

Natural Gas

By Gordon W. Koelling¹ and Leonard L. Fanelli²

Marketed production of natural gas in the United States declined approximately 1.5 trillion cubic feet (Tcf) to 20.1 Tcf in 1975. This 6.9% decrease, the second consecutive annual decrease and only the second decrease since 1938, followed the rapid depletion of the Nation's proved natural gas reserves during recent years.

Total consumption of natural gas (including extraction losses) in 1975 was 20.4 Tcf, 7.7% less than in 1974. The industrial sector, the largest user of natural gas,

experienced the greatest decline, 1.3 Tcf, and the electric utilities sector registered a decrease of almost 0.3 Tcf. Declining consumption in those sectors during 1975 was related to a 39.1% increase in the net curtailments of firm delivery commitments by pipeline companies and to a general decline in the Nation's economic activity. Residential use of natural gas increased 138 billion cubic feet (Bcf); growth in the commercial sector was insignificant.

Table 1.—Salient statistics of natural gas in the United States

	1971	1972	1973	1974	1975
Supply:					
Marketed production ¹					
million cubic feet --	22,493,012	22,531,698	22,647,549	21,600,522	20,108,661
Withdrawn from storage -- do ----	1,507,630	1,757,218	1,532,820	1,700,546	1,759,565
Imports ----- do -----	934,548	1,019,496	1,032,901	959,284	953,008
Total ----- do -----	24,935,190	25,308,412	25,213,270	24,260,352	22,821,234
Disposition:					
Consumption ----- do ----	22,676,581	23,009,445	22,965,914	22,110,623	20,409,875
Exports ----- do ----	80,212	78,013	77,169	76,789	72,675
Stored ----- do ----	1,839,398	1,892,952	1,974,324	1,784,209	2,103,619
Unaccounted for ----- do ----	338,999	328,002	195,863	288,731	235,065
Total ----- do ----	24,935,190	25,308,412	25,213,270	24,260,352	22,821,234
Value at wellhead:					
Total ----- thousand dollars --	4,085,482	4,180,462	4,894,072	6,573,402	8,945,062
Average					
cents per thousand cubic feet --	18.2	18.6	21.6	30.4	44.5

¹Marketed production of natural gas represents gross withdrawals less gas used for repressuring and quantities vented and flared.

NOTE.—Domestic production as used in the Bureau publication "Minerals and Materials/monthly survey" represents marketed production less the shrinkage (extraction loss) resulting from the extraction of natural gas liquids.

Proved reserves of natural gas declined 3.8% from 237.1 Tcf at yearend 1974 to 228.2 Tcf by yearend 1975 as annual discoveries failed to equal production for the seventh time in the last 8 years. Extensions to known fields during 1975 totaled 6 Tcf, and new reservoir discoveries in old fields and new field discoveries accounted

for 4.1 Tcf. Revisions of previous reserve estimates and changes in underground storage resulted in a net addition of 0.7 Tcf.

The average wellhead value of natural

¹ Mineral specialist, Division of Petroleum and Natural Gas.

² Survey statistician, Division of Fuels Data.

gas increased 46.4% to 44.5 cents per thousand cubic feet (Mcf) in 1975. During the same year, the average retail price for gas delivered to consumers rose 33.4% to 119.3 cents per Mcf.

Exports of 73 Bcf in 1975 were 5.4% less than in 1974. About 72.9% of total 1975 exports was shipped from Alaska to Japan as liquefied natural gas (LGN). The remaining exports, which were transported by pipeline, were almost equally divided between Canada and Mexico.

Natural gas imports declined slightly to 953 Bcf in 1975. Almost all of this gas was shipped from Canada via pipeline. LNG shipments from Algeria totaled only about 5 Bcf and, for the first time since 1955, no imports were received from Mexico.

Efforts to supplement natural gas supplies through the gasification of liquid fuels continued. Eleven such plants were operational, two were under construction, and two were planned as of yearend 1975.

Six pilot projects for the development and testing of processes for the production of high-Btu gas from coal were operational or under construction at yearend 1975. An additional three projects involving the production of low-Btu gas from coal were also operational or under construction. The Bureau of Mines continued its experimental coalbed degasification project during the year. Several gasification projects involving biomass conversion were also under development.

Research programs involving fracturing techniques to stimulate flow from economically submarginal gas reservoirs, including these in the Upper Devonian shales of the Eastern United States, were in progress. The U.S. Geological Survey initiated studies of the methane saturated Gulf Coast salt water aquifers penetrated by a number of onshore wells.

The Federal Power Commission (FPC), which regulates the sale, transportation, and price of gas moved in interstate commerce, continued to apply a single uniform national base rate for interstate natural gas sales by producers. As of late 1975, the single uniform national base rate had escalated to 52 cents per Mcf. This rate applied to gas from wells commenced

since January 1, 1973, and to new dedications of gas to interstate commerce since that date.

Leasing of Federal lands for the exploration and development of natural gas (and crude oil) resources continued under the authority of various public land acts. In 1975, the Federal Government leased 1.7 million acres on the Gulf of Mexico Outer Continental Shelf and off southern California for bonus bids totaling approximately \$1 billion. An additional 1.3 million acres off the southern California coast were offered for lease sale in December 1975.

Notice of a proposed regulation to establish emergency procedures for granting priorities and allocating natural gas under the Defense Production Act of 1950, to assure adequate gas supplies for vital defense activities, was issued by the Department of the Interior during 1975. This regulation would be applicable only in exceptional cases where, in the event of actual or imminent shortages, FPC and the appropriate State regulatory commission lack jurisdiction to direct delivery of natural gas to meet defense needs.

The Office of Pipeline Safety (OPS), responsible for safety regulation of natural gas pipelines, reported that the total number of pipeline failures declined 7% during 1975, and that the number of fatalities resulting from these failures decreased from 24 to 14. Damage by outside forces was the cause of 71.4% of total failures (table 2).

Federal gas pipeline safety standards, contained in Part 192 of Title 49 of the Code of Federal Regulations, were amended to provide for the transportation of double-jointed pipe by railroad, to update welding and weld inspection requirements, to improve specifications for plastic pipe, to prescribe new marketing requirements for gas pipelines, and to establish requirements for odorization of gas in transmission lines. Notices of proposed rulemakings were issued with respect to emergency plans, cast iron pipelines, offshore pipeline, pipe-bending limitations, and the updating of documents incorporated by reference in Part 192.

DOMESTIC PRODUCTION

Gross withdrawals of natural gas (table 3), including marketed production, gas returned to the formation for pressure maintenance, and that vented or flared; totaled 21.1 Tcf in 1975, approximately 7.6% less than in 1974. Marketed production declined 6.9% to 20.1 Tcf during 1975, and the quantity of gas used for repressuring decreased 20.3% to about 0.9 Tcf. Quantities vented and flared dropped 20.9% to 0.1 Tcf.

Gross withdrawals from gas wells declined 6.9% in 1975 to 17.4 Tcf, and gas withdrawals from oil wells dropped 10.9% to 3.7 Tcf. Increased gross withdrawals were registered by only 7 of the 31 producing States and the quantities involved were small. The largest gain, 23.3 Bcf, was

in Alaska.

The combined decrease in gross withdrawals registered by the two largest producing States, Texas and Louisiana, was equivalent to approximately 89% of the country's total net decline in 1975. Texas showed a decline of 9.8%, almost two-thirds of which was accounted for by a drop in production from gas wells; Louisiana registered a decrease of 8.6%, most of which also was due to a decline in gas well production.

Almost three-fourths of the total marketed natural gas production was from Texas and Louisiana. Marketed production data for leading producing States are shown in the following tabulation:

State	Marketed production in 1975 (Bcf)	Change from 1974 (percent)	Percent of total U.S. marketed production in 1975
Texas	7,486	-8.4	37.2
Louisiana	7,091	-8.6	35.3
Oklahoma	1,605	-2.0	8.0
New Mexico	1,217	-2.2	6.1
Kansas	844	-4.9	4.2
California	318	-12.9	1.6
Wyoming	316	-3.2	1.6
Others	1,232	+1.5	6.0
Total	20,109	-6.9	100.0

Gas well completions (table 4) in 1975 totaled 7,580, a net increase of 341, or 4.7%, over that of 1974. The largest increase in gas well completions, 292, occurred in Texas where continuing development of the Laredo field and exploratory and development drilling in the Ozana-Sonora area in the southwest part of the State were partially responsible for increased activity. Other significant increases in completions were in Pennsylvania (172) and Montana (134), where most wells are relatively small producers. In Ohio, where a large number of shallow wells were drilled during recent years, the number of gas well completions fell sharply from 1,050 in 1974 to 555 in 1975.

Completions of exploratory wells (table 5) in 1975 decreased 1.9% to 1,171. Texas accounted for 48.8% of these completions.

Data on gas well completions include condensate wells. The latter are wells that produce from high-pressure natural gas reservoirs, some of which contain considerable quantities of liquid hydrocarbons in the pentanes and heavier range described generically as "condensate."

The number of gas and condensate wells producing at yearend 1975 totaled 130,364 (table 6). This was an increase of 3.2% over the 1974 yearend total and 11% more than the number of wells producing at yearend 1970.

CONSUMPTION AND USES

Consumption (wet) of natural gas in 1975 totaled 20.4 Tcf, a 7.7% decrease from 1974 (table 7). Gas delivered to consumers declined 8% to 17.6 Tcf during 1975 when it accounted for 86% of total consumption (table 8). Of the remainder, 6.8% was used as lease and plant fuel, 2.9% was used for pipeline fuel, and 4.3% was accounted for by extraction losses (shrinkage) at gas-processing plants.

Residential use increased 2.9% to 4,924 Bcf in 1975 when it accounted for 28% of total deliveries to consumers. Most of the rise in residential use occurred in the contiguous Pacific, Mountain, and West South Central census regions.

The increase in the total number of residential consumers during 1975 was insignificant. Data on the number of residential customers by Census Regions for the years 1965, 1974, and 1975 are as follows:

Census regions	Residential consumers (thousands)		
	1965	1974	1975
New England ----	1,504	1,623	1,626
Middle Atlantic ---	7,381	7,779	7,594
East North Central	8,011	9,439	9,493
West North Central	3,005	3,519	3,587
South Atlantic ---	2,926	3,569	3,597
East South Central	1,684	2,001	1,967
West South Central	4,017	4,811	4,698
Mountain -----	1,523	2,151	2,227
Pacific -----	5,251	6,617	6,727
Total -----	35,802	41,509	41,516

The use of gas by the commercial sector increased slightly to 2,268 Bcf in 1975 despite a 1.2% decline in the number of customers. This sector accounted for 12.9% of total deliveries to consumers.

The industrial sector remained the largest user of natural gas, accounting for 39.7% of 1975 deliveries to consumers. However, total consumption by this sector dropped 16% to 6,979 Bcf during the year. Relatively low economic activity and curtailments of deliveries by many interstate pipelines contributed to this abrupt decline. Most of the gas used by industry was consumed as fuel. Petroleum refineries, which used 946 Bcf, and primary metal industries, which used an estimated 850 Bcf, were the principal fuel-consuming industrial sectors.

Other important industrial users of gas for fuel included the nonmetallic, paper, and food products sectors. The principal non-fuel use of gas involved the chemicals industry, which used it as a feedstock, primarily in the production of fertilizers and plastics. In 1975, an estimated 1,300 Bcf was used by the chemicals industry both as feedstock and for fuel.

Use of natural gas in the electric utilities industry continued to decline in 1975 when consumption by this sector dropped 8.2% to 3,147 Bcf. The decrease was greatest in the West North Central region where consumption declined 100 Bcf, but decreases were registered in all regions except the West South Central where an increase of 201 Bcf occurred.

The decline in natural gas supply during 1975 forced many gas-distributing companies to deny service to new customers and to curtail supplies to some existing users (tables 10-12). FPC reported that net curtailments of firm delivery commitments of the major interstate pipeline companies for the year April 1975 through March 1976 totaled 2,801 Bcf, a deficiency of 19.7%. Net interruptible curtailments for the same period were reported at 330 Bcf, a deficiency of 54.8%. Firm curtailments for the year ending March 1976 were 39.1% higher than those for the preceding period and interruptible curtailments rose 40.6%.

The milage of field and gathering, transmission, and distribution pipelines in service at the end of 1975 was up only 0.6% from that of the previous year. Most of this increase was due to an increase in the milage of gas distribution mains, which reflected the continuing expansion of the gas utility industry into less densely populated areas. Data on the nations natural gas pipeline network are as follows, in miles:

	1963	1973 ^r	1974 ^r	1975
Field and gathering --	60.7	65.9	66.4	68.5
Transmission --	200.9	263.1	262.2	262.6
Distribution --	448.3	638.8	645.6	648.9
Total --	709.9	962.8	974.2	980.0

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10 miles

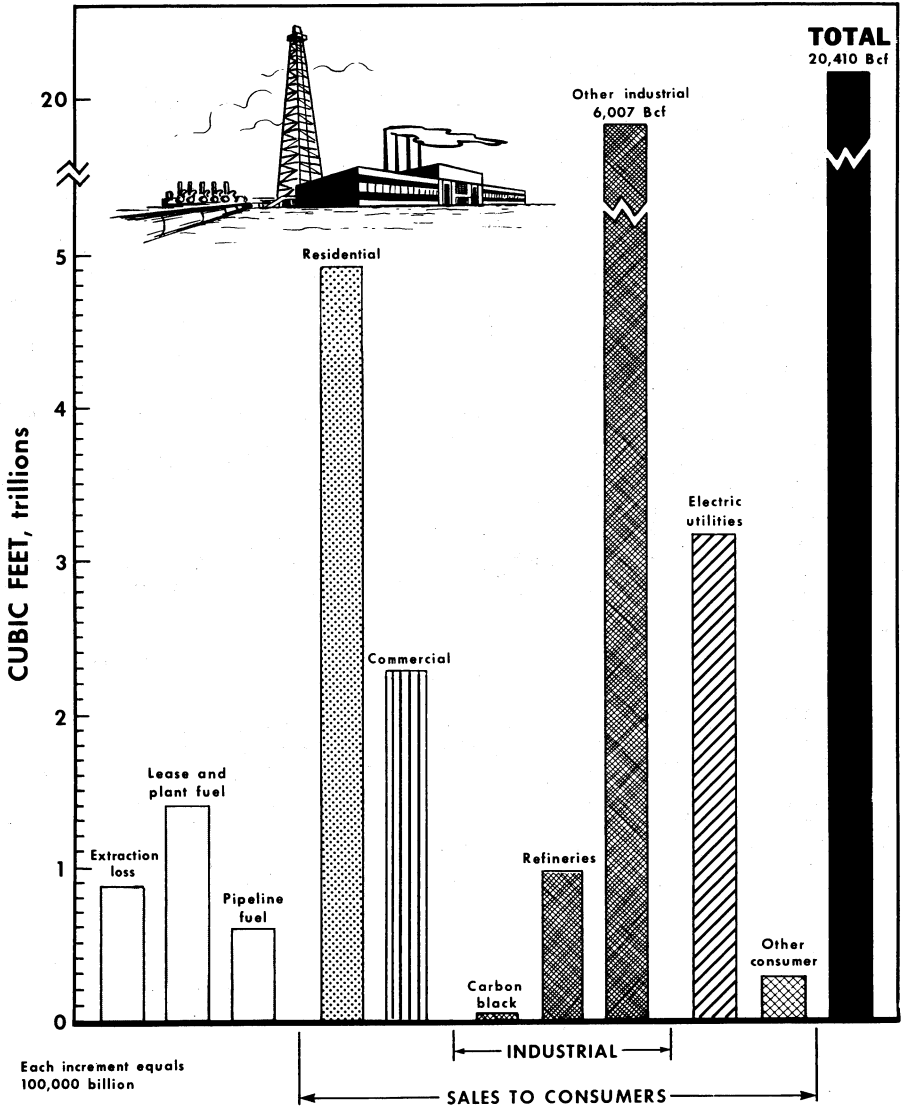


Figure 1.—Disposition of natural gas consumed in the United States by principal use.

RESERVES

Discoveries of natural gas failed to equal production during 7 of the last 8 years, and proved reserves declined 22% during the period. In 1975, the quantity of gas discovered was considerably less than that produced, and proved reserves dropped 3.8% from 237.1 Tcf at yearend 1974 to 228.2 Tcf by yearend 1975, according to the Committee on Natural Gas Reserves of the American Gas Association (AGA).

Additions to proved reserves reported for the United States in 1975 aggregated nearly 10.8 Tcf, approximately 21% more than in 1974 (table 15). Almost 57% of net additions to reserves in 1975 were offshore in the Gulf of Mexico. The largest addition to reserves, 6 Tcf, involved extensions to known fields. Approximately 53% of these new reserves were in Louisiana and Texas. Almost 50% of the 2.4-Tcf total for new field discoveries were in Louisiana (including offshore). New reservoir discoveries in old fields totaled approximately 1.7 Tcf, over 73% of which was in Texas and Louisiana. Net revisions of previous reserve estimates and net

changes in underground storage accounted for the remaining 0.7 Tcf of reserve additions.

There were some net increases during 1974 in the reserves of natural gas in 18 States. However, significant increases occurred in only three States, Kansas with almost 1 Tcf (accounted for almost entirely by revisions), and Alabama and California with approximately 0.3 Tcf each. Reserves in Texas dropped 7.5 Tcf, or 9.6%; those in Louisiana declined 2.7 Tcf, or 4.3%.

Natural gas reserves committed to interstate pipelines declined during 1975 for the eighth consecutive year. Dedicated domestic reserves dropped 10.1% in 1975, and domestic gas produced and purchased by interstate pipelines declined 6.9% from the 1974 total of 13.0 Tcf to 12.1 Tcf in 1975. The reserve-production ratio for interstate reserves dropped from 9.3 at yearend 1974 to 9.0 by yearend 1975. Additional data are shown in the following tabulations:

**Preliminary summary of domestic natural gas reserves,
interstate natural gas pipeline companies**
(Billion cubic feet at 14.73 psia and 60° F)

Total dedicated gas reserves as of December 31, 1974	120,543
Revisions and additions during 1975	—95
Gas reserves as of December 31, 1974, and changes during 1975	120,448
Gas produced during 1975	12,068
Total dedicated gas reserves as of December 31, 1975	108,380

* Revised.

**Yearend domestic reserves, production and purchases of
interstate natural gas pipeline companies**
(Billion cubic feet at 14.73 psia and 60° F)

	Major supply companies	Minor supply companies	Total
Number of companies	26	34	60
Gas reserves at yearend:			
Company-owned	10,633	526	11,159
Independent producer contracts	95,707	1,517	97,221
Total	106,340	2,043	108,380
Percent of total	98.1	1.9	—
Annual production and purchases:			
Company-owned	633	56	689
Independent producer contracts	11,171	208	11,379
Total	11,804	264	12,068
Percent of total	97.8	2.2	—

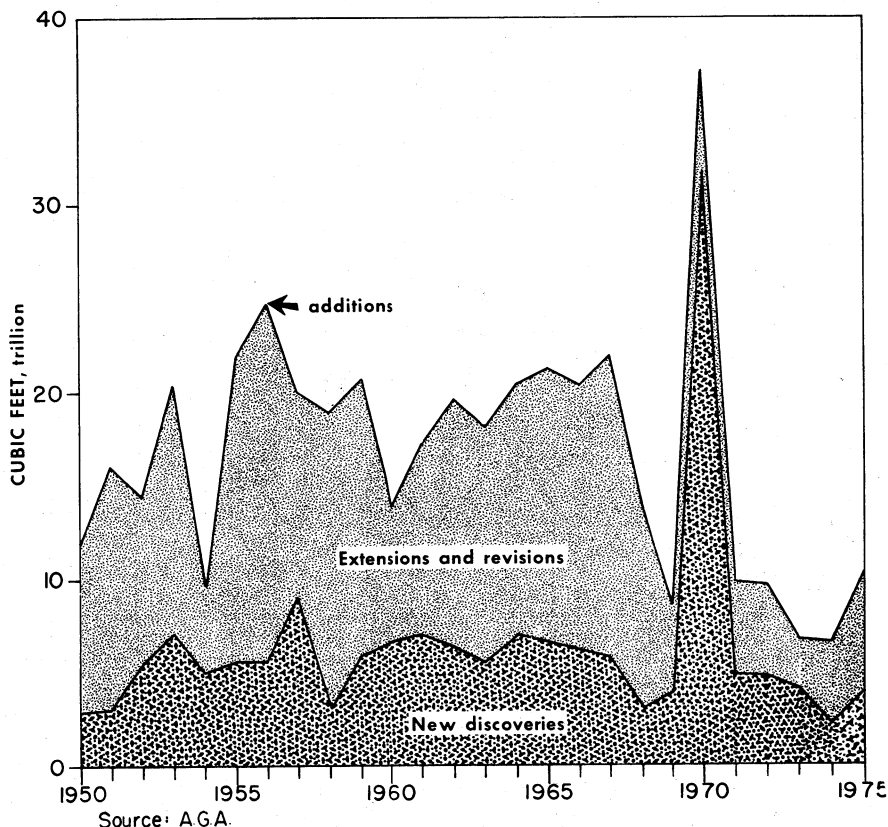


Figure 2.—Trends in annual additions to natural gas reserves.

STORAGE

The development of additional underground storage capacity for natural gas continued during 1975. Total reservoir capacity increased 4.4% from 6,364 Bcf in 1974 to 6,644 Bcf by yearend 1975. The number of underground storage facilities increased from 367 in 1974 to 376 in 1975. These storage facilities were located in 26 States.

Most storage reservoirs are depleted fields. Of the 376 storage reservoirs in use, 319 or nearly 85% were of this type. Most

of these reservoirs are located in the northeastern United States, primarily in the oldest oil- and gas-producing provinces. In Pennsylvania, where oil production dates back to 1859, depleted fields converted to storage facilities totaled 68 at yearend 1975. West Virginia had 38 reservoirs of this type as of the same date. The second largest concentration of storage reservoirs was in the Midwest, primarily in Michigan where 37 were in use.

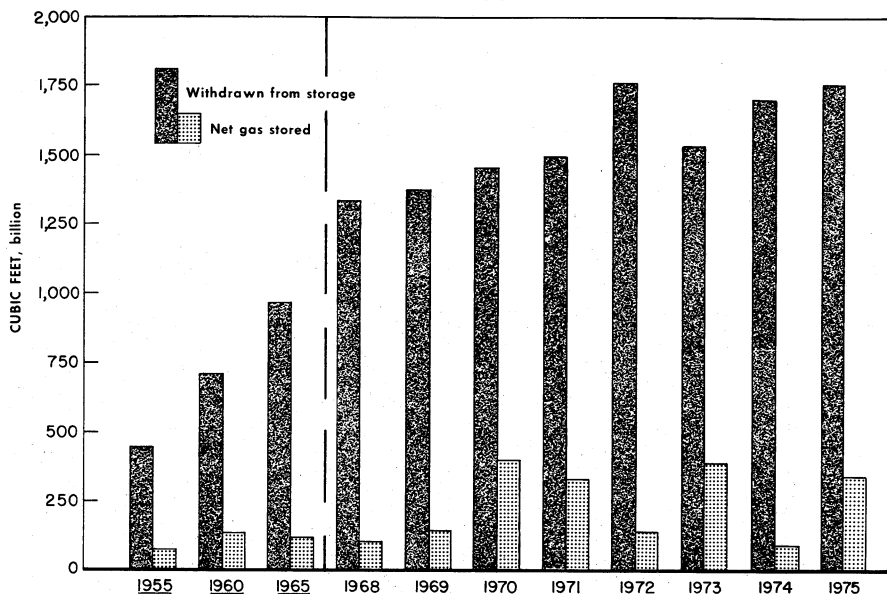


Figure 3.—Trends in net gas stored underground in U.S. storage fields.

Where depleted oil or gas fields are not available, other types of underground storage reservoirs have been developed (table 16). For example, 52 aquifer-type reservoirs were in use in 10 States at the end of 1975. Illinois was the leading State with 22, and Indiana ranked second with 10. Aquifer storage accounted for 22% of total underground storage capacity at year-end 1975. The increase in aquifer reservoir capacity during the year was negligible.

The development of underground storage reservoirs has been an important factor in meeting peak natural gas demand, particularly in the residential house-heating market, in which there is a high degree of seasonal variation. There is a concentration of underground storage facilities relatively close to the largest markets for residential heating. Illinois had 675 Bcf of

natural gas stored in 31 reservoirs, and Pennsylvania had 608 Bcf stored in 68 reservoirs at the end of 1975. The two States accounted for 30% of the total stored gas in underground reservoirs.

In 1975, the total amount of gas moved into underground storage totaled 2,104 Bcf (table 17). During the same period, 1,760 Bcf was withdrawn, leaving a net stored of 344 Bcf for the year.

In addition to underground storage, there has been a marked growth in the aboveground storage of natural gas that has been liquefied by reducing its temperature to -258°F (-161°C). LNG occupies only 1/620th the space necessary for conventional vapor storage. LNG storage is used for peak-shaving purposes during the high-consumption low-temperature winter months.

The following tabulation summarizes LNG storage data:

Facility	Status	Capacity (Bcf)	Number of plants
Peak-shaving -----	Operational -----	49.7	51
Do -----	Under construction -----	9.4	8
Large satellite -----	Operational -----	5.2	20
Do -----	Under construction -----	2.5	3
Small satellite -----	Operational -----	.2	31
Import-receiving terminals -----	Do -----	11.2	3
Do -----	Under construction -----	9.0	2
Total -----	Operational -----	66.3	105
Total -----	Under construction -----	20.9	13

VALUE AND PRICE

Total wellhead value of marketed natural gas production increased 36.1% to \$8,945 million in 1975, despite a 6.9% decline in production volume (table 18). This occurred as a result of a 46.4% increase in average wellhead value to 44.5 cents per Mcf. Texas and Louisiana accounted for 56.7% and 26.1%, respectively, of the \$2,372 million increase in total value during 1975.

Wholesale Prices.—Average wholesale prices for natural gas in the 14 large metropolitan areas for which FPC collects such data rose substantially between July 1, 1974, and July 1, 1975. Increases for individual areas ranged from 15.7% to 92.3%, and the median price rise was 30.8%. Wholesale prices as of July 1, 1975, ranged from 67.93 cents per Mcf in the Minneapolis-St. Paul area to 133.14 cents per Mcf in the Boston area.

A 7-year historical series of average wholesale natural gas prices in the 14 large metropolitan areas is shown in table 19. The wholesale prices for gas in those cities cited are based on the effective FPC gas

tariffs. In cities served by more than one pipeline, prices are based on weighted-average charges. Prices reflect deliveries at the city gate except for Los Angeles and San Francisco, where distributors purchase gas at the California-Oregon and California-Arizona State lines.

Retail Prices.—The average retail price for natural gas delivered to all classes of consumers increased 33.4% from 89.4 cents per Mcf in 1974 to 119.3 cents per Mcf in 1975. Monthly data, collected by the Bureau of Labor Statistics on the average price of residential heating gas for 20 standard metropolitan areas, indicate an average increase of 40.9% between January 1975 and January 1976. Increases for individual areas during the same period ranged from only 5.0% in Buffalo to 65.4% in Dallas and 48.7% in Houston, where much of the current supply is obtained under relatively recent, high-priced intrastate contracts. A historical summary of average residential heating gas prices in 20 standard metropolitan statistical areas appears in table 20.

FOREIGN TRADE

Exports of natural gas totaled 73 Bcf in 1975, a decline of 5.4% from 1974. Of the total 1975 volume, 72.9% was shipped from Port Nikiski, Alaska, to Japan as LNG. Exports via pipeline to Canada and Mexico were almost equally divided, with Canada receiving 51.9% of the total deliveries.

The LNG exported to Japan in 1975 totaled 53.0 Bcf valued at \$73 million, compared with 50.3 Bcf valued at \$37

million in 1974. The Alaskan LNG was exported rather than shipped to the lower 48 States since no receiving terminals exist on the U.S. west coast and there are no U.S. flag LNG tankers capable of transporting LNG from Alaska to the east coast. Federal Maritime law requires U.S. flag ships for all interstate seaborne trade. Statistics on LNG exports for 1975 are shown in table 21.

Exports via pipeline to Canada in 1975

totaled 10.2 Bcf, compared with 13.3 Bcf in 1974, a decline of 22.9% (table 22). Detroit was the exit point for most of these exports. Natural gas exports via pipeline to Mexico continued to decline from 13.3 Bcf in 1974 to 9.5 Bcf in 1975.

Pipeline imports of natural gas from Canada declined in 1975 to 948 Bcf, a decrease of 1.1% from those of 1974. These imports were valued at \$1,147 million, more than double the 1974 total of \$531 million. The rapid increase in value is reflected in the average price of gas from 55.35 cents per Mcf in 1974 to 121.03 per Mcf in 1975. Nine companies imported Canadian gas in 1975. For the first time since 1955 there were no imports of natural gas from Mexico.

Algeria, the only source of LNG imports during 1975, shipped a total of 4.9 Bcf valued at \$3.6 million to Everett, Mass., the U.S. receiving point. There were no LNG imports from Canada in 1975.

The El Paso Natural Gas Co.'s 25-year contract with Société Nationale pour la Recherche, la Production, le Transport, la Transformation et la Commercialisation des Hydrocarbures (SONATRACH), the Algerian National Oil and Gas Company, which has been approved by FPC, calls for the delivery of LNG, equivalent to 1 Bcf per day. A fleet of nine tankers owned

and operated by a subsidiary of El Paso will transport the LNG from Algeria to receiving terminals under construction at Cove Point, Md. and Elba Island, Ga.

The LNG receiving terminal under construction at Cove Point, Md., which is jointly owned by Columbia Gas System and Consolidated Natural Gas System, was about 50% complete at yearend 1975. Deliveries of LNG from El Paso Natural Gas Co. are expected to begin in late 1977. Initially, the terminal, with four storage tanks, will handle 650 MMcf (million cubic feet) of gas per day with 300 MMcf per day going to Columbia, and Consolidated receiving 350 MMcf per day. An area has been set aside for two more tanks when additional storage will be needed for future requirements. After being regassified at Cove Point, the gas will be shipped via an 87-mile pipeline being laid to a compressor station on Columbia's gas transmission system at Loudoun, Va.

Construction on the LNG receiving terminal on Elba Island near Savannah, Ga., owned by Southern Energy Co., was about one-third complete at yearend 1975, and is scheduled for completion in 1977. Southern will receive 350 MMcf of gas per day from El Paso.

Other proposed LNG projects are awaiting FPC approval.

WORLD REVIEW

World marketed production of natural gas continued to increase during 1975 when it totaled 47.2 Tcf (table 25). The United States accounted for 20.1 Tcf, or 42.6% of this total.

Algeria.—Marketed production in Algeria totaled 210 Bcf in 1975, an increase of 5.8% compared with that of 1974. Nearly all marketed natural gas production was exported as LNG.

Algeria's state-owned company SONATRACH cancelled a contract in November 1975 with Chemical Construction Corp. in a performance dispute over construction of the Arzew No. 1 gas liquefaction plant. Bechtel International, Inc., was named to complete the project. SONATRACH expects deliveries of LNG from this plant, which will be exported to the United States.

Algeria, Spain, and France jointly established the Segamo Co. to make economic feasibility studies on a proposed trans-Mediterranean pipeline to deliver gas from Algeria's Hassi R'Mel field to Western Europe.

Canada.—Marketed production in Canada, which ranked fourth in total output, totaled 3.1 Tcf in 1975, an increase of only 1% over that of 1974. More than 85% of total Canadian production came from the Province of Alberta, with British Columbia accounting for most of the remainder. Exports to the United States totaled 948 Bcf, about 30.8% of total production.

Canada's total proved gas reserves of 57 Tcf at yearend 1975 remained about the same as in 1974. Exploration in the Canadian Arctic continued to decline. This

was due in part to the uncertainty of Government energy policies and extremely high operating costs.

In 1975, Sun Oil Co., Ltd., drilled a gas discovery well on Garry Island, just off the Mackenzie Delta. Tests yielded gas flows at rates up to 17 MMcf per day.

Commercial development is planned for three fields in the Mackenzie Delta area, Imperial Taglu, Gulf-Mobil Parsons, and Shell Niglintgak. Gulf Oil Canada, Ltd., has awarded a contract for engineering and design, to include a gathering system, support facilities, and a 300-MMcf-per-day gas-processing plant at the Parsons Lake field. Shell Canada, Ltd., plans a 150-MMcf-per-day processing plant at Niglintgak.

Applications from two separate consortia for the right to construct pipeline facilities that would transport Mackenzie Delta gas to market were before the National Energy Board at yearend 1975. Canadian Arctic Gas Pipeline, Ltd., a consortium of U.S. and Canadian companies, was seeking permission to construct a pipeline that would transport both Mackenzie Delta and northern Alaska gas. Foothills Pipe Lines, Ltd., a partnership between Alberta Gas Trunk Line Co., Ltd., and Westcoast Transmission Co., Ltd., was advocating the construction of a line (Maple Leaf Pipeline) that would transport only Canadian natural gas from the Mackenzie Delta.

There have been seven significant gas discoveries to date in the Arctic Islands with estimated reserves totaling 15 Tcf. Drake Point and Hecla, the two largest discoveries, are located on the Sabine Peninsula of Melville Island. The remaining five are clustered in the Ellef Ringnes Island area.

During 1975 the Polar Gas Project, under the management of TransCanada Pipelines, Ltd., continued to conduct research on the construction of a natural gas pipeline from the Canadian Arctic to southern Canada. Studies indicate a transmission system is technologically feasible. Investigation was expected to continue throughout 1976.

Netherlands.—The Netherlands, Western Europe's largest natural gas producer and exporter, displaced Canada as the world's third ranking natural gas producing country during 1975. Marketed production totaled 3.2 Tcf an increase of 8.5% over

that of 1974, with the onshore Groningen field producing the largest share.

Offshore exploration and development in the Netherlands was increased during 1975, partly because of the Government's decision to acquire a 40% interest in these operations. The first gas deliveries from the North Sea began in mid-1975 upon completion of a 110-mile, 36-inch pipeline. Initially, 100 MMcf per day was brought ashore but this was expected to climb rapidly, with annual production expected to reach 70 Bcf in 1976. Half of the gas will go to West Germany under a 24-year contract.

In an effort to slow down the growth of energy consumption, the Netherlands Government has approved plans to gradually phase out gas sales to electric power stations and large factories after 1978. Priority will be given to small consumers. Exports will start to decline after 1978 and will virtually cease after 1994 because no new export contracts will be granted.

Norway.—Most of Norway's proved reserves at yearend 1975 were in the offshore Ekofisk and Frigg oil and gas fields. Deliveries of natural gas through a 274-mile pipeline from the Ekofisk field to Emden, West Germany, were scheduled to begin in the last half of 1976. Development of the giant Frigg gasfield in the North Sea was expected to be delayed at least 2 years because efforts were abandoned to salvage a \$50 million drilling platform jacket that sank during installation.

Romania.—The 1975 marketed production in Romania was estimated at 954 Bcf, a decrease of 5.7% from that of 1974. Most of the gas produced was used domestically. Although exploration and development drilling continued in the Ploiesti-Focsani oil and gas district, indications were that future exploration would be concentrated in the Black Sea area. An agreement was signed with Italy's State-owned Ente Nazionale Idrocarburi (ENI) for future joint exploration in the Black Sea.

United Kingdom.—North Sea oil and gas activity was at the highest level in its 12-year history during 1975. Although more exploration programs were in progress than at any other time, by mid-1975 emphasis was turning toward development and production. Brent oil and gas field, the largest in the United Kingdom's waters, with gas

reserves of 3 Tcf, and 2,000 million barrels of oil, was expected to be the world's most northerly producing offshore field in the open sea when production was scheduled to begin in 1976. In June 1975, British Gas Corp. signed a 20-year contract for natural gas from Brent field. The gas will flow at a minimum of 500 MMcf per day from a 300-mile 36-inch pipeline to St. Fergus, Scotland. Deliveries are expected to begin in 1980. The southern North Sea supplies about 30% of the total gas consumed in the United Kingdom.

U.S.S.R.—The U.S.S.R. was second to the United States accounting for 21.6% of world production. Its 1975 marketed production was estimated to have been 10.2 Tcf, an increase of 10.9% over that of 1974. Exports of natural gas, mostly to Eastern European countries, climbed to a record high of more than 600 Bcf in 1975, compared with 496 Bcf in 1974.

An agreement was signed in 1975 with

Iran involving the exportation of Iranian natural gas to Western Europe by means of an exchange arrangement. Iran will export 473 Bcf per year for consumption in the industrial centers of southwestern U.S.S.R. under terms of the agreement. The U.S.S.R. in turn, will pipe Siberian gas to Iran's West European customers—West Germany, France, and Austria. Deliveries are scheduled to begin in 1981 and continue for 20 years.

Natural gas production in western Siberia climbed to 1.3 Tcf in 1975, with the Medvezhye field in Tyumen Province accounting for about 88% of this total. Uren-goiskoye, the U.S.S.R.'s largest gasfield, with estimated reserves of 178 Tcf, located 60 miles east of Medvezhye, is scheduled for production in 1977. Most of the U.S.S.R.'s gas reserves are located in western Siberia, near or above the Arctic Circle.

TECHNOLOGY

The shortage of natural gas continued to stimulate Government and industry research in coal gasification. Three pilot projects for development and testing of processes for the production of high-Btu gas from coal were operational, and three others were under construction at yearend 1975. A pilot project involving the production of low-Btu gas from coal was also operational, and two others were under construction as of the same date. During the latter part of 1975, the Energy Research and Development Administration (ERDA) was in the process of preparing invitations for proposals covering the design, construction, and operation of high-Btu and low-Btu coal gasification demonstration plants. These facilities would provide the final development step prior to the construction of a commercial plant.

The Bureau of Mines continued its experiment in gathering methane from a coal deposit near Bula, W. Va. This project drained approximately 220 MMcf from a coalbed through a large air shaft during 1975. Some of the drained methane was sold to Consolidated Gas Supply Corp. for delivery to a nearby community. This experiment was being carried out with a dual purpose. To provide additional na-

tural gas supplies for distribution; and to reduce coal mining hazards.

Efforts to supplement natural gas supplies through the gasification of naphtha and natural gas liquids continued. As of yearend 1975, a total of 11 such synthetic gas plants were operational, 2 were under construction, and 2 were in the planning stage.

Other gasification projects in progress involved biomass conversion. During 1975, Los Angeles County began the recovery of methane from the Palos Verdes sanitary landfill in cooperation with NRG NuFuel Inc. and Reserve Oil & Gas Co. This project is expected to yield 2 Bcf of pipeline-quality gas annually. In addition, projects for the production of pipeline-quality gas from animal waste by the process of anaerobic digestion were in various stages of development in Colorado, Oklahoma, and Texas.

In addition, to gasification projects, research has also focused on fracturing techniques that stimulate flow from economically submarginal gas reservoirs. Most of this activity was in Wyoming, Colorado, and Utah, but one major project initiated during 1975 involved the massive hydraulic fracturing of Upper Devonian gas shales

in Mingo County, W. Va. These shales underlie about 12 Eastern States, including those that comprise the major northeastern markets, and are estimated to contain producible gas that may exceed the Nation's total current proved reserves. The U.S. Geological Survey is to provide coordination and assistance in the resource assessment activities of the program.

During 1975, the U.S. Geological Survey studied the methane-saturated Gulf coast salt water aquifers penetrated by 193 wells in Texas and Louisiana. On the basis of this study, the Survey estimated that these aquifers in onshore reservoirs alone may contain up to 24,000 Tcf of methane.

Table 2.—Gas pipeline failures reported during 1974–75

System and cause of failure	Total number of failures		Fatalities				Injuries			
			Employees		Non-employees		Employees		Non-employees	
	1974	1975	1974	1975	1974	1975	1974	1975	1974	1975
Distribution:										
Corrosion	108	94	--	--	3	1	3	6	27	23
Damage by outside forces	756	744	1	--	16	5	13	7	203	119
Construction defect or material failure	94	78	--	--	--	--	4	1	23	25
Other causes	59	63	--	--	--	2	11	15	25	24
Total	1,017	979	1	--	19	8	31	29	283	191
Transmission and gathering:										
Corrosion	78	44	--	3	--	1	--	2	4	4
Damage by outside forces	274	237	--	--	--	--	1	--	8	5
Construction defect or material failure	81	88	--	1	3	--	--	5	--	--
Other causes	27	25	1	1	--	--	6	1	1	--
Total	460	394	1	5	3	1	7	8	13	9
Grand total	1,477	1,373	2	5	22	9	38	37	296	200

Source: Office of Pipeline Safety, Department of Transportation.

Table 3.—Gross withdrawals and disposition of natural gas in the United States
(Million cubic feet at 14.73 psia)

State	Gross withdrawals			Disposition		
	From gas wells	From oil wells	Total ¹	Marketed production	Repressuring	Vented and flared ²
1974						
Alabama	23,970	5,387	29,357	27,865	--	1,492
Alaska	125,349	104,614	229,963	123,935	89,604	11,524
Arizona	27	223	250	224	--	26
Arkansas	92,265	33,426	125,691	123,975	--	1,716
California	222,673	204,301	426,974	365,354	60,060	1,560
Colorado	108,962	38,890	147,852	144,629	266	2,957
Florida	--	38,137	38,137	38,137	--	--
Illinois	1,436	(³)	1,436	1,436	--	--
Indiana	176	(³)	176	176	--	--
Kansas	747,580	141,870	889,450	886,782	1,779	889
Kentucky	71,876	--	71,876	71,876	--	--
Louisiana	7,037,239	882,671	7,919,910	7,753,631	134,607	31,672
Maryland	133	--	133	133	--	--
Michigan	45,745	24,719	70,464	69,133	63	1,268
Mississippi	76,295	22,700	98,995	78,787	9,421	10,787
Missouri	33	(³)	33	33	--	--
Montana	51,644	7,880	59,524	54,873	750	3,901
Nebraska	2,194	2,481	4,675	2,538	--	2,137
New Mexico	944,515	309,784	1,254,299	1,244,779	8,293	1,227
New York	4,990	(³)	4,990	4,990	--	--
North Dakota	287	43,779	49,066	31,206	--	17,860
Ohio	77,114	16,749	93,863	92,055	1,808	--
Oklahoma	1,425,283	331,846	1,756,629	1,638,942	83,488	34,199
Pennsylvania	82,735	(³)	82,735	82,637	--	98
South Dakota	48	--	48	--	48	--
Tennessee	17	376	393	17	--	376
Texas	7,029,873	1,829,171	8,859,044	8,170,793	658,815	34,431
Utah	21,433	58,540	79,973	50,522	24,192	5,259
Virginia	7,096	--	7,096	7,096	--	--
West Virginia	202,306	(³)	202,306	202,306	--	--
Wyoming	265,918	78,637	344,555	326,657	11,796	6,102
Total	18,669,212	4,180,581	22,849,793	21,600,522	1,079,890	169,381
1975						
Alabama	33,660	5,261	38,921	37,814	--	1,107
Alaska	138,153	115,074	253,227	160,270	82,556	10,401
Arizona	4	251	255	208	--	47
Arkansas	91,270	30,243	121,513	116,237	3,963	1,318
California	173,499	194,154	367,653	313,303	47,808	1,537
Colorado	130,743	43,402	174,145	171,629	--	2,516
Florida	--	44,383	44,383	44,383	--	--
Illinois	1,440	(³)	1,440	1,440	--	--
Indiana	346	(³)	346	346	--	--
Kansas	705,746	140,413	846,164	843,625	1,693	846
Kentucky	60,511	(³)	60,511	60,511	--	--
Louisiana	6,455,690	786,718	7,242,408	7,090,645	126,304	25,459
Maryland	93	--	93	93	--	--
Michigan	71,907	31,994	103,901	102,113	176	1,612
Mississippi	74,367	18,133	92,500	74,345	6,293	11,862
Missouri	30	(³)	30	30	--	--
Montana	41,474	3,073	44,547	40,734	611	3,202
Nebraska	1,605	2,358	3,963	2,565	--	1,398
New Mexico	915,370	311,830	1,227,200	1,217,430	8,128	1,642
New York	7,623	(³)	7,623	7,623	--	--
North Dakota	287	26,654	26,941	24,786	--	2,155
Ohio	85,810	(³)	85,810	84,960	850	--
Oklahoma	1,412,637	308,061	1,720,698	1,605,410	83,486	31,802
Pennsylvania	84,772	(³)	84,772	84,676	--	96
South Dakota	39	(³)	39	--	35	4
Tennessee	27	585	612	27	--	585
Texas	6,463,095	1,525,678	7,988,773	7,485,764	471,714	31,295
Utah	19,001	58,606	77,607	55,354	20,447	1,806
Virginia	6,723	--	6,723	6,723	--	--
West Virginia	154,484	(³)	154,484	154,484	--	--
Wyoming	249,882	76,356	326,238	316,123	6,892	3,223
Total	17,380,293	3,723,237	21,103,530	20,108,661	860,956	133,913

¹ Marketed production plus quantities used in repressuring and vented and flared.

² Partly estimated; includes direct losses on producing properties and residue blown to the air.

³ Not reported separately, included under "Gross Withdrawals From Gas Wells."

Source: Figures based on reports received from State agencies and Bureau of Mines estimates.

Table 4.—Gas and oil well completions in the United States, by State, 1970–75

State	Gas completions ¹						Oil completions ²					
	1970	1971	1972	1973	1974	1975	1970	1971	1972	1973	1974	1975
Alabama -----	5	6	9	10	16	26	7	8	13	18	16	20
Alaska -----	5	1	2	3	4	4	67	27	12	20	27	44
Arizona -----	--	2	1	1	--	--	1	--	5	--	3	--
Arkansas -----	36	29	39	40	41	23	100	127	96	91	99	147
California -----	56	60	62	65	69	46	1,697	1,459	1,045	879	1,567	1,854
Colorado -----	47	148	124	148	201	300	142	154	300	228	218	328
Florida -----	--	--	--	--	--	--	14	8	65	24	9	15
Illinois -----	5	16	18	13	11	5	311	252	255	240	357	460
Indiana -----	4	2	5	8	21	17	93	81	92	67	136	145
Kansas -----	108	112	368	384	389	438	1,044	1,099	880	592	989	1,094
Kentucky -----	111	135	166	157	127	123	275	244	230	158	195	304
Louisiana:												
North -----	157	237	451	269	458	413	263	390	291	234	326	402
South -----	232	200	234	284	190	220	497	398	375	337	233	373
Offshore -----	150	184	133	231	141	182	382	258	253	287	216	181
Total Louisiana -	539	621	818	784	789	815	1,142	1,046	919	858	825	956
Michigan -----	19	33	34	41	52	33	49	81	87	73	116	169
Mississippi -----	12	13	13	28	26	31	211	175	87	70	67	83
Missouri -----	--	1	--	--	2	1	10	6	--	--	7	6
Montana -----	74	33	125	123	145	279	64	45	83	46	60	100
Nebraska -----	2	1	2	--	5	1	39	47	48	33	40	74
New Mexico -----	159	186	238	498	463	517	341	401	502	280	350	437
New York -----	17	7	22	27	98	236	69	83	96	97	153	142
North Dakota -----	1	1	--	--	--	--	48	49	23	40	42	69
Ohio -----	683	608	721	940	1,050	555	503	391	426	393	567	550
Oklahoma -----	321	238	341	539	744	638	1,343	1,174	1,025	898	1,149	1,743
Pennsylvania -----	250	199	297	434	468	640	441	394	534	525	671	691
South Dakota -----	--	--	--	--	--	--	--	2	4	5	1	5
Tennessee -----	4	23	9	10	12	38	24	57	14	24	61	46
Texas -----	774	810	943	1,475	1,843	2,135	4,137	3,880	3,963	3,686	4,402	6,074
Utah -----	10	6	13	25	12	19	29	30	73	104	118	110
Virginia -----	--	--	18	7	55	26	--	--	--	--	--	2
West Virginia -----	553	496	488	514	556	556	192	133	84	72	121	120
Wyoming -----	45	43	52	61	40	78	627	405	345	381	418	620
Grand total ----	3,840	3,830	4,928	6,335	7,239	7,580	13,020	11,858	11,306	9,902	12,784	16,408

¹ Includes multiple completion wells that produce gas from all zones.

² Includes multiple completion wells that produce gas from one or more zones but oil from at least one zone.

Source: American Petroleum Institute Quarterly Review of Drilling Statistics for the United States, Annual Summaries 1970 to 1975, inclusive.

Table 5.—Exploratory wells drilled in the United States, by State, 1970–75

State	Gas completions ¹						Oil completions ²					
	1970	1971	1972	1973	1974	1975	1970	1971	1972	1973	1974	1975
Alabama	1	2	6	5	4	8	2	3	2	4	5	4
Alaska	1	--	1	1	3	3	23	1	--	2	2	6
Arizona	--	1	1	1	--	--	--	--	--	--	--	--
Arkansas	4	2	1	2	2	1	7	9	7	4	8	9
California	8	5	9	17	16	17	28	21	17	17	28	36
Colorado	15	27	29	29	26	19	26	29	71	38	25	37
Florida	--	--	--	--	--	--	2	--	2	3	2	--
Illinois	2	4	2	1	3	--	16	24	20	22	25	29
Indiana	3	1	3	3	6	5	8	14	11	11	18	15
Kansas	--	14	26	40	33	37	131	131	117	98	98	115
Kentucky	26	12	18	16	20	21	21	23	30	18	24	58
Louisiana	69	72	79	54	61	82	40	43	24	22	24	30
Michigan	7	13	21	31	34	17	9	26	34	38	50	55
Mississippi	2	3	4	15	6	5	25	13	9	13	23	23
Missouri	--	--	--	--	1	1	--	--	--	--	--	--
Montana	20	16	29	28	35	44	21	4	15	10	10	14
Nebraska	--	--	--	--	3	1	10	7	10	7	13	17
New Mexico	8	7	27	25	48	36	16	6	14	9	8	26
New York	2	3	3	3	19	9	--	--	1	2	--	1
North Dakota	--	--	--	--	--	--	7	8	7	4	11	14
Ohio	17	7	24	31	117	87	1	--	2	--	20	10
Oklahoma	43	27	55	69	61	52	59	42	37	35	51	59
Pennsylvania	21	3	20	41	42	46	2	1	3	3	11	11
South Dakota	--	--	--	--	--	--	--	2	--	4	--	4
Tennessee	1	14	7	8	11	30	5	16	4	6	17	13
Texas	179	172	183	410	562	571	256	186	179	207	278	311
Utah	4	4	2	13	4	6	9	8	22	4	4	7
Virginia	--	--	--	2	5	2	--	--	--	--	--	2
West Virginia	31	18	35	39	53	42	--	1	1	4	5	3
Wyoming	7	10	16	16	19	29	66	33	45	34	54	63
Total	471	437	601	900	1,194	1,171	790	651	684	619	814	972

¹ Includes multiple completion wells that produce gas from all zones.

² Includes multiple completion wells that produce gas from one or more zones but oil from at least one zone.

Source: American Petroleum Institute Quarterly Review of Drilling Statistics for the United States, Annual Summaries 1970 to 1975, inclusive.

Table 6.—Producing gas and condensate wells in the United States¹

PAD district and State	Dec. 31, 1970	Dec. 31, 1971	Dec. 31, 1972	Dec. 31, 1973	Dec. 31, 1974	Dec. 31, 1975
District 1:						
Maryland -----	16	14	16	15	15	15
New York -----	600	600	650	789	700	900
Pennsylvania -----	16,239	16,586	16,600	16,600	17,123	17,500
Virginia -----	115	115	180	178	174	186
West Virginia -----	20,702	21,025	21,324	21,400	21,450	21,700
Total -----	37,672	38,340	38,720	38,982	39,462	40,301
District 2:						
Illinois -----	8	14	31	36	37	41
Indiana -----	50	83	87	106	474	478
Kansas -----	8,660	8,585	8,621	8,785	8,300	8,365
Kentucky -----	6,913	7,413	7,099	7,224	7,307	7,386
Michigan -----	1,235	1,171	1,317	1,145	503	209
Missouri -----	11	2	3	2	3	3
Nebraska -----	35	29	29	29	25	19
North Dakota -----	29	29	21	44	34	18
Ohio -----	7,789	8,179	8,630	9,406	10,033	10,382
Oklahoma -----	8,168	8,507	8,457	8,868	9,401	9,769
South Dakota -----	—	—	r 5	r 10	r 20	20
Tennessee -----	15	20	45	6	13	5
Total -----	32,913	34,032	r 34,345	r 35,661	r 36,655	37,195
District 3:						
Alabama -----	2	—	15	15	6	9
Arkansas -----	1,008	1,013	1,041	876	1,172	1,123
Louisiana -----	9,690	9,748	9,456	10,551	9,243	9,182
Mississippi -----	325	400	252	250	239	243
New Mexico -----	8,848	9,388	9,679	9,711	9,915	10,352
Texas -----	23,417	23,280	23,373	23,805	24,646	26,184
Total -----	43,290	43,829	43,816	45,208	45,226	47,103
District 4:						
Colorado -----	861	928	934	1,050	1,347	1,662
Montana -----	739	1,056	1,116	1,118	1,450	1,235
Utah -----	173	178	200	158	114	271
Wyoming -----	800	840	887	850	900	950
Total -----	2,573	3,002	3,137	3,176	3,811	4,113
District 5:						
Alaska -----	51	40	50	52	52	61
Arizona -----	4	5	4	4	1	1
California -----	930	962	1,086	1,095	1,142	1,585
Total -----	1,035	1,007	1,140	1,151	1,195	1,647
Total United States -----	117,483	120,210	r 121,158	r 124,178	r 126,349	130,364

^r Revised.¹ Based on State reports, State estimates, and World Oil magazine.

Table 7.—Consumption of natural gas by use and by State, 1975

Region and State	Delivered to consumers			Extraction loss			Lease and plant fuel			Pipeline fuel			Total	
	Quantity (million cubic feet)	Value (thous. sands)	Quantity (million cubic feet)	Value (thous. sands)	Quantity (million cubic feet)	Value (thous. sands)	Quantity (million cubic feet)	Value (thous. sands)	Quantity (million cubic feet)	Value (thous. sands)	Quantity (million cubic feet)	Value (thous. sands)	Quantity (million cubic feet)	Value (thous. sands)
New England:														
Connecticut	63,968	\$183,566	--	--	--	--	--	--	43	\$25	64,011	\$183,581		
Maine, New Hampshire,														
Vermont	13,524	28,380	--	--	--	--	--	--	--	--	13,524	28,380		
Massachusetts	153,461	441,186	--	--	--	--	--	--	506	213	153,967	441,399		
Rhode Island	23,107	64,267	--	--	--	--	--	--	22	12	23,129	64,279		
Total	254,070	717,389	--	--	--	--	--	--	571	250	254,641	717,639		
Middle Atlantic:														
New Jersey	243,714	569,988	--	--	--	--	--	--	388	129	244,102	570,117		
New York	673,689	1,286,977	68	\$50	267	\$206	267	\$206	2,917	1,182	376,863	1,287,915		
Pennsylvania	634,285	984,562	68	\$50	1,760	1,292	1,760	1,292	17,697	9,503	663,810	995,407		
Total	1,451,688	2,811,127	68	50	2,027	1,498	2,027	1,498	21,002	10,764	1,474,795	2,823,439		
East North Central:														
Illinois	1,080,787	1,595,569	12,785	6,047	102	40	102	40	14,226	7,696	1,107,900	1,599,322		
Indiana	467,736	655,169	--	--	--	--	--	--	3,605	7,669	477,341	665,864		
Michigan	865,589	1,262,772	2,879	1,278	8,420	4,404	8,420	4,404	10,225	6,767	887,063	1,264,171		
Ohio	944,925	1,258,518	--	--	--	--	--	--	2,925	2,097	966,876	1,264,582		
Wisconsin	359,844	476,308	--	--	--	--	--	--	4,957	2,191	364,801	477,499		
Total	3,718,881	5,047,302	15,664	7,325	11,447	6,541	11,447	6,541	43,089	23,240	3,793,981	5,084,408		
West North Central:														
Iowa	329,703	332,647	--	--	--	--	--	--	16,095	5,424	345,798	338,071		
Kansas	402,278	267,626	42,763	19,115	27,212	14,631	27,212	14,631	69,242	22,860	541,490	324,122		
Minnesota	327,315	380,126	--	--	--	--	--	--	3,871	2,141	331,186	382,267		
Missouri	362,130	423,720	--	--	--	--	--	--	7,490	2,929	369,620	426,649		
Nebraska	207,371	185,069	313	150	1,086	408	1,086	408	10,427	3,378	219,147	189,005		
North Dakota	24,757	31,218	2,404	1,019	12,008	3,819	12,008	3,819	61	31	39,230	36,087		
South Dakota	32,502	33,679	--	--	--	--	--	--	32	16	32,534	33,695		
Total	1,686,051	1,654,035	45,480	20,284	40,256	18,758	40,256	18,758	107,218	36,769	1,879,006	1,729,896		
South Atlantic:														
Delaware	18,603	34,653	--	--	--	--	--	--	2,320	842	18,603	34,653		
Florida	271,471	260,019	9,170	5,053	6,304	4,013	6,304	4,013	4,176	1,336	289,927	269,927		
Georgia	822,383	383,749	--	--	--	--	--	--	--	--	326,565	335,085		
Maryland and District														
of Columbia	163,462	326,197	--	--	277	490	277	490	2,193	838	165,932	327,525		
North Carolina	111,276	178,033	--	--	--	--	--	--	3,546	1,089	114,822	179,122		

South Carolina -----	120,308	143,823	--	--	2,641	1,294	122,949	145,117
Virginia -----	118,083	205,481	--	168	97	1,154	121,320	206,782
West Virginia -----	142,585	172,003	9,258	3,666	915	8,309	167,693	184,893
Total -----	1,268,171	1,653,988	18,428	8,719	32,004	14,862	1,327,143	1,688,054
East South Central:								
Alabama -----	245,287	238,939	694	466	16,833	5,403	264,782	246,164
Kentucky -----	182,781	187,087	6,454	1,985	436	8,710	212,993	198,168
Mississippi -----	183,807	168,180	567	220	3,800	13,615	230,620	175,265
Tennessee -----	197,789	188,265	--	--	197	6,990	217,358	195,452
Total -----	809,664	772,371	6,715	2,671	5,289	34,718	925,723	815,049
West South Central:								
Arkansas -----	241,803	191,325	899	376	12,217	5,241	259,119	198,290
Louisiana -----	1,425,686	1,066,189	189,541	127,561	1,348	23,701	1,978,129	1,316,145
Oklahoma -----	565,387	386,783	60,008	24,303	24,556	6,495	728,827	452,137
Texas -----	3,099,149	2,969,780	435,571	265,698	421,235	30,221	4,379,948	3,656,934
Total -----	5,332,025	4,624,077	686,019	417,938	545,333	179,123	7,346,023	5,653,506
Mountain:								
Arizona -----	139,130	148,273	--	6,311	17,092	6,068	156,222	154,341
Colorado -----	294,760	265,090	9,620	294	5,339	2,621	317,392	278,472
Idaho -----	56,182	84,598	--	38	4,231	2,522	60,451	87,146
Montana -----	75,441	82,188	831	445	1,764	784	80,351	84,081
Nevada -----	61,251	87,363	--	--	--	--	61,251	87,363
New Mexico -----	172,688	125,476	56,109	23,173	29,018	11,172	206,369	172,946
Utah -----	116,620	117,023	3,859	2,294	300	161	127,819	122,517
Wyoming -----	66,818	42,480	13,224	5,819	5,268	2,713	100,412	55,573
Total -----	982,840	952,496	83,443	33,043	25,909	63,012	1,200,287	1,042,439
Pacific:								
Alaska -----	66,815	59,191	1,244	493	5,995	33	85,995	65,712
California -----	1,727,729	2,254,494	15,221	11,583	44,543	20,277	1,858,070	2,320,191
Oregon -----	101,980	147,846	--	--	7,886	4,825	109,898	152,694
Washington -----	158,479	260,141	--	--	5,855	3,788	164,334	263,929
Total -----	2,055,003	2,721,672	16,465	12,076	84,112	18,218	2,208,297	2,802,526
Total United States -----	17,558,353	20,954,477	872,282	507,106	659,903	230,470	20,409,875	22,351,966

Note.—All quantities at pressure base of 14.73 psia.

Table 8.—Quantity and value of natural gas delivered

Region and State	Residential			Commercial		
	Quantity (million cubic feet)	Value (thou- sands)	Number of consumers (thou- sands)	Quantity (million cubic feet)	Value (thou- sands)	Number of consumers (thou- sands)
New England:						
Connecticut -----	32,143	\$105,846	373	15,383	\$41,088	29
Maine, Vermont, New Hampshire -----	5,578	14,773	66	3,621	7,768	6
Massachusetts -----	90,226	284,392	1,033	33,319	89,654	68
Rhode Island -----	13,043	40,238	154	4,129	11,446	10
Total -----	140,990	445,249	1,626	56,952	149,956	113
Middle Atlantic:						
New Jersey -----	129,406	348,361	1,624	52,147	121,867	179
New York -----	327,384	880,246	3,810	117,012	233,938	238
Pennsylvania -----	272,634	527,274	2,160	92,911	159,621	147
Total -----	729,424	1,705,881	7,594	262,070	520,426	564
East North Central:						
Illinois -----	478,602	771,985	2,911	214,028	281,661	224
Indiana -----	162,858	286,958	1,087	68,545	85,837	99
Michigan -----	334,866	542,818	2,068	177,218	263,700	166
Ohio -----	427,817	645,487	2,559	163,976	220,384	198
Wisconsin -----	119,981	209,487	868	61,866	89,767	74
Total -----	1,524,124	2,404,685	9,493	685,633	935,399	761
West North Central:						
Iowa -----	94,370	134,665	623	62,724	68,432	75
Kansas -----	98,372	101,225	651	48,714	33,223	65
Minnesota -----	114,416	179,519	724	62,412	78,140	69
Missouri -----	155,178	231,991	1,085	77,692	93,075	88
Nebraska -----	53,803	68,922	356	40,999	49,712	56
North Dakota -----	10,200	15,392	65	12,371	13,645	9
South Dakota -----	11,969	16,721	83	11,227	11,205	11
Total -----	538,308	748,435	3,587	316,139	338,432	373
South Atlantic:						
Delaware -----	6,985	16,945	78	2,964	5,635	5
Florida -----	15,209	41,657	373	25,768	49,706	38
Georgia -----	87,184	130,514	846	45,152	50,074	66
Maryland and District of Columbia -----	82,330	192,088	854	32,836	67,513	64
North Carolina -----	27,466	55,591	306	18,144	31,534	43
South Carolina -----	18,211	38,789	259	15,115	19,861	26
Virginia -----	48,802	109,512	481	25,585	46,744	41
West Virginia -----	51,296	74,533	400	22,761	28,406	35
Total -----	337,533	659,629	3,597	188,325	299,473	318
East South Central:						
Alabama -----	52,314	82,028	603	32,153	34,822	43
Kentucky -----	79,156	97,124	585	33,512	36,092	56
Mississippi -----	29,530	41,578	347	15,204	15,888	36
Tennessee -----	44,020	56,830	432	38,569	45,010	57
Total -----	205,020	277,560	1,967	119,438	131,812	192
West South Central:						
Arkansas -----	48,543	54,174	411	32,676	29,310	52
Louisiana -----	96,221	131,630	914	27,427	27,511	66
Oklahoma -----	79,921	97,344	680	39,968	37,690	74
Texas -----	232,320	353,823	2,693	81,836	106,960	241
Total -----	457,005	636,971	4,698	181,907	201,771	433
Mountain:						
Arizona -----	37,931	58,186	526	29,494	34,773	45
Colorado -----	99,933	115,622	679	72,843	73,207	86
Idaho -----	14,089	30,728	119	11,493	18,320	17
Montana -----	24,097	31,230	159	16,233	17,872	21
Nevada -----	11,091	21,627	109	9,989	16,282	5
New Mexico -----	27,826	37,006	240	12,491	12,491	25
Utah -----	59,736	72,758	294	6,018	9,159	10
Wyoming -----	12,128	12,334	101	10,159	6,857	14
Total -----	286,831	379,491	2,227	168,720	188,961	223

See footnotes at end of table.

to consumers in 1975, by type of consumer and by State

Industrial ¹		Electric utilities		Other consumers ²		Total	
Quantity (million cubic feet)	Value (thousands)	Quantity (million cubic feet) ³	Value (thousands)	Quantity (million cubic feet)	Value (thousands)	Quantity (million cubic feet)	Value (thousands)
15,553	\$34,948	344	\$469	545	\$1,205	63,968	\$183,556
3,330	4,853	782	505	273	481	13,534	28,380
23,986	54,976	1,437	1,746	3,993	10,418	153,461	441,186
5,820	12,391	11	14	104	178	23,107	64,267
48,689	107,168	2,524	2,734	4,915	12,282	254,070	717,389
52,361	88,961	8,601	8,455	1,199	2,344	243,714	569,988
104,429	156,017	13,613	13,572	11,261	17,804	573,699	1,256,577
261,447	286,807	1,213	1,333	6,080	9,527	634,285	984,562
418,237	531,785	23,427	23,360	18,540	29,675	1,451,698	2,811,127
352,291	430,852	34,176	39,542	1,690	1,529	1,080,787	1,525,569
223,388	201,491	10,994	8,993	1,956	1,856	467,736	535,185
301,573	378,173	47,151	61,956	4,731	6,075	865,539	1,252,722
341,612	379,531	6,139	7,968	5,381	7,198	944,925	1,253,518
152,443	160,522	19,935	16,745	5,619	4,787	359,844	475,308
1,371,302	1,550,569	118,395	135,204	19,377	21,445	3,718,831	5,047,302
121,489	94,640	46,929	32,240	4,191	2,670	329,703	332,647
124,378	87,164	127,818	64,548	2,991	1,466	402,273	267,626
100,539	84,051	22,709	12,376	27,239	26,040	327,315	380,126
89,913	72,110	26,320	14,950	13,027	11,594	362,130	423,720
72,792	49,863	37,659	23,424	2,118	2,148	207,371	185,069
1,975	1,979	157	102	54	100	24,757	31,218
5,813	3,499	3,232	2,046	261	208	32,502	33,679
516,899	373,306	264,824	149,686	49,881	44,226	1,686,051	1,654,085
6,957	9,684	1,697	2,389	--	--	18,603	34,653
83,364	85,531	141,153	78,905	5,977	4,220	271,471	260,019
145,479	122,639	40,282	26,425	4,286	4,097	322,383	333,749
43,165	59,222	451	459	4,630	6,915	163,462	326,197
62,094	84,634	101	88	3,471	6,181	111,276	178,033
70,329	72,298	14,566	11,137	2,087	1,688	120,308	143,823
36,427	40,070	493	350	6,773	8,805	118,083	205,481
66,155	67,015	358	227	2,015	1,822	142,585	172,003
513,970	541,093	199,104	120,035	29,239	33,728	1,268,171	1,653,958
153,540	114,541	5,994	6,456	1,286	1,092	245,287	238,939
64,856	48,837	272	248	4,985	4,736	182,781	137,037
98,848	71,269	31,507	22,717	8,718	6,678	183,307	158,130
111,281	83,572	--	--	3,919	2,853	197,789	188,265
428,525	318,219	37,773	29,421	18,908	15,359	809,664	772,371
128,151	86,117	31,818	21,382	615	342	241,803	191,325
922,673	702,154	356,130	191,954	23,235	12,640	1,426,686	1,066,189
142,812	102,396	300,848	157,945	1,838	1,408	565,387	396,783
1,396,790	1,322,760	1,353,290	1,170,596	34,913	15,641	3,099,149	2,969,780
2,590,426	2,213,427	2,042,086	1,541,877	60,601	30,031	5,332,025	4,624,077
50,868	38,507	17,693	13,747	3,144	3,060	139,130	148,273
65,609	42,318	52,930	31,652	3,445	2,291	294,760	265,090
29,898	35,011	18	11	684	528	56,182	84,598
31,631	30,018	1,059	516	2,421	2,552	75,441	82,188
10,043	11,389	25,152	31,188	4,976	6,877	61,251	87,363
57,773	35,877	64,239	34,432	10,309	5,670	172,638	125,476
48,104	33,336	2,725	1,739	37	36	116,620	117,028
43,618	22,594	819	650	94	45	66,818	42,480
337,544	249,050	164,635	113,935	25,110	21,059	982,340	952,496

Table 8.—Quantity and value of natural gas delivered to consumers

Region and State	Residential			Commercial		
	Quantity (million cubic feet)	Value (thou- sands)	Number of consumers (thou- sands)	Quantity (million cubic feet)	Value (thou- sands)	Number of consumers (thou- sands)
Pacific:						
Alaska -----	10,398	\$16,909	25	8,475	\$10,323	4
California -----	631,398	993,820	6,181	232,911	301,853	389
Oregon -----	28,749	63,133	232	15,896	29,614	30
Washington -----	34,349	78,110	289	31,662	57,878	38
Total -----	704,889	1,151,972	6,727	288,944	399,668	461
Total United States --	4,924,124	8,409,878	41,516	2,268,128	3,165,898	3,438

¹ Includes refinery fuel use of 945,557 million cubic feet and 26,246 million cubic feet for carbon

² Includes deliveries to municipalities and public authorities for institutional heating, street

³ Source: Federal Power Commission.

NOTE.—All quantities at pressure base of 14.73 psia.

in 1975, by type of consumer and by State—Continued

Industrial ¹		Electric utilities		Other consumers ²		Total	
Quantity (million cubic feet)	Value (thou- sands)	Quantity (million cubic feet) ³	Value (thou- sands)	Quantity (million cubic feet)	Value (thou- sands)	Quantity (million cubic feet)	Value (thou- sands)
22,388	\$18,157	19,616	\$10,084	5,940	\$3,718	66,815	\$59,191
581,609	646,168	274,483	304,951	7,328	7,702	1,727,729	2,254,494
57,832	55,096	3	3	--	--	101,980	147,846
92,142	123,839	--	--	326	314	158,479	260,141
753,471	843,260	294,105	315,038	13,594	11,734	2,055,003	2,721,672
6,979,063	6,727,877	3,146,873	2,431,290	240,165	219,539	17,558,353	20,954,477

black production.
lighting, etc.

Table 9.—Production of natural gas liquids at natural gas processing plants, and disposition of residual gas in the United States in 1974-75, by State
(Million cubic feet at 14.73 psia at 60° F. unless otherwise stated)

State	Total natural gas liquids and ethane production (thousand 42-gallon barrels)	Natural gas processed	Extraction loss (shrinkage)	Disposition of residue gas					Total	
				Used at plants	Returned to formation	Vented and flared	Shipped to transmission companies	Direct deliveries to consumers		Uncounted for
1974:										
Arkansas	617	19,784	952	2,471	137		14,323	1,722	179	18,632
California	10,804	252,402	17,201	20,343	129,332	159	58,564	2,115	2,635	236,291
Colorado	4,154	118,686	6,210	4,612	4,949	437	100,748	1,364	366	112,476
Florida, Pennsylvania, West Virginia	8,810	409,248	13,049	4,720	8	--	391,108	363		396,199
Illinois and Kentucky	12,628	342,046	19,378	4,319	1,742	--	316,153	1,984	202	322,658
Kansas	31,032	1,407,239	43,416	10,165	159	159	1,301,549	50,140	89	1,362,923
Louisiana	144,299	6,273,136	194,329	103,973	102,858	1,510	5,169,920	704,324	-3,778	6,078,907
Michigan	1,315	45,106	1,921	1,713	1,994	38	39,703	4,185		43,185
Mississippi and Alabama	784	24,568	1,180	1,638	3,070	67	13,899	4,532	132	23,988
Montana, Utah, Alaska, Nebraska, North Dakota, South Dakota	4,018	146,907	5,912	6,071	92,638	1,416	23,916	9,192	2,762	140,395
New Mexico	2,032	34,243	3,031	3,132	7,267	66	20,454	31,212	243	31,212
Oklahoma	39,984	1,060,491	54,986	49,981	4,489	2,902	846,035	97,612	4,486	1,005,505
Texas	43,812	1,092,487	62,860	51,138	72,012	897	823,058	77,391	5,136	1,029,627
Wyoming	302,072	7,194,453	448,993	289,419	721,678	9,219	4,962,687	709,383	53,074	6,745,460
	9,737	263,684	14,072	9,497	8,997	391	224,561	6,478	-312	249,612
Total	616,098	18,684,480	887,490	563,242	1,151,171	17,261	14,311,688	1,688,612	65,016	17,796,990
1975:										
Arkansas	603	17,918	899	2,408	89	2	14,402	18,033	117	17,019
California	9,328	213,079	15,221	18,381	104,573	59	54,672	1,456	1,456	197,858
Colorado	6,563	136,090	9,620	5,204	5,483	497	112,014	2,994	278	126,470
Florida, Pennsylvania, West Virginia	12,977	765,597	18,496	5,898	8	--	740,991	204	150	747,101
Illinois and Kentucky	12,047	322,393	18,239	4,050	1,476	91	298,198	1,746	208	304,151
Kansas	29,858	1,337,949	42,763	8,719	1,476	91	1,274,698	39,904	208	1,325,186
Louisiana	135,522	5,831,487	189,541	97,510	86,839	1,104	4,718,880	782,262	5,201	5,676,975
Michigan	2,004	79,154	2,879	2,593	14,974	23	57,878	7,659	-62	63,975
Mississippi and Alabama	875	29,694	1,261	1,940	2,808	269	15,819	7,659	92	26,483
Montana, Utah, Alaska, Nebraska, North Dakota, South Dakota	3,948	156,203	5,734	6,163	104,999	1,374	23,568	8,578	3,787	150,469
New Mexico	1,910	34,463	2,717	4,727	8,492	43	18,195	73,105	289	31,746
Oklahoma	39,408	1,037,160	56,109	47,665	7,821	2,889	844,874	70,470	5,197	981,051
Texas	40,475	1,033,003	60,008	49,363	70,980	967	773,823	70,740	7,442	972,991
Wyoming	291,470	6,509,132	435,571	266,652	619,609	8,647	4,446,354	668,012	64,287	6,073,561
	8,970	215,104	13,224	8,578	6,682	416	178,963	7,356	-115	201,880
Total	595,958	17,748,426	872,282	530,451	1,034,838	15,881	13,575,330	1,630,373	89,271	16,876,144

Table 10.—Comparison of actual firm requirements and firm curtailments for year April 1975 through March 1976 with projections for year April 1976 through March 1977
(Million cubic feet)

	Total for year April 1975– March 1976			Total for year April 1976– March 1977		
	Actual			Projected		
	Firm requirements	Volume curtailed	Percent curtailed	Firm requirements	Deficiency	Percent deficiency
Alabama-Tennessee Natural Gas Co.	29,232	3,054	10.45	32,482	6,239	19.21
Algonquin Gas Transmission Co.	142,525	16,715	11.73	154,468	21,113	13.67
Arkansas Louisiana Gas Co.	471,093	148,403	31.50	482,720	173,628	35.97
Bluefield Gas Co.	1,090	--	--	1,151	--	--
Caprock Pipeline Co.	1,744	--	--	1,823	--	--
Cities Service Gas Co.	557,606	138,248	24.79	588,588	169,596	28.81
Colorado Interstate Gas Co.	349,486	251	.07	372,312	11,191	3.01
Columbia Gas Transmission Corp.	1,447,483	406,079	28.05	1,449,103	387,829	26.76
Commercial Pipeline Co., Inc.	465	--	--	465	--	--
Consolidated Gas Supply Corp.	654,749	52,050	7.95	691,160	74,464	10.77
East Tennessee Natural Gas Co.	79,779	26,522	33.24	80,263	25,061	31.22
Eastern Shore Natural Gas Co.	6,232	772	12.39	4,466	807	18.07
El Paso Natural Gas Co.	1,385,824	221,289	15.97	1,428,994	402,813	28.19
Florida Gas Transmission Co.	34,713	--	--	34,232	--	--
Gas Gathering Corp.	2,462	--	--	(¹)	(¹)	(¹)
Granite State Gas Transmission, Inc.	3,603	--	--	3,733	--	--
Great Lakes Gas Transmission Co.	88,859	--	--	88,741	--	--
Inter-City Minnesota Pipeline, Ltd.	7,694	--	--	7,624	--	--
Kansas-Nebraska Natural Gas Co., Inc.	85,447	--	--	84,686	--	--
Kentucky-West Virginia Gas Co.	27,014	--	--	27,157	--	--
Lawrenceburg Gas Transmission Corp.	5,523	535	9.69	5,523	1,980	35.85
Louisiana-Nevada Transit Co.	4,229	402	9.51	4,620	735	15.91
McCulloch Interstate Gas Corp.	6,345	--	--	4,591	--	--
Michigan Wisconsin Pipe Line Co.	807,519	30,273	3.75	821,292	54,866	6.68
Mid Louisiana Gas Co.	29,509	2,830	9.59	31,165	7,436	23.86
Midwestern Gas Transmission Co.	345,446	55,576	16.09	327,881	49,563	15.14
Mississippi River Transmission Corp.	202,633	--	--	225,818	--	--
Montana-Dakota Utilities Co.	40,855	--	--	42,022	--	--
National Fuel Gas Supply Corp.	188,933	--	--	227,371	25,976	11.42
Natural Gas Pipeline Co. of America	1,215,727	213,816	17.59	1,201,892	234,747	19.53
North Penn Gas Co.	26,446	--	--	26,860	--	--
Northern Natural Gas Co.	836,059	50,139	6.00	858,733	154,330	17.97
Northwest Pipeline Corp.	450,310	49,345	10.96	458,328	47,720	10.41
Pacific Gas Transmission Co.	² 367,194	--	--	360,365	--	--
Panhandle Eastern Pipeline Co.	719,774	133,154	18.50	717,911	200,193	27.89
South Georgia Natural Gas Co.	11,796	21	.18	14,797	307	2.07
South Texas Natural Gas Gathering Co.	39,229	--	--	34,851	--	--
Southern Natural Gas Co.	588,970	2,105	.36	588,970	43,879	7.45
Tennessee Gas Pipeline Co.	1,321,687	203,647	15.41	1,337,432	259,016	19.37
Tennessee Natural Gas Lines, Inc.	28,950	3,690	12.75	34,501	7,737	22.43
Texas Eastern Transmission Corp.	995,671	270,052	27.12	1,030,879	297,106	28.82
Texas Gas Pipe Line Corp.	2,386	--	--	2,465	--	--
Texas Gas Transmission Corp.	753,818	129,550	17.19	771,162	219,584	28.47
Transcontinental Gas Pipe Line Corp.	1,038,163	363,349	35.00	1,059,390	455,319	42.98
Transwestern Pipeline Co.	367,668	89,068	24.23	366,664	127,119	34.67
Trunkline Gas Co.	595,269	242,843	40.80	593,117	286,573	48.32
United Gas Pipe Line Co.	1,582,935	721,944	45.61	1,605,954	839,937	52.30
Valley Gas Transmission, Inc.	8,025	--	--	6,950	--	--
West Texas Gathering Co.	93,292	--	--	83,821	--	--
Western Gas Interstate Co.	8,873	108	1.22	9,580	78	.81
Western Transmission Corp.	NA	NA	NA	NA	NA	NA
Total	18,060,374	3,575,830	19.80	18,388,573	4,586,942	24.94
Net requirements	14,211,357	XX	XX	14,556,473	XX	XX
Net curtailments	XX	2,800,700	XX	XX	3,624,684	XX
Net curtailments as a percent of net requirements	XX	XX	19.71	XX	XX	24.90

NA Not available. XX Not applicable.

¹ No data for 1976-77 submitted.

² Reported only actual and projected deliveries. No curtailment claimed.

Source: Federal Power Commission.

Table 11.—Comparison of actual and firm requirements and firm curtailments for heating season November 1975 through March 1976 with projections for year November 1976 through March 1977
(Million cubic feet)

	Heating Season November 1975- March 1976			Heating Season November 1976- March 1977		
	Actual			Projected		
	Firm requirements	Volume curtailed	Percent curtailed	Firm requirements	Deficiency	Percent deficiency
Alabama-Tennessee Natural Gas Co	15,540	3,351	21.56	16,122	4,589	28.46
Algonquin Gas Transmission Co	84,914	12,047	14.19	89,691	13,773	15.36
Arkansas Louisiana Gas Co	218,743	66,627	30.46	228,473	73,472	32.16
Bluefield Gas Co	775	---	---	766	---	---
Caprock Pipeline Co	721	---	---	798	---	---
Cities Service Gas Co	280,467	72,626	25.89	297,292	89,420	30.08
Colorado Interstate Gas Co	181,430	98	.05	194,272	9,693	4.99
Columbia Gas Transmission Corp	847,997	244,875	28.88	847,875	235,597	27.79
Commercial Pipeline Co., Inc	801	---	---	801	---	---
Consolidated Gas Supply Corp	338,683	17,718	5.31	359,018	30,841	8.45
East Tennessee Natural Gas Co	40,282	10,172	25.25	40,472	10,023	24.77
Eastern Shore Natural Gas Co	3,442	726	21.09	1,914	785	41.01
El Paso Natural Gas Co	596,219	111,690	18.73	613,801	200,816	32.72
Florida Gas Transmission Co	19,193	---	---	18,557	---	---
Gas Gathering Corp	859	---	---	(¹)	(¹)	(¹)
Granite State Gas Transmission, Inc	2,065	---	---	2,117	---	---
Great Lakes Gas Transmission Co	36,964	---	---	36,777	---	---
Inter-City Minnesota Pipelines, Ltd	3,982	---	---	3,614	---	---
Kansas-Nebraska Natural Gas Co., Inc	39,773	---	---	41,866	---	---
Kentucky-West Virginia Gas Co	11,468	---	---	11,672	---	---
Lawrenceburg Gas Transmission Corp	2,299	535	23.27	2,299	810	35.23
Louisiana-Nevada Transit Co	1,915	341	17.81	2,153	549	25.49
McCulloch Interstate Gas Co	2,333	---	---	1,719	---	---
Michigan Wisconsin Pipe Line Co	439,179	17,707	4.03	426,512	16,665	3.91
Mid Louisiana Gas Co	12,404	1,480	11.93	16,210	3,078	18.99
Midwestern Gas Transmission Co	140,130	21,048	15.02	139,284	23,300	16.73
Mississippi River Transmission Corp	118,187	---	---	133,444	---	---
Montana-Dakota Utilities Co	26,220	---	---	27,580	---	---
National Fuel Gas Supply Corp	121,137	---	---	135,691	13,849	9.84
Natural Gas Pipeline Co. of America	523,381	11,968	2.29	514,201	22,515	4.38
North Penn Gas Co	15,837	---	---	15,424	---	---
Northern Natural Gas Co	410,919	40,142	9.77	415,680	58,221	14.01
Northwest Pipeline Corp	222,600	44,262	19.88	223,640	43,462	19.43
Ohio River Pipeline Corp	(²)	(²)	(²)	(²)	(²)	(²)
Pacific Gas Transmission Co	162,312	---	---	153,839	---	---
Panhandle Eastern Pipeline Co	350,783	79,475	22.66	354,326	90,886	25.65
South Georgia Natural Gas Co	6,550	4	.06	8,157	106	1.30
South Texas Natural Gas Gathering Co	15,233	---	---	13,559	---	---
Southern Natural Gas Co	273,256	1,035	.40	273,256	2,828	1.03
Tennessee Gas Pipeline Co	622,873	96,547	15.50	617,913	104,416	16.90
Tennessee Natural Gas Lines, Inc	18,682	3,690	19.75	19,509	3,997	20.49
Texas Eastern Transmission Corp	443,660	104,012	23.44	452,895	116,208	25.66
Texas Gas Pipe Line Corp	668	---	---	1,118	---	---
Texas Gas Transmission Corp	341,211	34,176	10.02	353,419	83,339	23.58
Transcontinental Gas Pipe Line Corp	483,167	145,985	30.21	501,183	194,471	38.80
Transwestern Pipeline Co	152,515	43,833	28.77	151,511	58,265	38.46
Trunkline Gas Co	249,107	111,053	44.58	247,638	122,852	49.61
United Gas Pipe Line Co	691,618	300,773	43.49	705,188	359,527	50.98
Valley Gas Transmission, Inc	3,083	---	---	2,700	---	---
West Texas Gathering Co	39,700	---	---	35,080	---	---
Western Gas Interstate Co	3,145	103	3.23	3,664	65	1.77
Western Transmission Corp	NA	NA	NA	(³)	(³)	(³)
Total	8,612,562	1,598,199	18.56	8,754,246	1,987,418	22.70
Net requirements	6,985,378	XX	XX	7,161,481	XX	XX
Net curtailments	XX	1,265,534	XX	XX	1,595,237	XX
Net curtailments as a percent of net requirements	XX	XX	18.12	XX	XX	22.28

NA Not available. XX Not applicable.

¹ No filing made for Sept. 30, 1975.

² First report received was for period ending Apr. 30, 1976.

³ Was granted exemption from further filing by Order dated Dec. 8, 1975.

Source: Federal Power Commission.

Table 12.—Comparison of actual interruptible sales and curtailments for year April 1975 through March 1976 with projected requirements and deficiencies for year April 1976 through March 1977
(Million cubic feet)

	Actual—Year April 1975–March 1976			Projected—Year April 1976–March 1977		
	Inter- ruptible require- ment	Volume cur- tailed	Per- cent cur- tailed	Inter- ruptible require- ment	Volume defi- ciency	Per- cent defi- cient
Alabama-Tennessee Natural Gas Co --	11,128	10,523	94.56	10,364	10,238	98.78
Algonquin Gas Transmission Co -----	12,673	12,673	100.00	12,187	12,187	100.00
Arkansas Louisiana Gas Co -----	23,532	23,532	100.00	27,650	27,650	100.00
Bluefield Gas Co -----	121	--	--	154	--	--
Colorado Interstate Gas Co -----	45,573	15,765	34.59	42,884	17,201	40.11
East Tennessee Natural Gas Co -----	22,114	19,489	88.13	21,953	21,003	95.67
Eastern Shore Natural Gas Co -----	2,370	2,088	88.10	3,863	3,863	100.00
Florida Gas Transmission Co -----	121,306	65,578	54.06	110,828	55,557	50.13
Granite State Gas Transmission, Inc	663	233	34.88	437	204	46.68
Kansas-Nebraska Natural Gas Co., Inc	34,983	3,535	10.10	33,327	8,742	26.23
Louisiana-Nevada Transit Co -----	350	--	--	97	48	49.48
Mississippi River Transmission Corp -	3,394	--	--	--	--	--
Montana-Dakota Utilities Co -----	18,355	--	--	18,193	--	--
Northern Natural Gas Co -----	8,217	--	--	--	--	--
Northwest Pipeline Corp -----	10,927	10,460	95.73	9,604	9,475	98.66
Panhandle Eastern Pipeline Co -----	70,979	38,350	54.03	67,511	35,406	52.44
South Georgia Natural Gas Co -----	21,254	7,338	34.53	19,753	11,956	60.53
Southern Natural Gas Co -----	165,802	125,274	75.56	165,802	134,618	81.19
Tennessee Natural Gas Lines, Inc ----	4,060	1,408	34.68	3,740	3,740	100.00
Texas Gas Transmission Corp -----	4,076	4,070	99.85	4,080	4,076	99.90
Transwestern Pipeline Co -----	864	--	--	746	--	--
Michigan Wisconsin Pipe Line Co --	30,273	--	--	--	--	--
Natural Gas Pipeline Co. of America -	22	--	--	14	--	--
Mid Louisiana Gas Co -----	--	--	--	1,206	1,206	100.00
Total -----	613,041	340,316	55.51	554,393	357,170	64.43
Net requirements and net curtailments -----	600,976	329,560	54.84	542,673	346,289	63.81

Source: Federal Power Commission.

Table 13.—Marketed production, interstate shipments and total consumption of natural gas in the United States, 1975
(Million cubic feet)

State and region	Interstate movements						Unaccounted for	Consumption
	Marketed production	Receipts	Deliveries	Net receipts (+) or deliveries (-)	Change in underground storage			
New England:								
Connecticut	--	155,741	91,871	68,870	-1,271	1,130	64,011	
Maine, New Hampshire, Vermont	--	13,923		13,923		389	18,534	
Massachusetts	--	183,191	23,271	159,920	2,185	9,768	158,967	
Rhode Island	--	97,119	75,886	21,233	-541	-1,355	23,129	
Total	--	449,974	191,028	258,946	373	8,932	254,641	
Middle Atlantic:								
New Jersey	--	633,893	384,050	249,843	3,869	1,872	244,102	
New York	7,628	826,501	250,455	576,046	-2,291	9,082	576,883	
Pennsylvania	84,676	1,721,102	1,097,990	623,112	51,876	2,102	653,810	
Total	92,304	3,181,496	1,732,495	1,449,001	53,454	13,056	1,474,795	
East North Central:								
Illinois	1,440	2,112,982	933,892	1,179,090	69,306	3,324	1,107,900	
Indiana	346	1,833,901	1,353,199	480,702	4,219	4,438	477,341	
Michigan	102,113	825,505	10,153	815,352	23,063	3,309	387,063	
Ohio	84,960	2,641,647	1,723,563	918,094	37,808	8,370	356,876	
Wisconsin	--	464,271	93,154	371,117	-428	6,744	364,801	
Total	188,859	7,884,306	4,113,951	3,770,355	133,998	26,235	3,793,981	
West North Central:								
Iowa	--	1,309,669	952,599	357,070	5,661	5,611	345,798	
Kansas	843,625	1,852,575	2,137,528	-284,953	13,968	3,214	541,490	
Minnesota	30	562,613	224,673	337,935	-4	6,753	331,186	
Missouri	30	1,535,978	1,153,783	377,895	-32	7,337	369,620	
Nebraska	2,565	1,308,584	1,081,133	224,236	4,681	3,033	219,147	
North Dakota	24,786	13,655	3,490	15,165	721	39,230	89,230	
South Dakota	--	34,677	1,423	33,249	--	715	32,534	
Total	871,006	6,619,301	5,559,644	1,059,657	24,274	27,384	1,379,005	
South Atlantic:								
Delaware	--	20,894	1,221	19,673	549	521	18,603	
Florida	44,333	246,566	328,261	226,566	--	1,684	289,265	
Georgia	--	1,137,354	809,093	328,261	339	1,363	326,659	
Maryland and District of Columbia	93	676,710	508,502	168,208	-1,437	3,806	165,932	
North Carolina	--	659,326	117,393	541,933	1,09	2,962	114,822	
South Carolina	--	786,871	659,826	127,045	-46	4,142	122,949	
Virginia	6,723	791,615	672,911	118,704	-1,393	5,600	121,820	
West Virginia	154,484	1,241,589	1,194,850	46,739	34,744	-1,214	167,693	
Total	205,633	5,561,425	4,383,336	1,173,089	32,865	18,764	1,327,143	

East South Central:									
Alabama	37,814	2,716,887	2,476,511	240,326	-98	18,456	264,782		
Kentucky	60,511	3,684,713	3,513,056	171,657	12,038	7,137	212,993		
Mississippi	74,345	5,683,382	5,621,131	62,251	-68	6,029	280,620		
Tennessee	27	3,912,003	3,690,655	221,348	528	3,519	217,328		
Total	172,697	15,996,985	15,201,353	796,582	12,416	30,141	925,728		
West South Central:									
Arkansas	116,287	2,865,986	2,218,827	147,809	380	4,097	259,119		
Louisiana	7,090,645	1,181,696	6,218,499	-5,036,803	68,688	17,028	1,978,129		
Oklahoma	1,605,410	1,220,782	2,090,214	-869,432	2,988	4,168	728,827		
Texas	7,485,764	544,780	3,622,568	-3,077,838	3,532	24,446	4,379,948		
Total	16,298,066	5,313,144	14,149,908	-8,836,764	65,530	49,789	7,346,023		
Mountain:									
Arizona	208	1,388,649	1,234,546	154,103	-2,465	-1,911	156,222		
Colorado	171,629	279,070	134,124	144,946	895	1,648	317,392		
Idaho	40,784	480,882	421,876	58,956	-1,890	-1,890	60,451		
Montana	56,241	23,653	23,653	32,588	-8,635	1,606	80,351		
Nevada	61,463	61,463	61,463	61,463	-	212	61,251		
New Mexico	1,217,430	717,762	1,629,630	-911,768	3,310	5,983	296,369		
Utah	55,854	206,470	131,094	75,376	738	2,173	127,819		
Wyoming	316,123	104,385	307,368	-202,983	3,234	9,494	100,412		
Total	1,801,478	3,294,872	3,882,191	-587,319	-3,423	17,315	1,200,267		
Pacific:									
Alaska	160,270	53,002	53,002	-53,002	15,555	5,718	85,995		
California	318,308	1,569,946	403,477	1,569,946	4,066	36,118	1,848,070		
Oregon	--	517,337	485,271	113,860	46	3,916	109,898		
Washington	--	652,253	485,271	166,982	-99	2,747	164,934		
Total	478,578	2,789,536	941,750	1,797,786	19,568	48,499	2,208,297		
Total United States									
	20,108,661	51,040,989	50,160,656	880,333	344,064	235,065	20,409,875		
¹ Includes receipts from Canada of 380,232 MMcf into Idaho; 269,443 MMcf into Washington; 253,638 MMcf into Minnesota; 42,180 MMcf into Montana; 5,497 MMcf into New York; 4,124 MMcf into Vermont; and from Algeria 4,893 MMcf into Massachusetts. ² Includes deliveries to Canada of 10,158 MMcf from Michigan; 66 MMcf from Montana and into Mexico; 6,230 MMcf from Texas; 3,233 MMcf from Arizona; and liquefied natural gas exports of 53,002 MMcf to Japan from Alaska.									

Table 14.—Net interstate pipeline movements of natural gas in the United States
(Billion cubic feet at 14.73 psia)

	Net receipts from				Net deliveries to				Net receipts (+) and deliveries (-) ¹
	Within region		Outside region		Within region		Outside region		
	State	Quantity	State	Quantity	State	Quantity	State	Quantity	
New England:									
Connecticut	Massachusetts	8.2	New York	147.5	Rhode Island	91.9	XX	XX	63.8
Maine, New Hampshire, Vermont	do	9.8	Canada	4.1	XX	XX	XX	XX	13.9
Massachusetts	XX	75.9	Algeria	4.9	Rhode Island	XX	XX	XX	168.2
	XX	102.4	New York	9.8	New Hampshire	5.2	XX	XX	
	XX	91.9	XX	XX	Connecticut	8.2	XX	XX	13.0
	XX	5.2	XX	XX	Massachusetts	75.9	XX	XX	
	XX	191.0	XX	258.9	XX	191.0	XX	XX	258.9
Total									
Middle Atlantic:									
New Jersey	New York	.4	XX	XX	New York	384.0	XX	XX	249.9
	Pennsylvania	683.5	XX	XX	XX	XX	XX	XX	
	New Jersey	384.0	Canada	5.5	New Jersey	.4	Connecticut	147.5	
	Pennsylvania	437.0	XX	XX	Pennsylvania	683.5	Massachusetts	102.4	576.1
	New York	.1	Maryland	505.9	New Jersey	437.0	Delaware	20.9	
	XX	XX	Ohio	536.1	New York	437.0	West Virginia	6.6	623.1
	XX	XX	XX	679.0	XX	XX	XX	XX	
	XX	1,455.0	XX	1,726.5	XX	1,455.0	XX	277.4	1,449.1
Total									
East North Central:									
Illinois	Indiana	189.6	Iowa	622.5	Indiana	686.0	Missouri	.6	1,179.1
	XX	XX	Kentucky	373.5	Wisconsin	247.3	XX	XX	
	XX	XX	Missouri	917.4	XX	XX	XX	XX	
	XX	686.0	Kentucky	1,152.9	Illinois	189.6	XX	XX	485.7
	XX	XX	XX	XX	Ohio	1,163.6	XX	XX	
	XX	733.3	XX	XX	XX	XX	Canada	10.2	816.3
	XX	93.2	XX	XX	XX	XX	XX	XX	
	XX	1,163.6	Kentucky	1,215.7	Michigan	733.3	Kentucky	.3	918.2
	XX	XX	XX	262.4	XX	XX	Pennsylvania	536.1	
	XX	XX	XX	XX	XX	XX	West Virginia	453.8	
	XX	247.3	Minnesota	217.0	Michigan	53.2	XX	XX	371.1
	XX	3,113.0	XX	4,771.4	XX	3,113.0	XX	1,001.0	3,770.4
Total									
West North Central:									
Iowa	Missouri	241.2	XX	XX	Minnesota	309.0	Illinois	632.5	356.7
	Nebraska	1,068.1	XX	XX	South Dakota	11.5	XX	XX	
	South Dakota	XX	XX	XX	XX	XX	XX	XX	
	XX	XX	Oklahoma	1,852.6	Missouri	821.8	Colorado	22.5	284.8
	XX	XX	XX	XX	Nebraska	1,275.7	Oklahoma	17.4	
	XX	309.0	Canada	253.6	North Dakota	7.7	Wisconsin	217.0	338.3
	XX	.4	XX	XX	XX	XX	XX	XX	
	XX	821.8	Arkansas	713.3	Iowa	241.2	Illinois	917.4	376.9
	XX	XX	Illinois	.6	XX	XX	Oklahoma	.2	
	XX	1,275.7	Colorado	6.1	Iowa	1,068.1	Colorado	2.5	224.2
	XX	XX	Wyoming	23.6	South Dakota	10.6	XX	XX	

North Dakota -----	7.7	Montana	4	Montana	8.5	14.8
South Dakota -----	11.5	do	4	do	(²)	33.6
Minnesota -----	10.6	do	4	Wyoming	.7	
Nebraska -----	3,746.4	XX	XX	XX	1,813.7	1,059.7
Total -----	2,873.4	XX	XX	XX	3,746.4	1,059.7
South Atlantic:						
Delaware -----	XX	Pennsylvania	20.9	Maryland	XX	XX
Florida -----	7.4	Alabama	239.2	XX	XX	XX
Georgia -----	XX	do	1,137.4	Florida	XX	XX
Virginia -----	XX	do	XX	South Carolina	7.4	14.8
Maryland and District of Columbia -----	66.5	XX	XX	West Virginia	786.9	XX
Delaware -----	1.2	XX	XX	West Virginia	2.6	505.9
West Virginia -----	10.1	XX	XX	XX	XX	XX
South Carolina -----	659.8	XX	XX	Virginia	541.9	XX
Georgia -----	786.9	XX	XX	North Carolina	659.8	XX
North Carolina -----	541.9	XX	XX	Maryland	10.1	XX
West Virginia -----	243.5	XX	6.2	District of Columbia	655.4	XX
XX	XX	XX	XX	West Virginia	7.5	XX
Maryland -----	2.6	Kentucky	771.0	Maryland	10.1	262.4
Virginia -----	7.5	Ohio	453.8	Virginia	243.5	679.0
XX	XX	Pennsylvania	6.6	XX	XX	XX
Total -----	2,926.4	XX	2,635.1	XX	2,926.4	1,462.1
East South Central:						
Alabama -----	2,716.8	XX	XX	Mississippi	4.9	239.2
Mississippi -----	XX	XX	XX	Tennessee	1,095.1	1,137.4
Tennessee -----	3,684.5	Ohio	3	XX	XX	373.5
XX	XX	XX	XX	Indiana	XX	1,152.9
XX	XX	XX	XX	Ohio	XX	1,215.7
XX	XX	XX	XX	West Virginia	XX	771.0
Alabama -----	4.9	Louisiana	4,176.4	Alabama	2,716.8	2.3
XX	XX	Arkansas	1,502.1	Tennessee	2,802.0	XX
Mississippi -----	1,095.1	Georgia	14.8	Kentucky	3,684.5	6.2
Tennessee -----	2,802.0	XX	XX	XX	XX	XX
Total -----	10,303.3	XX	5,693.6	XX	10,303.3	4,898.2
West South Central:						
Arkansas -----	1,710.3	XX	XX	Louisiana	XX	XX
Oklahoma -----	125.8	XX	XX	Texas	1,502.1	1,502.1
Texas -----	529.9	XX	XX	XX	2.6	713.3
Arkansas -----	1,178.3	XX	2.3	Arkansas	1,710.3	4,176.4
Texas -----	203.2	XX	17.4	Texas	331.8	XX
do -----	XX	Mississippi	XX	XX	XX	XX
Arkansas -----	2.6	Kansas	17.4	Arkansas	125.8	75.3
Louisiana -----	31.8	Missouri	XX	Texas	36.5	1,852.6
Oklahoma -----	86.5	New Mexico	173.8	Arkansas	529.9	6.2
XX	XX	XX	XX	Louisiana	1,173.8	704.5
XX	XX	Oklahoma	XX	Oklahoma	1,203.2	XX
Total -----	5,119.6	XX	193.7	XX	5,119.6	9,030.4
See footnotes at end of table.						

Table 14.—Net interstate pipeline movements of natural gas in the United States—Continued
(Billion cubic feet at 14.73 psia)

	Net receipts from						Net deliveries to						Net receipts (+) and deliveries (-) ¹
	Within region			Outside region			Within region			Outside region			
	State	Quantity	State	Quantity	State	Quantity	State	Quantity	State	Quantity	State	Quantity	
Mountain:													
Arizona	XX	1,385.3	XX	XX	Nevada	XX	61.5	California	1,166.5			154.1	
Utah	XX	3.4	XX	XX	New Mexico	XX	3.4	Mexico	3.2				
Colorado	XX	70.5	Kansas	22.5	do	XX	9.9	Nebraska	6.1				
	XX	108.2	Nebraska	2.5	Utah	XX	106.3	XX	XX			144.9	
	XX	XX	Oklahoma	75.3	Wyoming	XX	12.8	XX	XX				
Idaho	XX	36.8	Canada	380.2	XX	XX	XX	Oregon	32.1			58.9	
	XX	63.8	XX	XX	XX	XX	XX	Washington	389.8				
Montana	XX	10.6	North Dakota	3.5	XX	XX	XX	Canada	.1			32.5	
	XX	XX	South Dakota	XX	XX	XX	XX	North Dakota	11.0				
	XX	XX	Canada	42.1	XX	XX	XX	South Dakota	12.6				
Nevada	XX	61.5	XX	XX	XX	XX	XX	Texas	173.8			61.5	
New Mexico	XX	3.4	Texas	704.5	Arizona	XX	1,385.3	XX	XX			-911.8	
	XX	9.9	XX	XX	Colorado	XX	70.5	XX	XX				
Utah	XX	106.3	XX	XX	Arizona	XX	3.4	XX	XX			75.4	
	XX	101.2	XX	XX	Idaho	XX	36.8	XX	XX				
	XX	XX	XX	XX	Idaho	XX	90.9	XX	XX				
Wyoming	XX	12.8	South Dakota	XX	Wyoming	XX	108.2	Nebraska	23.6			-203.0	
	XX	90.9	XX	XX	Idaho	XX	63.8	XX	XX				
	XX	XX	XX	XX	Montana	XX	10.6	XX	XX				
	XX	XX	XX	XX	Utah	XX	101.2	XX	XX				
Total	XX	2,063.6	XX	1,231.3	XX	2,063.6	XX	1,818.8	XX	1,818.8		-887.5	
Pacific:													
Alaska	XX	XX	XX	XX	XX	XX	XX	Japan	853.0			-53.0	
California	XX	403.5	Arizona	1,166.5	XX	XX	XX	XX	XX			1,570.0	
Oregon	XX	456.3	Idaho	32.1	California	XX	403.5	XX	XX			113.9	
Washington	XX	XX	do	389.8	Oregon	XX	456.3	XX	XX			166.9	
	XX	XX	Canada	262.4	XX	XX	XX	XX	XX				
Total	XX	888.8	XX	1,850.8	XX	888.8	XX	53.0	XX	1,797.8			
United States ¹	XX	XX	XX	XX	XX	XX	XX	Canada	10.2			880.3	
	XX	XX	Canada	947.9	XX	XX	XX	Japan	53.0				
	XX	XX	Algeria	4.9	XX	XX	XX	Mexico	9.4				
Total	XX	XX	XX	952.8	XX	XX	XX	XX	XX			880.3	

¹ Data may not add to totals shown because of independent rounding.

² Less than 1/2 unit.

³ Liquefied natural gas.

Table 15.—Estimated total proved reserves of natural gas in the United States
(Million cubic feet at 14.73 psia and 60° F)

State	Reserves as of Dec. 31, 1974	Changes in reserves during 1975					Reserves as of December 31, 1975					
		Revisions	Extensions	New field discoveries	New reservoir discoveries in old fields	Net change in underground storage ¹	Production ²	Total gas	Non-associated	Associated-dissolved	Underground storage ³	Net change in reserves
Alabama	507,370	80,613	34,757	169,066	--	--	20,325	770,981	732,799	38,182	--	263,611
Alaska	31,866,612	216,369	101,000	22,000	--	--	155,232	32,050,749	5,727,699	26,323,050	--	184,137
Arizona	1,141	397	--	--	--	--	249	1,569	479	1,080	--	148
Arkansas	2,113,404	38,950	25,855	4,000	6,700	617	118,353	1,993,273	1,886,725	132,373	24,175	-120,131
California ⁴	5,194,582	390,881	194,169	11,100	29,515	-4,285	331,945	5,484,027	2,249,260	2,906,497	328,270	289,435
Colorado	1,881,698	--	91,174	250,982	11,041	839	165,303	1,893,017	1,659,151	204,572	29,291	11,322
Florida	308,866	1,683	--	--	--	--	43,645	266,904	266,904	--	--	--
Georgia	399,414	15,814	--	--	--	--	1,304	380,804	1,100	3,626	376,078	-18,610
Illinois	64,141	-2,552	--	--	--	--	1,607	59,839	2,010	21	57,808	-4,302
Iowa	80,465	--	--	--	--	--	15,970	96,435	40	21	96,435	--
Kansas	11,704,731	1,590,937	171,473	28,456	6,167	6,353	846,936	12,661,181	150,413	104,856	15,970	15,970
Kentucky	844,002	--	--	--	277	14,193	59,762	812,630	638,055	42,985	131,500	956,450
Louisiana ⁴	64,052,445	877,251	1,712,942	1,208,503	601,519	37,505	7,180,742	61,309,423	51,471,615	9,626,511	211,297	-2,743,922
Maryland	42,034	--	--	--	--	642	--	42,588	4,114	536,766	58,474	58,474
Michigan	1,458,254	36,927	--	155,967	--	61,304	105,703	1,606,749	483,268	536,766	586,715	148,495
Minnesota	3,188	--	--	--	--	-63	--	3,125	--	--	3,125	--
Mississippi	1,079,420	7,953	103,939	33,687	73,052	-10,619	79,805	1,207,627	1,082,310	94,201	81,116	128,207
Missouri	17,684	-7	--	--	--	-120	26,485	30	8	78,312	17,519	-167
Montana	901,260	13,701	13,617	27,347	--	--	52,424	959,986	686,350	78,312	169,724	28,726
Nebraska	54,609	245	308	271	4,435	--	4,050	55,818	12,748	7,214	36,856	1,209
New Mexico	11,944,902	446,806	422,575	41,552	21,886	2,388	1,120,819	11,759,294	9,442,073	2,287,375	29,846	-185,608
New York	165,546	60	44,850	3,000	9,029	--	6,632	216,843	103,446	38	112,359	50,297
North Dakota	432,682	1,347	2,551	3,242	77	--	23,061	416,848	5,715	411,133	--	--
Ohio	1,308,210	307,133	89,910	62,290	3,980	37,442	86,322	1,354,010	795,987	173,033	384,900	-15,834
Oklahoma	13,300,312	307,133	878,469	108,208	671,133	6,141	1,672,408	13,083,028	10,250,593	2,612,725	219,800	-307,284
Pennsylvania	1,492,115	213	219,750	2,376	3,149	49,812	84,772	1,682,460	1,074,414	11,722	596,324	190,315
South Dakota	213	--	--	20	--	--	40	193	--	--	--	-20
Tennessee	5,307	--	1,700	1,500	600	--	27	9,680	9,407	273	--	3,773
Texas ⁴	78,540,717	-3,083,061	1,492,079	507,372	609,411	12,192	7,041,856	71,036,854	50,638,399	20,242,346	156,109	-7,503,863
Utah	1,031,409	-87,304	25,042	6,401	228	240	58,583	917,433	493,885	420,266	3,282	-113,376
Virginia	44,707	--	8,550	300	--	--	6,092	47,465	47,465	--	--	2,758
Washington	17,182	--	--	--	--	1,149	--	18,331	--	--	18,331	1,149
West Virginia	2,265,581	68	154,525	2,292	8,130	28,529	147,789	2,311,336	1,887,516	50,853	372,987	45,755
Wyoming	3,917,387	-269,769	64,149	72,391	216,761	1,384	299,144	3,703,159	3,093,188	555,715	54,306	-214,228
Total United States	287,182,407	383,449	6,027,453	2,423,382	1,649,424	302,561	19,718,570	238,200,176	156,785,551	67,173,979	4,240,646	-8,932,921

See footnotes at end of table.

Table 15.—Estimated total proved reserves of natural gas in the United States—Continued
(Million cubic feet at 14.73 psia and 60° F)

State	Changes in reserves during 1975										Reserves as of December 31, 1975		
	Reserves as of Dec. 31, 1974	Revisions	Extensions	New field discoveries	New reservoir discoveries in old fields	Net change in underground storage ¹	Production ²	Total gas	Non-associated	Associated-dissolved	Underground storage ³	Net change in reserves	
Gulf of Mexico detail: ⁶													
Louisiana ----	32,420,492	2,982,205	1,417,045	998,981	304,614	--	3,907,590	34,215,747	29,904,289	4,311,458	--	1,795,255	
Texas -----	2,927,349	215,667	21,881	132,954	30,298	--	211,254	3,116,895	2,974,822	142,073	--	189,546	
Total Gulf of Mexico ---	35,347,841	3,197,872	1,438,926	1,131,935	334,912	--	4,118,844	37,332,642	32,879,111	4,453,531	--	1,984,801	

¹ The net difference between gas stored in and gas withdrawn from underground storage reservoirs, inclusive of adjustments and native gas transferred from other reserve categories. (Adjustments include change of reporting basis starting in 1974 to report only gas reserves considered recoverable, in effect, reducing gas reserves by 1,024,140 MMcf that would have been reported since 1972 using the former basis.)

² Preliminary net production.

³ Proved recoverable gas contained in underground gas storage reservoirs, including native and net injected gas. (First reported on a recoverable basis in 1973.)

⁴ Includes offshore.

⁵ Reported quantities include reserves estimated to be recoverable from some reservoirs considered natural gas bearing based on electrical logs, core data and other available engineering and geological data.

⁶ Included with Louisiana and Texas.

Source: Committee on Natural Gas Reserves, American Gas Association.

Table 16.—Underground storage statistics, December 31, 1975
(Million cubic feet at 14.73 psia and 60° F)

State	Number of reservoirs	Type of reservoir					Number of wells	Total stored gas in underground reservoirs (million cubic feet)	Total reservoir capacity (million cubic feet)
		Non-associated gas	Oil and gas	Oil	Water	Other			
Arkansas -----	5	5	--	--	--	--	22	11,920	42,571
California -----	8	5	3	--	--	--	355	202,157	424,494
Colorado -----	7	4	2	--	--	--	66	18,822	37,280
Illinois -----	31	8	--	--	22	11	66	74,363	161,488
Indiana -----	27	17	--	1	10	--	1,580	674,629	974,706
Iowa -----	8	--	--	--	8	--	892	74,363	161,488
Kansas -----	17	17	--	--	--	--	356	183,465	354,500
Kentucky -----	21	15	2	--	--	--	771	98,135	127,495
Louisiana -----	6	6	--	--	4	--	1,144	102,236	203,068
Maryland -----	1	1	--	--	--	--	135	196,501	274,022
Michigan -----	40	35	1	1	--	--	68	26,004	64,770
Minnesota -----	1	--	--	1	--	23	2,642	498,265	861,379
Mississippi -----	4	3	--	--	1	--	46	4,925	20,000
Missouri -----	1	--	--	--	--	21	69	65,465	108,077
Montana -----	5	5	--	--	1	--	82	29,278	45,000
Nebraska -----	1	1	--	--	--	--	134	133,086	213,152
New Mexico -----	2	1	--	--	--	--	15	27,487	39,270
New York -----	19	19	--	--	1	--	46	23,349	35,125
Ohio -----	22	22	--	--	--	--	766	109,858	146,609
Oklahoma -----	12	11	1	--	--	--	3,102	387,470	507,797
Pennsylvania -----	68	68	--	--	--	--	221	231,776	337,143
Texas -----	18	7	6	5	--	--	2,071	607,714	765,497
Utah -----	2	--	--	--	2	--	223	110,421	334,265
Washington -----	2	--	--	--	2	--	12	3,990	3,990
West Virginia -----	38	37	1	--	2	--	71	21,784	23,438
Wyoming -----	10	9	--	--	1	--	1,328	391,193	455,018
Total -----	376	296	16	7	52	5	16,246	4,276,984	6,643,539

¹ Coal.² Salt.

Source: American Gas Association.

Table 17.—Natural gas stored and withdrawal statistics
(Million cubic feet at 14.73 psia)

State	1974			1975		
	Total stored	Total withdrawn	Net stored	Total stored	Total withdrawn	Net stored
Alabama	410	621	-211	434	532	-98
Alaska	13,253	--	13,253	15,555	--	15,555
Arkansas	1,783	1,448	335	1,555	1,225	330
California	129,945	50,411	79,534	105,167	101,101	4,066
Colorado	11,444	12,354	-910	13,420	15,885	-2,465
Connecticut	740	1,241	-501	746	2,017	-1,271
Delaware	--	--	90	2,012	1,463	549
Georgia	123	33	90	366	27	339
Idaho	112	--	112	395	--	395
Illinois	232,284	184,540	47,744	294,689	225,333	69,306
Indiana	36,070	37,283	-1,213	43,845	39,626	4,219
Iowa	56,505	44,114	12,391	59,065	53,404	5,661
Kansas	45,642	37,156	8,487	52,045	38,077	13,968
Kentucky	50,903	49,047	1,856	70,609	58,571	12,038
Louisiana	81,960	79,140	2,820	149,966	91,281	58,685
Maryland	11,016	9,724	1,292	6,830	8,267	-1,437
Massachusetts	403	2,110	-1,707	3,912	1,727	2,185
Michigan	287,776	305,092	-17,316	322,960	294,867	28,093
Minnesota	1,502	979	523	839	843	-4
Mississippi	25,439	25,409	30	27,345	27,393	-53
Missouri	9,413	8,225	1,188	8,653	8,690	-32
Montana	19,791	14,347	5,444	13,090	21,725	-8,635
Nebraska	5,667	363	5,304	5,459	778	4,681
New Jersey	3,953	3,329	624	6,378	2,509	3,869
New Mexico	12,539	58	12,531	4,160	850	3,310
New York	56,403	53,712	2,691	43,207	45,493	-2,291
North Carolina	2,626	2,433	143	2,019	1,910	109
Ohio	152,530	178,990	-26,410	183,032	145,224	37,308
Oklahoma	70,076	78,355	-8,279	87,459	84,476	2,983
Oregon	5	--	5	46	--	46
Pennsylvania	265,901	306,543	-40,647	332,133	280,307	51,876
Rhode Island	243	654	-411	137	678	-541
South Carolina	30	53	27	70	116	-46
Tennessee	1,750	804	946	2,325	1,797	528
Texas	54,705	55,309	-604	54,333	50,801	3,532
Utah	999	317	682	1,340	602	738
Virginia	112	253	-146	1,079	2,472	-1,393
Washington	7,933	5,510	2,433	12,009	12,108	-99
West Virginia	124,983	141,995	-17,007	161,604	126,860	34,744
Wisconsin	--	331	-331	--	428	-428
Wyoming	7,025	8,199	-1,174	13,276	10,042	3,234
Total	1,784,209	1,700,546	83,663	2,103,619	1,759,565	344,054

Table 18.—Quantity and value of marketed production of natural gas in the United States

State	1974			1975		
	Quantity (million cubic feet) ¹	Value (thousands)	Average wellhead value (cents per Mcf)	Quantity (million cubic feet) ¹	Value (thousands)	Average wellhead value (cents per Mcf)
Alabama -----	27,865	\$20,704	74.3	37,814	\$32,898	87.0
Alaska -----	128,985	21,919	17.0	160,270	48,402	30.2
Arizona -----	224	45	20.0	208	58	28.0
Arkansas -----	128,975	32,234	26.0	116,237	40,834	34.7
California -----	365,354	160,756	44.0	318,308	222,816	70.0
Colorado -----	144,629	28,926	20.0	171,629	44,624	26.0
Florida -----	38,137	20,441	53.6	44,883	43,185	97.3
Illinois -----	1,436	574	40.0	1,440	1,008	70.0
Indiana -----	176	25	14.0	346	135	39.0
Kansas -----	886,782	147,206	16.6	843,625	145,103	17.2
Kentucky -----	71,876	35,988	50.0	60,511	32,676	54.0
Louisiana -----	7,753,631	2,380,865	30.7	7,090,645	2,999,179	42.3
Maryland -----	133	82	24.0	93	25	27.0
Michigan -----	69,133	34,843	50.4	102,113	64,740	63.4
Mississippi -----	78,787	28,242	29.5	74,345	36,876	49.6
Missouri -----	33	10	31.4	80	10	34.0
Montana -----	54,873	13,883	25.3	40,784	17,638	43.3
Nebraska -----	2,538	863	34.0	2,565	1,388	54.1
New Mexico -----	1,244,779	390,861	31.4	1,217	493,059	40.5
New York -----	4,990	2,745	55.0	7,628	5,645	74.0
North Dakota -----	31,206	6,210	19.9	24,786	5,701	23.0
Ohio -----	92,055	44,371	48.2	84,960	59,982	70.6
Oklahoma -----	1,638,942	458,904	28.0	1,605,410	513,731	32.0
Pennsylvania -----	82,637	36,360	44.0	84,676	57,156	67.5
Tennessee -----	17	6	36.0	27	12	43.0
Texas -----	8,170,798	2,541,118	31.1	7,485,764	3,885,112	51.9
Utah -----	50,522	20,815	41.2	55,354	26,570	48.0
Virginia -----	7,096	3,619	51.0	6,723	3,462	51.5
West Virginia -----	202,306	66,356	32.8	154,484	57,005	36.9
Wyoming -----	326,657	80,031	24.5	316,123	106,533	33.7
Total -----	21,600,522	6,573,402	30.4	20,108,661	8,945,062	44.5

¹ Marketed production natural gas represents gross withdrawals less gas used for repressuring and quantities vented and flared.

Source: Figures based on reports received from State agencies and Bureau of Mines estimates.

Table 19.—Average wholesale prices for 14 large cities and adjacent areas (Cents per Mcf)

Standard metropolitan statistical area	July 1, 1969	July 1, 1970	July 1, 1971	July 1, 1972 ¹	July 1, 1973 ¹	July 1, 1974 ¹	July 1, 1975 ¹
Baltimore -----	41.98	43.98	52.60	53.22	54.51	65.21	96.40
Boston -----	68.64	65.76	76.17	76.73	83.61	114.10	133.14
Chicago -----	29.63	31.93	36.04	36.65	44.76	55.66	72.68
Cleveland -----	40.50	44.64	49.09	52.90	52.14	62.72	73.72
Detroit -----	38.82	39.91	41.48	47.34	51.21	58.51	82.14
Los Angeles ² -----	31.60	34.63	38.78	40.74	42.25	50.53	74.57
Minneapolis-St. Paul -----	36.29	36.80	42.59	45.14	52.03	55.67	67.93
Newark (and New Jersey suburbs of New York) -----	43.90	43.45	47.18	53.61	56.91	77.02	97.84
New York -----	41.52	42.51	45.98	51.93	54.17	71.64	93.78
Philadelphia -----	43.20	43.42	46.90	53.23	56.64	76.53	95.80
Pittsburgh -----	38.37	43.44	49.78	49.26	48.24	65.07	75.30
St. Louis (Missouri portion only) -----	33.77	37.26	47.62	49.37	53.96	61.18	90.23
San Francisco-Oakland ² -----	30.81	33.67	35.17	36.52	39.24	49.01	94.27
Washington, D.C. -----	47.13	51.06	61.64	60.29	59.74	71.60	103.51

¹ Reflects contingent rates in effect subject to subsequent reduction and refunds as of July 1 of year indicated.

² Deliveries are not at city gates. Distributors must transport from State lines (California-Oregon and California-Arizona).

Source: Federal Power Commission.

Table 20.—Average price of residential heating gas by area 1968-76
(Dollars per 10 therms)

Standard metropolitan statistical area	January 1968	January 1969	January 1970	January 1971	January 1972	January 1973	January 1974	January 1975	January 1976
Atlanta	0.824	0.824	0.824	0.824	1.009	1.107	1.117	1.218	1.411
Baltimore	1.295	1.265	1.332	1.327	1.513	1.513	1.564	2.017	2.400
Boston	1.498	1.436	1.499	1.568	1.802	1.814	2.103	2.685	3.155
Buffalo	.870	.905	.932	1.028	1.218	1.228	1.461	1.864	1.947
Chicago-Northwest Indiana	.944	.895	.965	1.021	1.110	1.130	1.207	1.432	1.622
Cincinnati	.771	.752	.799	.812	.943	.974	.992	1.328	1.555
Cleveland	.793	.732	.747	.858	.896	.938	.928	1.229	1.405
Dallas	.740	.755	.847	.849	.863	.890	.888	.914	1.312
Detroit	.850	.850	.866	.873	.953	.998	1.155	1.350	1.569
Houston	.772	.871	.875	.923	.957	1.000	1.042	1.499	2.229
Kansas City	.569	.609	.681	.669	.717	.720	.771	.929	1.053
Milwaukee	1.067	1.101	1.247	1.272	1.350	.891	1.446	1.675	2.157
Minneapolis-St. Paul	.810	.851	.877	.913	.998	1.073	1.119	1.354	1.439
New York-Northeast New Jersey	1.290	1.290	1.320	1.368	1.660	1.660	1.887	2.298	3.015
Philadelphia	1.379	1.380	1.381	1.480	1.459	1.531	1.714	2.009	2.380
Pittsburgh	.809	.845	.880	.970	1.018	1.064	1.144	1.418	1.607
St. Louis	.838	.842	.916	.979	1.093	1.097	1.173	1.454	1.654
San Francisco-Oakland	.608	.610	.622	.714	.762	.840	.920	1.291	1.530
Seattle	1.150	1.150	1.159	1.159	1.249	1.270	1.580	1.886	2.421
Washington, D.C.	1.287	1.315	1.362	1.360	1.505	1.569	1.599	2.149	2.482
U.S. average	.838	.844	.874	.920	1.010	1.047	1.183	1.379	1.943

Source: Bureau of Labor Statistics, monthly release, "Retail Prices and Indexes of Fuels and Electricity", table 7; U.S. average table 2.

Table 21.—Liquefied natural gas (LNG) exports, 1975 ¹

	Phillips Petroleum Co.	Marathon Oil Co.	Total
Volume shipped:			
Barrels ----- 42 U.S. gallons --	10,603,275	4,566,111	15,169,386
Thousand-cubic-foot equivalent per 14.73 psia --	37,031,736	15,970,229	53,001,965
Average Btu per cubic foot -----	1,010	1,010	1,010
Value:			
Total dollars -----	51,075,578	22,044,291	73,119,869
Average price -- cents per thousand cubic feet _	137.92	138.03	137.96

¹ All shipments were to Japan from Port Nikiski, Alaska.

Source: Federal Power Commission.

Table 22.—Natural gas exports via pipeline: Volume, value, and unit cost, 1974-75

Exporting companies	Point of exit	Gas volume (thousand cubic feet at 14.73 psia and 60° F)		Percent change	Value (thousands)		Average price (cents per thousand cubic feet)		
		1974	1975		1974	1975	1974	1975	
EXPORTS TO CANADA									
Interstate company: Panhandle Eastern Pipe Line Co	Detroit River-River Rouge, Mich	13,231,763	10,153,173	(25.3)	\$3,473,472	\$7,918,872	64.04	77.99	
Intrastate company: The Montana Power Co	Sweetgrass, Mont	31,030	66,173	113.3	14,262	54,366	45.96	82.16	
Total Canada ¹		13,262,793	10,219,351	(22.9)	8,478,734	7,973,238	64.00	78.02	
EXPORTS TO MEXICO									
Interstate company: El Paso Natural Gas Co	Naco, Ariz	4,217,318	3,223,030	(23.6)	2,431,556	2,473,125	57.66	76.73	
Intrastate companies:									
Del Norte Natural Gas Co	El Paso, Tex	3,596,592	3,713,297	5.3	2,301,698	3,107,474	65.26	83.69	
Texas Gas Utilities Co	Eagle Pass, Tex	1,429,862	774,672	(47.0)	1,201,992	1,264,534	82.17	161.94	
Do	Laredo, Tex	2,953,605	558,782	(81.1)	2,432,332	397,366	84.06	160.68	
United Gas, Inc	do	1,108,076	1,133,620	6.3	934,437	2,045,010	84.33	172.78	
Total		9,051,134	6,230,371	(31.2)	6,921,019	7,304,884	76.47	117.25	
Total Mexico		13,268,452	9,453,401	(28.8)	9,352,575	9,778,009	70.49	103.43	
Grand total exports		26,531,245	19,672,752	(25.9)	17,840,309	17,751,247	67.24	90.23	

¹ In addition Northern Natural Gas Co. delivered 15,765,132 Mcf gas produced from the Tiger Ridge area, Mont., to Consolidated Natural Gas Co. at a point on the Montana-Saskatchewan border for transportation and received 15,767,658 Mcf gas into its line again on Minnesota-Manitoba border, near Emerson, Manitoba.

Source: Federal Power Commission.

Table 23.—Natural gas imports via pipeline: Volume, value, and unit cost, 1974-75

Importing companies	Point of entry	Gas volume (thousand cubic feet at 14.73 psia and 60° F.)		Percent change	Value (thousands)		Average price (cents per thousand cubic feet)	
		1974	1975		1974	1975	1974	1975
IMPORTS FROM CANADA								
Interstate companies:								
Great Lakes Gas Transmission Co	Noyes, Minn	1110,278,903	1,109,885,018	(0.4)	\$46,398,980	\$130,509,311	42.07	118.77
Inter-City Wisconsin Pipeline Ltd	Warroad, Minn. ²	87,773,545	87,206,073	(7.3)	4,662,888	8,013,217	53.70	111.50
Michigan Wisconsin Pipe Line Co	Noyes, Minn	318,259,000	18,250,000	--	7,318,419	21,684,077	42.84	118.54
Midwestern Gas Transmission Co	do	113,797,168	118,286,967	(1.3)	49,931,646	139,970,348	41.40	118.52
Northwest Pipeline Corp	Summas, Wash. ⁴	238,905,328	212,166,893	(11.2)	168,949,677	254,016,231	70.72	119.72
Do	Eastport, Idaho ⁴	47,841,435	50,275,976	6.1	22,991,765	61,423,563	48.06	122.17
Pacific Gas Transmission Co	do	357,657,900	380,282,414	6.3	198,151,071	469,714,574	55.40	123.63
Total interstate ⁵		900,504,279	896,313,341	(5)	498,463,841	1,085,281,611	55.35	121.08
Intrastate companies:								
The Montana Power Co	Whitlash, Mont	18,692,519	13,441,579	(28.1)	9,164,840	14,969,866	49.03	111.37
Do	Babb, Mont	29,418,757	28,738,911	(2.3)	15,696,821	35,683,760	53.35	124.17
St. Lawrence Gas Co. Inc	Massena, N.Y	5,566,108	5,496,658	(1.1)	4,209,852	6,657,848	75.77	121.13
Vermont Gas Systems, Inc	Highgate, Vt	4,890,860	4,124,171	(15.7)	3,832,048	4,872,330	68.13	118.14
Total intrastate		58,568,244	51,801,319	(11.5)	32,403,161	62,183,899	55.33	120.04
Total Canada		959,062,523	948,114,660	(1.1)	530,867,002	1,147,465,510	55.35	121.03
IMPORTS FROM MEXICO								
Interstate company: Texas Eastern Transmission Corp	McAllen, Tex	222,432	--	(100.0)	37,309	--	16.77	--
Grand total imports		959,284,955	948,114,660	(1.1)	530,904,311	1,147,465,510	55.34	121.03

¹ Includes the difference between the 288,533,155 Mcf received from TransCanada Pipelines Ltd. for transportation and the 287,255,222 Mcf redelivered to TransCanada at St. Clair and Sault Ste. Marie, Mich.

² Second port of entry is International Falls, Minn.

³ Includes the difference between the 10,044,212 Mcf received from TransCanada Pipelines Ltd. for transportation and 9,653,788 Mcf redelivered to TransCanada Pipelines Ltd. at Baudette, Minn.

⁴ Volumes and cost data include the gas imports reported by El Paso Natural Gas Co. for 1974 and the month of January 1975 after which Northwest Pipeline Corp. imported the volumes formerly imported by El Paso.

⁵ In addition, Tennessee Gas Pipeline Co. exchanged 211,524 gas with TransCanada Pipelines Ltd. at Niagara, N.Y.

Table 24.—Liquefied natural gas (LNG) imports, 1975¹

Volume received:	
42-gallon barrels -----	1,401,149
Mcf equivalent at 14.73 psia ---	4,892,949
Average Btu per cubic foot ----	1,057
Value:	
Total dollars -----	3,640,515
Average price cents per Mcf ----	74.40

¹ All shipments were from Algeria to the Dis-trigars Corp. terminal at Everett, Mass.

Source: Federal Power Commission.

Table 25.—Natural gas: World production by country (Million cubic feet)

Country ¹	1973		1974		1975 ^P	
	Gross production ²	Marketed production ³	Gross production ²	Marketed production ³	Gross production ²	Marketed production ³
North America:						
Barbados -----	^e 140	127	^r ^e 90	85	^e 125	120
Canada -----	3,566,650	3,119,461	3,497,225	3,045,506	3,488,798	3,075,693
Cuba -----	^e 920	494	^e 930	671	^e 930	^e 700
Mexico -----	676,750	541,772	744,673	560,911	786,458	583,876
Trinidad and Tobago						
Tobago -----	113,500	^r 64,353	127,686	58,240	102,395	^e 55,000
United States ..	24,067,202	22,647,549	22,849,793	21,600,522	21,103,530	20,108,661
South America:						
Argentina -----	314,793	^r 237,631	332,839	255,748	362,860	271,639
Bolivia -----	151,199	57,857	144,128	60,539	137,297	66,374
Brazil -----	41,668	8,970	52,970	17,587	57,386	^e 20,000
Chile -----	⁴ 260,496	144,937	⁴ 248,687	127,503	⁴ 250,625	185,751
Colombia -----	113,229	65,045	116,634	65,792	120,754	65,905
Ecuador -----	^r 11,477	989	11,159	^e 1,000	10,559	^e 1,100
Peru -----	64,005	34,184	69,848	35,697	67,037	^e 35,000
Venezuela -----	1,745,702	459,936	1,639,511	475,969	1,342,234	450,295
Europe:						
Albania -----	⁵ 6,710	6,710	^e ⁵ 7,170	^e 7,170	^e ⁵ 7,190	^e 7,190
Austria ⁶ -----	80,163	77,335	77,930	73,957	83,305	79,869
Belgium ⁷ -----	⁵ 1,949	1,949	⁵ 2,246	2,246	⁵ 1,822	1,822
Bulgaria -----	⁵ 7,840	7,840	⁵ 6,357	6,357	^e ⁵ 5,300	^e 5,300
Czechoslovakia ⁶ -----	⁵ 36,798	36,798	⁵ 34,432	34,432	⁵ 30,088	30,088
Denmark ^e -----	2,191	(⁸)	1,034	(⁸)	1,992	(⁸)
France -----	387,753	261,680	392,697	269,414	382,159	259,773
Germany, East						
East -----	⁵ 247,625	247,625	⁵ 273,052	273,052	⁵ 280,000	280,000
Germany, West ⁶						
West -----	706,131	705,895	734,787	713,202	645,445	639,414
Hungary -----	^r ⁵ 170,251	^r ⁵ 170,251	⁵ 180,139	⁵ 180,139	⁵ 183,000	⁵ 183,000
Italy -----	⁵ 540,993	540,993	⁵ 540,363	540,363	⁵ 514,252	514,252
Netherlands -----	2,501,467	2,494,687	2,956,707	2,956,671	⁵ 3,208,428	3,208,428
Norway -----	16,759	(⁸)	19,700	(⁸)	106,800	(⁸)
Norway -----	⁵ 212,840	212,840	⁵ 202,670	202,670	⁵ 210,580	210,580
Poland ^e -----	^r 1,032,526	^r 980,083	1,063,495	1,011,513	^e 1,165,526	953,527
Romania -----	⁵ 114	114	⁵ 35	35	⁵ 42	42
Spain -----	^e 8,800,000	^r 8,345,735	^e 9,700,000	9,201,299	^e 10,760,000	10,205,890
U.S.S.R.						
United Kingdom ^e ..	⁵ 1,018,400	1,018,400	⁵ 1,230,039	1,230,039	⁵ 1,208,180	1,208,180
Yugoslavia -----	⁵ 46,933	46,933	⁵ 51,100	51,100	⁵ 54,879	54,879
Africa:						
Algeria -----	^r ^e 760,000	167,567	700,251	198,502	739,874	^e 210,000
Angola ^e -----	36,000	2,300	^e 37,500	^e 2,400	^e 35,000	2,300
Congo (Brazzaville)						
Brazzaville -----	^r 15,800	^r 551	23,000	664	14,000	591
Egypt -----	30,700	^e 3,100	49,700	^e 15,000	50,600	^e 40,000
Gabon -----	^r ^e 56,900	^r 10,000	62,507	22,495	60,458	9,252
Libya -----	^r 575,026	⁹ 385,246	425,363	⁹ 345,199	489,035	⁹ 382,633
Morocco -----	^r 2,962	^r 2,295	2,814	2,084	2,501	^e 2,000
Nigeria -----	735,813	10,700	1,017,774	14,255	658,839	16,094
Rwanda -----	⁵ 35	35	⁵ 35	35	⁵ 35	⁵ 35
Tunisia -----	4,513	4,026	^e 7,600	7,098	35,315	7,497

See footnotes at end of table.

Table 25.—Natural gas: World production by country—Continued
(Million cubic feet)

Country ¹	1973		1974		1975 ^p	
	Gross production ²	Marketed production ³	Gross production ²	Marketed production ³	Gross production ²	Marketed production ³
Asia:						
Afghanistan --	^r 110,005	^r 110,005	⁵ 113,006	113,006	105,944	98,881
Bahrain -----	82,855	¹⁰ 56,575	100,010	¹⁰ 68,255	101,546	73,343
Bangladesh -----	⁵ 32,000	32,000	17,241	17,223	⁵ 33,000	33,000
Brunei -----	^e 220,000	101,670	243,811	176,820	268,390	186,531
Burma ¹¹ -----	12,000	5,400	^e 11,000	^e 4,900	^e 9,700	5,600
China, People's Republic of ^e	1,100,000	950,000	1,400,000	1,200,000	1,600,000	1,400,000
India -----	59,124	32,242	67,733	25,320	81,575	35,244
Indonesia -----	^r 177,667	28,425	202,423	^e 40,000	222,227	82,224
Iran -----	1,698,691	701,678	1,766,721	787,360	1,603,384	771,057
Iraq -----	308,260	⁹ 42,731	329,237	⁹ 41,988	368,648	⁹ 58,410
Israel -----	^r 1,907	1,907	⁵ 2,327	2,327	^e 2,105	2,105
Japan ⁶ -----	^e 104,000	102,553	102,000	100,540	^e 88,000	86,026
Kuwait ¹² -----	581,065	186,045	466,939	186,894	382,367	183,792
Malaysia (Sarawak) -	^e 35,000	3,187	^e 31,000	^e 2,800	^e 33,000	3,137
Oman ^e -----	90,000	1,500	90,000	1,500	105,000	1,700
Pakistan -----	^r 155,383	^r 155,383	⁵ 175,000	175,000	⁵ 164,101	164,101
Qatar -----	^r 219,409	^r 55,797	181,905	⁹ 45,909	192,005	^e 78,010
Saudi Arabia ¹²	1,564,150	^e 160,000	1,670,729	^e 219,000	1,335,312	^e 200,000
Syria -----	^e 37,000	6,992	^e 40,000	6,356	^e 58,000	^e 7,000
Taiwan -----	51,358	^e 51,000	56,034	55,372	55,604	54,702
Turkey ^e -----	^r 4,900	^r 2,450	^r 4,900	^r 2,450	4,600	2,300
United Arab Emirates:						
Abu Dhabi --	483,456	^r 44,178	460,995	⁹ 42,377	432,002	^e 38,493
Dubai ^e --	^r 88,000	17,000	101,000	19,000	102,000	20,000
Sharjah ^e --	--	--	9,000	(8)	15,000	(8)
Oceania:						
Australia -----	⁵ 144,754	144,754	⁵ 159,339	159,339	⁵ 177,477	177,477
New Zealand -	9,339	^r 9,323	10,647	10,594	^e 11,500	11,442
Total -----	^r 56,533,246	^r 46,127,788	57,449,694	47,171,491	56,323,121	47,207,325

^e Estimate. ^p Preliminary. ^r Revised.

¹ In addition to the countries listed, Thailand produces crude oil and presumably produces natural gas but available information is inadequate to estimate output levels.

² Comprises all marketed production (see footnote 3) plus gas vented, flared, reinjected for repressuring or for storage and used to drive gas turbines without being burned.

³ Comprises all gas collected and utilized as a fuel or as a chemical industry raw material as well as that used for gas lift in fields, including gas used in oilfields and gasfields as a fuel by producers, even though it is not actually sold.

⁴ Gas vented or flared is apparently not included; difference between gross production and marketed production is the amount reinjected into reservoirs.

⁵ Gross production not reported, marketed output has been reported in lieu of estimating gross output because the quantity vented, flared or reinjected is believed to be small.

⁶ Includes output from coal mines as follows, in million cubic feet: Austria: 1973—71, 1974—71, 1975—70 (estimate); Czechoslovakia: 1973—11,159, 1974—10,806, 1975—10,500 (estimate); West Germany: 1973—21,577, 1974—17,940, 1975—16,000 (estimate); the Netherlands: 1973—671, 1974 and 1975—0; Poland: 1973—7,628, 1974—7,451, 1975—7,400 (estimate); the United Kingdom: 1973—4,484, 1974—3,991, 1975—3,800 (estimate); Japan: 1973—10,806, 1974—9,747, 1975—9,500 (estimate).

⁷ Total production is obtained from coal mines.

⁸ No marketed production reported; there probably is some small field use in Denmark, Norway and Sharjah, and in Norway there was extraction of natural gas liquids reported in each year 1973—75, but available information is inadequate to permit reliable estimation of output levels.

⁹ Includes gas reinjected to reservoirs, if any.

¹⁰ Excludes gas used for gas lift.

¹¹ Data are for year ending June 30 of that stated.

¹² Includes $\frac{1}{2}$ of production reported for the former Kuwait-Saudi Arabia Neutral Zone.

