12.56	15.15	14.17	14.98	13.47	14.28	15.33	13.26
	March	15.54	NA	14.42	19.04	16.46	14.14	15.07	13.61	15.72	16.13	13.88
	April	16.80	NA	15.98	17.96	17.40	17.02	18.18	14.77	16.24	17.40	14.58
	May	19.14	NA	16.84	17.27	19.13	18.56	20.02	14.62	17.38	18.39	15.76

<sup>1</sup>The FOB cost excludes all costs related to insurance and transportation. See Explanatory Note 16.

NA = Not available.

Sources: 1976 through January 1979: FEA form 701-M-0, "Transfer Pricing Report."

• February 1979 forward: ERA form 51, "Transfer Pricing Report." Data provided by Economic Regulatory Administration.

# Price

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

		Algeria	Canada	Indonesia	Iran	Libya	Mexico	Nigeria	Saudi Arabia	United Arab Emirates	United Kingdom	Venezuela
		Dollars per barrel										
<b>1975</b>	<b>AVERAGE</b>	<b>12.72</b>	<b>12.72</b>	<b>13.79</b>	<b>12.21</b>	<b>12.35</b>	<b>NA</b>	<b>12.62</b>	<b>12.30</b>	<b>12.87</b>	<b>NA</b>	<b>11.65</b>
<b>1976</b>	<b>AVERAGE</b>	<b>13.81</b>	<b>13.57</b>	<b>13.82</b>	<b>12.82</b>	<b>13.58</b>	<b>NA</b>	<b>13.80</b>	<b>13.04</b>	<b>13.30</b>	<b>NA</b>	<b>11.80</b>
<b>1977</b>	January	14.80	13.92	14.42	13.16	14.64	13.78	14.97	13.22	13.56	NA	13.29
	February	15.18	13.74	14.57	13.56	15.12	13.92	15.12	13.32	13.46	NA	13.76
	March	15.08	14.34	14.64	13.94	14.88	13.77	15.13	13.50	13.80	NA	13.41
	April	15.21	14.02	14.70	13.95	15.12	13.66	15.37	13.41	13.78	NA	13.19
	May	15.20	14.94	14.59	13.94	14.91	13.80	15.40	13.49	13.85	NA	13.10
	June	15.34	14.49	14.63	13.81	14.92	13.81	15.37	13.39	13.72	NA	13.06
	July	15.29	13.91	14.75	13.84	14.88	13.87	15.39	13.64	14.20	NA	13.02
	August	15.24	14.24	14.65	13.99	14.70	13.84	15.25	13.72	14.36	NA	12.82
	September	15.29	14.14	14.62	13.77	14.99	13.72	15.34	14.01	14.41	NA	13.08
	October	15.41	14.00	14.67	13.83	14.81	13.71	15.31	13.85	14.56	NA	13.16
	November	15.05	14.52	14.73	13.88	14.73	13.79	15.23	13.94	14.19	NA	13.11
	December	15.25	14.27	14.58	13.95	14.81	13.69	15.21	13.99	14.48	NA	12.99
	<b>AVERAGE</b>	<b>15.20</b>	<b>14.21</b>	<b>14.63</b>	<b>13.80</b>	<b>14.87</b>	<b>13.75</b>	<b>15.25</b>	<b>13.61</b>	<b>14.04</b>	<b>NA</b>	<b>13.13</b>
<b>1978</b>	January	15.01	14.37	14.60	13.91	14.63	13.83	14.88	13.93	14.40	NA	13.00
	February	14.91	14.31	14.53	13.75	14.85	13.67	14.90	13.96	14.07	NA	12.93
	March	14.74	13.56	14.56	14.06	14.62	13.66	14.89	14.07	14.44	14.75	13.22
	April	14.91	13.87	14.61	13.90	14.43	13.63	14.63	13.85	14.42	14.26	12.89
	May	14.70	14.39	14.50	13.94	14.56	13.65	14.72	13.86	14.20	14.35	12.49
	June	14.80	15.07	14.58	13.92	14.45	13.51	14.61	13.86	14.48	14.19	12.72
	July	14.83	14.64	14.73	13.93	14.65	13.35	14.64	13.81	14.29	13.81	12.41
	August	14.83	14.78	14.66	13.76	14.64	13.52	14.59	13.84	14.49	14.48	12.70
	September	14.74	13.92	14.73	13.83	14.62	13.45	14.78	14.03	14.36	14.53	12.94
	October	14.90	14.73	14.68	13.89	14.81	13.39	15.03	13.89	14.61	14.85	12.78
	November	15.30	14.72	14.85	13.89	15.04	13.61	15.06	14.02	14.38	14.81	13.08
	December	15.27	14.96	14.80	13.80	15.23	13.50	15.30	14.00	14.66	15.00	13.02
	<b>AVERAGE</b>	<b>14.91</b>	<b>14.50</b>	<b>14.64</b>	<b>13.88</b>	<b>14.72</b>	<b>13.54</b>	<b>14.86</b>	<b>13.92</b>	<b>14.39</b>	<b>NA</b>	<b>12.83</b>
<b>1979</b>	January	15.88	16.19	15.29	13.76	15.81	14.51	15.88	14.73	15.53	16.29	14.16
	February	16.18	16.68	15.62	14.25	16.49	14.76	16.13	14.88	16.05	16.07	14.17
	March	16.61	17.18	15.68	19.54	17.56	14.81	16.20	15.28	17.10	15.91	14.61
	April	17.93	17.39	17.31	19.06	18.59	17.40	19.11	16.18	17.70	18.23	15.19
	May	20.22	20.22	17.92	18.56	20.16	18.82	21.06	16.29	18.65	19.26	16.74

<sup>1</sup>See Explanatory Note 17.

NA = Not available.

Sources: • 1976 through January 1979: FEA form F701-M-0, "Transfer Pricing Report." Data provided by the Economic Regulatory Administration.

• February 1979 forward: ERA 51, "Transfer Pricing Report."

## Price

### Crude Oil Refiner Acquisition Cost<sup>1</sup>

		Domestic	Imported	Composite
		Dollars per barrel		
<b>1976</b>	<b>AVERAGE</b>	<b>8.84</b>	<b>13.48</b>	<b>10.89</b>
<b>1977</b>	January	9.23	14.11	11.64
	February	9.24	14.50	11.80
	March	9.32	14.54	11.88
	April	9.21	14.36	11.75
	May	9.21	14.62	11.87
	June	9.34	14.63	11.98
	July	9.32	14.44	11.90
	August	9.54	14.68	12.01
	September	9.75	14.50	12.01
	October	9.95	14.56	12.12
	November	10.17	14.61	12.18
	December	10.15	14.76	12.27
	<b>AVERAGE</b>	<b>9.55</b>	<b>14.53</b>	<b>11.96</b>
<b>1978</b>	January	10.14	14.52	12.13
	February	10.25	14.41	12.19
	March	10.46	14.57	12.23
	April	10.55	14.40	12.20
	May	10.60	14.51	12.35
	June	10.72	14.54	12.48
	July	10.58	14.49	12.45
	August	10.65	14.46	12.46
	September	10.65	14.53	12.57
	October	10.78	14.63	12.62
	November	10.87	14.74	12.76
	December	11.00	14.94	12.93
	<b>AVERAGE</b>	<b>10.61</b>	<b>14.57</b>	<b>12.46</b>
<b>1979</b>	January	11.02	15.50	13.11
	February	11.34	15.88	13.42
	March	11.45	16.41	13.70
	April	12.06	17.58	14.52
	May	12.41	19.00	15.40
	June	13.24	21.03	17.00
	July	14.61	23.09	18.58
	August	15.73	23.98	19.75
	September	16.05	25.06	20.14
	<b>AVERAGE</b>	<b>13.01</b>	<b>19.83</b>	<b>16.14</b>

<sup>1</sup>See Explanatory Note 13.

Note: Crude oil costs and volumes reported on the ERA 49 exclude unfinished oils but include Strategic Petroleum Reserve (SPR). Crude oil costs and volumes reported on the P-110-M-1 include unfinished oils but exclude SPR. Imported averages derived from the Economic Regulatory Administration (ERA) form 49 exclude crude oil purchased as Strategic Petroleum Reserves (SPR), whereas, the composite averages derived from the ERA 49 include SPR.

Sources: • January 1976: Form FEO 96, "Monthly Cost Allocation Report."

• February 1976 through June 1978: FEA form P110-M-1, "Refiners' Monthly Cost Allocation Report."

• July 1978 forward: ERA form 49, "Domestic Crude Oil Entitlements Program." Data provided by the Economic Regulatory Administration.



# Price

## Unrecouped Costs for Refined Products for 29 Largest Refiners<sup>1</sup>

		Distillate <sup>2</sup>	Motor Gasoline	Aviation Jet Fuel <sup>3</sup>	Other Products	Total
Million dollars						
1977	January	NA	901	166	325	1,392
	February	NA	1,038	187	303	1,528
	March	NA	956	180	287	1,423
	April	NA	1,029	194	343	1,566
	May	NA	967	224	351	1,542
	June	NA	957	234	344	1,535
	July	NA	869	210	391	1,470
	August	NA	764	279	455	1,498
	September	NA	784	186	500	1,470
	October	NA	879	248	511	1,638
	November	NA	904	218	538	1,660
	December	NA	818	185	470	1,473
1978	January	NA	1,055	191	420	1,666
	February	NA	1,265	198	435	1,898
	March	NA	1,065	175	378	1,618
	April	NA	1,013	170	400	1,583
	May	NA	849	186	500	1,535
	June	NA	718	180	562	1,460
	July	NA	713	136	449	1,298
	August	NA	353	74	461	888
	September	NA	554	155	491	1,200
	October	NA	627	131	701	1,459
	November	NA	709	102	540	1,351
	December	NA	532	94	791	1,417
1979	January	NA	836	64	799	1,699
	February	NA	1,110	36	842	1,988
	March	NA	1,551	NA	837	2,388
	April	NA	2,067	NA	1,649	3,716
	May	NA	2,245	NA	1,848	4,093
	June	NA	2,737	NA	1,754	4,491
	July	NA	2,989	NA	2,087	5,076
	August	NA	2,865	NA	2,331	5,196
	September†	NA	3,176	NA	2,384	5,560

<sup>1</sup>Beginning with February 1977, data for only 29 refiners are included in this table due to the merger between Skelly Oil Company and Getty Oil Company.

<sup>2</sup>Includes No. 2 heating oil and No. 2 diesel fuel only. After May 1976, reporting of the distillate bank is no longer required due to decontrol of middle distillates. Aviation jet fuel was decontrolled on February 26, 1979.

<sup>3</sup>After February 1979, reporting of aviation jet fuel bank is no longer required due to the decontrol of kerosene-base jet fuel and aviation gasoline.

R = Revised data.

NA = Not available.

†Preliminary data.

Sources: • January 1977 through June 1978: FEA form P110-M-1, "Refiners' Monthly Cost Allocation Report."

• July 1978 forward: EIA form 14, "Refiners' Monthly Cost Allocation Report." Data provided by the Economic Regulatory Administration.

# Price

## Crude Oil Entitlements and Supply Ratio

		Entitlement Price <sup>1</sup> Dollars	National Old Oil (or Domestic Crude Oil) Supply Ratio <sup>1</sup>	Entitlement Benefit <sup>1</sup> Dollars
1977	January	8.30	0.266	2.21
	February	8.53	0.267	2.28
	March	8.71	0.273	2.38
	April	8.69	0.285	2.48
	May	8.77	0.280	2.46
	June	8.65	0.273	2.36
	July	8.68	0.258	2.24
	August	8.75	0.266	2.33
	September	8.75	0.250	2.19
	October	8.78	0.250	2.20
	November	8.61	0.239	2.06
	December	8.65	0.233	2.02
1978	January	8.61	0.240	2.07
	February	8.48	0.230	1.95
	March	8.47	0.225	1.91
	April	8.35	0.218	1.82
	May	8.26	0.197	1.63
	June	8.19	0.191	1.56
	July	8.16	0.184	1.50
	August	8.06	0.165	1.33
	September	8.13	0.174	1.41
	October	8.11	0.178	1.44
	November	8.16	0.166	1.35
	December	8.20	0.155	1.27
1979	January	8.74	0.178	1.56
	February	9.03	0.185	1.67
	March	9.50	0.189	1.80
	April	10.53	0.196	2.06
	May	11.74	0.208	2.44
	June	13.70	0.220	3.01
	July	16.01	0.221	3.54
	August	17.26	0.218	3.78
	September	17.97	0.218	3.92

<sup>1</sup>See Definitions.

Source: • FEA P102-M-1, "Domestic Crude Oil Entitlements Program Refiners Monthly Report." Data provided by the Economic Regulatory Administration.

# Price

## National Average Retail Dealer Motor Gasoline Selling Prices

		Leaded Regular		Unleaded Regular		Leaded Premium		Unleaded Premium		Average for All Grades
		Full Serve	Self Serve	Full Serve	Self Serve	Full Serve	Self Serve	Full Serve	Self Serve	
Cents per gallon, including tax										
1976	AVERAGE	58.7	55.4	62.5	NA	63.8	60.7	NA	NA	NA
1977	January	59.9	56.2	64.0	NA	65.2	61.7	68.4	NA	NA
	February	60.7	57.1	65.0	NA	66.1	62.7	67.2	NA	NA
	March	61.3	57.7	65.4	NA	66.8	63.3	70.7	NA	NA
	April	62.2	58.4	66.1	NA	67.6	64.1	71.7	NA	NA
	May	62.9	58.9	66.7	NA	68.4	64.8	71.2	NA	NA
	June	63.4	59.3	67.2	NA	68.9	65.2	71.7	NA	NA
	July	63.4	59.2	67.3	NA	68.9	65.2	71.4	NA	NA
	August	63.4	58.8	67.0	63.7	68.9	65.8	71.4	NA	NA
	September	63.3	58.5	67.0	63.7	68.9	65.8	71.3	NA	NA
	October	63.2	58.2	67.0	63.6	68.9	65.7	71.3	NA	NA
	November	63.1	58.1	67.0	63.4	68.9	65.6	71.3	NA	NA
	December	63.3	58.2	67.2	63.6	69.1	65.8	70.6	NA	NA
		AVERAGE	62.6	58.2	66.4	63.6	68.1	64.7	71.0	NA
1978	January	61.7	57.2	65.8	61.6	67.7	63.5	69.6	66.0	63.1
	February	61.6	57.1	65.7	61.8	67.7	64.0	NA	66.1	63.0
	March	61.7	57.0	65.8	61.8	68.0	63.9	69.7	66.0	63.0
	April	61.9	57.2	66.1	62.0	68.3	64.3	70.4	NA	63.2
	May	62.5	58.2	66.9	62.9	69.0	65.3	NA	NA	64.0
	June	63.4	59.0	67.8	64.0	70.0	66.2	NA	NA	64.8
	July	64.6	60.6	68.8	65.6	71.1	68.2	73.5	70.3	66.1
	August	65.4	61.2	69.8	66.2	72.0	68.8	74.4	71.3	66.8
	September	65.8	61.7	70.2	66.9	72.4	69.2	75.2	71.3	67.2
	October	65.9	61.5	70.2	66.7	72.5	69.3	74.8	71.8	67.2
	November	66.7	62.3	71.1	67.7	73.3	70.1	76.3	73.9	68.2
	December	67.5	63.4	71.7	68.7	73.7	71.0	77.1	74.7	68.9
		AVERAGE	63.9	59.8	68.4	64.9	69.4	67.1	72.8	69.7
1979	January	68.4	64.0	72.9	69.3	74.8	71.3	78.6	75.1	69.8
	February	69.9	65.4	74.5	70.4	76.2	72.8	80.8	77.0	71.0
	March	72.6	68.7	77.4	73.9	78.9	76.0	83.7	78.8	74.0
	April	76.8	73.7	81.6	78.5	83.5	81.7	86.2	82.5	78.4
	May	81.2	78.6	85.8	83.2	88.0	86.4	89.9	86.3	82.9
	June	86.3	83.8	90.9	88.3	92.9	91.8	94.5	91.3	87.9
	July	91.3	88.4	95.6	92.6	96.9	95.2	100.4	97.8	92.6
	August	95.6	R92.0	R100.1	R96.5	R101.8	R99.1	R105.6	R101.6	96.7
	September	98.1	94.2	103.1	99.2	105.3	102.4	108.9	104.6	99.4
		AVERAGE	81.7	78.3	87.4	83.6	86.6	83.6	92.0	88.3

NA = Not available.

R = Revised data.

Note: "Average for all grades" excludes mini-serve for January 1978 through June 1978. Mini-serve is included from July 1978 forward.

Sources: • January 1976 through December 1977: Lundberg Survey, Inc.

• January 1978 through June 1978: EIA 8, "Retail Motor Fuels Service Station Survey".

• July 1978 forward: EIA 79, "Monthly Motor Gasoline Service Station Survey".

## Price

### Average Retail Dealer Motor Gasoline Selling Prices for Major<sup>1</sup> and Nonmajor Brands — July, August and September 1979

	Full Serve			Self Serve			Full Serve			Self Serve		
	July	August	Sept.†	July	August	Sept.†	July	August	Sept.†	July	August	Sept.†
Leaded Regular						Unleaded Regular						
Cents per gallon, including tax												
Major	91.9	R96.2	98.9	88.9	R92.6	95.2	96.0	100.6	103.7	92.9	R97.1	100.1
Nonmajor	89.3	R94.1	96.3	87.8	R91.2	93.1	93.2	R98.4	100.8	92.1	R95.7	98.0
Leaded Premium						Unleaded Premium						
Major	97.5	R102.5	105.9	95.5	R99.9	103.4	100.0	R105.6	108.8	97.8	R101.6	104.6
Nonmajor	94.6	R99.0	101.9	94.9	97.9	101.1	NA	NA	NA	NA	NA	NA

### Average Retail Dealer Motor Gasoline Selling Prices by Department of Energy (DOE) Regions<sup>2</sup> — July, August and September 1979

DOE Region	Full Serve			Self Serve			Full Serve			Self Serve		
	July	August	Sept.†	July	August	Sept.†	July	August	Sept.†	July	August	Sept.†
Leaded Regular						Unleaded Regular						
Cents per gallon, including tax												
1	91.3	96.1	98.1	88.6	R93.7	95.9	94.7	R99.6	102.1	92.5	R96.8	100.0
2	93.4	97.0	99.5	92.3	R96.3	96.6	97.5	R101.4	103.5	96.1	R101.1	101.1
3	90.5	95.2	97.4	87.6	R92.1	95.0	94.3	R98.4	101.3	92.2	96.2	99.2
4	88.8	93.9	96.2	86.5	R90.5	92.4	93.5	R98.4	101.3	90.3	R94.6	96.7
5	91.6	96.6	99.4	88.9	R92.3	95.9	96.1	R101.1	104.8	93.0	R96.9	100.7
6	87.8	91.2	93.5	85.6	R88.2	89.7	91.8	R95.3	97.4	89.3	R92.4	94.2
7	91.8	95.6	97.6	90.0	R93.2	94.2	95.8	99.9	101.9	94.5	R97.8	98.8
8	91.2	95.3	98.0	87.7	91.4	93.1	95.5	R99.0	102.0	92.4	95.8	97.4
9	95.0	99.7	102.4	91.8	R95.7	99.3	98.2	R104.4	108.7	95.9	100.3	104.2
10	92.5	96.5	99.9	91.1	96.1	98.2	96.4	R101.4	105.4	95.7	R100.7	104.0
Leaded Premium						Unleaded Premium						
1	96.4	R100.7	103.4	95.0	R97.0	99.4	99.6	105.0	107.3	96.8	104.1	105.2
2	99.0	R101.6	105.1	97.9	R100.4	102.3	101.3	107.2	109.9	101.2	108.0	109.5
3	95.3	R99.7	102.6	93.0	R97.7	100.5	99.8	104.9	108.1	97.3	R101.2	106.0
4	94.9	R99.3	101.5	92.3	95.4	98.0	98.1	R103.5	107.1	97.0	99.8	102.4
5	95.8	R100.6	104.6	93.8	R97.1	101.4	101.9	R107.2	111.4	99.3	R103.3	108.4
6	93.3	R96.7	98.7	91.1	R93.6	95.3	96.0	R100.9	103.3	93.0	R97.9	97.5
7	96.2	R99.8	102.6	95.9	R98.4	99.9	99.7	104.0	106.8	99.4	R102.8	105.4
8	97.3	R100.2	102.8	94.5	R97.8	98.9	101.5	R104.1	108.1	96.2	102.4	106.1
9	99.2	105.7	110.0	97.8	R102.0	106.2	NA	NA	NA	NA	NA	NA
10	98.1	R103.1	107.4	97.6	R101.4	106.1	NA	NA	NA	NA	NA	NA

<sup>1</sup>See Explanatory Note 18.

<sup>2</sup>DOE regions are defined in Explanatory Note 19.

R = Revised data.

†Preliminary data.

NA = Not available.

Source: • EIA 79, "Monthly Motor Gasoline Service Station Survey."

# Price

## Aviation and Diesel Fuels

		Aviation					Diesel	
		Aviation Gasoline		Naphtha-Type <sup>1</sup>	Kerosene-Type		No. 2 Diesel	
		Wholesale <sup>2</sup>	Retail <sup>2</sup>	Retail <sup>2</sup>	Wholesale <sup>2</sup>	Retail <sup>2</sup>	Wholesale <sup>3</sup>	Retail <sup>3</sup>
Cents per gallon, excluding tax								
<b>1976</b>	<b>AVERAGE</b>	<b>42.4</b>	<b>43.1</b>	<b>31.5</b>	<b>32.5</b>	<b>31.2</b>	<b>31.9</b>	<b>34.7</b>
<b>1977</b>	January	43.4	44.1	33.4	34.6	33.2	34.3	36.6
	February	44.7	45.0	34.0	37.1	34.1	35.3	38.2
	March	45.0	45.7	34.5	35.9	34.6	35.9	39.0
	April	46.0	47.2	34.3	35.9	34.9	36.1	39.6
	May	46.6	47.8	34.3	36.3	35.1	36.5	39.6
	June	46.7	47.6	35.1	36.8	35.7	36.3	39.6
	July	47.0	48.7	35.6	37.1	35.8	36.2	39.6
	August	47.9	50.1	35.5	36.6	36.0	36.2	39.5
	September	47.9	49.1	35.6	37.1	37.0	36.2	40.2
	October	48.1	49.0	35.7	37.3	37.3	36.5	40.3
	November	48.3	47.8	35.8	37.9	37.5	36.7	40.1
	December	47.8	48.1	36.2	37.2	37.8	36.6	39.9
	<b>AVERAGE</b>	<b>46.7</b>	<b>47.7</b>	<b>35.0</b>	<b>36.7</b>	<b>35.8</b>	<b>36.1</b>	<b>39.3</b>
<b>1978</b>	January	47.8	49.1	36.9	37.9	38.5	36.6	39.5
	February	48.3	48.4	36.5	38.3	38.2	36.6	39.8
	March	49.1	49.4	36.9	37.8	38.4	36.7	39.7
	April	49.5	51.5	36.8	38.1	38.5	36.5	39.6
	May	50.1	50.0	37.3	38.3	38.6	36.6	39.9
	June	50.4	52.8	37.2	38.9	38.9	36.7	40.1
	July	51.4	52.4	37.6	39.0	38.9	36.4	40.0
	August	52.0	54.0	37.5	38.9	39.3	36.6	40.0
	September	52.6	54.0	37.8	39.2	39.3	37.1	39.8
	October	52.5	56.1	38.5	39.7	39.3	37.7	40.9
	November	53.4	51.4	38.5	40.2	39.4	38.6	41.7
	December	53.2	54.3	38.4	40.6	39.5	39.1	42.0
	<b>AVERAGE</b>	<b>51.0</b>	<b>52.1</b>	<b>37.5</b>	<b>38.9</b>	<b>38.9</b>	<b>37.1</b>	<b>40.2</b>
<b>1979</b>	January	54.1	53.9	38.6	42.2	40.1	39.7	43.0
	February	54.6	55.1	39.1	44.3	40.2	41.8	46.1
	March	56.6	56.8	40.7	54.8	41.3	44.5	47.9
	April	58.2	59.1	43.2	60.1	45.4	47.7	50.6
	May	60.6	61.2	44.1	58.1	48.4	53.4	56.1
	June	64.8	66.8	49.5	59.9	50.9	58.7	65.0
	July	70.0	71.8	50.4	R67.1	58.2	62.4	R68.9
	August	74.2	75.6	R55.0	71.4	60.8	R66.0	R72.3
	September†	78.2	79.0	60.2	73.1	65.9	69.0	71.8
	<b>AVERAGE</b>	<b>55.6</b>	<b>65.9</b>	<b>46.7</b>	<b>59.1</b>	<b>50.8</b>	<b>53.4</b>	<b>58.0</b>

<sup>1</sup>Nearly all naphtha-type fuels are sold directly to the Defense Fuel Supply Center. Consequently, wholesale prices are not applicable.

<sup>2</sup>Wholesale refers to the price of aviation fuel sold to other refiners and resellers, including bulk plants, branded and unbranded jobbers, and aviation fuel distributors. Retail refers to the price of aviation fuel sold to ultimate consumers, including commercial airline and military accounts.

<sup>3</sup>Wholesale refers to the price of diesel fuel sold to other refiners and resellers, including branded jobbers, unbranded jobbers, and commercial accounts. Retail refers to the price at which company-owned and -operated retail dealers sell to consumers.

†Preliminary data.

R = Revised data.

Source: • FEA form P302-M-1, "Petroleum Industry Monthly Report for Product Prices."

# Price

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

		Refiners' Average Selling Price to Resellers and Retailers	Distributors Average Selling Price to Residential Customers <sup>2</sup>	Average Purchase Price Paid by Distributors for Residential Heating Oil <sup>2</sup>	Average Distributor Margin on Residential Heating Oil <sup>2</sup>
Cents per gallon					
<b>1976</b>	<b>AVERAGE</b>	<b>31.4</b>	<b>40.6</b>	<b>32.6</b>	<b>NA</b>
<b>1977</b>	January	34.7	44.4	35.8	9.3
	February	35.4	45.3	36.7	9.4
	March	35.9	45.8	37.0	9.5
	April	35.8	45.9	37.1	9.6
	May	35.7	45.7	37.1	9.5
	June	35.7	45.7	37.1	9.3
	July	35.8	45.8	37.2	9.3
	August	35.7	46.0	37.3	9.2
	September	35.5	46.2	37.4	9.4
	October	36.0	46.7	37.5	9.8
	November	36.3	47.6	37.3	10.2
	December	36.6	47.9	37.2	10.4
	<b>AVERAGE</b>	<b>35.7</b>	<b>46.0</b>	<b>36.9</b>	<b>NA</b>
<b>1978</b>	January	36.8	48.5	38.1	10.5
	February	36.4	48.6	37.8	11.0
	March	36.2	48.6	37.6	11.1
	April	36.0	48.6	37.6	11.1
	May	36.2	48.3	37.6	11.0
	June	35.8	48.2	37.7	10.7
	July	35.9	48.2	37.7	10.7
	August	36.1	48.2	37.9	10.5
	September	36.9	49.0	38.6	10.6
	October	38.1	50.2	39.6	10.8
	November	39.4	51.5	40.5	11.2
	December	40.1	52.6	41.3	11.6
	<b>AVERAGE</b>	<b>37.2</b>	<b>49.4</b>	<b>38.7</b>	<b>11.0</b>
<b>1979</b>	January	40.9	53.7	42.1	11.8
	February	43.1	56.3	44.5	12.0
	March	45.8	58.8	47.0	12.0
	April	48.3	61.1	49.3	12.1
	May	53.2	64.2	52.6	12.1
	June	58.8	69.1	56.9	12.7
	July	62.5	73.8	61.1	13.0
	August	65.7	R78.4	64.6	R13.0
	September†	67.4	81.4	67.8	13.8
	<b>AVERAGE</b>	<b>50.5</b>	<b>60.0</b>	<b>48.0</b>	<b>12.1</b>

<sup>1</sup>See Explanatory Note 20.

<sup>2</sup>Average selling prices, purchase prices, and dealer margins represent sales for residential heating oil only.

R = Revised data.

† Preliminary data.

NA = Not available.

Source: • January 1976 forward: FEA form P112-M-1/EIA-9, "No. 2 Heating Oil Supply/Price Monitoring Report."

# Price

## Residential Heating Oil Prices by Region

		Census Region									
		New England	Mid-Atlantic	South Atlantic	East North Central	East South Central	West North Central	West South Central	Mountain	Pacific	
		Cents per gallon									
1977	January	45.8	44.9	44.2	43.2	43.1	43.0	36.9	43.4	44.6	
	February	46.6	45.8	45.7	43.9	43.4	44.0	38.8	44.2	45.2	
	March	47.1	46.3	45.5	44.4	43.8	44.6	40.2	44.7	45.9	
	April	47.2	46.5	45.5	44.8	43.3	44.2	40.8	44.8	46.4	
	May	47.0	46.4	45.6	44.7	43.7	43.7	40.7	44.8	46.5	
	June	47.1	46.4	45.7	44.7	44.0	43.3	41.2	45.8	46.8	
	July	47.1	46.4	45.7	44.7	44.2	44.2	41.2	44.2	47.9	
	August	47.4	46.6	45.6	44.7	43.7	44.5	41.0	44.9	48.2	
	September	47.7	46.7	45.8	45.0	44.2	44.9	41.1	44.9	47.2	
	October	48.0	47.3	46.4	45.3	43.9	45.4	41.1	45.4	47.4	
		DOE Region <sup>1</sup>									
		1	2	3	4	5	6	7	8	9	10
1978	November	48.5	48.1	47.0	46.1	45.7	NA	44.2	45.4	44.9	47.4
	December	48.9	48.6	47.5	46.6	46.1	NA	44.5	45.7	44.5	47.3
	January	49.4	49.2	48.1	47.5	46.4	NA	44.5	45.2	44.7	47.4
	February	49.5	49.3	48.4	47.6	46.4	NA	45.2	45.5	45.6	47.5
	March	49.4	49.3	48.4	47.7	46.5	NA	44.4	45.0	47.0	47.8
	April	49.3	49.2	48.2	47.1	46.4	NA	44.6	45.0	45.1	47.6
	May	49.3	49.1	47.7	46.7	46.3	NA	44.7	45.0	44.4	47.4
	June	49.2	49.1	47.8	46.8	46.0	NA	44.8	45.4	43.9	47.7
	July	49.1	49.0	47.6	46.7	46.4	NA	45.0	45.8	43.5	48.1
	August	49.1	49.0	47.6	47.4	46.3	NA	45.1	45.5	44.8	47.3
1979	September	50.0	49.7	48.5	46.6	46.8	NA	45.6	46.3	45.0	47.7
	October	51.2	51.0	50.0	48.1	47.6	NA	45.9	46.3	45.9	48.3
	November	52.8	52.3	51.3	49.5	49.2	NA	47.6	47.9	45.8	49.1
	December	54.0	53.4	52.3	50.4	50.2	NA	48.2	48.7	46.7	49.9
	January	55.1	54.5	53.3	51.6	51.5	NA	49.6	50.4	47.6	50.8
	February	57.7	57.3	55.5	53.2	53.7	NA	51.3	51.4	49.4	52.9
	March	60.6	59.8	57.5	54.3	56.3	NA	54.7	55.3	50.8	55.3
	April	62.8	61.9	60.0	57.3	58.8	NA	58.2	58.4	53.8	57.8
	May	65.9	64.8	63.4	61.2	62.8	NA	62.0	62.7	56.2	60.8
	June	70.5	69.7	68.4	66.2	68.5	NA	68.9	67.8	62.2	66.4
1979	July	75.9	73.9	72.9	70.9	73.2	NA	72.0	72.5	68.4	72.3
	August	80.1	R78.6	R77.7	R74.8	R78.5	NA	R76.4	R77.1	R71.7	R77.2
	Septembert	83.3	81.5	80.0	79.3	81.6	NA	80.6	79.4	76.8	80.6

<sup>1</sup>DOE regions are defined in Explanatory Note 19.

R = Revised data.

† Preliminary data.

NA = Not available. Data for Region 6 are based on a sample of less than four reporting firms.

Note: Average regional distributor purchase prices for heating oil for the period January 1975 through February 1976 are published on page 70 of the October 1977 issue of the *Monthly Energy Review*.

Source: • FEA form P112-M-1/EIA-9, "No. 2 Heating Oil Supply/Price Monitoring Report."

# Price

## Average No. 6 Residual Fuel Oil Prices

		0.0 to 0.3 percent sulfur		0.31 to 1.0 percent sulfur		Greater than 1.0 percent sulfur		Average	
		Whole- sale	Retail	Whole- sale	Retail	Whole- sale	Retail	Whole- sale	Retail
Dollars per barrel, excluding taxes									
<b>1976</b>	<b>AVERAGE</b>	<b>12.20</b>	<b>12.54</b>	<b>10.83</b>	<b>11.79</b>	<b>9.98</b>	<b>10.43</b>	<b>10.72</b>	<b>11.49</b>
<b>1977</b>	January	14.06	14.34	12.79	13.68	11.51	12.32	12.45	13.32
	February	14.00	14.60	12.91	14.06	12.04	12.74	12.69	13.71
	March	14.00	14.58	13.47	14.51	11.62	12.70	12.68	13.84
	April	12.88	14.63	13.05	14.10	11.27	12.50	12.04	13.61
	May	13.56	14.48	11.90	13.73	11.05	12.15	11.64	13.42
	June	13.12	14.28	11.88	13.27	11.10	11.93	11.72	13.02
	July	13.31	14.38	11.73	13.12	11.02	12.06	11.62	13.01
	August	13.32	14.15	11.83	13.08	11.89	12.01	12.06	13.00
	September	13.35	14.33	11.79	13.11	11.78	12.19	12.03	12.94
	October	13.38	14.30	11.69	13.15	11.71	12.33	12.10	13.15
	November	12.85	14.24	11.66	12.93	11.44	12.15	11.76	12.96
	December	12.87	13.95	11.38	12.60	10.77	11.95	11.28	12.70
	<b>AVERAGE</b>	<b>13.45</b>	<b>14.36</b>	<b>12.09</b>	<b>13.45</b>	<b>11.31</b>	<b>12.27</b>	<b>11.96</b>	<b>13.23</b>
<b>1978</b>	January	12.72	14.19	11.56	12.70	10.71	12.00	11.33	12.79
	February	12.20	14.05	11.64	12.42	10.58	11.75	11.25	12.53
	March	12.73	13.99	11.94	12.75	10.48	11.70	11.36	12.63
	April	12.72	14.51	12.26	12.95	10.84	11.85	11.57	12.87
	May	12.67	14.21	12.01	12.88	10.79	11.74	11.70	12.79
	June	12.37	13.99	11.83	12.58	10.82	11.60	11.41	12.50
	July	11.26	13.93	11.29	12.01	10.51	11.48	10.86	12.21
	August	11.41	14.09	11.24	11.97	10.46	11.54	10.70	12.34
	September	12.29	14.18	11.46	12.30	10.69	11.39	11.26	12.43
	October	13.43	14.63	12.06	13.00	10.83	11.82	11.76	13.01
	November	14.12	15.55	13.26	13.77	10.87	11.54	12.36	13.34
	December	14.66	15.98	13.19	14.13	11.04	11.82	12.57	13.75
	<b>AVERAGE</b>	<b>12.77</b>	<b>14.47</b>	<b>11.95</b>	<b>12.78</b>	<b>10.73</b>	<b>11.70</b>	<b>11.51</b>	<b>12.75</b>
<b>1979</b>	January	15.16	16.12	13.68	14.79	11.00	11.92	12.78	14.13
	February	16.12	17.28	15.01	15.30	11.31	12.28	13.72	14.68
	March	16.08	18.05	15.90	16.94	13.48	14.00	14.82	15.95
	April	17.79	19.09	16.34	17.44	13.70	14.59	15.51	16.61
	May	18.04	19.45	15.74	17.89	14.69	15.37	15.71	17.18
	June	20.92	19.79	18.08	18.51	15.95	16.40	17.81	17.97
	July	21.85	23.07	R21.25	R20.47	16.51	17.86	19.18	19.89
	August	R21.05	R22.63	R19.49	R21.28	17.51	18.32	19.00	20.33
	September†	21.81	22.92	21.01	21.66	17.54	18.94	19.62	20.90
	<b>AVERAGE</b>	<b>17.92</b>	<b>18.98</b>	<b>17.58</b>	<b>17.89</b>	<b>14.89</b>	<b>15.46</b>	<b>16.18</b>	<b>17.15</b>

†Preliminary data.

R = Revised data.

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

Source: • FEA for P302-M-1, "Petroleum Industry Monthly Report for Product Prices."



# Price

## Wholesale<sup>1</sup> Propane and Butane

		Propane	Butane
		Cents per gallon, excluding taxes	
<b>1976</b>	<b>AVERAGE</b>	<b>20.6</b>	<b>21.9</b>
<b>1977</b>	January	22.9	23.0
	February	24.0	24.3
	March	23.7	24.9
	April	23.6	24.2
	May	24.5	25.8
	June	24.5	25.6
	July	24.9	26.2
	August	25.5	26.1
	September	25.9	27.4
	October	26.8	26.3
	November	26.5	25.8
	December	26.7	25.8
	<b>AVERAGE</b>	<b>25.0</b>	<b>25.4</b>
<b>1978</b>	January	27.0	25.9
	February	26.5	25.1
	March	25.6	24.9
	April	24.4	23.9
	May	23.7	22.8
	June	23.3	22.9
	July	23.0	22.1
	August	22.7	21.8
	September	22.6	21.8
	October	22.5	20.9
	November	22.1	22.0
	December	22.1	22.7
	<b>AVERAGE</b>	<b>24.0</b>	<b>23.0</b>
<b>1979</b>	January	22.4	24.9
	February	21.8	28.5
	March	21.2	32.5
	April	22.0	35.4
	May	24.2	39.5
	June	27.9	46.9
	July	29.3	51.1
	August	30.8	48.0
	September†	33.3	51.9

<sup>1</sup>Wholesale refers to the price at which refiners, resellers, retailers, and gas plants sell to one another, including sales to agricultural and industrial accounts. Excludes butane/propane mixtures.

†Preliminary data.

Source: • FEA form P302-M-1, "Petroleum Industry Monthly Report for Product Prices."

## Price

### Average Wellhead Value of Natural Gas Production<sup>1</sup>

		Cents per thousand cubic feet
<b>1973</b>	<b>AVERAGE</b>	<b>21.6</b>
<b>1974</b>	<b>AVERAGE</b>	<b>30.4</b>
<b>1975</b>	<b>AVERAGE</b>	<b>44.5</b>
<b>1976</b>	<b>AVERAGE</b>	<b>58.0</b>
<b>1977</b>	January	67.1
	February	71.0
	March	74.9
	April	77.2
	May	76.7
	June	82.3
	July	83.1
	August	82.3
	September	83.3
	October	84.0
	November	83.2
	December	84.4
	<b>AVERAGE</b>	<b>79.0</b>
<b>1978</b>	January	87.3
	February	87.9
	March	89.1
	April	88.0
	May	90.8
	June	90.7
	July	88.9
	August	91.2
	September	92.1
	October	92.0
	November	92.5
	December	96.1
	<b>AVERAGE</b>	<b>90.5</b>
<b>1979</b>	January	99.5
	February	98.5
	March	102.9
	April	103.6
	May	108.0

### Average Retail Prices for Natural Gas Sold to Residential Customers for Heating Use<sup>2</sup>

		Cents per thousand cubic feet
<b>1977</b>	January	213.8
	February	217.0
	March	219.9
	April	223.7
	May	227.0
	June	227.3
	July	229.9
	August	230.1
	September	230.4
	October	235.1
	November	238.4
	December	237.3
<b>1978</b>	January	241.6
	February	243.0
	March	247.0
	April	248.7
	May	255.2
	June	254.2
	July	NA
	August	NA
	September	NA
	October	NA
	November	285.8
	December	290.1
<b>1979</b>	January	297.7
	February	300.5
	March	305.5

<sup>1</sup> Sources: • Annual data from the appropriate agencies of the individual producing states; monthly data are estimated primarily on the basis of values reported by state agencies in New Mexico, Oklahoma, and Texas.

<sup>2</sup> Source: • Bureau of Labor Statistics.

# Price

## Natural Gas Prices Reported by Major Interstate Pipeline Companies

		Purchases			Sales		
		From Domestic Producers	From Canadian and Foreign Sources	Total Purchases	To Industrial Users <sup>1</sup>	To Resellers <sup>2</sup>	Total Sales
Cents per thousand cubic feet							
<b>1976</b>	<b>AVERAGE</b>	<b>47.9</b>	<b>172.7</b>	<b>58.4</b>	<b>97.2</b>	<b>100.3</b>	<b>100.5</b>
<b>1977</b>	January	59.4	201.8	71.6	143.2	124.3	125.4
	February	63.4	199.7	76.4	130.6	130.4	131.0
	March	69.8	200.4	83.4	129.3	132.1	132.5
	April	65.3	190.7	76.5	128.1	131.0	131.1
	May	69.1	191.3	80.5	128.1	133.9	133.5
	June	69.2	188.6	79.6	125.3	135.1	134.2
	July	72.1	187.7	81.8	134.3	135.9	135.7
	August	71.1	185.5	81.5	133.5	134.0	133.9
	September	71.8	194.7	84.0	131.8	135.7	135.4
	October	74.2	211.9	87.4	133.9	135.6	135.6
	November	74.8	214.2	87.7	134.4	141.6	141.4
	December	73.9	216.5	86.7	138.3	132.1	133.0
	<b>AVERAGE</b>	<b>69.5</b>	<b>199.0</b>	<b>81.4</b>	<b>131.9</b>	<b>132.2</b>	<b>132.5</b>
<b>1978</b>	January	74.0	211.2	86.4	150.4	138.2	139.2
	February	76.3	211.3	89.2	158.2	141.5	142.8
	March	79.3	212.5	91.1	149.7	144.7	145.5
	April	80.7	222.0	92.9	149.9	147.7	148.2
	May	81.2	218.5	92.5	149.0	149.7	150.0
	June	82.6	220.5	93.5	148.3	153.0	152.7
	July	83.8	222.6	95.0	149.5	155.7	155.0
	August	R84.2	222.5	95.6	148.9	R154.9	154.0
	September	R87.7	216.8	R97.9	152.0	R155.3	155.0
	October	90.7	225.3	101.7	158.5	157.4	157.8
	November	90.1	219.3	102.3	171.0	161.0	162.1
	December	95.8	215.1	107.6	169.9	159.8	161.0
	<b>AVERAGE</b>	<b>84.1</b>	<b>218.2</b>	<b>95.8</b>	<b>154.1</b>	<b>150.7</b>	<b>151.4</b>
<b>1979</b>	January	99.5	215.7	110.4	192.1	161.0	163.1
	February	101.7	219.0	114.0	195.4	164.5	166.7
	March	106.1	224.8	118.4	186.8	171.5	173.2
	April	116.7	222.1	127.9	190.7	167.6	170.2
	May	118.3	228.6	129.5	202.5	188.8	190.5
	June	118.3	233.4	130.9	180.5	184.4	184.2
	July	119.2	232.1	131.9	198.8	190.3	191.4
	August	125.6	263.6	138.6	205.4	192.5	193.8
	September	130.5	274.1	145.8	212.4	209.4	209.8
	<b>AVERAGE</b>	<b>115.0</b>	<b>233.5</b>	<b>127.4</b>	<b>196.6</b>	<b>178.1</b>	<b>180.1</b>

<sup>1</sup>Represents direct sales by pipeline companies to industrial users. Does not include sales to industrial users by resellers.

<sup>2</sup>Includes the cost of gas to the distributing utility at entrance of distribution system or point of receipt.

R = Revised data.

Source: • Federal Power Commission form 11, "Natural Gas Pipeline Company Monthly Statement."

# Price

## Utility Fossil Fuels

### Average Delivered Prices of Coal at Utilities

		Contract	Spot
		Dollars per short ton	
1976	AVERAGE	17.90	21.33
1977	January	17.87	21.93
	February	18.28	22.71
	March	18.75	23.27
	April	18.82	22.41
	May	18.97	23.73
	June	19.03	24.62
	July	19.35	25.13
	August	18.95	24.73
	September	19.75	26.14
	October	20.31	26.83
	November	20.51	27.01
	December	20.49	28.01
	AVERAGE	19.25	24.99
1978	January	16.94	30.27
	February	16.50	30.50
	March	18.59	31.52
	April	21.43	30.42
	May	22.23	29.62
	June	22.88	28.95
	July	22.08	28.94
	August	22.12	28.95
	September	22.66	29.06
	October	23.53	28.96
	November	24.03	29.29
	December	23.99	21.41
	AVERAGE	21.41	29.63
1979	January	24.40	27.82
	February	24.08	26.71
	March	24.82	27.64
	April	25.52	28.55
	May	26.40	27.64
	June	25.91	28.42
	July	25.13	28.36
	August	25.79	28.50

Source: • Federal Power Commission form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."

# Price

## Cost of Fossil Fuels Delivered to Steam-Electric Utility Plants

### All Fossil Fuels<sup>1</sup>

Region	1978					1979							
	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG
	Cents per million Btu												
New England	190.4	190.9	194.9	192.9	207.5	206.8	223.3	249.2	244.9	267.4	283.6	302.9	313.0
Middle Atlantic	155.4	154.9	156.7	159.6	163.5	170.2	180.5	174.4	168.2	176.7	184.3	212.0	204.7
East North Central	128.6	125.3	130.2	132.5	137.0	142.5	146.9	143.5	140.7	145.1	144.0	150.9	146.9
West North Central	98.1	98.5	99.5	100.7	105.9	121.6	124.3	106.9	107.3	110.9	114.4	110.3	112.1
South Atlantic	147.0	148.5	148.0	147.8	154.6	158.9	163.3	168.3	168.2	172.7	185.0	197.7	187.9
East South Central	124.4	125.1	124.1	125.4	128.3	129.7	128.1	131.7	132.4	137.5	136.9	144.0	143.3
West South Central	132.8	132.3	127.3	129.4	131.7	144.4	143.6	139.6	141.7	155.7	158.7	156.5	154.0
Mountain	74.7	75.8	83.3	82.3	82.8	89.3	91.4	92.3	99.7	120.3	101.6	100.8	100.8
Pacific	225.1	232.2	237.3	245.2	245.8	245.9	243.1	234.3	240.8	242.2	250.9	263.6	274.1
<b>NATIONAL AVG.</b>	<b>135.9</b>	<b>135.8</b>	<b>138.1</b>	<b>138.8</b>	<b>142.9</b>	<b>150.4</b>	<b>154.3</b>	<b>152.3</b>	<b>151.4</b>	<b>158.0</b>	<b>161.2</b>	<b>168.7</b>	<b>167.1</b>
<b>Coal</b>													
New England	143.9	147.2	147.4	147.0	146.8	147.1	150.3	149.9	150.9	152.7	155.2	155.5	155.7
Middle Atlantic	119.4	121.4	121.1	120.6	120.3	121.2	122.6	123.7	121.9	120.4	122.8	129.6	123.8
East North Central	120.5	119.9	120.9	123.9	123.8	124.3	123.7	126.7	129.0	131.4	130.6	137.0	134.3
West North Central	91.3	92.0	93.6	95.2	95.1	96.0	95.3	95.6	98.5	100.6	106.9	103.6	98.5
South Atlantic	127.5	129.6	132.5	134.1	138.8	136.6	136.4	136.0	137.8	139.0	138.0	142.9	142.7
East South Central	118.4	119.0	119.3	120.8	122.6	122.6	121.3	125.8	129.6	132.7	131.8	134.7	134.2
West South Central	68.0	77.3	74.1	73.4	81.4	88.2	89.3	92.9	94.9	89.9	99.8	99.0	100.2
Mountain	55.1	57.8	61.5	60.2	58.7	62.6	62.9	65.0	74.0	97.8	69.3	65.4	66.8
Pacific	77.9	79.4	79.9	78.2	78.6	84.3	82.9	83.4	82.7	83.0	84.6	84.2	82.0
<b>NATIONAL AVG.</b>	<b>110.0</b>	<b>111.4</b>	<b>114.0</b>	<b>115.6</b>	<b>115.9</b>	<b>115.8</b>	<b>114.6</b>	<b>116.8</b>	<b>120.1</b>	<b>123.4</b>	<b>121.8</b>	<b>122.2</b>	<b>122.5</b>
<b>Residual Fuel Oil<sup>1</sup></b>													
New England	191.0	191.9	196.8	195.6	211.3	210.6	227.8	255.8	250.8	272.7	293.2	309.1	321.0
Middle Atlantic	203.4	209.3	214.7	224.2	226.0	232.2	243.4	266.4	273.7	279.9	305.0	325.2	338.1
East North Central	271.5	253.4	247.9	260.6	261.5	282.2	295.9	302.5	307.2	320.0	321.8	352.6	383.2
West North Central	194.0	216.3	217.1	217.6	212.6	233.9	265.4	246.4	277.0	384.5	244.7	373.0	479.0
South Atlantic	192.6	196.5	207.0	211.7	215.3	224.7	233.0	255.7	266.4	270.7	288.1	312.8	320.6
East South Central	178.5	176.8	172.4	168.8	177.4	174.7	198.3	211.6	212.1	231.8	218.9	240.2	266.3
West South Central	178.8	188.3	184.1	189.8	207.0	306.8	227.3	255.1	232.4	242.8	247.1	305.8	298.6
Mountain	209.0	215.2	215.3	252.0	228.2	237.3	233.6	246.4	276.5	284.3	287.8	337.2	350.0
Pacific	258.5	260.5	266.8	270.1	266.4	262.9	267.9	265.2	283.1	277.8	283.3	307.4	323.1
<b>NATIONAL AVG.</b>	<b>205.6</b>	<b>211.2</b>	<b>219.8</b>	<b>225.6</b>	<b>228.7</b>	<b>231.8</b>	<b>245.6</b>	<b>261.4</b>	<b>268.0</b>	<b>277.7</b>	<b>289.3</b>	<b>314.7</b>	<b>328.0</b>
<b>Natural Gas<sup>2</sup></b>													
New England	185.0	184.6	192.5	187.6	193.7	208.4	219.1	224.0	233.9	250.1	263.1	261.9	277.5
Middle Atlantic	169.5	178.7	223.1	190.8	180.7	179.2	183.0	179.3	190.1	192.5	210.0	226.7	241.7
East North Central	210.8	204.6	211.0	201.6	209.8	217.2	241.7	242.3	244.3	247.1	231.2	222.9	258.3
West North Central	123.6	122.3	125.5	128.1	135.2	143.0	145.5	137.6	143.8	147.1	146.1	148.8	152.1
South Atlantic	113.5	114.1	107.7	109.2	105.1	94.1	103.0	118.5	119.7	123.5	126.5	155.5	155.3
East South Central	157.3	160.3	163.1	164.5	187.3	175.6	177.9	169.1	172.3	195.0	185.6	182.0	192.2
West South Central	138.9	137.1	134.8	134.8	133.9	146.2	147.6	142.5	149.2	169.2	168.5	161.3	160.4
Mountain	146.0	145.3	150.0	160.3	177.0	178.1	174.9	196.9	182.3	193.0	198.3	205.1	216.3
Pacific	218.8	233.4	223.3	222.1	227.7	231.0	224.9	222.0	221.6	225.8	238.7	245.3	246.3
<b>NATIONAL AVG.</b>	<b>149.4</b>	<b>146.6</b>	<b>147.1</b>	<b>141.1</b>	<b>139.4</b>	<b>150.2</b>	<b>159.1</b>	<b>162.8</b>	<b>164.4</b>	<b>177.2</b>	<b>179.5</b>	<b>178.9</b>	<b>180.9</b>

<sup>1</sup>See Explanatory Note 21.

<sup>2</sup>Includes small quantities of coke oven gas, refinery gas, and blast furnace gas.

Source: • Federal Power Commission form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."

# Price

## Average Retail Electricity Prices<sup>1</sup>

		Residential	Commercial	Industrial	Other	Total <sup>2</sup>
		Cents per kilowatt-hour				
<b>1973</b>	<b>AVERAGE</b>	<b>2.54</b>	<b>2.41</b>	<b>1.25</b>	<b>2.10</b>	<b>1.96</b>
<b>1974</b>	<b>AVERAGE</b>	<b>3.10</b>	<b>3.04</b>	<b>1.69</b>	<b>2.75</b>	<b>2.49</b>
<b>1975</b>	<b>AVERAGE</b>	<b>3.51</b>	<b>3.45</b>	<b>2.07</b>	<b>3.08</b>	<b>2.92</b>
<b>1976</b>	<b>AVERAGE</b>	<b>3.73</b>	<b>3.69</b>	<b>2.21</b>	<b>3.27</b>	<b>3.09</b>
<b>1977</b>	January	3.62	3.78	2.35	3.36	3.20
	February	3.69	3.86	2.40	3.45	3.25
	March	3.95	4.00	2.44	3.40	3.33
	April	4.07	4.04	2.43	3.46	3.34
	May	4.19	4.09	2.45	3.64	3.38
	June	4.17	4.11	2.48	3.59	3.43
	July	4.20	4.12	2.58	3.59	3.56
	August	4.35	4.37	2.64	3.69	3.69
	September	4.26	4.21	2.60	3.59	3.58
	October	4.25	4.27	2.57	3.47	3.53
	November	4.18	4.22	2.55	3.56	3.47
	December	3.97	4.11	2.52	3.34	3.41
	<b>AVERAGE</b>	<b>4.05</b>	<b>4.09</b>	<b>2.50</b>	<b>3.51</b>	<b>3.42</b>
<b>1978</b>	January	3.90	4.11	2.60	3.47	3.46
	February	3.94	4.16	2.73	3.47	3.54
	March	4.14	4.34	2.86	3.68	3.69
	April	4.34	4.41	2.82	3.75	3.70
	May	4.46	4.42	2.77	3.89	3.69
	June	4.53	4.48	2.81	3.76	3.78
	July	4.50	4.40	2.84	3.69	3.82
	August	4.51	4.40	2.81	3.72	3.80
	September	4.48	4.41	2.79	3.72	3.78
	October	4.48	4.46	2.78	3.53	3.72
	November	4.39	4.38	2.76	3.53	3.65
	December	4.20	4.31	2.76	3.54	3.63
	<b>AVERAGE</b>	<b>4.31</b>	<b>4.36</b>	<b>2.77</b>	<b>3.62</b>	<b>3.69</b>
<b>1979</b>	January	4.08	4.29	2.82	3.58	3.65
	February	4.09	4.30	2.86	3.69	3.66
	March	4.28	4.44	2.89	3.87	3.75
	April	4.51	4.54	2.90	3.88	3.81
	May	4.68	4.65	2.96	3.98	3.89
	June	4.88	4.73	3.02	4.05	4.02
	July	4.91	4.76	3.11	4.20	4.14
	August	4.94	4.79	3.11	NA	4.17
	September	4.95	4.84	3.14	4.08	4.18
	<b>AVERAGE</b>	<b>4.59</b>	<b>4.59</b>	<b>2.98</b>	<b>3.92</b>	<b>3.92</b>

<sup>1</sup>Prices are for Classes A and B privately owned electric utilities.

<sup>2</sup>Average price for total sales to ultimate consumers.

R = Revised data.

NA = Not available.

Source: • Federal Power Commission, form 5, "Monthly Statement of Electric Operating Revenue and Income."

## **International**

### **Petroleum Consumption**

Petroleum consumption by IEA member nations was 32.4 million barrels per day in July 1979. Although this preliminary figure represents a decrease of 900,000 barrels per day from the consumption rate of June 1979, it also reflects an increase of 100,000 barrels per day over the rate of consumption during July 1978.

The daily consumption rate for the first 7 months of 1979 was 35.8 million barrels, about 600,000 barrels per day more than during the same period in 1978.

### **Crude Oil Production**

Crude oil production by the OPEC nations was 30.9 million barrels per day during September 1979. While most OPEC nations remained at or near their August production levels, declines of 214,000 barrels per day in Nigeria and 150,000 barrels per day in Kuwait led to a decline of 0.4 million barrels per day in total Opec production levels, as compared to the August 1979 figure. Only North Sea production, up almost 5 percent to 2.2 million barrels per day, showed a significant increase.

World crude oil production in September 1979 was 63.1 million barrels per day, down 0.4 million barrels per day from August level. This decrease reflected principally the declines in Kuwaitian and Nigerian outputs.

# International

## Petroleum Consumption for Major Free World Industrialized Countries

		Total IEA <sup>1</sup>	Japan	West Germany	France <sup>2</sup>	United Kingdom	Canada	Italy <sup>3</sup>
		Thousand barrels per day						
1973	AVERAGE	33,600	5,000	2,693	2,219	1,958	1,597	1,525
1974	AVERAGE	32,390	4,872	2,408	2,094	1,829	1,630	1,521
1975	AVERAGE	31,235	4,568	2,319	1,925	1,633	1,595	1,468
1976	AVERAGE	33,180	4,786	2,507	2,075	1,601	1,647	1,503
1977	January	37,700	5,433	2,393	2,519	1,830	1,776	1,696
	February	38,600	6,025	2,446	2,386	1,844	1,901	1,823
	March	35,000	5,539	2,523	2,109	1,818	1,651	1,573
	April	32,800	4,714	2,431	2,043	1,671	1,523	1,326
	May	31,300	4,314	2,364	1,846	1,546	1,524	1,268
	June	32,900	4,484	2,475	1,715	1,454	1,593	1,340
	July	31,800	4,716	2,382	1,349	1,300	1,497	1,251
	August	32,700	4,709	2,469	1,390	1,349	1,690	1,140
	September	33,400	4,742	2,567	1,783	1,555	1,527	1,502
	October	33,300	4,664	2,324	1,882	1,545	1,626	1,405
	November	34,300	5,093	2,649	2,181	1,912	1,718	1,605
	December	37,900	5,800	2,719	2,512	1,890	1,925	1,817
	AVERAGE	34,300	5,015	2,478	1,973	1,655	1,661	1,476
1978	January	36,600	5,301	2,461	2,645	1,824	1,777	1,763
	February	39,900	5,981	3,014	2,598	1,899	1,956	1,906
	March	36,900	5,595	2,610	2,236	1,840	1,681	1,589
	April	33,400	4,849	2,577	2,044	1,791	1,561	1,339
	May	32,600	4,437	2,341	2,131	1,618	1,522	1,300
	June	33,300	4,502	2,611	1,687	1,499	1,622	1,354
	July	32,300	4,704	2,693	1,364	1,401	1,549	1,338
	August	33,500	4,857	2,338	1,325	1,447	1,680	1,197
	September	33,700	4,827	2,561	1,665	1,557	1,595	1,566
	October	34,700	4,847	2,633	1,997	1,676	1,749	1,573
	November	36,100	5,423	2,772	2,472	1,802	1,882	1,828
	December	37,800	6,125	2,578	2,800	1,846	1,915	1,889
	AVERAGE	35,000	5,115	2,596	2,077	1,683	1,701	1,551
1979	January	39,400	5,579	2,893	2,753	1,883	1,881	1,950
	February	40,500	6,006	2,708	R2,708	2,067	2,019	1,912
	March	36,800	5,706	2,592	R2,286	1,949	1,654	1,601
	April	33,400	5,009	2,590	R2,129	1,703	1,619	1,447
	May	33,500	R4,755	2,641	R2,003	1,648	1,650	1,385
	June	R33,300	R4,709	2,613	R1,652	R1,517	1,704	1,304
	July†	32,400	R4,675	2,625	1,594	1,440	1,695	1,285
	August†	NA	4,972	2,618	1,528	NA	1,808	1,290

<sup>1</sup>The 20 signatory nations of the International Energy Agency (IEA) are: Australia, Austria, Belgium, Canada, Denmark, West Germany, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States.

<sup>2</sup>Not a member of IEA.

<sup>3</sup>Principal products only.

NA = Not available.

R = Revised data.

†Preliminary data.

Note: Total IEA data represent domestic products supplied in the United States and sales of petroleum products for all other members. Sales exclude refinery fuel, refinery losses, and ocean bunkers. Experience has shown that this total IEA quantity is between 93 and 95 percent of total IEA consumption.

Sources: • Central Intelligence Agency, National Foreign Assessment Center, "International Energy Statistical Review," 14 November 1979.

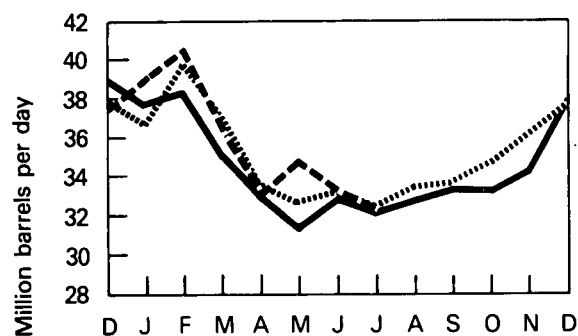
• Other statistics are EIA estimates based on multiple sources.



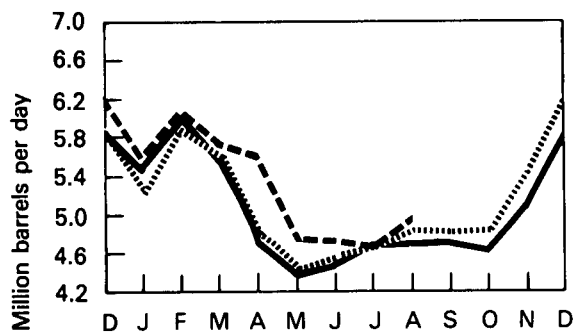
# International

## Petroleum Consumption

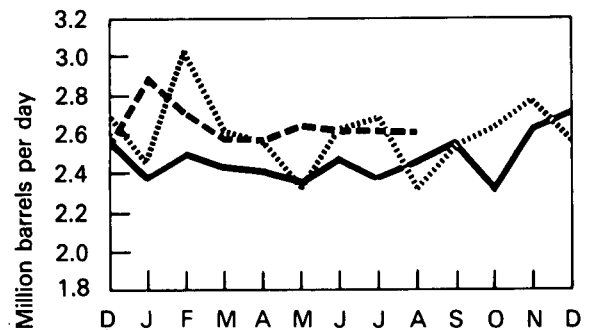
Total IEA



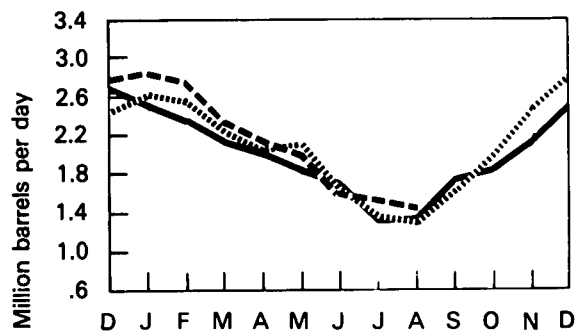
Japan\*



West Germany



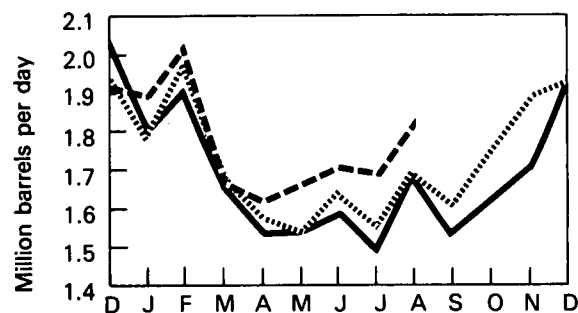
France\*\*



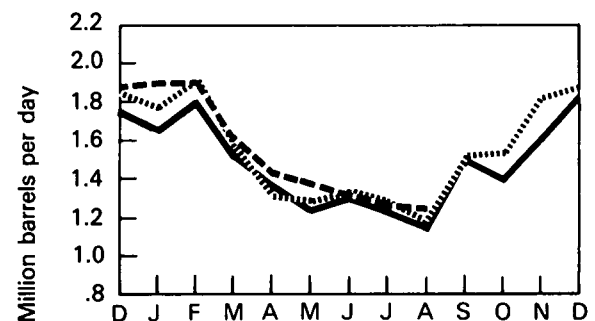
United Kingdom



Canada



Italy\*\*\*



\*Excludes liquefied petroleum gases and condensates.

\*\*Not a member of IEA.

\*\*\*Principal products only.

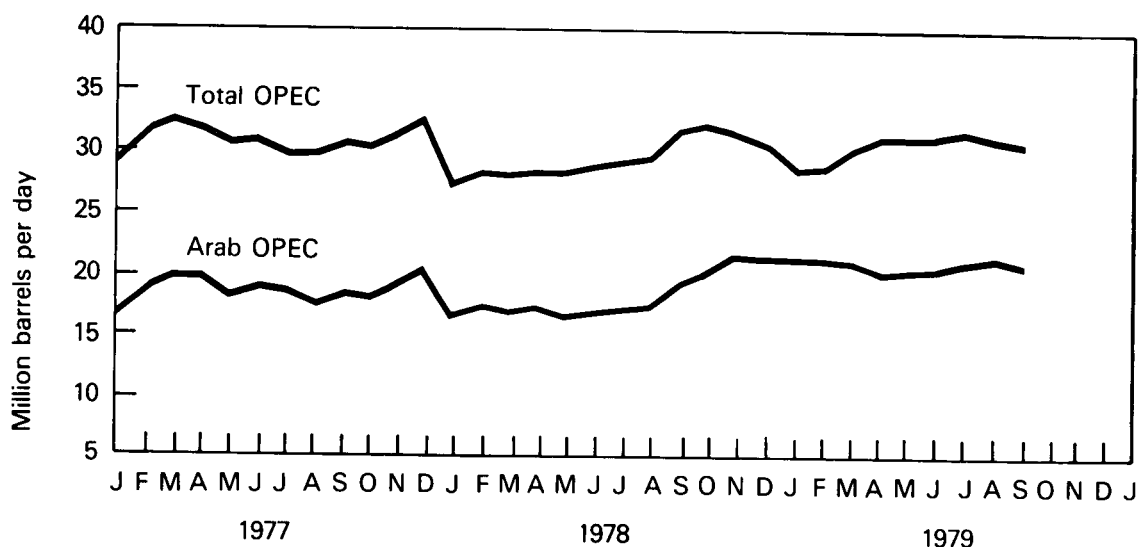
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# International

## Crude Oil Production for Major Petroleum Exporting Countries

Country	September 1979 Production Capacity								
	1973 Year	1974 Year	1975 Year	1976 Year	1977 Year	1978 Year	Production	Maximum Sustainable	Unused
Thousand barrels per day									
Algeria	1,070	960	960	990	1,122	1,225	1,000	900	(2)
Iraq	2,020	1,970	2,260	2,415	2,493	2,629	3,500	3,500	0
Kuwait <sup>1</sup>	3,020	2,545	2,085	2,145	1,969	2,098	2,374	2,800	426
Libya	2,175	1,520	1,480	1,935	2,054	1,993	2,028	2,200	172
Qatar	570	520	440	495	445	484	454	600	146
Saudi Arabia <sup>1</sup>	7,595	8,480	7,075	8,575	9,200	8,299	9,774	9,800	26
United Arab Emirates	1,535	1,680	1,665	1,935	1,999	1,832	1,837	2,430	593
Subtotal: Arab OPEC	17,985	17,675	15,965	18,490	19,292	18,560	20,967	22,230	1,363
Ecuador	210	175	160	185	183	202	220	225	5
Gabon	150	200	225	225	222	225	199	225	26
Indonesia	1,340	1,375	1,305	1,505	1,685	1,637	1,578	1,650	72
Iran	5,860	6,020	5,350	5,885	5,699	5,207	3,500	<sup>3</sup> 5,500	2,000
Nigeria	2,055	2,255	1,785	2,070	2,097	1,910	2,116	2,200	74
Venezuela	3,365	2,975	2,345	2,295	2,238	2,166	2,365	2,400	35
Subtotal: Non-Arab OPEC	12,980	13,000	11,170	12,165	12,124	11,347	9,978	12,200	2,212
TOTAL OPEC	30,965	30,675	27,135	30,655	31,416	29,907	30,945	34,430	3,575
Canada	1,800	1,695	1,460	1,300	1,321	1,324	1,474	NA	NA
Mexico	465	580	720	850	981	1,207	1,460	NA	NA
North Sea <sup>4</sup>	41	44	213	528	1,020	1,448	2,157	NA	NA
TOTAL OPEC, Canada, Mexico, North Sea	33,271	32,994	29,528	33,333	34,738	33,886	36,036	NA	NA
TOTAL WORLD	55,755	55,875	52,990	57,340	60,002	59,563	63,124	NA	NA

## OPEC Countries Crude Oil Production



<sup>1</sup>Includes about one-half of the former Kuwait-Saudi Arabia Neutral Zone. Production in September 1979 amounted to approximately 548,000 barrels per day.

<sup>2</sup>Production may exceed maximum sustainable capacity for brief periods.

<sup>3</sup>The sustainable capacity is uncertain.

<sup>4</sup>The North Sea region includes Denmark, Norway and United Kingdom.

NA = Not available.

Sources: • Central Intelligence Agency, National Foreign Assessment Center, "International Energy Statistical Review," 19 November 1979.

• "Petroleum Intelligence Weekly," 12 November 1979, and U.S. Department of Energy.

# Definitions

## Anthracite

A hard, black, lustrous coal containing a high percentage of fixed carbon and a low percentage of volatile matter. Often referred to as hard coal. Includes metaanthracite and semianthracite. Conforms to ASTM Specification D388, for anthracite.

## Average Retail Selling Price, Motor Gasoline

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

## Base Production Control Level

1. Prior to February 1, 1976: the total number of barrels of domestic crude oil produced and sold from a particular property in the corresponding month of 1972. If domestic crude oil was not produced and sold from that property in every month of 1972, the total number of barrels of domestic crude oil produced and sold from that property in 1972, is then divided by 12.

2. Effective February 1, 1976: the total number of barrels of crude oil produced and sold from the property during calendar year 1975, divided by 365, and multiplied by the number of days in the particular month during 1975. A producer may elect to use the total number of barrels of crude oil produced and sold from the property during calendar year 1972, divided by 366, and multiplied by the number of days in the particular month during 1972.

## Bituminous Coal

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

## Ceiling Price

The maximum permissible selling price, prior to February 1, 1976, for a particular grade of domestic crude oil in a particular field is the May 15, 1973, posted price, plus \$1.35 per barrel.

## Coke

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

## Crude Oil

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

## Crude Oil Domestic Production

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

## Crude Oil Entitlement Value

The average value a refiner receives from the entitlement program for each incremental barrel of imported crude oil. It is calculated by multiplying the entitlement price by the National Old Oil Supply Ratio for November 1974 through January 1976, and by the National Domestic Crude Oil Supply Ratio for February 1976 forward.

## Crude Oil Imports

The volume of crude oil imported into the 50 States and the District of Columbia, including imports from U.S. territories, but excluding imports of crude oil into the Hawaiian Foreign Trade Zone.

## Crude Oil Refinery Input

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

## Crude Oil Stocks

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

## Distillate Fuel Oil

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

## Electricity Production

Production at electric utilities only. Does not include industrial electricity generation.

## Entitlement Position

The monthly entitlement position of a refiner indicates whether he bought or sold entitlements in that month. An entitlement is the right to process "deemed old oil," which is the sum of a refiner's receipts of "old" oil and a fraction of his receipts of "upper tier" crude oil. This fraction is set monthly by the Economic Regulatory Administration (ERA). A refiner must purchase entitlements for the amount of his "deemed old oil" receipts in excess of the national domestic crude oil supply ratio (NDCOSR). The NDCOSR, as calculated by ERA, reflects the differences in costs to refiners of "old" oil, "upper tier" crude oil, and imported crude oil.

## Entitlement Price

The price of an entitlement, fixed by ERA, is the exact differential as reported for the month between the

weighted average delivered cost per barrel to refiners of both imported crude oil and stripper crude oil, and the weighted average delivered cost per barrel to refiners of "old oil."

### **Exploratory Well**

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

### **Full Serve**

Motor vehicle services are provided by an attendant, such as: pumping gas, washing windows, checking under the hood, checking tire pressure, etc.

### **Jet Fuel**

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

### **Landed Cost**

The cost of imported crude oil equal to actual cost of the crude oil at point of origin plus transportation cost to the United States.

### **Line Miles of Seismic Exploration**

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

### **Lignite**

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

### **Lower Tier Crude Oil**

The total number of barrels of crude oil produced and sold from a property in a specific month up to the amount of base period production. Base period production equals the lesser of 1972 or 1975 production, with a downward adjustment to take account of depletion of the oil field (see **Base Production Control Level**).

### **Lower Tier Ceiling Price Determination**

The lower tier ceiling price for a particular grade of domestic crude oil in a particular field is the sum of (1) the highest posted price at 6 A.M., local time, May 15, 1973, for transactions in that grade of crude oil in that field; or if there was no posted price in that field for that grade of domestic crude oil, the related price for that grade of domestic crude oil which is most similar in kind and quality in the nearest field for which prices were posted; and (2) the amount mandated in the Monthly Price Adjustment Schedules published by ERA in the **Federal Energy Guidelines** (Part 212.77-13847 Appendix).

### **Major Brand**

Lundberg Survey, Inc., defines major brand as an integrated company that produces, refines, transports, and markets in Interstate Commerce under its own brand(s) in 10 or more states.

### **Maximum Dependable Capacity**

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

### **Motor Gasoline**

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

### **Motor Gasoline Production**

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

### **Motor Gasoline Stocks**

Primary motor gasoline stocks held by gasoline producers. Stocks at natural gas processing plants are not included.

### **Motor Gasoline, Regular Grade**

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

### **Motor Gasoline, Premium Grade**

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

### **National Domestic Crude Oil Supply Ratio**

Old oil receipts adjusted for upper tier receipts, small refiner bias, and other minor adjustments, divided by crude runs to stills adjusted for residual fuel entitlements.

### **Natural Gas**

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

### **Natural Gas Liquids**

Products obtained from lease separators, field facilities,

and natural gas processing plants. Natural gas liquids include natural gas plant liquids and lease condensate.

### **Natural Gas Plant Liquids**

Products obtained from processing natural gas at natural gas processing plants, including natural gasoline plants, cycling plants and fractions. Products obtained include ethane, liquefied petroleum gases (propanes, butanes, and propane-butane mixtures), isopentane, natural gasoline, plant condensate and other minor quantities of finished products such as motor gasoline, special naphthas, jet fuel, kerosene and distillate fuel oil.

### **Natural Gas Production (Dry)**

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

### **New Crude Oil**

(See Upper Tier Crude Oil).

### **Old Crude Oil**

1. Prior to February 1, 1976: the total number of barrels of crude oil produced and sold from a property in a specific month, less the total number of barrels of new crude oil for that property in that month and less the total number of barrels of released crude oil for that property in that month.

2. Effective February 1, 1976: the total number of barrels of crude oil produced and sold from a property in a specific month, less the total number of barrels of new crude oil for that property in that month.

### **Petroleum**

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

### **Petroleum Coke**

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

### **Petroleum Products**

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

### **Primary Stocks of Petroleum Products**

Stocks held at refineries, bulk terminals, and pipelines. They do not include stocks held in secondary storage facilities, such as those held by jobbers, dealers, independent marketers, and consumers.

### **Product Supplied—Specific Petroleum Products**

A calculated value, computed as domestic production plus net imports (imports less exports), less the net increase in primary stocks. It, therefore, represents the total disappearance of products from primary supplies. (See definition for Products Supplied — Total Petroleum Products).

### **Products Supplied—Total Petroleum Products**

Total domestic products supplied is calculated as inputs to refineries, plus estimated refinery gain, plus hydrogen input, plus natural gas plant liquids production, plus direct use of crude as fuel, plus product imports, less product exports, less the net increase in product stocks. (See definition for Product Supplied—Specific Petroleum Products).

### **Property**

Prior to August 26, 1976, a property was defined as the right to produce domestic crude oil, which arises from a lease or from a fee interest. This definition was interpreted to apply only to a surface lease. In August 1976 the definition of a property was changed so that a producer may treat as a separate property each separate and distinct producing reservoir subject to the same right to produce crude oil, provided that such reservoir is recognized by the appropriate governmental regulatory authority as producing formation that is separate and distinct from, and not in communication with, any other producing formation. Although this new definition was not implemented until August 26, 1976, it was made effective retroactively to February 1, 1976. (F.R. 36171, August 26, 1976.)

### **Refiner Acquisition Cost**

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

### **Released Crude Oil**

An amount of crude oil produced from a property in a particular month prior to February 1, 1976, which is equal to the total number of barrels of new crude oil produced and sold from that property in that month. The amount of released crude oil for a property in a particular month shall not exceed the base production control level for that property in that month.

## **Residual Fuel Oil**

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

## **Rotary Rig**

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

## **Self Serve**

Motor vehicle services are not provided by attendants.

## **Separative Work Unit (SWU)**

The measure of work required to produce enriched uranium from natural uranium. Enrichment plants separate natural uranium feed material into two groups, an enriched product group with a higher percentage of U-235 than the feed material and a depleted tails group with a lower percentage of U-235 than the feed material. To produce 1 kilogram of enriched uranium containing 2.8 percent U-235, and a depleted tails assay containing 0.3 percent U-235, it requires 6 kilograms of natural uranium feed and 3 kilograms of separative work units (3 SWU).

## **Strategic Petroleum Reserves**

A plan developed to reduce the impact of interruption of imports of petroleum. Congress enacted legislation to establish a strategic Petroleum Reserve in Title I, Part B of the Energy Policy and Conservation Act of 1975, Public Law 94-163.

## **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.

## **Stripper Well Property**

A property whose average daily production of crude oil per well (excluding condensate recovered in nonassociated natural gas production) did not exceed 10 barrels per day during any preceding consecutive 12-month period beginning after December 31, 1972.

## **Synthetic Natural Gas (SNG)**

A product resulting from the manufacture, conversion, or reforming of petroleum hydrocarbons which 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 imports, exports of crude oil, oil burned as fuel and losses of oil.

## **Unrecouped Costs**

Costs which have not been recovered in the current month's product prices but which have been "banked" for later use.

## **Upper Tier Crude Oil**

1. Prior to February 1, 1976: the total number of barrels of domestic crude oil produced and sold in a specific month, less the base production control level for that month and less the current cumulative deficiency.
2. February 1, 1976 through August 31, 1976: the total number of barrels of domestic crude oil produced and sold in a specific month, less the property's base production control level for that month and less the current cumulative deficiency since February 1, 1976. Includes new crude oil and crude oil produced from a stripper well property.
3. Since September 1, 1976: upper tier crude oil excludes crude oil produced from a stripper well property.

## **Upper Tier Ceiling Price Determination**

The upper tier ceiling price for a particular grade of domestic crude oil in a particular field is (1) the highest posted price on September 30, 1975, for transactions in that grade of crude oil in that field in September 1975, or if there was no posted price in that field for that grade of domestic crude oil, the related price for that grade of domestic crude oil which is most similar in kind and quality in the nearest field for which prices were posted; less (2) the amount mandated in the Monthly Price Adjustment Schedules published by ERA in the *Federal Energy Guidelines* (Part 212.77 .13847 Appendix).

## **Well**

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

## Explanatory Notes

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

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

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

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

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

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

There are two degree-day data bases maintained by the National Oceanic and Atmospheric Administration. Weekly degree-day information is based on mean daily temperatures recorded at about 200 major weather stations around the country. Monthly data are based on

readings at more than 8,000 weather stations. The temperature information recorded at these weather stations is used to calculate statewide degree-day averages based on population. The State figures are then aggregated into Petroleum Administration for Defense (PAD) Districts and into the national average, also using a population weighting method.

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

7. Domestic products supplied figures for natural gas liquids (NGL) as reported by the Bureau of Mines and reproduced in this publication do not include amounts utilized by refineries for blending purposes in the production of finished products, principally gasoline. Use of NGL at refineries is reported in a separate column. The production series cited in this publication shows both NGL produced at processing plants and liquefied gases produced at refineries (LRG). NGL produced at refineries is extracted from crude oil and hence, to avoid double counting, should not be included in calculations of total U.S. production of petroleum liquids. The stock series shown in this volume includes natural gas liquids held as stocks at both natural gas processing plants and at refineries and LRG held at refineries.

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

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

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

10. Bituminous coal and lignite consumption is calculated by Energy Information Administration (EIA) from information provided by the Federal Energy Regulatory Commission, Department of Commerce, and reports from selected manufacturing industries and retailers.

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

Bituminous coal and lignite production is calculated from the number of railroad cars loaded at mines, based on the assumption that approximately 60 percent of the coal produced is transported by rail. Production data are estimated by EIA from Association of American Railroads reports of carloadings.

11. Quantities of uranium are measured by various units at different stages in the fuel cycle. At the mill, quantities are usually expressed as pounds or short tons of  $U_3O_8$ . After the conversion stage, the units of measure are either metric tons (MT) of  $UF_6$  or metric tons of uranium (MTU). The later designation expresses only the elemental uranium content of  $UF_6$ .

Following the enrichment stage, the same units are used, but the U-235 content has been enhanced at the expense of loss of material. At the fabrication stage,  $UF_6$  is changed to  $UO_2$ , and the standard unit of measure is the MTU. We have chosen to present all uranium quantities as MTU; conversion factors to other units are given in the Units of Measure section.

12. The units used to describe power generation at nuclear plants are based on the watt, which is a unit of power. (Power is energy produced per unit of time.) As with fossil-fueled plants, nuclear plants have three design power ratings. The normal rating (expressed in thermal megawatts) is the rate of heat production by the reactor core. The gross electrical rating (expressed in electrical megawatts, MWe) is the generator capacity at the stated thermal rating of the plant. The net electrical rating (also expressed in MWe) is the power available as input to the electrical grid after subtracting the power needed to operate the plant. (A typical nuclear plant needs 5 percent of its generated electricity for its own operation.)

The electrical energy produced by a plant is expressed either as megawatt hours (MWh) or kilowatt hours (kWh). Tables in the nuclear section show generated electricity as average electrical power. This enables a more direct comparison to design capacity and to previous months' performances. To obtain the quantity of electricity generated during a given time period (in kilowatt hours), multiply the average power level (in kilowatts) by the number of hours during that period.

The energy extracted from uranium fuel is expressed as thermal megawatt days per metric ton of uranium (MWD/MTU). The production of plutonium in the fuel rods is expressed as kilograms of plutonium per metric ton of discharged uranium (kg/MTU).

13. The refiner acquisition cost of domestic crude oil is the price paid by refiners for domestic crude oil and natural gas plant liquids and includes transportation costs from the wellhead to the refinery. The refiner acquisition cost of imported crude oil is the average landed cost of imported crude oil to the refiner and represents the amount which may be passed on to the

consumer. It incorporates transportation costs and fees (including the supplemental import fees) and any other costs incurred in purchasing and shipping crude oil to the United States.

14. Prior to February 1976, the domestic crude oil well-head price represented an estimate of the average of posted prices; after February 1976, the wellhead price represents an average of first sale prices. For the 2-year period January 1974 through January 1976, the old oil price at the wellhead was originally estimated to be \$5.25 per barrel based on representative postings. This estimate was revised in July 1976 after a survey of crude oil purchasers was implemented and more complete data became available. Estimates of the average old oil price given in the table for months prior to February 1976 are based on prices for old oil reported on new leases, and were not derived from a statistically valid sample of old oil leases.

15. The actual domestic average price represents the average price at which all domestic crude oil, except that from Naval Petroleum Reserves, is purchased. The imputed domestic average price is the average price used to establish ceiling prices for domestic crude oil in accordance with the provisions of the Energy Conservation and Production Act. It is calculated as the weighted average of lower tier, upper tier, and an imputed stripper crude oil price. The imputed stripper crude oil price is equal to \$11.63 per barrel plus the difference between the composite price of crude oil in August 1976 (excluding stripper oil) and the composite price of crude oil in the month of measurement (excluding stripper oil).

16. 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.

17. 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 which 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.

18. The major brand category includes those stations using the primary brand of a major refiner. Primary brands are the brand names or logos that are associated most commonly with the 15 integrated major refiners as defined in the Emergency Petroleum Allocation Act of 1973. These refiners are: Amoco, Atlantic Richfield, Chevron, Cities Service, Continental, Exxon, Getty, Gulf, Marathon, Mobil, Phillips, Shell, Sun, Texaco, and Union Oil of California. The nonmajor brand category includes all the other stations in the survey. Stations using secondary brands of major refiners are included in the nonmajor brand category, as these stations typically price their gasoline to compete with independent refiner and market-brand stations.



Stations owned and operated directly by refiners are not included in this survey.

19. The U.S. Department of Energy Regions are defined as follows:

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

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

21. The weighted average for all fossil fuels includes peaking fuels and distillate fuel oil delivered to utilities for the total United States, whereas the regional and total United States breakdown for residual fuel oil prices represents all heavy fuel oil prices.

# Conversion Factors

## Thermal Conversion Factors

Approximate Heat Content of Various Fuels		1973	1974	1975	1976	1977-78-79
<b>Anthracite</b>						
Production	Btu/short ton	23,170,000	22,560,000	23,390,000	22,770,000	22,500,000
Imports and Exports	Btu/short ton	25,400,000	25,400,000	25,400,000	25,400,000	25,400,000
Consumption, average	Btu/short ton	22,710,000	21,950,000	21,740,000	22,150,000	22,000,000
Electric utility consumption	Btu/short ton	17,200,000	17,200,000	17,060,000	17,530,000	17,240,000
Non-utility consumption	Btu/short ton	24,590,000	23,750,000	23,650,000	23,840,000	23,790,000
<b>Bituminous coal and lignite</b>						
Production	Btu/short ton	24,010,000	23,730,000	23,200,000	23,150,000	22,900,000
Imports	Btu/short ton	25,000,000	25,000,000	25,000,000	25,000,000	25,000,000
Exports	Btu/short ton	27,000,000	27,000,000	27,000,000	27,000,000	27,000,000
Consumption, average	Btu/short ton	23,650,000	23,070,000	22,800,000	22,750,000	22,570,000
Electric utility consumption	Btu/short ton	22,180,000	21,800,000	21,660,000	21,690,000	21,520,000
Non-utility consumption	Btu/short ton	27,020,000	26,120,000	25,810,000	25,870,000	26,020,000
<b>Coal Coke</b>						
Production	Btu/short ton	26,000,000	26,000,000	26,000,000	26,000,000	26,000,000
<b>Crude petroleum<sup>1</sup></b>						
Production	Btu/barrel	5,800,000	5,800,000	5,800,000	5,800,000	5,800,000
Imports	Btu/barrel	5,817,131	5,825,768	5,821,375	5,808,452	5,809,909
Exports	Btu/barrel	5,800,000	5,800,000	5,800,000	5,800,000	5,800,000
<b>Crude Petroleum and Products</b>						
Imports, average	Btu/barrel	5,897,122	5,883,985	5,857,876	5,856,076	5,834,208
Exports, average	Btu/barrel	5,752,455	5,773,577	5,748,482	5,745,450	5,796,948
<b>Petroleum products</b>						
Consumption, average	Btu/barrel	5,514,605	5,503,841	5,494,291	5,504,484	5,526,069
Electric utility consumption	Btu/barrel	6,128,488	6,128,058	6,109,112	6,129,283	6,126,858
Non-utility consumption	Btu/barrel	5,454,865	5,443,438	5,437,208	5,444,956	5,464,678
Imports	Btu/barrel	5,983,262	5,959,487	5,934,666	5,980,372	5,907,512
Exports	Btu/barrel	5,752,055	5,773,222	5,746,991	5,743,408	5,796,155
<b>Natural gas plant liquid production</b>						
Production	Btu/barrel	4,049,369	4,010,663	3,983,763	3,964,050	3,941,159
<b>Natural gas, dry</b>						
Production and consumption	Btu/cubic foot	1,021	1,024	1,021	1,020	1,021
Electric utility consumption	Btu/cubic foot	1,024	1,022	1,026	1,023	1,029
Non-utility consumption	Btu/cubic foot	1,020	1,024	1,020	1,019	1,019
Imports	Btu/cubic foot	1,026	1,027	1,026	1,025	1,026
Exports	Btu/cubic foot	1,023	1,016	1,014	1,013	1,013
<b>Hydropower<sup>2</sup></b>						
Production	Btu/kWh	10,389	10,442	10,406	10,373	10,435
<b>Nuclear power<sup>2</sup></b>						
Production	Btu/kWh	10,903	11,161	11,013	11,047	10,769
<b>Geothermal power<sup>2</sup></b>						
Production	Btu/kWh	21,674	21,674	21,611	21,611	21,611
<b>Electricity consumption</b>						
Production	Btu/kWh	3,412	3,412	3,412	3,412	3,412
<b>Refined Petroleum Products:</b>						
Asphalt	Btu/barrel	6,636,000				
Aviation gasoline	Btu/barrel	5,048,000				
Butane	Btu/barrel	4,326,000				
Butane-propane mixture <sup>3</sup>	Btu/barrel	4,130,000				
Distillate fuel oil	Btu/barrel	5,825,000				
Ethane	Btu/barrel	3,082,000				
Isobutane	Btu/barrel	3,974,000				
Jet fuel — kerosene type	Btu/barrel	5,670,000				
Jet fuel — naphtha type	Btu/barrel	5,355,000				
Kerosene	Btu/barrel	5,670,000				
Lubricants	Btu/barrel	6,065,000				
Motor gasoline	Btu/barrel	5,253,000				
Natural gasoline	Btu/barrel	4,620,000				
<b>Petrochemical feedstocks</b>						
Naphtha 400°	Btu/barrel	5,248,000				
Other oils over 400°	Btu/barrel	5,825,000				
Still gas	Btu/barrel	6,000,000				
Petroleum coke	Btu/barrel	6,024,000				
Plant condensate	Btu/barrel	5,418,000				
Propane	Btu/barrel	3,836,000				
Residual fuel oil	Btu/barrel	6,287,000				
Road oil	Btu/barrel	6,636,000				
Special naphtha	Btu/barrel	5,248,000				
Still gas	Btu/barrel	6,000,000				
Unfinished oils	Btu/barrel	5,825,000				
Wax	Btu/barrel	5,537,000				
Miscellaneous	Btu/barrel	5,796,000				

## 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 <sub>3</sub> O <sub>8</sub> )	contains	0.769 metric tons of uranium
1 short ton (UF <sub>6</sub> )	contains	0.613 metric tons of uranium
1 metric ton (UF <sub>6</sub> )	contains	0.676 metric tons of uranium

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

<sup>2</sup>There is no generally accepted practice for measuring hydropower thermal conversion rates. The hydropower factors on this page are the prevailing heat rate factors at fossil fuel steam electric powerplants. By using the heat rate factor, it is possible to evaluate fossil fuel requirements for replacing hydropower production during periods of drought. Furthermore, it allows for better comparisons with certain other countries such as Norway where hydropower 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 kilowatt hour of electricity produced, regardless of the generation process, is 3,412 Btu per kilowatt hour. It is not possible to determine the hydroelectric powerplant efficiency by using these factors. The efficiency factor for hydroelectric powerplants is derived by multiplying generation efficiency by turbine efficiency. The average hydroelectric powerplant efficiency in the United States is 86 percent while average generation efficiency is 97 percent and average turbine efficiency is 89 percent.

<sup>3</sup>60 percent butane and 40 percent propane.

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