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Preface

The *Natural Gas Monthly (NGM)* is prepared in the Data Operations Branch of the Reserves and Natural Gas Division, Office of Oil and Gas, Energy Information Administration (EIA), U.S. Department of Energy (DOE).

General questions and comments regarding the *NGM* may be referred to Kendrick E. Brown, Jr. (202) 586-6077, James M. Todaro, (202) 586-6305, or Eva M. Fleming, (202) 586-6113. Specific technical questions may be referred to the appropriate persons listed in Appendix E.

The *NGM* highlights activities, events, and analyses of interest to public and private sector organizations associated with the nat ral gas industry. Volume and price data are presented each month for natural gas production, distribution, consumption, and interstate pipeline activities. Producer-related activities and underground storage data are also reported. From time to time, the *NGM* features articles designed to assist readers in using and interpreting natural gas information.

The data in this publication are collected on surveys conducted by the EIA to fulfill its responsibilities for gathering and reporting energy data. Some of the data are collected under the authority of the Federal Energy Regulatory Commission (FERC), an independent commission within the DOE, which has jurisdiction primarily in the regulation of electric utilities and the interstate natural gas industry. Geographic coverage is the 50 States and the District of Columbia.

Explanatory Notes supplement the information found in tables of the report. A description of the data collection surveys that support the *NGM* is provided in the Data Sources section. A glossary of the terms used in this report is also provided to assist readers in understanding the data presented in this publication.

All natural gas volumes are reported at a pressure base of 14.73 pounds per square inch absolute (psia) and at 60 degrees Fahrenheit.

Common Abbreviations Used in the Natural Gas Monthly

AGA	American Gas Association
Bbl	Barrels
BLS	Bureau of Labor Statistics, U.S. Department of Labor
Bcf	Billion Cubic Feet
BOM	Bureau of Mines, U.S. Department of the Interior
Btu	British Thermal Unit
DOE	U.S. Department of Energy
DOI	U.S. Department of the Interior
EIA	Energy Information Administration, U.S. Department of Energy
FERC	Federal Energy Regulatory Commission
IOCC	Interstate Oil Compact Commission
LNG	Liquefied Natural Gas
Mcf	Thousand Cubic Feet
MMBtu	Million British Thermal Units
MMcf	Million Cubic Feet
MMS	United States Minerals Management Service, U.S. Department of the Interior
NGL	Natural Gas Liquids
NGPA	Natural Gas Policy Act of 1978
OCS	Outer Continental Shelf
PGA	Purchased Gas Adjustment
Tcf	Trillion Cubic Feet

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Background on the Natural Gas Industry

by Mary E. Carlson, Joan Heinkel, David F. Morehouse, William Trapmann, and Dana Van Wagener

Introduction

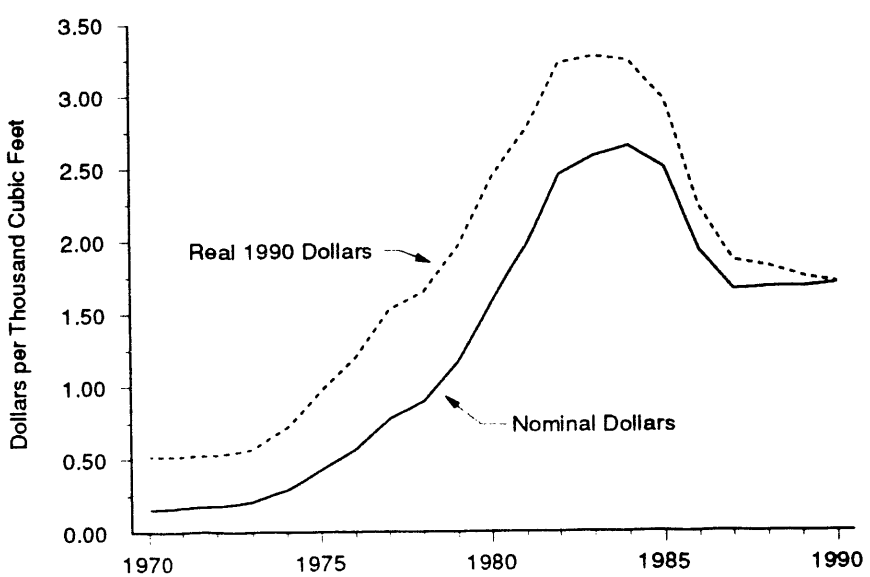
Real natural gas wellhead prices have declined to levels last seen in 1978 (Figure FE1). From 1984 through the first quarter of 1991, the average wellhead price of gas fell in nominal terms from $2.66 to $1.68 per thousand cubic feet (Mcf), and in constant 1990 dollars from $3.25 to $1.64 per Mcf. Recent spot market gas prices have been below $1 per thousand cubic feet in some areas.

A surplus in wellhead deliverability is the major factor in the price decline. This surplus stems from expanding supplies without equivalent increases in demand. Natural gas demand generally declined between 1972 and 1986, as indicated by a 26-percent decrease in gas consumption (Figure FE2). Since 1986, this trend has generally reversed, with consumption increasing from 16.2 trillion cubic feet (Tcf) to 18.8 Tcf in 1989, before declining slightly to 18.7 Tcf in 1990. These higher levels of consumption were not nearly enough to utilize the available wellhead supply fully however, especially considering the growth of imports.

Abundant supplies coupled with declining prices clearly benefit gas consumers in the short run. It is doubtful that the same holds true for the long run, as the implications of low gas prices are far reaching. The financial viability of some firms has been threatened in the short term, while in the long term, the ability of the industry to provide adequate supply may be seriously reduced. Exploration and development activities have declined as the current prices are widely believed to be below replacement cost. Abundant supply conditions are not expected to be sustainable at current price levels.

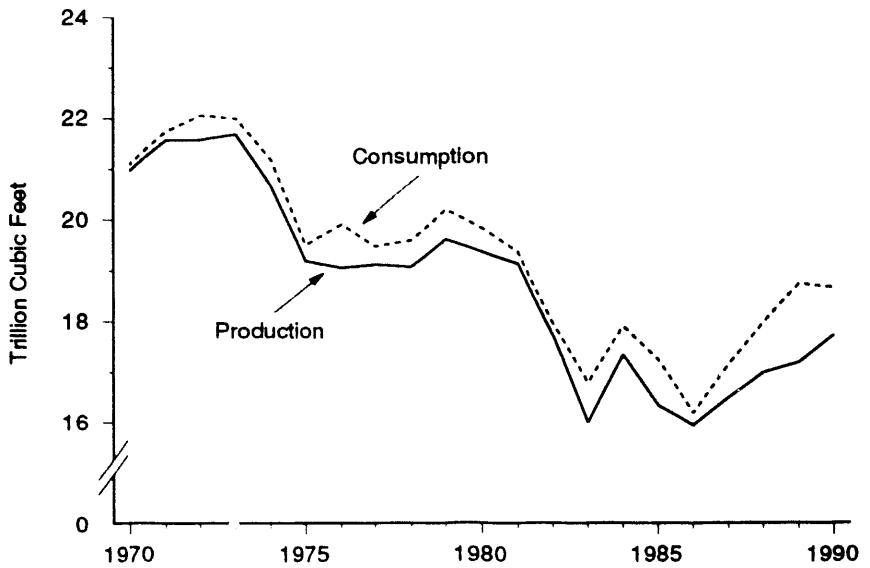
Many factors have contributed to the development of the current situation. Producers' unfulfilled demand and price expectations have resulted in a capacity to produce gas that substantially exceeds current demand.

Figure FE1. Natural Gas Wellhead Prices, Nominal and 1990 Dollars, 1970 - 1990



Sources: Energy Information Administration, *Natural Gas Annual 1990.*

Figure FE2. Natural Gas Domestic Production and Consumption, 1970 - 1990



Sources: Energy Information Administration: **1970-1989**: *Annual Energy Review 1990.* **1990**: *Natural Gas Annual 1990.*

The situation has been exacerbated by several events, all occurring roughly during the same time period. From 1987 through 1990 competitively priced imports increased by 54 percent; warmer than normal heating seasons limited natural gas consumption; and entirely new region-specific gas sources, such as coalbed methane developed. (These new sources partly resulted from favorable Federal tax treatments.) Other factors, such as the removal of Federal regulation of wellhead prices, the reduction of Federal regulation of interstate transportation (including gas sales), the industry's subsequent reactions to these events, and the rise and fall of competing fuel prices, especially petroleum liquids, also affect the industry.

Supply Side Developments

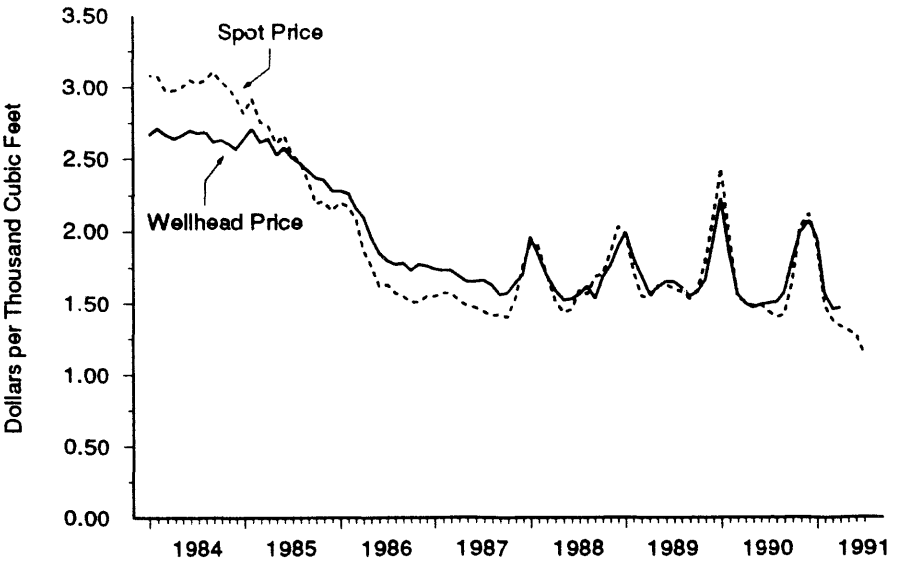
This section focuses on changes in the industry that pertain to natural gas supply. The current supply situation is the result of a set of diverse, and not necessarily complementary, influences. Over the last 2 decades, industry participants have experienced a transition from a highly regulated business environment, in which virtually all aspects were subject to governmental oversight and review, to a much less regulated position. Further, while the natural gas industry was moving toward a more competitive environment, the price of oil surged and fell with changes in the global market, leading to widely varying degrees of competition with petroleum products.

The fluctuations that have buffeted the natural gas industry, planned or unexpected, have changed the industry both on a short-term, cyclical basis and in the longer term. A shift from long-term contracts to spot transactions has led to wellhead prices that vary during the year to an unprecedented degree (Figure FE3). Competition within the industry has accentuated the seasonal nature of the market. Nonetheless, long-term changes affecting the industry are of greater significance and, hence, more interest in understanding the current state of the natural gas industry.

Legislative Changes

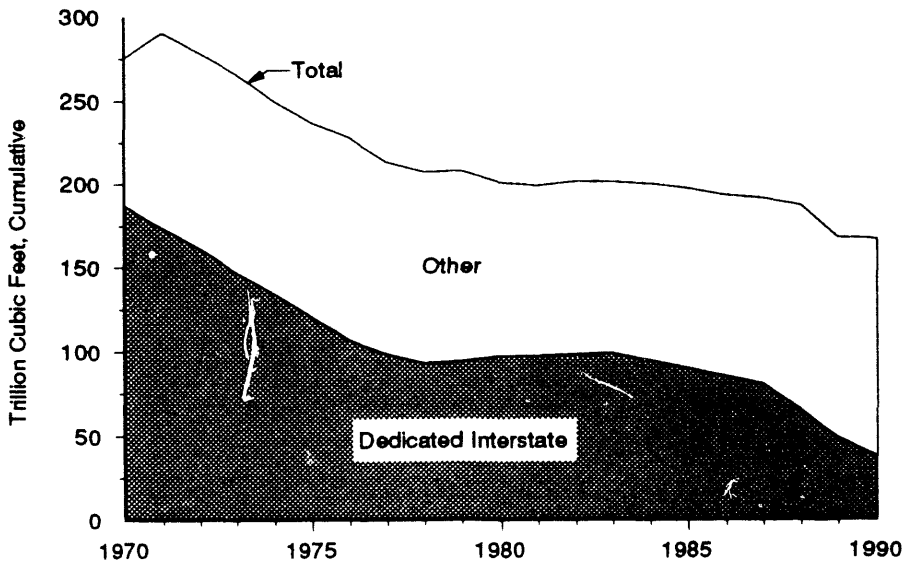
Market conditions in the 1970's provided the motivation for a movement to less regulation. During the 1970's the interstate market for natural gas experienced shortages largely attributed to the failure of Federally regulated wellhead prices to reflect changing market conditions. Interstate price ceilings set by the Federal Power Commission (predecessor to the current Federal Energy Regulatory Commission, or FERC) often constrained interstate prices to below market-clearing levels, encouraging consumption while discouraging investment directed toward supplying gas to the interstate market. Despite plentiful supplies in intrastate markets that were not subject to Federal price controls, shortages eventually appeared in States where supplies were obtained primarily from the interstate pipelines. The inability of interstate pipelines to compete for natural gas supplies is apparent in the drop in their dedicated reserve stocks (Figure FE4).

Figure FE3. Average Wellhead and Spot Natural Gas Prices, 1984 - July 1991



Sources: Energy Information Administration: **Wellhead Prices**: *Natural Gas Monthly*, Monthly Reports January 1987-August 1991. **Spot Prices**: Office of Oil and Gas, derived from various industry publications.

Figure FE4. Natural Gas Proved Reserves, Beginning of Year 1970 - 1990



Sources: Energy Information Administration: **Interstate**: *Gas Supplies of Interstate Natural Gas Pipeline Companies 1989*. **Total**: •1970-1976: *Annual Energy Review 1989*. •1977-1990: *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves*, Annual Reports 1977-1989.

Total U.S. natural gas reserves declined by about 83 trillion cubic feet between the beginning of 1971 and the end of 1978, the year of passage of the Natural Gas Policy Act (NGPA). Reserves dedicated to interstate pipeline companies, however, fell by 80 trillion cubic feet, which is almost 96 percent of the decline in total natural gas reserves. Dedicated interstate reserves constituted 45 percent of the total at the end of 1978 down from roughly 60 percent at the beginning of 1 71. Total proved reserves decreased 20 percent between 1979 and 1990, but most of this decline (60 percent) was the result of a massive negative revision reported for natural gas reserves on the Alaskan North Slope.

The Natural Gas Policy Act of 1978 sought to alleviate market imbalances by providing a gradual movement toward the deregulation of natural gas wellhead markets. The approach was to bring all natural gas wellhead sales, both inter- and intrastate, under a comprehensive multi-tiered pricing regime. Ceiling prices for most "old" gas would remain fixed in constant dollars. Some "old" gas, primarily intrastate, would be decontrolled as of certain dates.

The NGPA provided higher price ceilings and price growth rates for gas from newly drilled wells and for "high-cost" gas. "High-cost" gas included incremental production resulting from the production e tancement of old wells. Further, FERC decontrolled some categories of high-cost gas immediately under the NGPA. Gas within most categories of "new" wells was scheduled for eventual decontrol (beginning in 1985). The ever-higher price ceilings (in both nominal and constant dollars) were intended to stimulate additional supplies and to allow interstate pipeline companies to compete more effectively for the incremental supplies over time, thus reversing the downward trend in their dedicated reserves.

The retention of relatively low price ceilings for old gas and the schedule of gradual price increases and decontrol for other types of gas were intended to stimulate exploration and development of new supplies while protecting consumers from large price increases. The degree of success in meeting these goals may be arguable, however, as the actual course of subsequent events did not conform to anyone's expectations.

However, shortly after passage of the NGPA, the assumptions underlying the Act began to unravel. The price of imported oil soared from $15 per barrel in November 1978, to $39 per barrel in February 1981, destroying the underlying reasoning of the NGPA that intended to provide a smooth transition through the gradual removal of natural gas wellhead price ceilings. The surge in petroleum product prices led consumers to shift toward other, lower priced fuels, thus building demand pressure in the natural gas market. Consequently, wellhead price ceilings even under the NGPA were binding, frustrating the intended loosening of regulatory constraints. Prices paid for the small amount of deregulated gas available at that time show the intensity of natural gas demand. They rose above $10 per thousand cubic feet for a brief period, from 1980 through 1982, and even exceeded the equivalent price of residual fuel oil, the closest gas competitor.

Industry Response to the NGPA

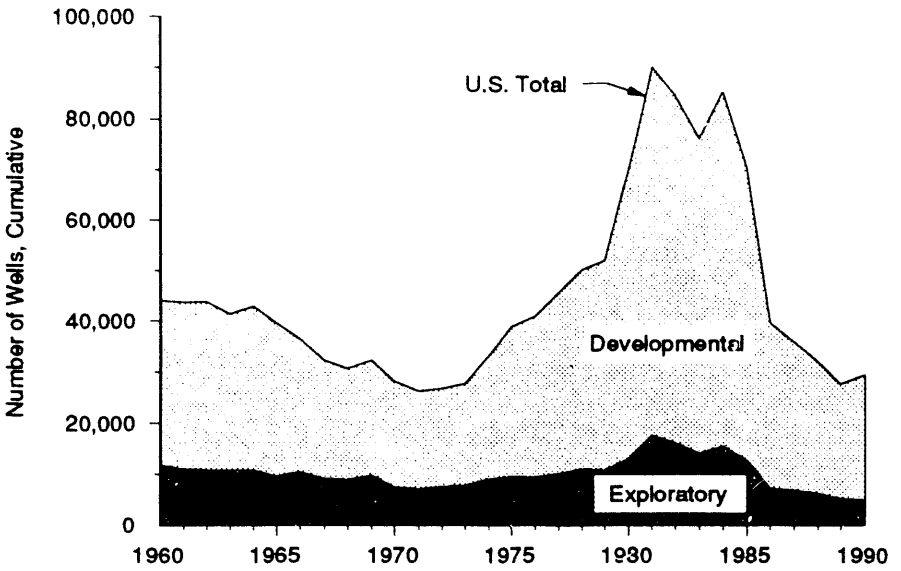
An unprecedented increase in drilling occurred shortly after passage of the NGPA. In general, this increase can be attributed both to higher prices allowed for natural gas under the NGPA and to increases in the price of crude oil on the world market.

Total annual well completions grew by 73 percent between 1979 and 1981 (Figure FE5)--the early years of partial decontrol of wellhead prices and rising crude oil prices. In 1981, drilling peaked at more than 90,000 wells, over three times the level observed just 10 years earlier. Gas wells accounted for about one in three successful wells. This increase in natural gas drilling activity occurred despite a drop in overall consumption of about 2 percent per year and constantly increasing per-well drilling costs.

The high level of drilling occurred when the prices of all types of energy, including natural gas, were expected to increase. Given the previous period of continued price growth, it seemed reasonable to assume that wellhead prices would rise more or less continuously into the future. The ceiling price paths for NGPA Section 102 (new reservoirs) ranged from $3 to $5 per thousand cubic feet during the 1980's. The set of legislated ceiling prices provided a framework that likely reflected or influenced the formation of the industry's price expectations. Realized average wellhead gas prices, however, diverged from the ceiling prices as consumption decreased (Figure FE6). The turnaround from increasing to decreasing average wellhead prices took place in 1984 and 1985. The optimistic outlook of producers regarding prices included the assumption that consumption, and thus sales of produced gas, would remain steady or increase. In fact, consumption weakened and subsequently declined through 1986.

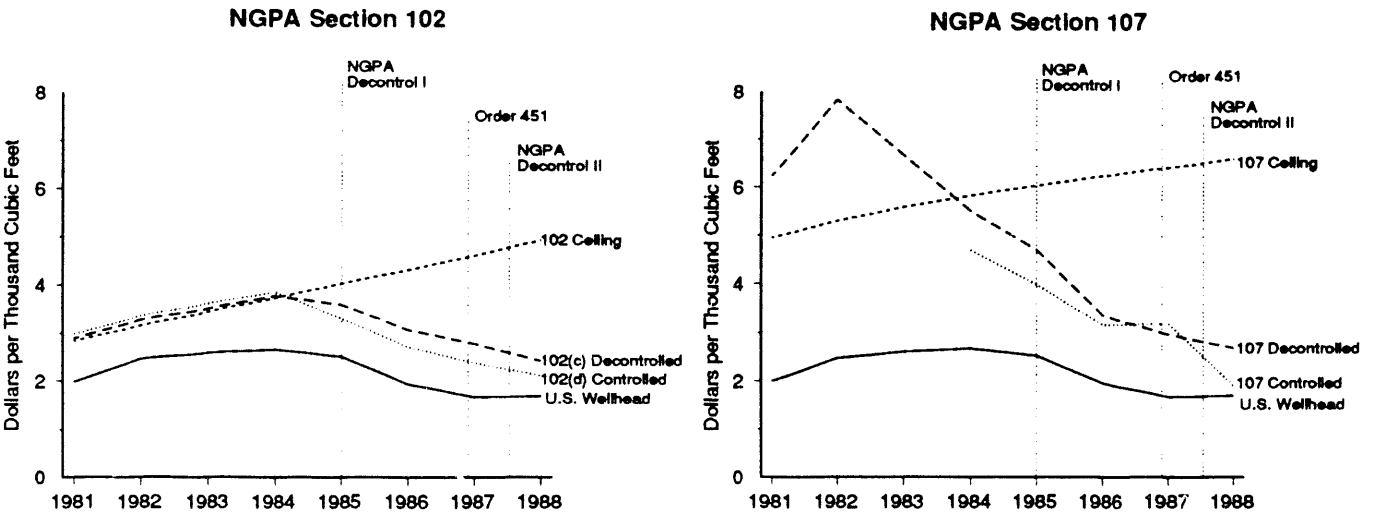
Two major changes concerning gas well drilling occurred from the late 1970's through the 1980's that are not apparent from the number of wells alone. The first change concerns industry practice and the intended targets of the additional gas wells. The second change is a shift in the returns to drilling.

Figure FE5. Annual Well Completions, Exploratory and Developmental, 1960 - 1990



Source: American Petroleum Institute, *Quarterly Completion Report* series, 1960-1990.

Figure FE6. Average Interstate Prices for NGPA Section 102 (New Reservoir Gas) and Section 107 (High-Cost Gas), 1981 - 1988



Note: Actual prices include taxes, gathering and other allowable charges and therefore may exceed the ceiling price.
Sources: Energy Information Administration, *Natural Gas Annual 1989*; Federal Energy Regulatory Commission, Purchased Gas Adjustment Filings.

The generally applied model of field development used until the mid 1970's was based on a standardized gas reservoir. This idealized model relied on the assumption of a homogeneous reservoir with uniform characteristics throughout. This model led to the engineering conclusion that a single well could drain extensive acreage. Over time, this concept was replaced with the idea that the effective radius of drainage for any well is more limited in many gas reservoirs because of the heterogeneity of reservoir characteristics. Thus, according to the new model, the introduction of additional wells into producing reservoirs (infill drilling) would increase overall recovery on average.

Gas well spacing prior to the late 1970's had been rather sparse, frequently with only one well in any 320 or even 640 acres. During the 1980's, regulators lowered acreage per well restrictions as operators showed more interest in the infill development of already producing fields. This shift in policy and practice had significant consequences for the industry. The success of infill drilling programs in terms of additional recovery can be seen in the natural gas reserves statistics. Gas reserves have been remarkably stable throughout most of the 1980's despite a tremendous decrease in the number of exploratory gas completions. The stability may be attributed largely to net positive revisions to the proved reserves of old fields, which in turn were related to the success of infill drilling programs.

An important aspect of these infill programs concerns unit supply costs. The cost of producing gas from infill wells generally is substantially less than the cost of most other types of additional gas supplies. This is especially pertinent to old fields, where the costs of discovery have already been recovered and processing and gathering infrastructures already exist. Previously, sparse well spacing had created a large stock of relatively low cost gas awaiting development. This portion of the resource base began to be exploited during the period when other events also were acting to drive down the wellhead price of natural gas.

The second change concerning gas well drilling involves the productivity of the wells. As the number of exploratory gas wells (new field wildcats, new reservoir tests, and field extension tests) declined from the peak of 2,530 wells in 1981 to 550 wells in 1990, the quality of the discoveries being made improved in terms of reserves found per exploratory well. This is a common, expected phenomenon in both oil and gas exploratory drilling. Higher drilling levels typically yield discoveries of decreasing average reserve volumes per well, while falling drilling levels typically result in the discovery of higher reserve volumes per well. This happens as marginal prospects respectively become, or cease to be, economically attractive drilling targets.

Beyond the short-term changes in productivity related to drilling levels, improved exploration technology emerged, which served to increase returns to drilling. During the 1980's, new and improved technologies such as three dimensional seismic surveying and directional/horizontal drilling were increasingly applied both to the discovery of new fields and reservoirs, and to the design of field development programs. The impact of the combined economic response and technology factors can be seen in the data on average gas reserves discovered per exploratory gas well (Figure FE7). The average yield in discovered volumes generally decreased from 1977 through 1980, remained fairly constant through 1983, and then increased to much higher levels. The average discovered gas volume per gas exploratory well in 1990 was 240 percent of the 1977 level, and 330 percent of the 1980 to 1983 average value.

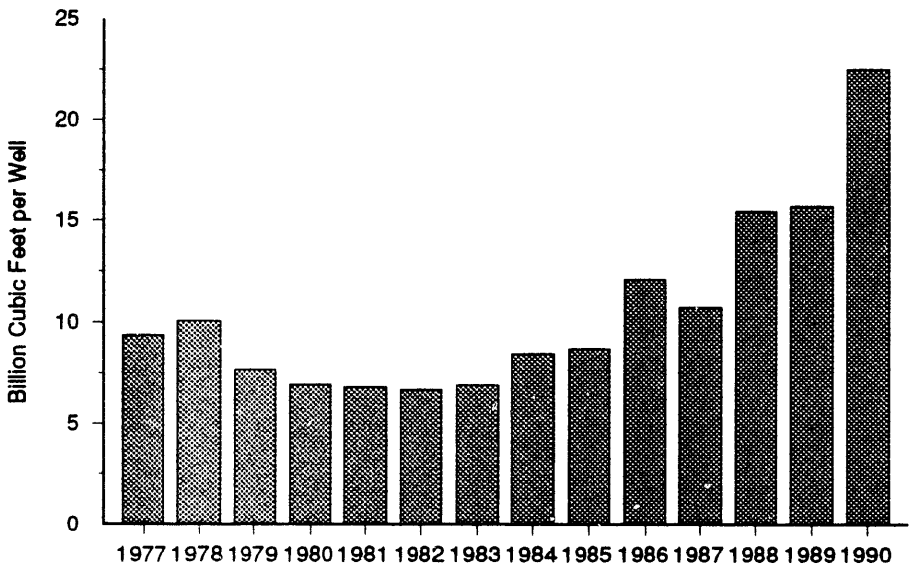
The number of producing wells from 1960 through 1990 (Figure FE8) provides a different perspective on the condition of the industry, as compared with well completions alone. Producing gas wells increased at a more or less constant and relatively low rate up to 1975 to 1976, when the Government began raising gas ceiling prices. Between 1976 and 1990 the number of producing gas wells increased by about 132,000. The bulk of these new wells were not of the same quality as their predecessors with respect to production flow rates, but the sheer number of additional wells drilled after 1975 offset the loss of productivity, leading to an excess wellhead deliverability that is only slowly diminishing (Figure FE9).

Tax incentives that subsidize the production of selected categories of gas also encouraged the development of additional natural gas supplies. An example of such a program is the tax subsidy for coalbed methane production. The provision of a special tax credit for nonconventional gas sources in Section 29 of the Crude Oil Windfall Profits Tax Act of 1980[1] was an important factor inthe conversion of coalbed methane from a worthless substance vented from coal mines for safety reasons to an attractive gas resource.[2] The credit was originally applicable to wells drilled after December 31, 1979, and before January 1, 1990. The qualification period has since been extended twice. Now, coalbed methane wells must be drilled by the end of 1992 to receive the tax credit through the end of 2002.

The significant economic incentive provided by the tax credit encouraged the industry's experimentation with drilling, completion, production, and water disposal methods related to coalbed methane resource exploitation. The significance of this provision is apparent in a comparison of the average price of natural gas in 1990, $1.71 per thousand cubic feet (Mcf), and the tax credit, worth $0.865 per Mcf, roughly half the price.

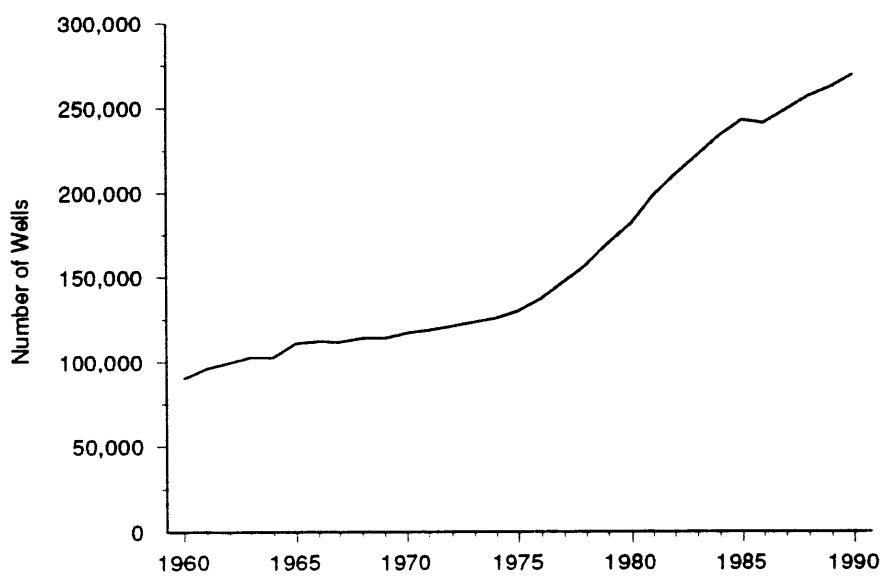
[1] The Section 29 credits also apply to tight gas sands, Devonian shales, and other nonconventional, high-cost gas sources.
[2] Annual volumes of about 700 billion cubic feet still are vented to remove gas from coal mines.

Figure FE7. Total Reserve Discoveries per Exploratory Gas Well, 1977 - 1990



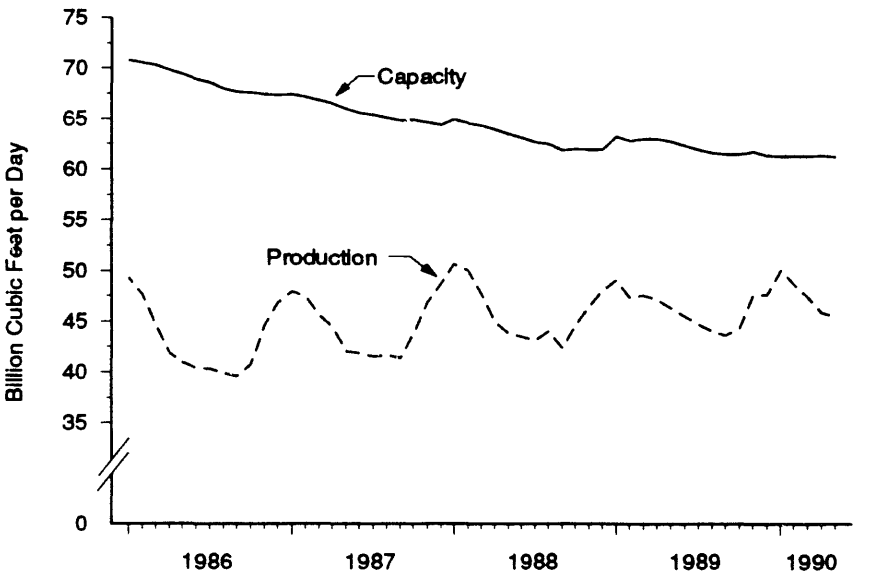
Source: Energy Information Administration, Office of Oil and Gas, Dallas Field Office.

Figure FE8. Producing Gas Wells, 1960 - 1990



Sources: Energy Information Administration: **1960-1989**: *Annual Energy Review 1990.* **1990**: *Natural Gas Annual 1990.*

Figure FE9. Monthly Natural Gas Production and Capacity, 1986 - May 1990



Source: Energy Information Administration, *Natural Gas Productive Capacity for the Lower 48 States 1980 through 1991*, January 1991.

The tax credit for coalbed methane is adjusted for inflation.

Coalbed methane production increased over seven fold from 27 billion cubic feet (Bcf) in 1987 to 196 Bcf in 1990, when it accounted for 1.1 percent of total domestic gas production.[3] Some portion of the production increase in 1990 must be attributed to the fact that companies expected the tax credit to expire at the end of 1990, initiating more drilling than otherwise would have been expected. More than half of all coalbed methane wells ever drilled (3,600 of 6,000) were drilled in 1990, although less than half of them have started producing. Most experts do not expect 1991 coalbed methane drilling to increase as much as it did in 1990 because of the present low spot gas prices and the extension of the qualification period through the end of 1992. Production, however, should increase appreciably as wells already drilled are completed for production.

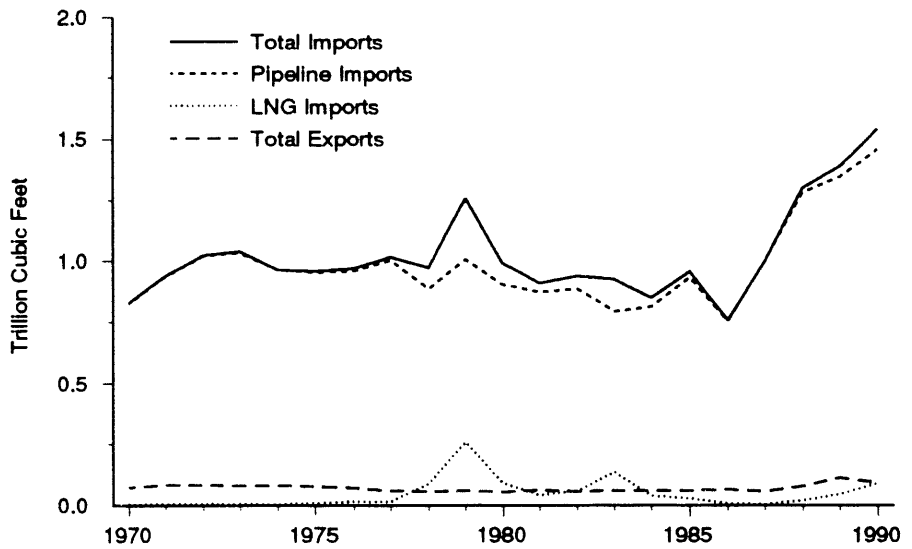
Imports

The increase in natural gas imports has also affected the current supply situation. From 1987 through 1990, gross imports, mostly from Canada, increased at an annual rate of 16 percent (Figure FE10). Net imports of 1.4 trillion cubic feet accounted for 7 percent of total U.S. natural gas supplies in 1990 and are expected to nearly double this share in the early part of the next century.

The current level of Canadian imports reflects the fact that in recent years, Canada has instituted regulatory reforms that have moved its industry toward market-based pricing of natural gas. This is reflected in the 62-percent decline in Canadian import prices from a 1982 peak of $4.97 per thousand cubic feet to $1.91 per thousand cubic feet in 1990 (Figure FE11). During this period, gross imports from Canada increased by 85 percent, doubling their share of total U.S. consumption from 4 to 8 percent. The 1989 Free Trade Agreement with Canada provided assurance of reasonable access to Canadian supplies. Canadian imports now compete directly with domestic sources for core markets. At present, fully half of Canadian proved gas reserves are not connected to delivery systems because of the lack of markets, so competitive pressure from Canada will continue.

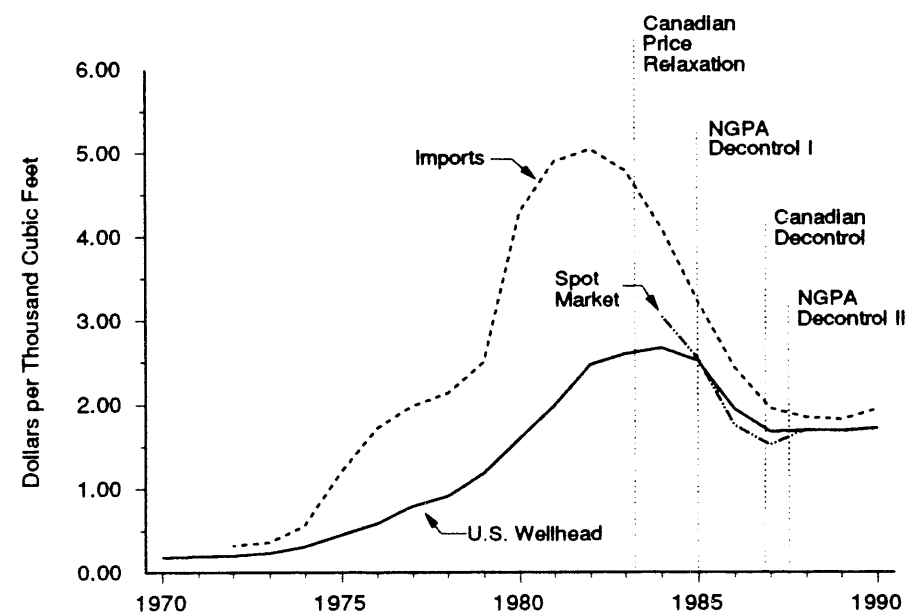
[3] Although coalbed methane comprises a relatively small portion of total U.S. domestic natural gas production, it may be quite significant regionally. Roughly 20 percent of overall gas production in the San Juan Basin, located mainly in northwest New Mexico, comes from coalbed methane.

Figure FE10. Natural Gas Imports and Exports, 1970 - 1990



Sources: Energy Information Administration, *Natural Gas Monthly*, August 1991.

Figure FE11. Average Natural Gas Prices, 1970 - 1990



Sources: Energy Information Administration: **U.S. Wellhead:** *Natural Gas Annual 1990.* **Imports:** *Natural Gas Monthly*, August 1991. **Spot Market:** Office of Oil and Gas, derived from various industry publications.

Although still very small, (less than 1 percent of total consumption), LNG imports from Algeria roughly doubled from 42 billion cubic feet in 1989, to 84 billion cubic feet in 1990. While only two of the four U.S. LNG facilities were operating in 1990 (Everett, Massachusetts had reopened in 1988 and Lake Charles, Louisiana in 1989), plans call for the reopening of the other two facilities (Cove Point, Maryland and Elba Island, Georgia) in the mid-1990's. Low domestic natural gas prices may cast some doubt on these plans however.

Domestic Supply Summary

Abundant natural gas supplies have reduced prices generally below the replacement cost of reserves. Many producing firms appear to be in a loss-minimization position, in which they treat their past finding and development costs as sunk, and continue to produce from existing wells, as long as the variable costs of operating do not exceed generated revenue. This strategy to maintain cash flow and market share is not viable in the long term, but each firm hopes to survive the period of low prices.

Productive capacity eventually will equilibrate with demand, given either additional natural gas demand or the removal of the appropriate amount of supply. Supply contraction is occurring as current conditions in the industry eliminate economically marginal producing projects and limit exploratory drilling to only the best prospects. One would therefore expect, over the next few years, the evolution of a more concentrated producing industry, with fewer operators, built around fewer marginal properties.

Firms in the industry do not show evidence of optimism. A survey by Saloman Brothers, Inc., indicates that operators are backing off significantly in their plans for drilling expenditures.[4] Overall, producers expect drilling expenditures to increase 2.1 percent for the year. This is down from expectations at the end of 1990 of a 5.5-percent increase in 1991. Independent producers are expecting to cut back even further. Current plans are for a 1.7-percent reduction in expenditures from last year as compared with plans for a 6.6 percent increase as of the end of last year.

Gas price increases in the next few years are expected to be limited, because of

- Expected lack of demand growth, which may be attributed to a number of causes, including the current recession and consumer concerns about supply assurance.
- Ready availability of competitively priced imports, either via pipeline from Canada or via LNG tankers.
- Expected continued success of exploratory gas drilling and of infill drilling programs, which would combine to provide relatively low-cost supplies to the market.

Market Developments

While the production side of the market was responding to the price incentives provided by the NGPA, market expansion did not parallel the advances in productive capacity.

Natural gas consumption generally declined during much of the 1970's and 1980's, although substantial increases have been evident since 1986. Natural gas consumption decreased 27 percent from the peak of 22.1 trillion cubic feet (Tcf) in 1972, to 16.2 Tcf in 1986. Consumption levels recovered, increasing 16 percent from the 1986 level to reach 18.8 trillion cubic feet (Tcf) in 1989, before declining slightly to 18.7 Tcf in 1990. All sectors showed increased consumption between 1986 and 1989, while both the industrial and electric utility sectors increased again in 1990 (Figure FE12). Overall, the greatest increase came in the industrial sector, as the result of two factors: the increased use of natural gas by consumers with switchable fuel-burning capacity, and the development of gas-fired cogeneration. The increases in total consumption were moderated by the relatively warm weather over the last few years. Weather during the heating seasons[5] from the end of 1986 through the first quarter of 1990 was warmer than normal[6] in virtually every region of the Lower 48 States.

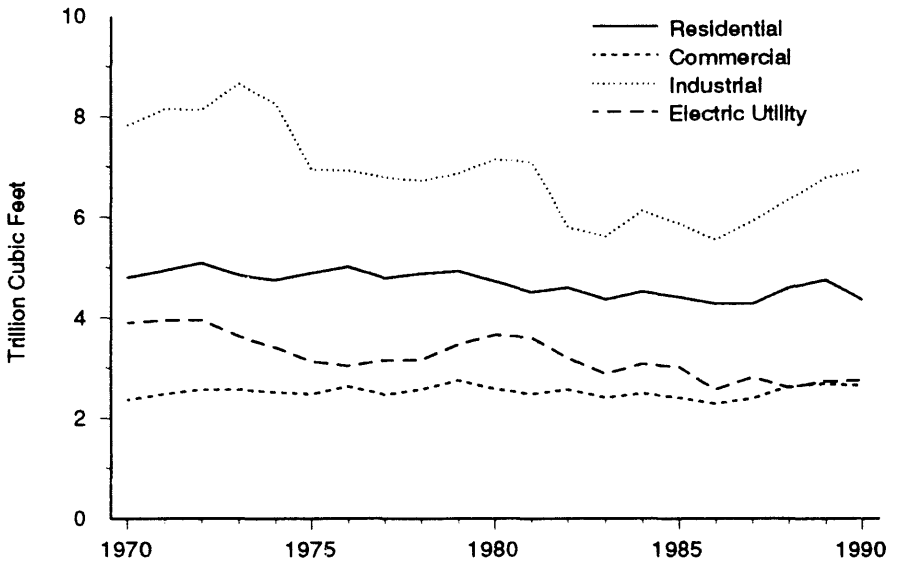
Steep declines in consumption in the early 1980's were related to the sharp growth in natural gas prices (Figure FE13) as well as the recession of 1982. Another factor in the decline was the Powerplant and Industrial Fuel Use Act of 1978 (PIFUA), which was designed to reduce the consumption of natural gas and petroleum products by electric utilities and large industrial boilers. While consumption increased about 1 trillion cubic feet in 1984, another decline occurred from 1985 to 1986. Additional pressure was put on natural gas markets, as crude oil prices collapsed, resulting in fuel switching from natural gas to other fuels. Most of the market contraction occurred in the industrial and electric utility sectors which have substantial fuel switching capability. Residential and commercial use have remained fairly level throughout the last 2 decades.

[4] *Natural Gas Week*, July 1, 1991.

[5] The measure of weather for each heating season is the summation of heating degree days for the entire season, October through March. Heating degree days is the deviation between the mean temperature for the day and 65 degrees, all measured on the Fahrenheit scale.

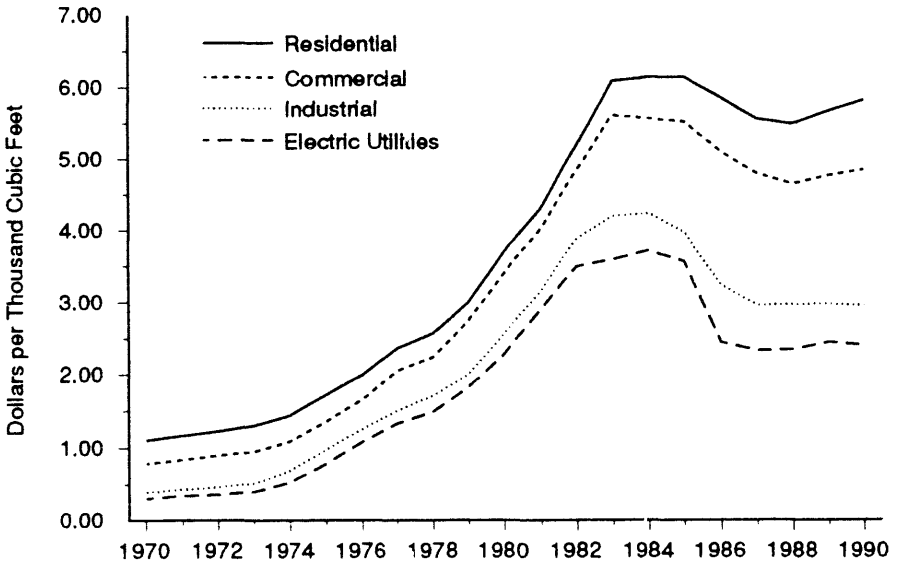
[6] "Normal" in this context is determined as average heating degree days for the 10 years, 1976 through 1985.

Figure FE12. Natural Gas Consumption by Sector, 1970 - 1990



Sources: Energy Information Administration: **1970-1989**: *Annual Energy Review 1990*. **1990**: *Natural Gas Annual 1990*.

Figure FE13. Average Natural Gas Prices to Consumers, 1970 - 1990



Sources: Energy Information Administration: **1970-1989**: *Annual Energy Review 1990*. **1990**: *Natural Gas Annual 1990*.

During this period, natural gas use in the industrial sector contracted as the result of several factors. First, companies have become more energy efficient.[7] Second, the remaining mix of manufacturing industries has changed so that they now have a greater propensity to use electricity rather than fossil fuels--whether gas, petroleum, or coal.[8] Finally, among industrial consumers who could burn gas in their manufacturing processes, concern about gas supply and price influenced their decision to look elsewhere for fuel.

Industrial customers typically purchase natural gas under interruptible contracts, trading off reduced supply dependability for better price terms. Interruptible customers in many parts of the country routinely have natural gas supplies cut off during periods of peak demand, usually because of the need to satisfy residential and commercial heating requirements during the winter. While there are good reasons for industrial users to elect interruptible service, it remains that: (1) there is no realistic way for these users to stockpile natural gas because they have little or no access to storage; and (2) if interrupted, they must locate and acquire substitute fuel sources or shut down. Additionally, the price of natural gas to industrial customers, in both nominal and real terms, experienced double-digit annual rate increases from the mid-1970's through the early 1980's. The real rate of increase in the price of gas exceeded 20 percent in 7 of the 10 years from 1973 to 1982. In the late 1980's, natural gas prices to industrial users declined significantly. In 1990, the average price was $2.93 per thousand cubic feet, 31 percent below the peak level of $4.22 per thousand cubic feet in 1984. Recently, industrial consumption has increased.

Electric utilities are burning substantially less natural gas than in the early 1970's. During the 1970's and 1980's, as a result of PIFUA and rapidly increasing prices for both oil and natural gas, electric utilities placed increased emphasis on coal-fired power plants and the development of nuclear power. In 1970, electric utilities paid an average of 12 percent more for coal, on a Btu equivalent basis, than for natural gas; however, measured in constant dollars, gas prices to utilities increased at an annual average rate of 14 percent through 1982, while coal prices increased only 7 percent annually over the same period (Figure FE14). Since 1982, natural gas prices have dropped dramatically, however, in 1990 electric utilities still paid 58 percent more per Btu for natural gas than for coal. Between 1972 and 1989, generation from coal-fired plants more than doubled while nuclear generation increased nearly 10-fold. Since the late 1970's, almost all baseload capacity construction has been either coal-fired or nuclear. Some expansion of the electric utility market for natural gas is expected over the next several years as utilities look to natural gas combined cycle plants to meet increasing generation requirements over the next decade.

Residential consumption has decreased by 14 percent from the 1972 peak, reflecting the countervailing effects of an increase in the size of the market being served on the one hand, and conservation efforts on the other. Because of concerns about their ability to secure sufficient supplies for their existing customer base, local distribution companies have not been aggressive in the past two decades in promoting natural gas for new communities, or in promoting conversions to natural gas from alternative fuels. New communities were developed without any access to gas lines. Some existing residential customers are confined to only partial use of natural gas and are prohibited from expanding their use. For instance, although a household may use natural gas for cooking, it may not be allowed to install a gas furnace.

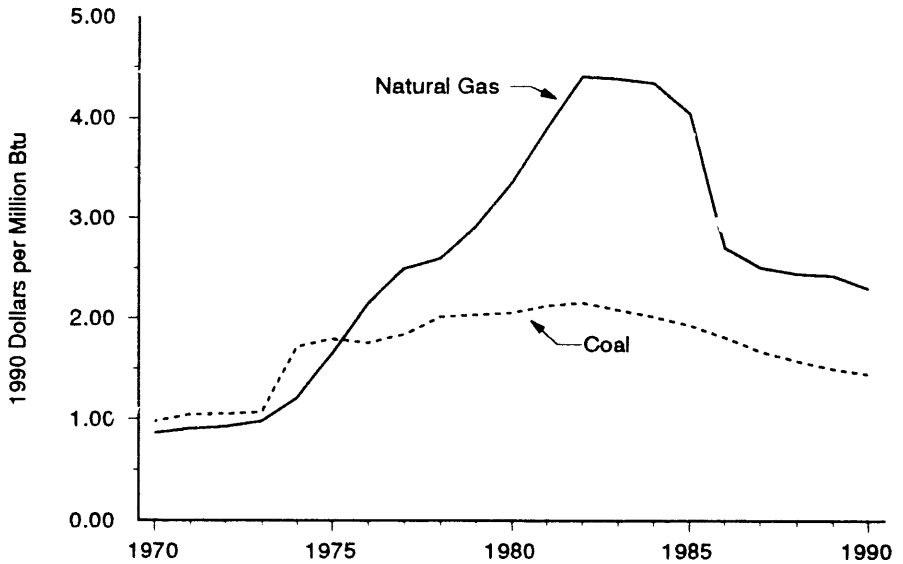
Still, the number of residential customers has increased by approximately 26 percent since 1972. On average, each customer is burning less gas than previously. As shown in Figure FE15, weather driven demand does not explain the shift.[9] While there may be a slight increase in the proportion of customers who cook with gas but do not use it for home heating, it seems that the primary factor in the decline lies with conservation efforts. These range from cutting back the thermostat and replacing inefficient units with more efficient burners, to the greater energy efficiency if new homes. The incentives for these efforts are as varied as simply having to replace a unit because of age; the desire to take advantage of tax incentives for weatherization efforts; or a response to demand side management efforts by local distribution companies.

[7] Energy Information Administration, *Energy Consumption and Conservation Potential: Supporting Analysis for the National Energy Strategy*, SR/NES/90-02 (Washington, DC, December 1990), pp. 143-144, 146-147.

[8] Energy Information Administration, *Annual Energy Outlook 1991*, DOE/EIA-0383(91) (Washington, DC, March 1991), p. 14.

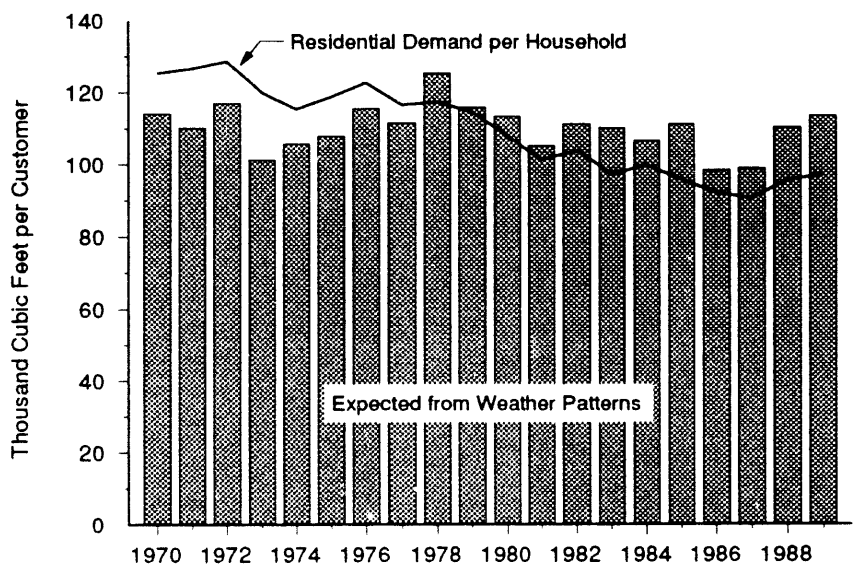
[9] Values of consumption volume expected from weather patterns were determined through a regression of annual residential natural gas consumption per customer on residential customer-weighted heating degree days. Heating degree day data were obtained from the National Oceanic and Atmospheric Administration, DISC Resident Historical Divisional Data Base (DRD964X0); natural gas consumption and the number of residential customers come from the Energy Information Administration, *Natural Gas Annual*, 1970 through 1989 annual reports, DOE/EIA-0131 (Washington, DC, 1971-1990).

Figure FE14. Average Natural Gas and Coal Prices to Electric Utilities, 1970 - 1990



Sources: Energy Information Administration: **Natural Gas**: *Natural Gas Annual 1990.* **Coal**: •1970-1989: *Annual Energy Review 1990.* •Preliminary 1990: *Electric Power Monthly*, August 1991.

Figure FE15. Natural Gas Consumption per Residential Customer, 1970 - 1989



Sources: Energy Information Administration: **Residential Demand per Household**: *Natural Gas Annual 1990.* **Expected from Weather Patterns**: Office of Oil and Gas.

In summary, these factors together have resulted in 1990 consumption levels that are approximately 15 percent below the 22.1 trillion cubic feet of consumption in 1972. For 1991, natural gas consumption is expected to be about 18.8 trillion cubic feet.[10] Generally weak demand in the industrial and electric utility sectors is expected to offset some growth in residential and commercial use if normal weather patterns develop. With significant recovery in the industrial sector not expected until late this year, and with stable prices and plentiful supplies of fuel oil expected for the rest of 1991, industrial gas demand is not expected to show year-by-year improvement again until early to mid-1992. Total gas consumption in 1992 is projected to be 19.4 trillion cubic feet, which would be the highest annual level of gas use since 1981.

The longer term prospects for expansion of natural gas markets appear promising. During the course of this decade, consumption of natural gas is expected to return to levels seen in the early 1970's. This growth will be led by increases in the electric utility and industrial sectors. Electric utility use of natural gas is expected to reach historical highs by the end of the decade as utilities meet additional peaking and intermediate load requirements with the use of gas-fired, combined-cycle and combustion turbine plants. An increase of from 200 to 600 billion cubic feet in natural gas consumption by industries is projected by the end of the decade.[11] However, industrial consumption is not expected to reach the previous peak seen in the early 1970's. Residential and commercial consumption of natural gas are expected to show little change throughout the decade. The increased use of natural gas appliances, both in existing units as well as in new commercial establishments and homes, is expected to be offset by improvements in appliance efficiencies.

Regulatory Developments

The continuing climb of natural gas prices in the early 1980's, in the face of declining demand for natural gas and the supply surplus, highlighted some of the weaknesses of the regulatory structure then in place. In particular, the inflexibility of the system prevented companies from responding quickly to changing market conditions. Pipeline companies were locked into contractual arrangements with inflexible pricing terms that resulted in above market prices for their purchases of gas. These contract rigidities were in large part responsible for the continuing upward movement of prices in the early to mid-1980's in spite of declining demand.

Pipeline companies found it more difficult to sell their relatively high priced gas, and those with take-or-pay clauses in their contracts began to experience substantial liabilities. That is, they were obligated to pay producers for gas supplies regardless of whether or not they could market the gas. Some major pipeline companies invoked market-out clauses while others unilaterally lowered the rates they paid for gas that could not be resold at the contracted price. Producers also suffered from a lack of outlets for their production and a subsequent loss of revenue.

While the wellhead market was becoming more competitive, the regulatory structure of the transportation system was impeding the transmission of price signals. These market dislocations were the impetus for a sweeping program of reform of the regulatory structure that began when FERC issued Order 380 in 1984. Under this Order, pipeline companies were no longer allowed to require their customers to purchase or pay for predetermined levels of gas (minimum bills). The removal of such requirements relieved the local distribution companies (LDC's) of any obligation to purchase gas under these contracts and encouraged them to seek alternate supply sources (usually through other pipeline companies), adding to competitive pressures on wellhead prices. The pipeline companies were still faced with the obligation to be prepared to supply gas to these customers and did not receive any compensation for being unable to collect minimum bills. This situation served to increase pipeline company take-or-pay liabilities.

Some pipeline companies, operating within FERC guidelines, moved to expand off-system sales to new users and to offer incentives to retain existing customers through brokerage packages that became known as special marketing programs (SMP's). The intent was to enable pipeline companies to retain customers who otherwise might have switched to alternative fuels by providing access to less expensive, spot market supplies. FERC responded to this industry initiative by introducing blanket certificates for transportation, for both high-priority and nonpriority users of natural gas. Both programs restricted access to the market-priced wellhead gas to certain classes of customers. In 1985, the D.C. Circuit Court found that SMP's and blanket certificates illegally discriminated among customers and the programs were terminated (*Maryland People's Counsel v. FERC F. 2nd*, Nos. 84-1019 and 84-1090).

As a result of the Court's decision, FERC developed a more comprehensive program to provide LDC's and end users greater access to the increasingly deregulated, wellhead market. Over time, it became apparent that a key feature of a restructured natural gas market would have to be greater flexibility on the part of tra-

Energy Information Administration, *Short-Term Energy Outlook*, Third Quarter 1991, DOE/EIA-0202(91/3Q) (Washington, DC, August 1991), Table 15, p. 25.

Energy Information Administration, *Annual Outlook for Oil and Gas 1991*, DOE/EIA-0517(91) (Washington, DC, June 1991), Table A1, pp. 56-57.

Table FE1. Major FERC Orders and Court Decisions

Item	Date	Features
Order 380	May 25, 1984	Prohibits most aspects of minimum bills in natural gas contracts between jurisdictional pipeline companies and their customers.
Order 436	October 9, 1985	Allows nondiscriminatory, open access transportation.
AGD I Court Decision	June 23, 1987	Vacates and remands Order 436 primarily because it did not adequately address the take-or-pay issue.
Order 500	August 7, 1987	Interim order. (1) Repeats most aspects of Order 436, maintaining the contract demand (CD) conversion option, but prospectively eliminating the CD reduction option; (2) Provides an alternate mechanism for the recovery of take-or-pay settlement costs by open access pipeline companies, subject to a sunset date; (3) Provides a cross-crediting mechanism whereby certain gas transported for producers is credited towards a pipeline company's take-or-pay obligation with that producer; (4) Provides for a gas inventory charge for the prevention of future take-or-pay liabilities.
AGA I Court Decision	October 16, 1989	Remands Interim Order 500 because of the "arbitrary and capricious" choice of a sunset date. Does not rule on any other issues because the order is not final. Requires FERC to issue a final rule within 60 days.
Order 500-H	December 13, 1989	Final order, issued in response to the AGA I court mandate. (FERC issued Order 500-I on February 12, 1990, granting in part and denying in part rehearing of Order 500-H. Order 500-I did not specifically affect the take-or-pay recovery mechanisms.)
AGD II Court Decision	December 28, 1989	Finds that the purchase deficiency methodology for allocating directly billed fixed charges among pipeline customers violates the Filed Rate Doctrine and therefore vacates this aspect of Order 500.
AGA II Court Decision	August 24, 1990	Approves almost all aspects of Orders 500-H/I. Defers judgment of the purchase deficiency methodology to the proceedings under AGD II.
Order 528	November 1, 1990	In response to AGD II and AGA II, stays collections of fixed charges for certain pipeline companies. Provides guidelines for companies that will submit alternate allocation methods for collecting the fixed charge.

Source: The Federal Energy Regulatory Commission orders and the D.C. Circuit Court decisions.

ditional sales customers of interstate pipeline companies in their selection of a natural gas supplier, and greater access to transportation capacity on the existing pipeline grid. After Order 380, the restructuring of the industry continued with the issuance of the following Orders (Table FE1):

- Order 436/500 (Order 436 issued in 1985 and superseded by Order 500 in 1987) provided the mechanism for interstate pipeline companies to become "open access" transporters[12] for gas bought directly from producers, thereby separating the pipeline companies' merchant and transportation functions. The objective of Order 436 was to aid in the development of a fully competitive market by guaranteeing that consumers wishing to buy directly from producers could rely on transportation services from pipelines on a nondiscriminatory basis. Permitting these direct sales also provided producers an outlet for gas the pipeline companies either could not or would not buy. Order 436 had the effect of increasing pipeline company transportation volumes and decreasing sales, further increasing their take-or-pay liabilities. Order 500 provided a mechanism whereby interstate pipeline companies could partially recover payments they had made to their producers in order to settle these liabilities.
- Order 451 (issued in 1986) provided a mechanism for increases in the price of old interstate gas subject to the lowest (below-market) NGPA ceiling prices. This Order eliminated price differences among various old-gas subcategories by setting an alternative maximum lawful price (MLP) equal to the highest previous ceiling for any old interstate gas. Acceptance of an alternative MLP, how-

[12]In accepting an "open access" transportation certificate from the Federal Energy Regulatory Commission, a pipeline company agrees to allow access to its transportation capacity to any customer on an open, nondiscriminatory basis. For example, the pipeline company cannot offer preferential transportation rates to its sales customers, because this would discriminate against third-party customers who purchase gas elsewhere and only use the pipeline company for transportation.

ever, depends on "good-faith negotiation" agreements between parties to the contract.

- Order 490 (issued in 1988) allowed sellers and purchasers to abandon automatically all first sales (i.e., producer sales) of natural gas under Section 7(b) of the Natural Gas Act upon 30 days' notice, when the underlying contract either had expired or had been terminated or modified by mutual agreement of the parties. This Order also promoted open access transportation by making possession of an Order 436/500 certificate a prerequisite for abandonment.
- Order 528 (issued in 1990) stayed the collection of fixed charges for take-or-pay settlement recovery for certain pipeline companies, because on December 28, 1989, the D.C. Circuit Court had found that the methodology for allocating those charges among a pipeline company's customers, as originally proposed in Order 500, violated the Filed Rate Doctrine (*Associated Gas Distributors, et al. v. FERC, Nos. 88-1385 et al.*).[13] Certain companies were exempt from the stay because they and their customers had filed Stipulation and Agreements with FERC in which all parties agreed that the Order 500 fixed charge allocation mechanism would be used even if it was later modified by the Court. Order 528 also provided a means for those companies affected by the stay to file new fixed charges that reflect a new allocation methodology that will satisfy the Court, and made several suggestions for such a methodology.

Regulatory problems remain as the industry continues to evolve. Transportation customers seek guarantees that the transportation service they receive from interstate pipeline companies is no different from that offered by the companies to their remaining sales customers (the comparability of service issue). Also, the industry seeks the implementation of a rate structure that, while "fair" to both the regulated company and end users of gas, also more nearly reflects conditions in a competitive market. FERC, on July 31, 1991, issued a Notice of Proposed Rulemaking (NOPR) that addresses these issues.

The result of the recent regulatory initiatives is a natural gas market that is dramatically different from that of 10 years earlier. The traditional role of the pipeline company as the sole aggregator and marketer of interstate supply has been replaced by a substantially more complex market, with many more participants involved in the purchase and sale of the gas (Figure FE16). Prior to 1980, natural gas in the interstate market moved almost exclusively under long-term contracts with inflexible pricing arrangements. The long-term contract structure collapsed in the mid-1980's with increasing amounts of gas flowing under short-term arrangements. Local distribution companies, large end users, and natural gas marketers have taken advantage of the increased access, with the result that the role of the pipeline companies has shifted to being principally transporters. In 1982, 20 major interstate pipeline companies owned 77 percent of the gas they delivered, but by 1989, they owned only 21 percent (Figure FE17).

While producers found greater access to buyers under the new market structure, they also were faced with intense gas-on-gas competition from other producers. The competitiveness of the wellhead market is reflected in the movement of spot market prices. With the advent of the spot market, natural gas prices began to reflect market conditions more accurately and respond to them. Unlike the traditional long-term contract, spot market contracts are generally short term, usually less than 2 months. Delivery is on a best-efforts basis, but not guaranteed. Bidding, which takes place during the last 10 days of the month, is for gas to be delivered 1 to 3 months in the future. While prices on the spot market generally declined in the early years of trading, a normal seasonal pattern began to develop around 1988 (Figure FE3). A concern to producers is the continuing slide in off-peak spot prices.

While the new regulatory structure appears to be increasing the efficiency of price signals, the costs of this transition have been significant. The most visible costs are the $9 billion of take-or-pay settlements. Pass through of these costs, which were incurred in the 1980's, will continue well into the mid-1990's. It is important to note that these amounts reflect only the actual settlement amounts, which are only a portion of the total amount producers claimed under the take-or-pay clauses. Other hidden costs that are not easily quantifiable include:

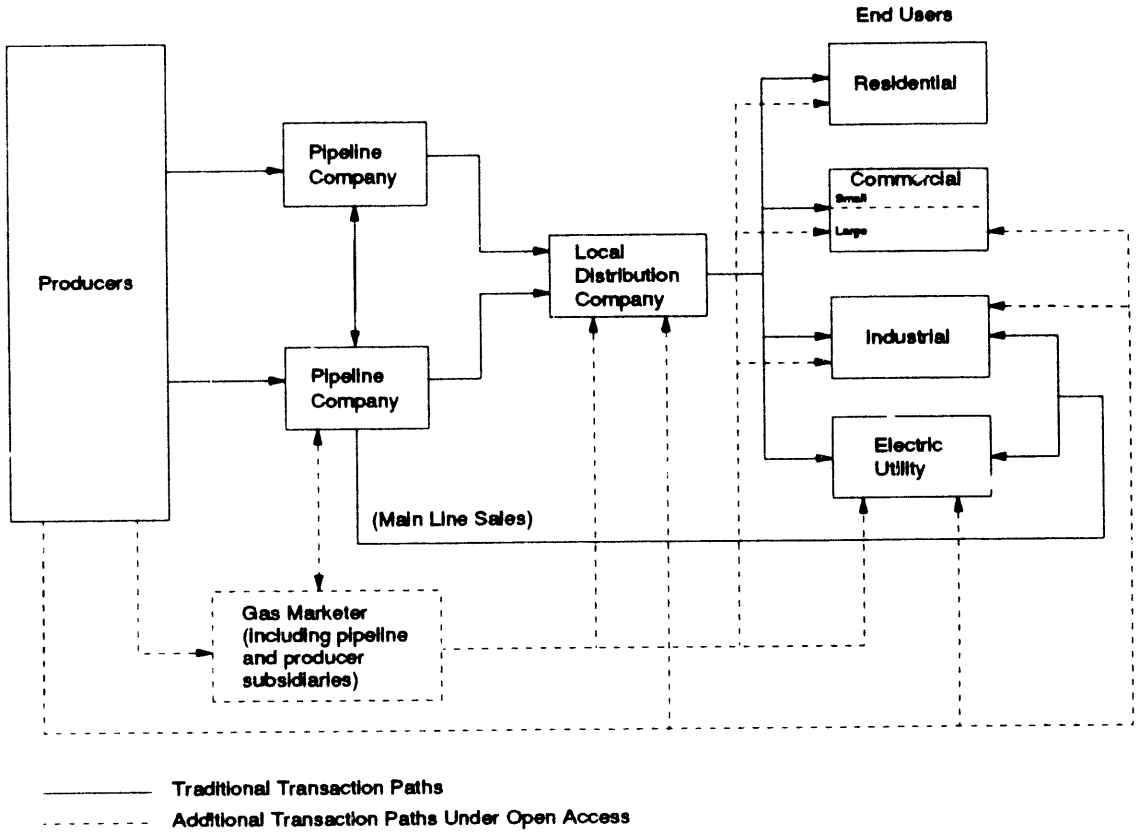
- Reduced reliability of the system resulting from the complexity of the transaction structure and lack of experience of market participants in negotiating these transactions
- Dislocations and uncertainty caused by lengthy regulatory and judicial review prompted by myriad challenges to nearly every aspect of the new structure.

Outlook for the Industry

The movement to a less regulated industry has opened numerous opportunities for industry participants. However, taking advantages of these opportunities requires major changes in operating practices and the development of innovative means of securing the as-

[13] The Filed Rate Doctrine is a label attached by the courts and others to describe provisions in various regulatory Acts of Congress that prescribe the procedures and substantive standards to be followed in setting rates and the conditions under which changes may be made to rates that have been filed or fixed under those Acts.

Figure FE16. Principal Buyer/Seller Transaction Paths for Natural Gas Marketing



Source: Energy Information Administration, Office of Oil and Gas.

sociated benefits. The increasing flexibility of the natural gas pipeline system engenders much greater competition in the marketplace and faster transmission of price signals. Services traditionally provided by the pipeline companies are now being provided by marketers and in some cases by the end users themselves. Transactions are becoming increasingly complex and the transaction costs associated with negotiation for gas deliveries can be significant.

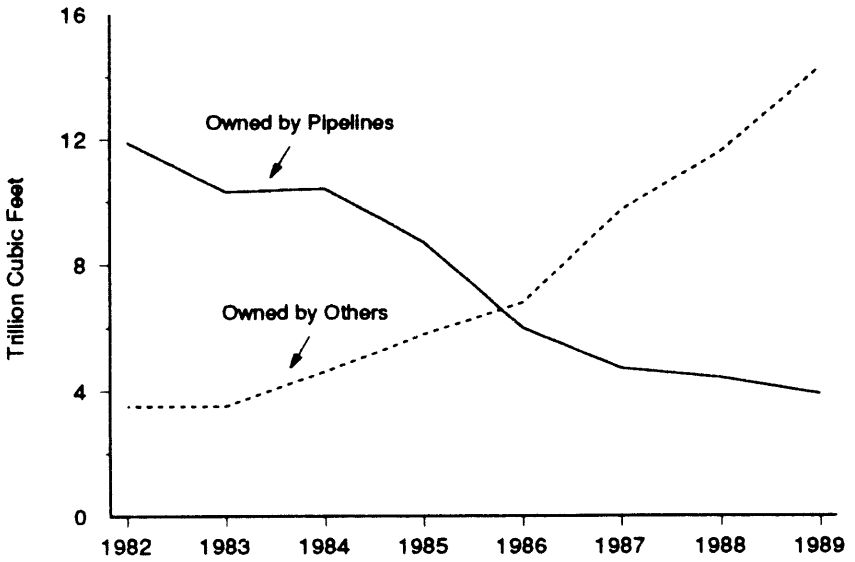
Additionally, regulatory bodies must resolve certain issues affecting the industry. Impediments remain that restrict the functioning of the market in this era of open access. Comparability of service on pipeline systems and access to storage facilities are being addressed in the FERC NOPR. Producers generally have access to the pipeline system to negotiate deliveries directly with marketers and end users, but access remains limited. For example, access to natural gas storage facilities is controlled by the pipeline companies. Storage access could aid producers in maintaining relatively constant flows and deliveries into a market area. Access to secure firm transportation service could aid end users in ensuring adequate supplies of natural gas even during seasonal periods when curtailments under interruptible contracts normally occur. Lastly, changes to Federal regulation may be moot without complementary modification at the State level.

Over the next 2 years and perhaps longer, downward pressure on natural gas prices is likely to continue. This does not preclude some recovery in the overall annual price levels. However, intense competition among producers during off-season periods will probably constrain any large increases in price on an annual basis.

Some factors that could raise prices or generally improve conditions for producers over the short term include:

- Improvement in economic growth could increase demand for natural gas.
- Accelerated implementation of modified rate structures would allow higher utilization of pipeline capacity in the nonheating season, increasing the off-peak demand for natural gas.

Figure FE17. Annual Deliveries of Natural Gas by Twenty Major Interstate Pipeline Companies, 1982 - 1989



Source: Federal Energy Regulatory Commission, FERC Form 2, "Annual Report of Major Natural Gas Companies."

- Increased use of long-term contracts could provide more stability to the market. This would provide for more certain and stable revenue streams to the producers. However, total reliance on long-term contracts might not be appropriate for the industry in general as the spot market is an important part of a prudent gas purchasing strategy.

Factors that will continue to depress natural gas prices include the following:

- Supplies available from pipeline and LNG imports as well as domestically, from the expected continued success of drilling programs and from tax-credited sources.
- Gas on gas competition resulting from continued deregulation and increased access to transportation and storage.
- Perceived lack of supply reliability that inhibits greater use of gas by end users.
- Lack of opportunities for further fuel switching, because substantial portions of the electric utility and industrial sector already are using natural gas in place of petroleum fuels.

In conclusion, relatively low prices and abundant gas volumes bestow substantial benefits on consumers. For the producers, however, the short-term outlook is one of continuing adjustment and financial difficulties for some firms.

Opportunities over the longer term for the industry are more positive. The recent Clean Air Act Amendments (CAA) of 1990 require substantial reductions in sulfur dioxide emissions by the year 2000. Conversion to natural gas units is one option available to electric utilities to meet the CAA requirements. Other options are the installation of scrubbers or a switch to lower sulfur coal. One concern for utilities is the availability of fuel supplies at reasonably stable and predictable prices. In order to compete with coal to capture portions of this market, the natural gas industry must find a means of assuring long-term supplies at prices that are competitive with alternative fuels.

Long-term contracts have been an important aspect of the market throughout much of the development of the industry. Nonetheless, the use of long-term contracts has declined since the build-up of take-or-pay liabilities resulting, in part, from the inflexibilities of these contracts. A return to greater use of long-term contracts would play a significant role in providing market stability. Terms currently offered by producers provide supply security, but at a premium over current spot prices. Customers, such as local distribution companies and electric utilities, are uncertain of the response of State regulatory commissions to contracts that carry a premium over current market rates.

Reform of the Public Utility Holding Company Act (PUHCA) is widely viewed by the natural gas pipeline industry as providing additional opportunity for the expansion of the natural gas market. This reform would promote the development of independent power producers by exempting electric utility affiliates and other energy companies from PUHCA regulation. Currently, electric utility holding companies are restricted

under PUHCA so that in most instances they cannot own unregulated, independent power generation facilities. Many of these independent generators would use natural gas as a fuel. Advocates of bills now before Congress to repeal or modify PUHCA feel that allowing holding companies to own independent generators would not only increase the market for natural gas, but would increase competition in the electric utility industry as well. Those opposing these bills feel that such a move would reduce the overall reliability of the electric utility industry.

Another potential market for the industry is the use of compressed natural gas (CNG) in fleet vehicles. In some regions of the country, industry, local governments, and gas distributors are experimenting with prototype programs testing the general applicability of this use of natural gas. More general application of CNG, however, will require the development of an infrastructure to service these vehicles.

While the opportunities appear to be substantial for the industry, there are obstacles also. The industry must:

- Structure marketing arrangements that will meet the needs of the industrial and electric utility sectors for predictable and stable prices
- Assure prospective users of natural gas that supplies are abundant and will be available at competitive prices.
- Support legislative and regulatory reforms that remove barriers to the use of natural gas.

Domestic Natural Gas Reserves and Production Dedicated to Interstate Pipeline Companies, 1990

By Norman Crabtree and Rosemary Jameson

A preliminary compilation of information reported by interstate natural gas pipeline companies to the Energy Information Administration (EIA) indicates that domestic natural gas reserves dedicated to the interstate market at the end of 1990 were 34.4 trillion cubic feet, a decrease of 9 percent from the 37.7 trillion cubic feet at the end of 1989 (Table FE2).

Dedicated domestic natural gas reserves are those economic and recoverable gas reserves committed to, controlled by, or owned by interstate pipeline companies, where both the seller and pipeline company have received all requisite certification authorizations from the Federal Energy Regulatory Commission (FERC) or its predecessor, the Federal Power Commission. Dedicated reserves include interstate pipeline-owned reserves, reserves controlled under contracts with independent producers, and intrastate supplies committed to the interstate market pursuant to the Natural Gas Policy Act of 1978 (NGPA). Coal gas, liquefied natural gas, synthetic natural gas, and gas supplies purchased under contracts with other interstate pipeline companies or foreign sources are not included as reserves. Information concerning 1989 reserves was extracted from Table 1 of *Gas Supplies of Interstate Natural Gas Pipeline Companies 1989,* DOE/EIA-0167(89).

Table FE2. Preliminary Year-End Dedicated Reserves and Production, 1990 (Billion Cubic Feet)

Dedicated Reserves and Production	Volume
Dedicated Reserves - Dec 31, 1989	37,685
Dedicated Reserves - Dec 31, 1990	P 34,410
Change in Dedicated Reserves Net Change (Dec 31, 1990, minus Dec 31, 1989)	P -3,276
1990 Production from Dedicated Reserves	P 4,167
Gross Change	P 891

P Preliminary data
Source: FERC Form 15, "Interstate Pipeline's Annual Report of Gas Supply."

Dedicated reserves decreased by 9 percent in 1990, which is less than the 23 percent decrease reported in 1989. The continuing decrease in reserves since 1982 reflects a move by many interstate pipeline companies to become primarily transporters of natural gas, indicating a basic shift in the structure of the natural gas industry. In past years, gas was traditionally sold by the producer to the pipeline company. The pipeline company then sold the gas to a local distribution company which in turn delivered it to the ultimate consumer. The increasing trend is for gas to be sold by the producer directly to the consumer. This results in less gas being dedicated to the interstate market. Pipeline companies in these cases provide transportation services only. Over the past decade, some pipeline companies have renegotiated their take-or-pay contracts resulting in dedicated reserves being returned to the producers. These reserves are then no longer dedicated and are available for spot market or short term contracts. For information concerning industry changes see *Natural Gas Production Responses to a Changing Market Environment 1978-1988,* DOE/EIA-0532.

EIA's preliminary compilation indicates that the volume of natural gas produced from dedicated reserves in 1990 totaled 4.2 trillion cubic feet, a decrease of 14.1 percent from the 4.9 trillion cubic feet produced during 1989. Production from dedicated reserves includes production from interstate pipeline-owned reserves, volumes purchased from reserves dedicated under independent producer contracts, and volumes purchased from intrastate supplies, as authorized by the NGPA.

The 1990 dedicated domestic reserves were 34.4 trillion cubic feet. Of these reserves, 4.4 trillion cubic feet (12.8 percent) were interstate pipeline-owned reserves, 29.4 trillion cubic feet (85.5 percent) were dedicated under independent producer contracts, and 0.6 trillion cubic feet (1.7 percent) were committed to the interstate market from intrastate supplies. Production from interstate pipeline-owned reserves totaled 0.1 trillion cubic feet in 1990, or 3.1 percent of the total production. Production from reserves dedicated under contracts with independent producers totaled 3.8 trillion cubic feet, which is 90.7 percent of the total production. The remaining 0.3 trillion cubic feet, or 6.1 percent of the total production, is production from intrastate gas supplies (Table FE3).

Table FE3. Preliminary Summary of Reserves and Production Owned by Major and Minor Interstate Pipeline Companies or Dedicated Under Independent Producer Contracts, 1990 (Billion Cubic Feet)

Item	Major [1] Companies	Minor Companies	Total
Number of Companies	23	32	55
Reserves Dedicated as of Dec 31, 1990			
Pipeline-Owned Reserves[2]	4,030	362	4,392
Reserves Dedicated Under Independent Producer Contracts	27,145	2,285	29,431
Other Supply Contracts[3]	121	466	587
Total Dedicated Reserves	31,296	3,112	34,410
Percent of Total Dedicated Reserves	91.0	9.0	100.0
Production from Dedicated Reserves During 1990:			
Pipeline-Owned	112	19	131
Dedicated Under Independent Producer Contracts	3,521	259	3,780
Other Supply Contracts[3]	158	98	256
Total Production	3,790	376	4,167
Percent of Total Production	91.0	9.0	100.0

[1] Major companies are those that reported in-the-ground dedicated domestic reserves of over 900 billion cubic feet in the year they initially filed a FERC Form 15 report.
[2] Includes recoverable natural gas in underground storage facilities at the end of the current report year.
[3] Includes intrastate supplies contracted pursuant to Sections 311(b) and 312 of the Natural Gas Policy Act of 1978.
Note: Totals may not equal sum of components due to independent rounding.
Source: FERC Form 15, "Interstate Pipeline's Annual Report of Gas Supply."

The 23 major interstate pipeline companies owned or held under contract a reported 91.0 percent of the reserves and 91.0 percent of the production shown in Table FE3. For the purpose of this report, major companies are those that reported in-the-ground dedicated domestic reserves of over 900 billion cubic feet in the year they initially filed a report.

The gross change in reserves during 1990 was an increase of 0.9 trillion cubic feet compared to a decrease of 6.3 trillion cubic feet in 1989. Gross change represents the net effect of all additions and revisions to the year-end reserve estimates. It is computed as the difference between year-end 1990 and year-end 1989 reserves, plus 1990 production. Dedicated reserves dropped from 195,130 bcf in 1966 to 34,410 bcf in 1990. The reserves to production (R/P) ratio was 8.3 at the end of 1990, compared to the 7.8 ratio at the end of 1989. The R/P ratio, after dropping rapidly from 1963 to 1972, remained relatively stable through 1990 (Table FE4).

The data presented here are based upon computer-edited, detailed reserves and production data reported by the interstate pipeline companies on Schedule II of FERC Form 15. The final data, to be published in the last quarter of calendar year 1991 in *Gas Supplies of Interstate Natural Gas Pipeline Companies 1990*, DOE/EIA-0167(90), are not expected to vary significantly from the data published in this report.

Sixty-eight interstate pipeline companies, subject to FERC jurisdiction during 1990, were required to report natural gas supply information. Of those, 13 obtained their entire supply of natural gas from other interstate pipeline companies and/or foreign suppliers. The data for the remaining 55 interstate pipeline companies (Table FE5) were edited, validated, and aggregated to develop the 1990 dedicated reserve and production data shown in this report. Thirteen interstate pipeline companies are no longer required to report because they do not buy or sell gas, they have sold their reserves, or the company no longer exists.

A decrease in reserves reported on FERC Form 15 does not necessarily indicate a decrease in the level of proved natural gas reserves for the United States as a whole. FERC Form 15 covers only those reserves dedicated to interstate pipeline companies, as described above. The EIA collects total proved reserves information on Form EIA-23, "Annual Report of Domestic Oil and Gas Reserves," and publishes the findings in *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves*, DOE/EIA-0216.

Table FE4. Year-End Domestic Reserves, Change in Reserves, and Production Dedicated to Interstate Pipeline Companies, 1963-1990 (Billion Cubic Feet)

Year	Dedicated Reserves as of December 31	Net Change in Dedicated Reserves	Production from Dedicated Reserves	Gross Change in Dedicated Reserves [1,2]	Reserve to Production (R/P) Ratio	Gross Change to Production (GC/P) Ratio
1963	188,540	NA	9,351	NA	20.2	NA
1964	189,165	625	10,015	10,640	18.9	1.06
1965	191,900	2,734	10,371	13,105	18.5	1.26
1966	195,130	3,231	11,137	14,367	17.5	1.29
1967	194,392	-739	11,597	10,858	16.8	.94
1968	191,474	-2,918	12,316	9,399	15.5	.76
1969	184,165	-7,309	13,192	5,883	14.0	.45
1970	170,383	-13,783	13,851	68	12.3	.00
1971	158,682	-11,701	13,985	2,284	11.3	.16
1972	146,906	-11,776	14,207	2,431	10.3	.17
1973	132,375	-14,531	13,498	-1,032	9.8	-.08
1974	120,543	-11,832	12,965	1,133	9.3	.09
1975	106,816	-13,726	11,992	-1,734	8.9	-.14
1976	98,282	-8,534	11,389	2,854	8.6	.25
1977	92,889	-5,393	10,921	5,527	8.5	.51
1978	93,993	1,104	10,865	11,970	8.7	1.10
1979	97,299	3,306	11,536	14,842	8.4	1.29
1980	97,102	-197	11,604	11,407	8.4	.98
1981	98,339	1,237	11,959	13,197	8.2	1.10
1982	98,711	371	10,933	11,304	9.0	1.03
1983	94,498	-4,213	9,497	5,284	10.0	.56
1984	89,894	-4,604	10,422	5,818	8.6	.56
1985	85,102	-4,792	8,918	4,126	9.5	.46
1986	80,602	-4,500	7,578	3,078	10.6	.41
1987	65,135	-15,466	6,655	-8,811	9.8	-1.32
1988	48,792	-16,344	5,804	-10,539	8.4	-1.82
1989	37,685	-11,107	4,843	-6,263	7.8	-1.29
1990	34,410	-3,276	4,167	891	8.3	.21

[1] Gross change in dedicated reserves represents the net effect of all additions and revisions to the year-end reserve estimates. It is computed from the difference between year-end 1990 and year-end 1989 reserves, plus 1990 production.

[2] Because of rounding, data may not sum to totals.

[NA] Not available

Source: o 1963-1989: Energy Information Administration, *Gas Supplies of Interstate Pipeline Companies 1989*, DOE/EIA-0167(89) (Washington, DC, December 1990) Table 8. o 1990: Preliminary data compiled from 1990 FERC Form 15, "Interstate Pipeline's Annual Report of Gas Supply."

Table FE5. FERC Form 15 Major and Minor Interstate Pipeline Companies, 1990

Major Companies	Minor Companies
ANR Pipeline Company	Alabama Tennessee Natural Gas Company
Arkla Incorporated	Arkansas Oklahoma Gas Corporation
CNG Transmission Corporation	Caprock Pipeline Company
Colorado Interstate Gas Company	Carnegie Natural Gas Company
Columbia Gas Transmission Corporation	East Tennessee Natural Gas Company
El Paso Natural Gas Company	Eastern Shore Natural Gas Company
Florida Gas Transmission Company	Equitrans Incorporated
K N Energy Incorporated	Gas Transport Incorporated
Natural Gas Pipeline Company of America	Glacier Gas Company
Northern Natural, Division of Internorth	Granite State Gas Transmission Inc
Northwest Pipeline Corporation	Inland Gas Company Incorporated
Panhandle Eastern Pipe Line Company	International Paper Company
Southern Natural Gas Company	Kentucky West Virginia Gas Company
Tennessee Gas Pipeline Company, Division of Tenneco	Lone Star Gas Company, Division of Enserch Corporation
Texas Eastern Transmission Corporation	Louisiana-Nevada Transit
Texas Gas Transmission Corporation	Michigan Gas Storage Company
Transcontinental Gas Pipe Line Corporation	Mid Louisiana Gas Company
Transwestern Pipeline Company	Midwestern Gas Transmission Company
Trunkline Gas Company	Mississippi River Transmission Corporation
United Gas Pipeline Company	National Fuel Gas Supply Corporation
Valero Interstate Transmission Company	North Penn Gas Company
Williams Natural Gas Company	Orange and Rockland Utilities Incorporated
Williston Basin Interstate Pipeline Company	Pacific Gas Transmission Company
	Pacific Interstate Offshore Company
	Pacific Interstate Transmission Company
	Pacific Offshore Pipeline Company
	Pennsylvania and Southern Gas Company
	Questar Pipeline Company
	Ringwood Gathering Company
	Viking Gas Transmission Company
	Western Gas Interstate Company
	Zenith Natural Gas Company

Overview

Natural Gas Reserves Up After 8-Year Decline

U.S. natural gas reserves increased in 1990 for the first time since 1981. According to the Energy Information Administration (EIA) report, *U.S. Crude Oil, Natural Gas and Natural Gas Liquids Reserves 1990,* the 1.3 percent increase brought dry gas reserves up to 169,346 billion cubic feet.

Proved gas reserves increased in both Alaska and the lower 48 States. Gas reserves for the lower 48 States not only increased in 1990, but are higher now than they were in 1985. Higher estimates of future gas requirements on the North Slope caused some technically recoverable Alaskan gas to be reclassified as economically recoverable proved reserves.

Reserves in coalbed methane fields increased by 1,411 billion cubic feet in 1990 while production doubled. In 1990, three-quarters of the net growth of natural gas reserves in the lower 48 States came from the increases in reserves of coalbed methane. They have grown from negligible quantities to 5,087 billion cubic feet or 3 percent of the U.S. total. Large tax incentives

Total U.S. Proved Reserves of Dry Natural Gas, 1980 Through 1990 (Billion cubic feet, 14.73 psia, 60 degrees F.)

Year	Adjustments[1]	Revision Increases	Revision Decreases	Revisions[2] and Adjustments	Extensions	New Field Discoveries	New Reservoir Discoveries in old Fields	Total[3] Discoveries	Production	Proved[4] Reserves 12/31	Change from Prior Year
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1980	1,201	16,972	15,923	2,250	9,357	2,539	2,577	14,473	18,699	199,021	-1,976
1981	1 627	16,412	13,813	4,226	10,491	3,731	2,998	17,220	18,737	201,730	+2,709
1982	2,378	19,795	19,340	2,833	8,349	2,687	3,419	14,455	17,506	201,512	-218
1983	3,090	17,602	17,617	3,075	6,909	1,574	2,965	11,448	15,788	200,247	-1,265
1984	-2,241	17,841	14,712	888	8,299	2,536	2,686	13,521	17,193	197,463	-2,784
1985	-1,708	18,775	16,304	763	7,169	999	2,960	11,128	15,985	193,369	-4,094
1986	1,320	21,269	17,697	4,892	6,065	1,099	1,771	8,935	15,610	191,586	-1,783
1987	1,268	17,527	14,231	4,564	4,587	1,089	1,499	7,175	16,114	187,211	-4,375
1988	2,193	23,367	[5] 38,427	-12,867	6,803	1,638	1,909	10,350	16,670	[5] 168,024	-19,187
1989	3,013	26,673	23,643	6,043	6,339	1,450	2,243	10,032	16,983	167,116	-908
1990	1,557	18,981	13,443	7,095	7,952	2,004	2,412	12,368	17,233	169,346	+2,230

[1] Includes operator reported corrections for the years 1980 and 1981. After 1981 operators included corrections with revisions.
[2] Revisions and adjustments = Col. 1 + Col. 2 - Col. 3.
[3] Total discoveries = Col. 5 + Col. 6 + Col. 7.
[4] Proved reserves = Col. 10 from prior year + Col. 4 + Col. 8 - Col. 9.
[5] An unusally large revision decrease to North Slope dry natural gas reserves was made in 1988. It recognizes some 24.6 trillion cubic feet of downward revisions reported during prior years by operators because of economic and market conditions. EIA in previous years carried these reserves in the proved category.

Notes: o **Old** means discovered in a prior year. o **New** means discovered during the report year. o The production estimates in this table are based on data reported in Form EIA-23, "Annual Survey of Domestic Oil and Gas Reserves," and Form EIA-64A, "Annual Report of the Origin of Natural Gas Liquids Production." They may differ from the official Energy Information Administration production data for 1990 contained in the *Natural Gas Annual 1990*, DOE/EIA-0131(90).

Source: *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves*, 1980 through 1990 annual reports, DOE/EIA-0216.

and an improved understanding of the underlying production technology caused the rapid growth.

U.S. total discoveries of dry gas reserves are those attributable to field extensions, new fields, and new reservoirs in old fields and result from drilling exploratory wells. These total discoveries were 12,368 billion cubic feet in 1990, a 23.3 percent increase. Large total discoveries in New Mexico, the Alabama State offshore, and the Louisiana Federal offshore areas made major contributions to the overall increase in proved reserves of natural gas.

Supply and Disposition

The Energy Information Administration (EIA) estimates that marketed production (gross withdrawals less gas used for repressuring, quantities vented and flared, and nonhydrocarbon gases removed in treating or processing operations) totaled 1,504 billion cubic feet in July (Table 1). This is a 1 percent increase from June's total of 1,489 billion cubic feet and slightly higher than in July 1990.

The total gas supply available for disposition in July was an estimated 1,479 billion cubic feet, 8 percent less than in July 1990 (Table 2). The July 1991 total includes 9 billion cubic feet of supplemental fuel supplies, 132 billion cubic feet of imported gas, and 46 billion cubic feet withdrawn from storage. Imports were 10 percent greater than in July 1990, indicating the continued strong level of Canadian import activity, which has increased every year since 1986.

On the disposition side, the consumption of 1,207 billion cubic feet was less than 1 percent greater than in June 1991 and 6 percent less than in July 1990 (Table 2). Total disposition included 266 billion cubic feet of gas injected into underground storage reservoirs and exports of 6 billion cubic feet.

Consumption

Data for the four major end-use sectors, as shown in Table 3, indicate that the total amount of gas delivered to all consumers decreased 11 percent to 1,057 billion cubic feet in June, from 1,192 billion cubic feet in May (Table 3). Consumption in the industrial sector decreased from 560 billion cubic feet in May 1991 to 532 billion cubic feet in June 1991, a decline of 5 percent.

The electric utility sector maintained its strong consumption level, using 260 billion cubic feet, 4 percent higher than May 1991, but 12 percent less than in June 1990.

The residential sector consumed 147 billion cubic feet in June 1991, and the commercial sector consumed 119 billion cubic feet. These totals are 8 percent and 4 percent less, respectively, than in June 1990.

Prices

In June 1991, major interstate pipeline companies paid an average of $1.98 per thousand cubic feet for gas purchased from domestic producers, a 3 percent decrease from May's $2.04 total, and a 9 percent decrease from the $2.18 paid in June 1990. In June 1991, these pipeline companies paid $2.05 per thousand cubic feet for imported gas. Distributors paid an average $2.86 per thousand cubic feet for gas at the city gate in June. This is 3 percent more than these consumers paid in May 1991 but 5 percent less than they paid in June 1990. Residential consumers paid $6.94 per thousand cubic feet in June, 11 percent more than the $6.28 per thousand cubic feet paid in May, and 6 percent more than they paid in June 1990. Commercial consumers paid $4.79 per thousand cubic feet in June, 2 percent greater than $4.71 paid in May and an increase of 5 percent from the $4.57 they paid in June 1990. Industrial consumers paid $2.33 per thousand cubic feet in June, a 3 percent decrease from May's price of $2.39 and an 8 percent reduction from June's total in 1990. Electric utilities paid an average of $2.01 per thousand cubic feet in May. This is a decrease of 4 percent from the $2.10 per thousand cubic feet they paid in April 1991.

Table 1. Summary of Natural Gas Production in the United States, 1985-1991
(Billion Cubic Feet)

Year and Month	Gross Withdrawals	Repressuring	Nonhydrocarbon Gases Removed[a]	Vented and Flared	Marketed Production (Wet)	Extraction Loss	Total Dry Gas Production[b]
1985 Total	19,534	1,915	326	95	17,198	816	16,382
1986 Total	19,063	1,838	337	98	16,791	800	15,991
1987 Total	20,056	2,208	376	124	17,349	812	16,536
1988 Total	20,922	2,478	460	143	17,841	816	17,026
1989							
January	1,866	219	34	11	1,602	70	1,532
February	1,712	193	29	11	1,479	64	1,415
March	1,809	197	31	13	1,568	68	1,500
April	1,737	203	29	12	1,493	65	1,428
May	1,770	214	31	12	1,513	66	1,447
June	1,683	192	28	12	1,451	63	1,388
July	1,720	199	30	12	1,479	64	1,415
August	1,715	207	28	12	1,468	63	1,404
September	1,644	207	28	12	1,397	60	1,337
October	1,719	211	29	12	1,467	64	1,403
November	1,784	214	31	12	1,527	66	1,461
December	1,850	219	33	12	1,586	72	1,514
Total	21,009	2,475	362	142	18,029	785	17,245
1990							
January	1,936	205	32	15	1,684	79	1,605
February	1,714	180	27	9	1,498	70	1,428
March	1,836	207	30	10	1,589	74	1,515
April	1,739	201	29	10	1,499	70	1,429
May	1,774	203	35	11	1,525	71	1,454
June	1,705	191	29	10	1,475	69	1,406
July	1,729	194	30	10	1,495	70	1,425
August	1,743	196	31	10	1,506	70	1,436
September	1,670	189	30	10	1,441	67	1,374
October	1,783	197	31	10	1,545	70	1,475
November	1,815	203	32	11	1,569	73	1,496
December	1,901	213	34	11	1,643	77	1,566
Total	21,345	2,379	370	127	18,469	860	17,609
1991							
January	1,902	213	34	11	1,644	72	1,572
February	1,722	192	30	10	1,490	65	1,425
March	1,823	204	32	11	1,576	69	1,507
April	1,742	195	31	10	1,506	66	1,440
May	R 1,755	R 196	31	10	R 1,518	66	R 1,452
June	E 1,722	E 193	E 30	E 10	E 1,489	E 65	E 1,424
July	E 1,740	E 195	E 31	E 10	E 1,504	E 65	E 1,439
1991 YTD	12,406	1,388	219	72	10,728	468	10,259
1990 YTD	12,433	1,381	212	75	10,765	503	10,262
1989 YTD	12,297	1,417	212	83	10,584	460	10,125

[a] See Appendix A, Explanatory Note 1 for a discussion of data on Nonhydrocarbon Gases Removed.
[b] Equal to marketed production (wet) minus extraction loss.
E = Estimated Data.
R = Revised Data.

Notes: Data for 1985 through 1989 are final. All other data are preliminary unless otherwise indicated. Geographic coverage is the 50 States and the District of Columbia. Totals may not equal sum of components because of independent rounding.

Sources: EIA, *Natural Gas Annual 1989*, Table 7 and EIA estimates, January 1990 through current month. See Explanatory Notes 1, 3, and 6 for discussion of computation, estimating procedures, and revision policy.

Table 2. Supply and Disposition of Dry Natural Gas in the United States, 1985-1991
(Billion Cubic Feet)

Year and Month	Supply						Disposition		
	Total Dry Gas Production	Withdrawals from Storage[a]	Supplemental Gaseous Fuels	Imports	Balancing Item[b]	Total Supply/ Disposition[c]	Additions to Storage[a]	Exports	Consumption[d]
1985 Total	16,382	2,397	126	950	-356	19,499	2,163	55	17,281
1986 Total	15,991	1,837	113	750	-427	18,265	1,984	61	16,221
1987 Total	16,536	1,905	101	993	-359	19,175	1,911	54	17,211
1988 Total	17,026	2,270	101	1,294	-376	20,315	2,211	74	18,030
1989									
January	1,532	426	11	119	-4	2,084	53	7	2,024
February	1,415	614	10	110	-101	2,048	32	7	2,009
March	1,500	369	10	113	72	2,064	106	11	1,947
April	1,428	138	8	110	93	1,777	184	11	1,582
May	1,447	44	8	108	77	1,684	326	8	1,350
June	1,388	20	7	104	72	1,591	381	9	1,201
July	1,415	29	8	101	55	1,608	377	9	1,222
August	1,404	29	8	108	39	1,588	362	9	1,217
September	1,337	39	7	117	16	1,516	325	9	1,182
October	1,403	96	9	123	-57	1,574	225	10	1,339
November	1,461	227	9	123	-139	1,681	105	8	1,568
December	1,514	821	12	145	-275	2,217	52	8	2,157
Total	17,245	2,850	107	1,382	-149	21,435	2,529	107	18,799
1990									
January	1,605	339	11	140	[R] 136	[R] 2,231	91	14	[R] 2,126
February	1,428	324	9	118	[R] 33	[R] 1,912	70	8	[R] 1,834
March	1,515	256	10	116	[R] 34	[R] 1,931	124	11	[R] 1,796
April	1,429	140	9	123	[R] 93	[R] 1,794	183	6	[R] 1,605
May	1,454	45	8	123	[R] 69	[R] 1,699	289	6	[R] 1,404
June	1,406	42	7	117	[R] 56	[R] 1,628	327	6	[R] 1,295
July	1,425	27	9	120	[R] 33	[R] 1,614	325	5	[R] 1,284
August	1,436	37	8	118	39	1,638	321	5	1,312
September	1,374	36	8	120	33	1,571	284	7	1,280
October	1,475	61	8	142	-68	1,618	214	6	1,398
November	1,496	144	9	140	[R] -92	[R] 1,697	136	6	[R] 1,555
December	1,566	467	11	156	[R] -173	[R] 2,027	72	7	[R] 1,948
Total	17,609	1,918	105	1,532	[R] 195	[R] 21,359	2,436	86	[R] 18,837
1991									
January	1,572	632	10	156	[R] -23	[R] 2,347	57	8	[R] 2,282
February	1,425	360	9	131	[R] 44	[R] 1,969	58	7	[R] 1,904
March	1,507	262	10	119	[R] 34	[R] 1,932	98	9	[R] 1,825
April	1,440	83	9	[R] 145	[R] 95	[R] 1,772	212	8	[R] 1,552
May	[R] 1,452	31	9	128	[R] 32	1,652	306	6	1,340
June	[E] 1,424	20	8	125	[R] -62	[R] 1,515	307	8	[R] 1,200
July	[E] 1,439	46	9	132	-147	1,479	266	6	1,207
1991 YTD	10,259	1,434	64	936	-27	12,666	1,304	52	11,310
1990 YTD	10,262	1,173	63	857	454	12,809	1,409	56	11,344
1989 YTD	10,125	1,640	62	765	264	12,856	1,459	62	11,335

[a] Monthly and annual data for 1985 through 1989 include underground storage and liquefied natural gas storage. Data for January 1990 forward include underground storage only. See Appendix A, Explanatory Note 7 for discussion of computation procedures.

[b] Represents quantities lost and imbalances in data due to differences among data sources. See Appendix A, Explanatory Note 11 for full discussion.

[c] "Total" data for 1985 through 1989 do not equal equivalent data in Table 1 of the 1989 *Natural Gas Annual* due to the exclusion of intransit receipts and deliveries in the *NGM*.

[d] Consists of pipeline fuel use, lease and plant fuel use, and deliveries to consuming sectors as shown in Table 3.

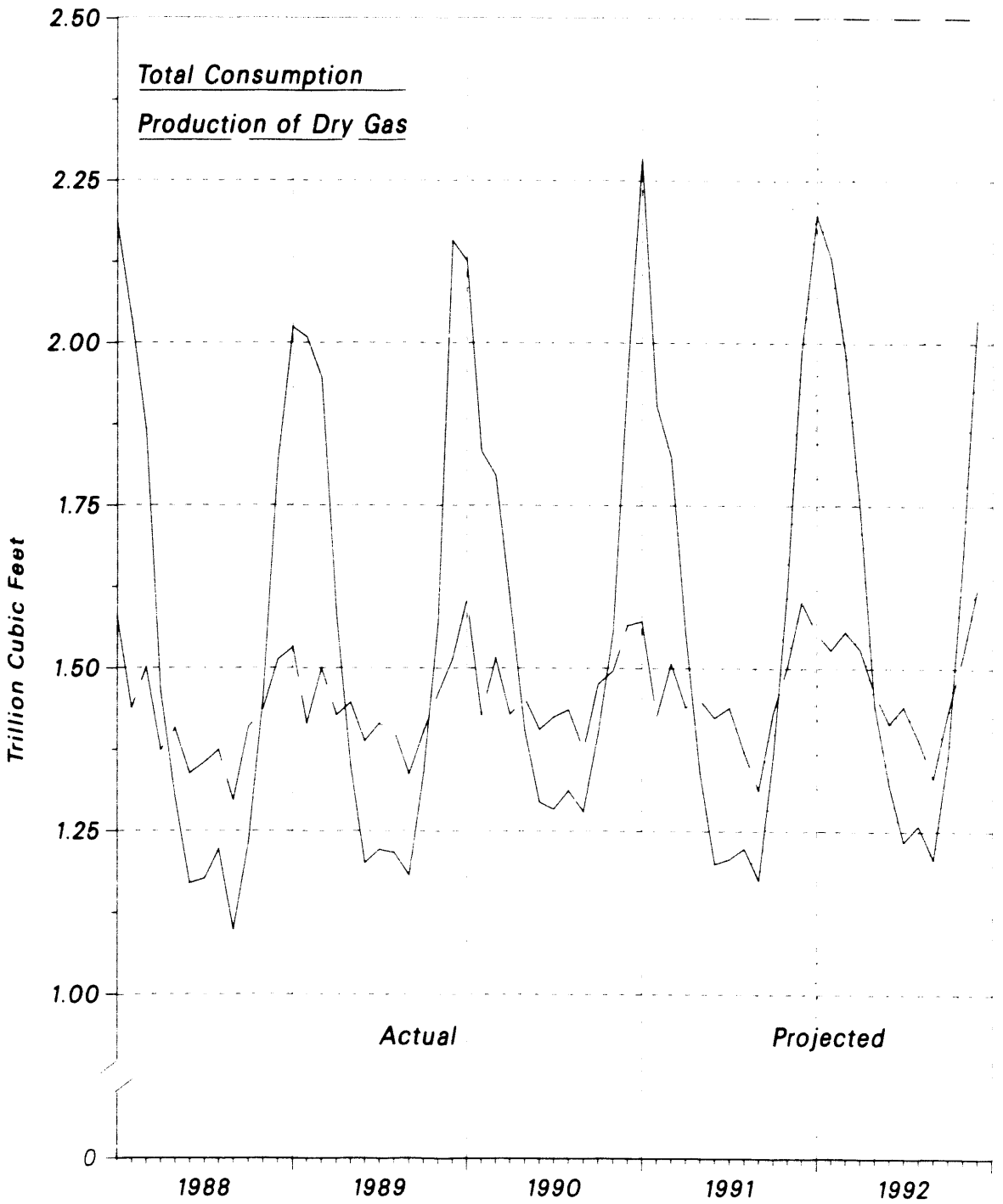
[E] = Estimated Data.

[R] = Revised Data.

Notes: Data for 1985 through 1989 are final. All other data are preliminary unless otherwise indicated. Geographic coverage is the 50 States and the District of Columbia. Totals may not equal sum of components because of independent rounding.

Sources: •Total Dry Gas Production: EIA *Natural Gas Annual 1989*, 1985 through 1989; IOCC, MMS reporting, and EIA estimates, January 1990 through current month. See Explanatory Note 3 for estimation procedures and revision policy. •Withdrawals from and Additions to Storage: EIA *Natural Gas Annual 1989*, 1985 through 1989; Form FERC-8 and Form EIA-191, January 1990 through current month. •Supplemental Gaseous Fuels: EIA *Natural Gas Annual 1989* 1985 through 1989; and EIA computations, January 1990 through current month. See Explanatory Note 2 for discussion of computation procedures and revision policy. •Imports and Exports: Form FPC-14, 1985 through 1989; and EIA estimates, January 1990 through the current month. See Explanatory Note 4 for discussion of procedures and revision policy. •Consumption and Balancing Item: EIA *Natural Gas Annual 1989*, 1985 through 1989; and EIA computations, January 1990 through current month. See Explanatory Notes 5 and 11 for discussion of computation procedures and revision policy.

Figure 1. Production and Consumption of Natural Gas in the United States, 1988-1992



Source: *Natural Gas Annual* and the *Short Term Energy Outlook*.

Table 3. Natural Gas Consumption in the United States, 1985-1991
(Billion Cubic Feet)

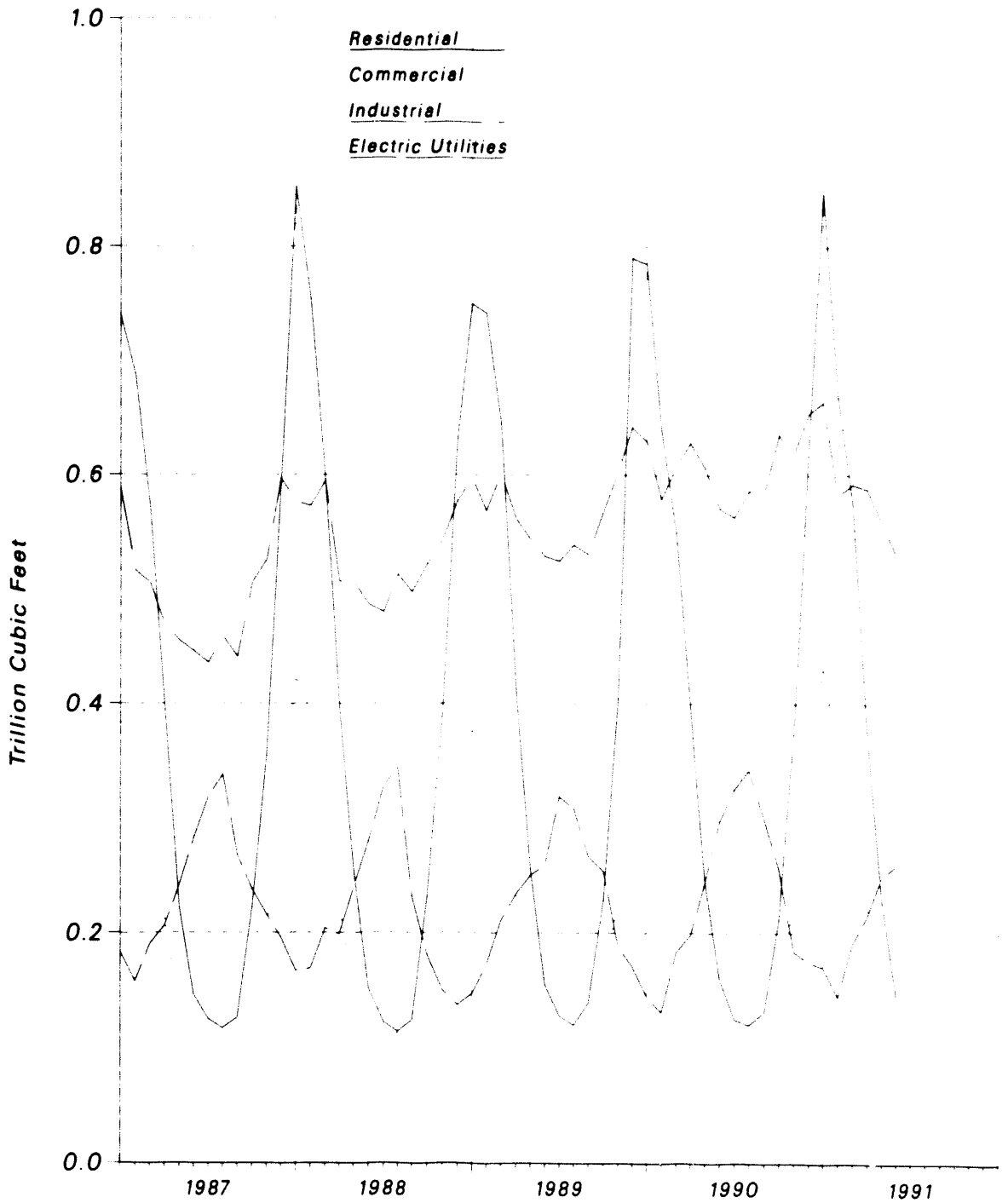
Year and Month	Lease and Plant Fuel	Pipeline Fuel	Delivered to Consumers					Total Consumption
			Residential	Commercial	Industrial	Electric Utilities	Total	
1985 Total	966	504	4,433	2,432	5,901	3,044	15,811	17,281
1986 Total	923	485	4,314	2,318	5,579	2,602	14,814	16,221
1987 Total	1,149	519	4,315	2,430	5,953	2,844	15,542	17,211
1988 Total	1,096	614	4,630	2,670	6,383	2,636	16,320	18,030
1989								
January	95	57	751	376	598	147	1,872	2,024
February	88	57	742	380	570	172	1,864	2,009
March	93	54	645	342	602	211	1,800	1,947
April	88	49	414	233	563	235	1,445	1,582
May	89	51	256	159	544	251	1,210	1,350
June	86	50	155	121	529	260	1,065	1,201
July	88	50	129	110	525	320	1,084	1,222
August	87	50	121	110	539	310	1,080	1,217
September	82	48	139	113	532	268	1,052	1,182
October	87	49	228	152	568	254	1,203	1,339
November	90	50	405	231	603	189	1,428	1,568
December	97	65	790	391	643	171	1,995	2,157
Total	1,070	630	4,777	2,719	6,816	2,787	17,099	18,799
1990								
January	111	53	785	R 401	630	146	R 1,962	R 2,126
February	99	48	639	R 337	R 580	132	R 1,687	R 1,834
March	105	48	549	R 302	607	184	R 1,643	R 1,796
April	99	44	398	R 237	629	199	R 1,462	R 1,605
May	101	47	247	R 158	R 607	244	R 1,256	R 1,404
June	97	44	160	R 124	R 572	297	R 1,154	R 1,295
July	97	49	126	R 123	R 563	326	R 1,138	R 1,284
August	98	49	121	R 116	R 586	342	1,165	1,312
September	95	47	R 131	R 122	R 584	301	1,138	1,280
October	99	44	212	R 151	R 636	256	1,255	1,398
November	104	49	373	R 224	619	185	R 1,402	R 1,555
December	109	51	R 627	R 333	654	175	R 1,788	R 1,948
Total	1,214	573	4,369	R 2,626	R 7,268	2,786	R 17,049	R 18,837
1991								
January	109	58	847	R 433	R 664	171	R 2,115	R 2,282
February	99	50	R 668	R 359	R 582	146	R 1,755	R 1,904
March	104	51	R 575	R 310	R 592	192	R 1,670	R 1,825
April	100	48	375	226	R 588	215	R 1,404	R 1,552
May	R 100	48	230	153	R 560	249	R 1,192	1,340
June	99	44	147	119	532	260	1,057	1,200
1991 YTD	611	299	2,842	1,601	3,518	1,233	9,194	10,103
1990 YTD	612	284	2,779	1,558	3,625	1,201	9,163	10,060
1989 YTD	539	318	2,964	1,611	3,406	1,276	9,257	10,113

R = Revised Data.

Notes: Data for 1985 through 1989 are final. All other data are preliminary unless otherwise indicated. Geographic coverage is the 50 States and the District of Columbia. Totals may not equal sum of components because of independent rounding.

Sources: All data except electric utility: EIA *Natural Gas Annual 1989*, 1985 through 1989; and Form EIA-857 and computations January 1990 through the current month. See Explanatory Note 5 for computation procedures and revision policy. Electric utility data: Form EIA-759, "Monthly Power Plant Report" (formerly Form FPC-4).

Figure 2. Natural Gas Deliveries to Consumers, 1987 - 1991



Source: *Natural Gas Annual*, Form EIA-857, and Form EIA-759.

Table 4. Selected National Average Natural Gas Prices, 1985-1991
(Dollars per Thousand Cubic Feet)

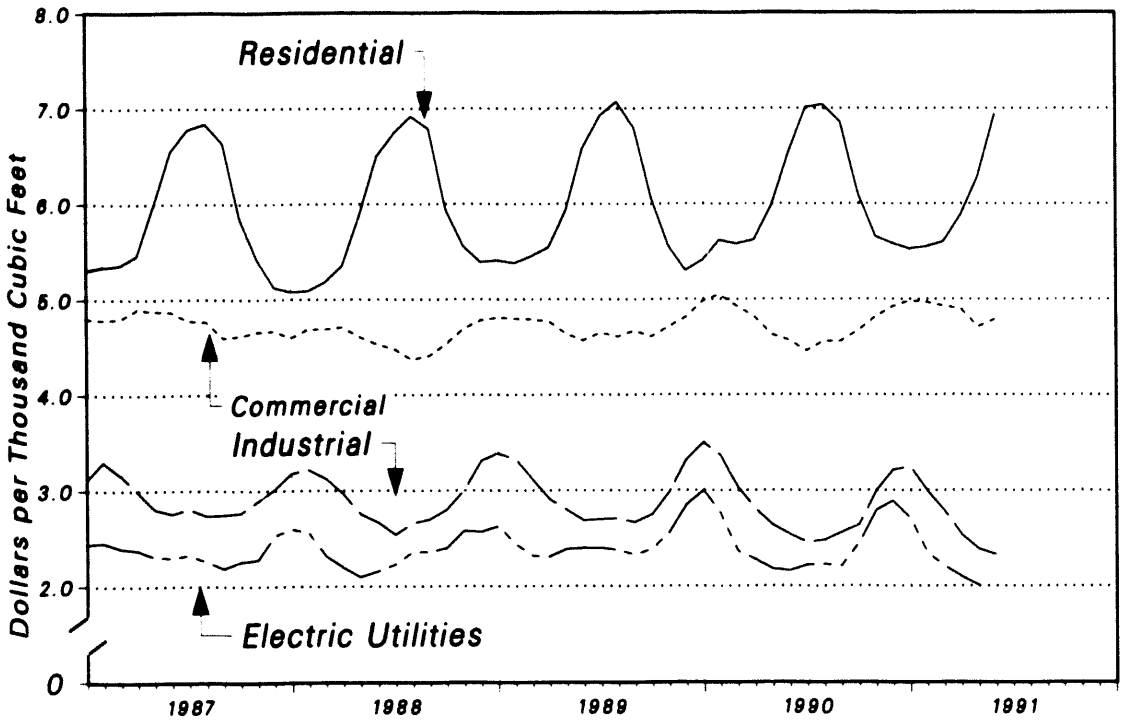
Year and Month	Wellhead Price[a]	Major Interstate Pipeline Companies		City Gate	Delivered to Consumers			
		Imports[b]	Purchased from Producers[b]		Residential	Commercial[c]	Industrial[c]	Electric Utilities[d]
1985 Annual Average	2.51	3.19	2.85	3.75	6.12	5.50	3.95	3.55
1986 Annual Average	1.94	2.53	2.39	3.22	5.83	5.08	3.23	2.43
1987 Annual Average	1.67	2.17	2.10	2.87	5.54	4.77	2.94	2.32
1988 Annual Average	1.69	2.00	2.13	2.92	5.47	4.63	2.95	2.33
1989								
January	1.99	1.77	2.35	3.17	5.41	4.81	3.39	2.63
February	1.81	2.20	2.16	3.10	5.38	4.80	3.33	2.44
March	1.69	1.99	2.14	2.89	5.45	4.79	3.12	2.32
April	1.56	2.01	2.19	2.83	5.54	4.77	2.91	2.31
May	1.61	2.00	2.11	2.94	5.93	4.64	2.80	2.39
June	1.65	2.04	2.05	2.98	6.58	4.57	2.69	2.40
July	1.65	1.88	2.00	3.08	6.92	4.65	2.70	2.40
August	1.61	2.27	2.11	3.04	7.07	4.61	2.71	2.38
September	1.55	2.02	2.08	2.99	6.80	4.67	2.67	2.33
October	1.58	2.17	2.13	2.84	6.06	4.61	2.75	2.39
November	1.66	2.13	2.23	2.98	5.56	4.71	2.98	2.56
December	1.92	2.08	2.39	3.10	5.30	4.81	3.32	2.85
Annual Average	1.69	2.04	2.18	3.01	5.64	4.74	2.97	2.42
1990								
January	2.22	2.04	2.42	3.24	5.41	4.98	R 3.50	R 3.00
February	1.85	2.25	2.17	3.10	5.62	5.05	R 3.37	2.76
March	1.56	1.99	1.94	2.94	5.58	4.93	R 3.04	2.37
April	1.50	2.00	2.17	2.83	5.62	4.82	R 2.81	R 2.28
May	1.47	2.08	1.98	2.81	5.98	4.63	R 2.64	R 2.18
June	1.49	1.91	2.18	3.00	R 6.54	R 4.57	2.54	2.16
July	1.50	1.88	2.00	3.03	7.01	4.46	R 2.46	2.22
August	1.51	1.93	1.86	2.91	7.04	4.56	2.48	2.23
September	1.57	1.89	1.93	2.92	6.86	R 4.56	2.56	2.21
October	1.79	1.90	2.18	2.81	6.11	4.67	R 2.64	2.45
November	1.99	2.21	2.45	3.14	5.66	R 4.81	R 2.99	2.79
December	2.07	2.27	2.58	3.19	5.59	4.92	R 3.21	2.89
Annual Average	1.72	2.03	2.19	3.03	5.77	4.83	R 2.89	2.38
1991								
January	1.95	2.24	2.23	3.08	5.53	4.98	R 3.25	2.71
February	1.57	2.12	1.98	2.94	5.55	4.97	R 3.00	2.35
March	1.46	1.94	2.06	R 2.79	5.60	4.93	R 2.79	2.21
April	1.47	2.05	1.91	2.75	5.88	4.90	R 2.54	2.10
May	1.42	2.00	2.04	2.77	6.28	4.71	R 2.39	2.01
June	NA	2.05	1.98	2.86	6.94	4.79	2.33	NA
1991 YTD	NA	2.07	2.03	2.90	5.73	4.92	2.75	2.24
1990 YTD	NA	2.04	2.14	3.02	5.64	4.90	3.03	2.46
1989 YTD	NA	2.00	2.17	3.00	5.54	4.76	3.06	2.40

[a] See Appendix A, Explanatory Note 8 for discussion of wellhead price.
[b] See Appendix A, Explanatory Note 9 for discussion of major interstate pipeline company data.
[c] See Table Notes and Sources for explanation of break in series for consumer prices in 1987.
[d] Includes all steam electric utility generating plants with a combined capacity of 50 megawatts or greater.
R = Revised Data.
NA = Not Available.

Notes: Data for 1985 through 1989 are final. All other data are preliminary unless otherwise indicated. Geographic coverage is the 50 States and the District of Columbia. Average prices for gas delivered to industrial consumers for 1985 through 1987 include imputed averages for volumes of gas delivered for the account of others. From 1988 on, average prices reflect on-system sales prices only. The change in series in 1987 affects the commercial and industrial averages.

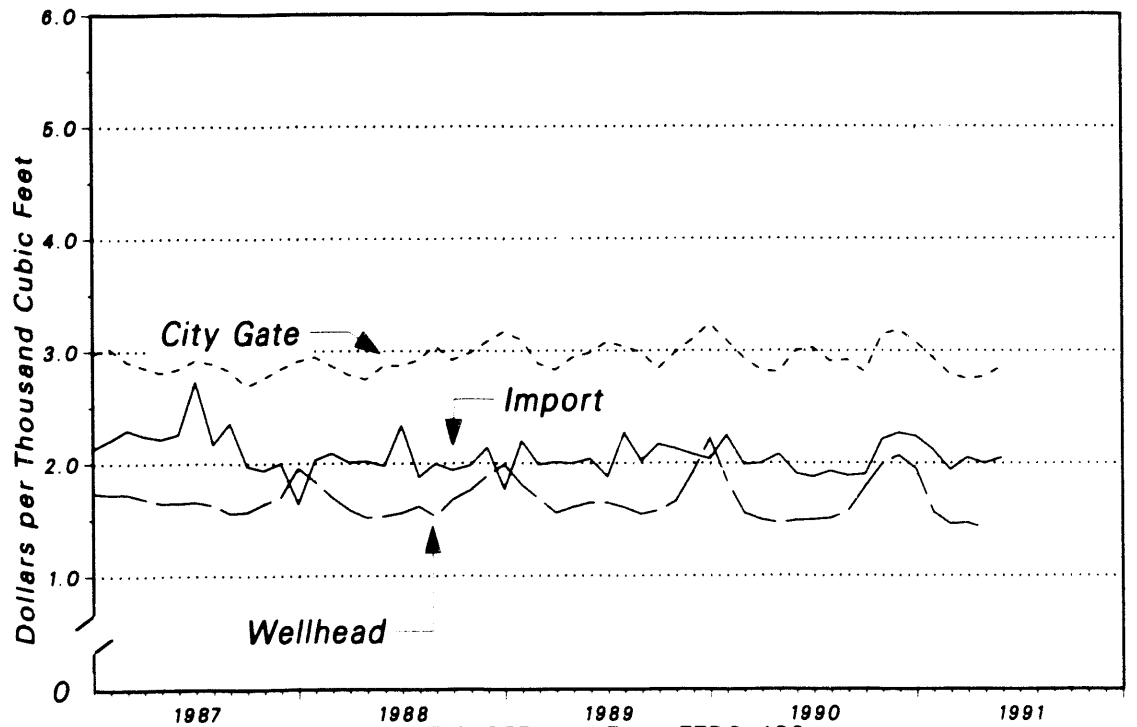
Sources: •Average wellhead price: EIA *Natural Gas Annual 1989* , 1985 through 1989; and EIA estimates, January 1990 through current month. See Explanatory Note 8 for estimation procedures and revision policy. •Imports and Interstate Pipeline Company Purchases: Form FERC-11. •Average City Gate, Residential, Commercial and Industrial average prices for 1985 through current month from Form EIA-857. See Explanatory Note 5 for discussion of revision policy. •Earlier prices from EIA *Natural Gas Annual 1989* . Electric Utilities averages from Form FERC-423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."

Figure 3. Average Price of Natural Gas Delivered to Consumers in the United States, 1987-1991



Source: *Natural Gas Annual*, Form FERC-11, and Form EIA-857.

Figure 4. Average Price of Natural Gas in the United States, 1987-1991



Source: *Natural Gas Annual*, Form EIA-857, and Form FERC-423.

Table 5. Projected Volumes and Prices of Wellhead Purchases by NGPA Category, 1985-1991

(Volumes in Billion Cubic Feet, Prices in Dollars per Thousand Cubic Feet)

Year and Month	Section 104[a]		Section 105[b]		Section 106[c]		Old Gas[d]	
	Volume	Price[m]	Volume	Price[m]	Volume	Price[m]	Volume	Price[m]
1985 Total	3,549	1.48	57	2.54	358	1.18	3,964	1.47
1986 Total	2,675	1.41	58	2.26	320	1.13	3,053	1.39
1987 Total	2,035	1.34	33	2.08	260	1.15	2,327	1.33
1988 Total	1,579	1.49	25	2.27	184	1.35	1,794	1.49
1989								
January	134	1.94	2	1.83	13	1.61	149	1.91
February	135	1.96	2	1.79	12	1.67	149	1.94
March	128	1.89	2	1.79	12	1.63	141	1.86
April	85	1.55	2	2.01	9	1.43	96	1.54
May	76	1.51	1	2.09	8	1.49	85	1.52
June	71	1.41	1	2.09	8	1.46	80	1.43
July	68	1.42	1	1.80	7	1.51	75	1.43
August	67	1.39	*	1.76	7	1.49	74	1.41
September	65	1.43	1	1.83	7	1.52	73	1.44
October	79	1.51	1	1.97	8	1.51	88	1.51
November	76	1.80	1	1.97	8	1.56	86	1.78
December	77	1.81	1	1.97	8	1.52	86	1.79
Total	1,060	1.69	15	1.90	108	1.55	1,183	1.68
1990								
January	69	1.92	2	1.04	8	1.70	79	1.88
February	59	1.97	2	.96	8	1.71	68	1.92
March	57	1.97	2	1.04	7	1.73	66	1.92
April	53	1.81	2	1.30	7	1.61	62	1.77
May	55	1.80	1	1.24	7	1.70	63	1.78
June	52	1.75	2	2.17	7	1.70	61	1.76
July	49	1.79	2	2.08	5	1.73	56	1.80
August	44	1.68	2	2.08	5	1.59	51	1.69
September	43	1.72	1	.87	5	1.62	50	1.69
October	47	1.82	1	1.13	7	1.79	55	1.81
November	54	1.94	1	1.19	7	1.94	63	1.93
December	56	1.99	1	1.17	7	1.98	64	1.98
Total	638	1.86	19	1.46	81	1.74	738	1.83
1991								
January	59	2.00	1	1.17	7	2.02	67	1.99
February	52	1.98	1	1.17	6	2.04	59	1.97
March	48	1.94	1	1.18	6	2.02	55	1.94
April	45	1.88	1	1.22	5	1.86	50	1.86
May	39	1.78	1	1.18	4	1.70	44	1.76
June	36	1.76	3	2.52	3	1.65	42	1.80
July	31	1.67	2	3.15	4	1.61	37	1.74
August	32	1.63	2	3.18	4	1.55	37	1.70

See footnotes at end of table.

Table 5. Projected Volumes and Prices of Wellhead Purchases by NGPA Category, 1985-1991 (Continued)
(Volumes in Billion Cubic Feet, Prices in Dollars per Thousand Cubic Feet)

Year and Month	Section 102[e]		Section 103[f]		Section 108[g]		Section 109[h]		New Gas[i]	
	Volume	Price[m]	Volume	Price[m]	Volume	Price[m]	Volume	Price[m]	Volume	Price[m]
1985 Total	2,780	3.73	945	3.39	207	4.27	257	2.80	4,189	3.62
1986 Total	1,907	3.13	723	3.03	173	3.92	204	2.51	3,007	3.11
1987 Total	1,494	2.64	500	2.61	175	3.30	191	2.29	2,360	2.65
1988 Total	1,295	2.37	406	2.41	153	3.03	142	2.16	1,996	2.41
1989										
January	124	2.49	32	2.50	10	3.30	12	2.17	178	2.51
February	117	2.66	33	2.50	11	3.31	14	2.18	175	2.63
March	114	2.61	31	2.48	10	3.27	13	2.21	169	2.60
April	100	2.48	29	2.32	10	3.14	13	2.10	151	2.46
May	73	2.45	27	2.28	8	3.23	10	2.02	119	2.43
June	67	2.39	27	2.26	9	3.01	10	2.04	112	2.38
July	58	2.42	25	2.17	9	2.95	9	1.97	101	2.36
August	60	2.60	23	2.09	8	2.78	8	2.08	100	2.45
September	59	2.64	22	2.15	9	2.87	8	2.14	99	2.51
October	66	2.68	29	2.11	9	2.90	12	2.34	116	2.52
November	89	2.33	33	2.18	10	3.04	33	2.20	165	2.32
December	91	2.33	34	2.16	10	3.09	34	2.17	169	2.31
Total	1,018	2.51	346	2.28	113	3.08	176	2.15	1,653	2.46
1990										
January	85	2.41	32	2.29	10	3.19	31	2.17	157	2.39
February	75	2.53	31	2.27	9	3.13	24	2.28	139	2.47
March	76	2.52	30	2.28	9	3.07	23	2.29	138	2.47
April	79	2.43	25	2.17	8	3.11	25	2.20	137	2.38
May	59	2.39	24	2.15	8	3.27	16	2.00	107	2.34
June	56	2.36	23	2.08	7	3.11	16	1.99	102	2.29
July	47	2.34	23	1.97	7	2.99	15	1.93	92	2.23
August	46	2.15	21	1.86	7	2.66	15	1.87	89	2.08
September	44	2.18	21	1.91	8	2.84	14	1.86	87	2.13
October	55	2.31	21	2.18	8	2.93	15	2.00	98	2.28
November	75	2.35	24	2.30	7	3.33	42	2.24	148	2.36
December	90	2.44	29	2.35	8	3.25	45	2.40	172	2.45
Total	788	2.39	304	2.17	97	3.08	279	2.17	1,468	2.35
1991										
January	92	2.47	27	2.35	9	3.24	48	2.44	176	2.48
February	67	2.58	24	2.36	9	3.25	35	2.33	135	2.52
March	70	2.46	21	2.32	6	3.20	35	2.32	133	2.44
April	61	2.34	26	2.08	7	2.99	30	2.20	123	2.29
May	40	2.16	22	1.96	6	2.86	10	1.79	79	2.11
June	31	2.22	22	1.93	6	2.77	13	1.84	72	2.11
July	31	2.21	21	1.85	6	2.74	13	1.83	70	2.07
August	29	2.17	20	1.81	6	2.71	11	1.83	66	2.05

See footnotes at end of table.

Table 5. Projected Volumes and Prices of Wellhead Purchases by NGPA Category, 1985-1991 (Continued)

(Volumes in Billion Cubic Feet, Prices in Dollars per Thousand Cubic Feet)

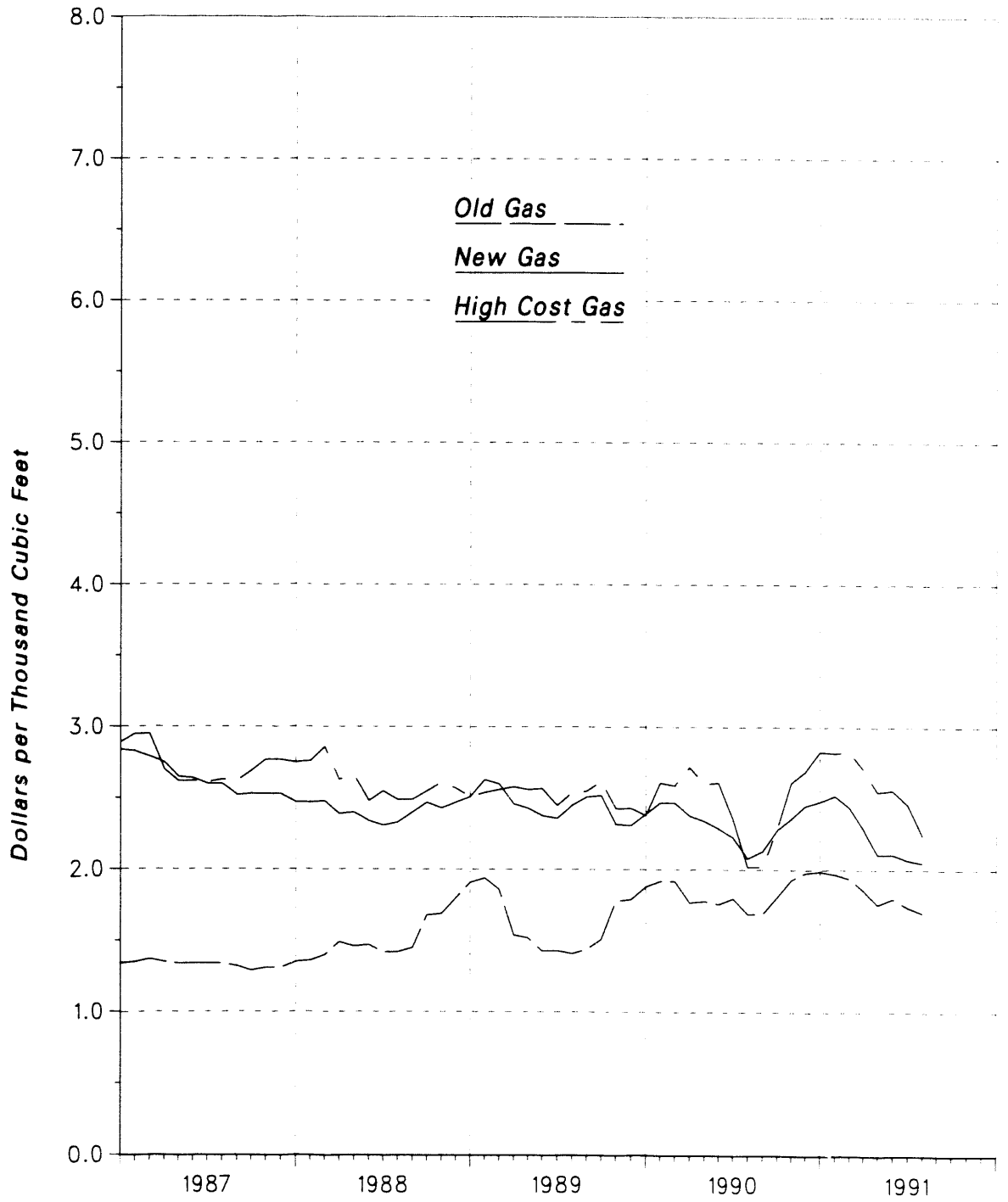
Year and Month	Section 107[l]		Miscellaneous[k]		Total Gas[l]		Number of Companies[n]
	Volume	Price[m]	Volume	Price[m]	Volume	Price[m]	
1985 Total	738	4.71	*	—	8,890	2.75	48
1986 Total	426	3.48	*	—	6,487	2.32	46
1987 Total	417	2.72	*	—	5,104	2.05	46
1988 Total	438	2.61	*	—	4,226	2.04	42
1989							
January	31	2.51	*	—	358	2.26	39
February	34	2.54	*	—	358	2.33	41
March	33	2.56	*	—	343	2.29	40
April	31	2.58	*	—	278	2.16	41
May	29	2.56	*	—	233	2.11	44
June	28	2.57	*	—	220	2.06	45
July	26	2.45	*	—	203	2.03	45
August	24	2.54	*	—	199	2.07	44
September	24	2.55	*	—	195	2.11	44
October	28	2.62	*	—	231	2.15	44
November	29	2.43	*	—	280	2.16	44
December	28	2.43	*	—	284	2.16	44
Total	347	2.53	*	—	3,182	2.18	43
1990							
January	25	2.38	*	—	261	2.23	41
February	22	2.61	*	—	230	2.32	42
March	23	2.59	*	—	227	2.32	42
April	24	2.72	*	—	223	2.25	41
May	24	2.60	*	—	195	2.19	41
June	24	2.61	*	—	188	2.16	42
July	22	2.36	*	—	170	2.10	40
August	20	2.02	*	—	160	1.95	42
September	20	2.02	*	—	157	1.97	42
October	25	2.29	*	—	178	2.14	43
November	27	2.61	*	—	237	2.27	41
December	28	2.69	*	—	264	2.36	41
Total	284	2.47	*	—	2,490	2.21	42
1991							
January	30	2.83	*	—	273	2.40	41
February	26	2.82	*	—	220	2.41	41
March	26	2.83	*	—	214	2.36	41
April	24	2.71	*	—	197	2.23	42
May	19	2.55	*	—	142	2.06	42
June	18	2.56	*	—	132	2.07	42
July	18	2.46	*	—	125	2.03	41
August	16	2.24	*	—	120	1.97	42

[a] Dedicated to interstate commerce.
[b] Existing intrastate contracts.
[c] Rollover contracts.
[d] Total of Sections 104, 105, and 106.
[e] New natural gas and certain natural gas produced from the Outer Continental Shelf.
[f] New onshore production wells.
[g] Stripper well natural gas.
[h] Other categories of natural gas.
[i] Total of Sections 102, 103, 108, and 109.
[j] High cost natural gas.
[k] Natural gas not identified by category in Purchased Gas Adjustments (PGA) filing.
[l] Total of old gas, new gas, high cost gas, and miscellaneous.
[m] All prices are weighted averages.
[n] See Appendix A, Explanatory Note 12 for pipeline company list.
— = Not Applicable.
* = Volume is less than 500 million cubic feet.

Notes: See Explanatory Note 12 for discussion of purchased gas adjustment filings. Totals may not equal sum of components because of independent rounding.

Source: Purchased Gas Adjustment filings for interstate pipeline companies.

Figure 5. Purchased Gas Wellhead Prices in the United States, 1987-1991



Source: Purchased Gas Adjustment filings for interstate pipeline companies.

Table 6. Summary of Natural Gas Imports and Exports in the United States, 1985-1991

(Volumes in Million Cubic Feet, Prices in Dollars per Thousand Cubic Feet)

Year and Month	Imports				Exports	
	Longterm Contracts		Spot Markets			
	Volume	Average Price	Volume	Average Price	Volume	Average Price
1985 Total	949,715	3.21	NA	NA	55,268	4.77
1986 Total	715,960	2.43	34,489	1.57	61,271	2.81
1987 Total	804,496	1.95	188,036	1.30	54,020	3.07
1988 Total	952,520	1.96	341,292	1.41	73,638	2.74
1989						
January	82,813	2.23	39,604	1.69	6,722	2.69
February	71,892	2.11	34,673	1.53	7,253	2.41
March	82,655	2.04	35,016	1.38	11,127	2.41
April	74,433	2.08	38,611	1.32	11,137	2.34
May	68,812	2.02	36,713	1.37	8,030	2.44
June	69,355	2.01	35,343	1.35	8,943	2.57
July	67,405	1.94	34,225	1.31	8,681	2.55
August	73,268	2.29	32,701	1.29	9,148	2.48
September	80,435	2.09	34,566	1.22	8,998	2.41
October	83,324	2.22	37,676	1.24	10,453	2.57
November	80,124	2.08	41,876	1.48	7,909	2.71
December	98,801	2.06	47,199	1.70	8,471	2.80
Total	933,317	2.11	448,203	1.41	106,871	2.51
1990						
January	104,331	2.15	35,845	2.04	13,694	3.11
February	86,705	2.20	30,871	1.81	7,641	2.94
March	87,888	2.07	28,091	1.73	11,333	2.42
April	89,784	1.92	33,576	1.56	6,155	2.95
May	91,168	1.87	31,749	1.54	5,906	2.51
June	86,757	1.89	30,252	1.51	6,209	2.75
July	86,530	1.97	33,156	1.46	4,569	2.95
August	88,740	1.86	29,745	1.53	4,536	2.79
September	83,527	1.90	35,996	1.57	6,597	2.62
October	95,706	2.15	46,268	1.50	6,275	2.71
November	97,205	2.25	42,486	1.83	5,897	2.74
December	112,552	2.21	43,332	1.93	6,753	4.23
Total	1,110,892	2.04	421,367	1.68	85,565	3.10
1991						
January	107,000	2.04	49,139	1.79	7,748	2.82
February	80,000	2.17	46,477	1.57	6,484	2.67
March	88,000	2.16	50,777	1.47	9,324	2.46
April	93,389	1.91	51,611	1.33	7,641	2.78
May	77,165	1.86	50,835	1.33	5,922	2.68
June	69,535	1.87	55,465	1.32	8,103	2.68

NA = Not Available

Notes: Data for 1985 through 1989 are final. All other data are preliminary.

Sources: o Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas." o "Quarterly Sales and Price Report" prepared by the Office of Fuels Programs, Office of Fossil Energy.

Table 7. Marketed Production of Natural Gas by State, 1985-1991
(Million Cubic Feet)

Year and Month	Alabama	Alaska	Arkansas	California	Colorado	Florida	Kansas
1985 Total	107,342	321,346	155,099	491,283	178,233	10,545	512,872
1986 Total	107,184	304,841	131,075	462,218	163,684	8,833	465,695
1987 Total	117,241	359,837	141,151	424,621	164,557	8,281	457,050
1988 Total	129,524	378,638	166,573	399,663	191,544	7,484	576,274
1989							
January	12,166	35,680	20,800	30,377	22,256	639	57,650
February	10,588	33,405	15,833	28,008	19,088	550	60,563
March	11,626	35,160	16,453	30,661	17,871	577	55,638
April	11,028	33,821	13,245	30,396	15,564	597	47,092
May	11,340	24,870	12,935	31,068	16,010	660	50,559
June	10,914	32,380	12,314	30,379	15,551	571	42,180
July	11,212	32,531	11,900	32,013	15,750	638	47,756
August	10,599	30,266	13,659	31,718	15,420	645	43,662
September	10,119	30,257	12,418	29,806	16,468	665	36,719
October	9,709	34,951	12,832	30,677	19,373	708	41,051
November	9,137	34,619	14,384	28,134	21,568	611	46,650
December	9,973	35,789	17,385	29,623	21,818	673	57,710
Total	128,411	393,729	174,158	362,860	216,737	7,534	587,230
1990							
January	10,650	35,514	E 21,800	28,313	21,484	699	57,345
February	10,097	34,268	E 16,400	25,362	17,390	649	48,176
March	11,223	34,845	E 17,300	30,292	17,567	553	50,256
April	11,165	32,533	E 14,400	29,010	18,070	629	46,660
May	11,736	29,666	E 14,100	29,171	18,034	660	46,608
June	10,988	30,091	E 13,400	27,467	16,976	557	40,202
July	11,670	31,215	E 13,100	30,200	17,071	537	43,504
August	11,525	31,307	E 14,700	29,123	17,085	479	40,519
September	11,672	30,123	E 13,700	29,988	16,093	454	37,020
October	11,343	35,838	E 14,000	33,258	20,249	574	E 44,800
November	10,307	36,919	E 15,300	32,102	19,334	507	49,963
December	12,964	40,503	E 18,900	30,936	20,812	588	53,204
Total	135,340	402,822	187,100	355,222	220,165	6,886	558,257
1991							
January	13,267	40,203	E 22,400	29,527	19,162	375	E 55,000
February	E 12,300	36,265	E 17,200	28,789	19,222	339	E 46,800
March	13,132	38,931	E 17,600	30,207	21,059	369	E 47,200
April	13,021	34,665	E 14,500	31,237	E 19,500	511	E 41,200
May	E 12,900	32,432	E 14,300	33,861	17,604	388	43,172
1991 YTD	64,620	182,496	86,000	153,621	96,547	1,982	233,372
1990 YTD	54,871	166,826	84,000	142,148	92,545	3,190	249,045
1989 YTD	56,748	162,936	79,266	150,510	90,789	3,023	271,502

See footnotes at end of table.

Table 7. Marketed Production of Natural Gas by State, 1985-1991 (Continued)
(Million Cubic Feet)

Year and Month	Louisiana	Michigan	Mississippi	Montana	New Mexico	North Dakota	Oklahoma
1985 Total	5,013,702	131,855	144,170	52,494	905,272	72,633	1,936,341
1986 Total	4,895,394	127,287	140,833	46,592	702,614	55,098	1,917,493
1987 Total	5,122,509	146,996	139,727	46,456	823,773	62,258	2,004,797
1988 Total	5,180,267	146,145	124,053	51,654	791,819	57,747	2,106,632
1989							
January	462,497	12,129	9,885	5,285	76,385	4,534	171,407
February	416,292	12,715	8,724	4,740	71,990	3,874	170,435
March	452,444	12,637	8,780	4,789	72,556	4,309	178,866
April	428,437	12,663	9,364	4,372	67,421	4,252	182,017
May	434,489	12,812	9,204	3,797	65,556	4,417	190,207
June	411,724	14,724	8,932	2,541	60,526	4,136	183,465
July	410,492	12,896	8,693	3,165	67,229	4,468	185,458
August	412,289	12,807	8,987	3,369	70,746	3,771	180,743
September	387,125	13,696	6,984	4,257	67,447	3,935	174,864
October	401,455	13,326	7,194	4,858	70,808	4,566	185,799
November	430,699	13,955	7,632	5,036	80,013	4,418	190,129
December	430,182	11,628	8,266	5,098	83,938	4,494	191,814
Total	5,078,125	155,988	102,645	51,307	854,615	51,174	2,185,204
1990							
January	479,709	14,451	8,360	4,504	86,860	4,911	196,375
February	427,464	12,737	7,677	4,113	79,375	4,483	176,373
March	448,041	13,702	8,359	4,229	81,171	4,957	188,436
April	423,139	14,745	7,886	4,133	75,759	4,884	177,033
May	432,410	12,988	7,885	3,585	76,645	5,022	184,114
June	414,984	14,773	8,090	3,438	74,052	4,707	178,440
July	425,585	13,049	8,354	4,040	75,771	4,705	182,681
August	428,945	13,572	8,041	3,708	79,845	4,878	178,904
September	406,651	14,222	7,858	3,629	75,101	4,716	173,815
October	[b] 439,394	13,824	8,204	4,575	80,253	4,831	179,754
November	[b] 450,904	13,547	8,217	4,945	86,037	4,698	179,820
December	[b] 460,635	14,750	8,722	4,894	91,547	4,765	[E] 188,467
Total	5,237,861	166,360	97,653	49,793	962,416	57,557	2,184,212
1991							
January	[b] 458,393	14,485	8,787	4,934	95,413	4,332	[E] 185,153
February	[b] 419,748	12,923	7,330	4,355	78,034	3,866	[E] 175,769
March	[E] 446,702	16,277	8,697	4,742	86,640	4,292	[E] 187,448
April	[E] 420,734	16,953	9,011	4,642	82,828	4,049	[E] 180,595
May	[E] 429,127	12,360	9,395	4,488	83,471	4,151	[E] 187,027
1991 YTD	2,174,704	72,998	43,220	23,161	426,386	20,690	915,992
1990 YTD	2,210,763	68,623	40,167	20,564	399,810	24,257	922,331
1989 YTD	2,194,159	62,956	45,957	22,983	353,908	21,386	892,932

See footnotes at end of table.

Table 7. Marketed Production of Natural Gas by State, 1985-1991 (Continued)
(Million Cubic Feet)

Year and Month	Texas	Utah	West Virginia	Wyoming	Other[a] States	U.S. Total
1985 Total	6,052,663	83,405	144,883	416,565	467,294	17,197,999
1986 Total	6,151,775	90,013	135,431	403,266	481,584	16,790,910
1987 Total	6,126,315	87,158	160,000	497,980	457,830	17,348,537
1988 Total	6,286,029	101,372	174,942	509,058	462,056	17,841,474
1989						
January	545,995	11,563	17,970	63,140	41,235	1,601,593
February	498,336	10,631	17,612	54,794	40,722	1,478,900
March	541,753	10,346	16,271	56,294	40,824	1,567,855
April	518,207	9,313	14,930	51,686	38,773	1,493,178
May	525,157	10,134	14,215	56,519	38,978	1,512,927
June	508,113	7,824	14,841	52,138	37,850	1,451,103
July	520,968	10,092	13,678	51,594	38,363	1,478,896
August	516,596	9,588	13,320	50,036	39,696	1,467,917
September	491,862	8,462	12,963	51,023	38,158	1,397,228
October	512,554	9,473	11,353	55,332	40,722	1,466,741
November	517,874	10,130	14,662	58,195	39,286	1,527,132
December	544,010	12,533	15,377	64,948	40,620	1,585,879
Total	6,241,425	120,089	177,192	665,699	475,227	18,029,349
1990						
January	575,763	14,705	[E] 19,800	61,622	[E] 41,100	1,683,965
February	504,743	12,782	[E] 19,500	56,233	[E] 40,600	1,498,422
March	543,979	12,822	[E] 17,300	62,938	[E] 40,700	1,588,670
April	517,307	9,629	[E] 17,000	56,500	[E] 38,700	1,499,182
May	532,978	11,992	[E] 15,200	54,733	[E] 37,400	1,524,927
June	523,891	12,060	[E] 15,600	48,413	[E] 36,400	1,474,529
July	515,232	11,396	[E] 14,800	55,332	[E] 36,900	1,495,142
August	520,680	11,004	[E] 14,600	58,667	[E] 38,200	1,505,782
September	500,100	11,063	[E] 14,600	53,847	[E] 36,700	1,441,352
October	529,269	12,046	[E] 12,900	60,205	[E] 39,200	1,544,517
November	528,045	12,602	[E] 16,300	61,866	[E] 37,800	1,569,213
December	559,785	13,774	[E] 16,700	61,922	[E] 39,100	1,642,968
Total	6,351,772	145,875	194,300	692,278	462,800	18,468,669
1991						
January	566,150	13,995	[E] 20,900	51,561	[E] 40,100	1,644,137
February	496,680	11,573	[E] 20,400	58,864	[E] 39,600	1,490,057
March	530,200	12,789	[E] 18,600	51,650	[E] 39,700	1,576,235
April	519,057	11,468	[E] 17,800	46,952	[E] 37,700	1,506,423
May	513,903	11,206	[E] 16,700	53,970	[E] 37,300	1,517,755
1991 YTD	2,625,990	61,031	94,400	262,997	194,400	7,734,607
1990 YTD	2,674,770	61,930	88,800	292,026	198,500	7,795,166
1989 YTD	2,629,448	51,987	80,998	282,433	200,532	7,654,453

[a] Includes Arizona, Illinois, Indiana, Kentucky, Maryland, Missouri, Nebraska, New York, Ohio, Oregon, Pennsylvania, South Dakota, Tennessee, and Virginia. The 1990 monthly values for these States are estimated.

[b] Total marketed production for Louisiana in October 1990 - May 1991 were estimated on the basis of production reported in January - December 1989 and 1990, seasonally adjusted.

[E] = Estimated Data.

Notes: Data for 1985 through 1989 are final. All other data are preliminary unless otherwise indicated. Totals may not equal sum of components because of independent rounding. See Explanatory Notes 1 and 3 for discussion of computation procedures and revision policy.

Sources: •EIA *Natural Gas Annual 1989*, 1985 through 1989. •IOCC, MMS reports, and EIA computations, January 1990 through current month.

Table 8. Well Determination Filings, 1985-1991
(Volume in Billion Cubic Feet)

Year and Month	Section 102[a]			Section 103[b]			Section 107[c]		
	Number of Filings[e]			Number of Filings[e]			Number of Filings[e]		
	Total	With Volumes	Estimated Annual Volume[f]	Total	With Volumes	Estimated Annual Volume[f]	Total	With Volumes	Estimated Annual Volume[f]
1985 Total	9,052	7,028	1,905	15,896	12,531	1,455	10,940	8,766	741
1986 Total	4,631	3,620	1,010	11,348	8,956	959	6,709	4,874	367
1987 Total	2,387	1,787	471	5,717	4,548	532	6,655	4,242	248
1988 Total	2,147	1,508	526	6,359	5,004	563	5,743	3,494	185
1989									
January	124	97	25	389	300	31	385	286	14
February	134	103	28	400	303	54	268	219	14
March	104	78	22	392	317	23	351	234	10
April	131	93	24	384	279	40	286	217	15
May	135	107	29	405	285	30	295	192	21
June	66	44	13	294	199	18	214	136	6
July	137	110	24	462	339	38	266	218	14
August	124	91	26	313	236	24	341	259	28
September	74	61	102	269	195	32	314	268	17
October	87	73	24	448	338	57	385	293	20
November	91	69	21	233	143	20	364	302	22
December	55	41	7	205	126	13	362	229	14
Total	1,262	967	344	4,194	3,060	379	3,831	2,853	195
1990									
January	85	67	17	289	173	24	388	298	21
February	67	54	20	248	155	18	389	262	16
March	122	86	17	291	181	17	714	468	29
April	93	82	18	204	137	11	425	231	22
May	82	71	17	367	213	26	553	378	32
June	45	39	10	297	224	22	468	349	42
July	34	28	7	202	144	20	362	254	21
August	52	29	13	205	139	24	359	221	13
September	58	43	19	208	138	21	493	388	27
October	61	47	11	258	199	22	381	236	22
November	127	109	14	234	144	29	543	349	21
December	59	43	11	163	114	11	473	345	11
Total	885	698	173	2,966	1,961	244	5,548	3,779	279
1991									
January	52	43	10	204	124	12	338	237	19
February	69	59	18	228	153	22	775	626	40
March	32	24	4	210	141	8	375	299	16
April	47	37	9	264	181	16	576	410	24
May	39	31	7	194	134	10	461	271	24
June	11	6	1	106	81	12	295	203	15
July	54	22	3	288	188	13	514	355	24
1991 YTD	304	222	52	1,494	1,002	94	3,334	2,401	163
1990 YTD	528	427	105	1,898	1,227	137	3,299	2,240	184
1989 YTD	831	632	164	2,726	2,022	234	2,065	1,502	94

See footnotes at end of table.

Table 8. Well Determination Filings, 1985-1991 (Continued)
(Volume in Billion Cubic Feet)

Year and Month	Section 108[d] Number of Filings[e] Total	Section 108[d] Number of Filings[e] With Volumes	Section 108[d] Estimated Annual Volume[f]	Total Number of Filings[e] Total	Total Number of Filings[e] With Volumes	Total Estimated Annual Volume[f]
1985 Total	9,740	5,304	74	45,628	33,629	4,174
1986 Total	7,215	4,115	50	29,903	21,566	2,383
1987 Total	5,061	3,179	58	19,820	13,756	1,309
1988 Total	4,020	2,602	34	18,269	12,608	1,309
1989						
January	120	71	1	1,018	754	71
February	136	78	1	938	703	96
March	142	61	1	989	690	56
April	170	103	1	971	692	80
May	408	326	1	1,243	910	81
June	163	101	1	737	480	38
July	389	344	2	1,254	1,011	78
August	92	75	1	870	661	78
September	144	80	3	801	604	153
October	380	338	3	1,300	1,042	104
November	145	65	1	833	579	63
December	92	39	1	714	435	35
Total	2,381	1,681	16	11,668	8,561	934
1990						
January	344	311	7	1,106	849	69
February	89	54	1	793	525	55
March	50	30	0	1,177	765	63
April	330	308	3	1,052	758	54
May	66	26	0	1,068	688	75
June	76	32	0	886	644	74
July	116	63	3	714	489	51
August	40	24	0	656	413	50
September	33	22	0	792	591	66
October	36	19	1	736	501	56
November	33	19	0	937	621	65
December	20	5	0	715	507	34
Total	1,233	913	17	10,632	7,351	713
1991						
January	17	8	0	611	412	41
February	78	56	1	1,150	894	81
March	181	22	1	798	486	29
April	63	40	0	950	668	49
May	488	27	0	1,182	463	42
June	18	8	0	430	298	29
July	32	14	3	888	579	43
1991 YTD	877	175	5	6,009	3,800	314
1990 YTD	1,071	824	15	6,796	4,718	441
1989 YTD	1,528	1,084	8	7,150	5,240	500

[a] New natural gas and certain natural gas produced from the Outer Continental Shelf.
[b] New onshore production wells.
[c] High cost natural gas.
[d] Stripper well natural gas.
[e] Not all filings report estimated volumes. The "With Volumes" columns show number reporting volumes.
[f] Annual volumes are often estimated by producers prior to actual operations or based on short periods of operation. For this reason the accuracy of estimates may vary.

Notes: Data for the current month and the previous 2 months are preliminary. All other data are final. Dates shown indicate date received at the FERC. Data include affirmative determinations only. See Explanatory Note 10 for discussion of Title I of the Natural Gas Policy Act. Geographic coverage is the 50 States and the District of Columbia. Totals may not equal sum of components because of independent rounding.

Source: Form FERC-121.

Table 9. Well Determination Filings by State, July 1991
(Volume in Million Cubic Feet)

State	Section 102[a]			Section 103[b]			Section 107[c]		
	Number of Filings[e]			Number of Filings[e]			Number of Filings[e]		
	Total	With Volumes	Estimated Annual Volume[f]	Total	With Volumes	Estimated Annual Volume	Total	With Volumes	Estimated Annual Volume
Alabama	0	0	0	0	0	0	86	39	1,320
Arkansas	0	0	0	2	2	1,715	0	0	0
Colorado	0	0	0	15	13	1,220	33	28	4,932
Kansas	0	0	0	9	7	604	0	0	0
Kentucky	0	0	0	73	40	988	93	63	2,339
Louisiana	7	4	501	0	0	0	0	0	0
Michigan	0	0	0	0	0	0	43	40	966
Mississippi	0	0	0	1	1	450	0	0	0
Montana	0	0	0	26	17	1,562	0	0	0
New Mexico	3	1	450	15	5	819	15	4	625
Ohio	0	0	0	17	14	346	80	58	1,239
Oklahoma	7	7	332	15	10	1,752	2	1	1
Pennsylvania	0	0	0	60	47	1,226	50	48	1,002
Texas	37	10	1,641	27	18	1,876	48	32	10,893
Utah	0	0	0	2	1	146	4	0	0
West Virginia	0	0	0	17	13	252	51	41	932
Wyoming	0	0	0	9	0	0	9	1	40
Total	54	22	2,924	288	188	12,956	514	355	24,289

See footnotes at end of table.

Table 9. Well Determination Filings by State, July 1991 (Continued)
(Volume in Million Cubic Feet)

State	Section 108[d]			Total		
	Number of Filings[e]			Number of Filings[e]		
	Total	With Volumes	Estimated Annual Volume[f]	Total	With Volumes	Estimated Annual Volume[f]
Alabama	0	0	0	86	39	1,320
Arkansas	0	0	0	2	2	1,715
Colorado	0	0	0	48	41	6,152
Kansas	3	3	14	12	10	618
Kentucky	3	2	27	169	105	3,354
Louisiana	0	0	0	7	4	501
Michigan	0	0	0	43	40	966
Mississippi	0	0	0	1	1	450
Montana	0	0	0	26	17	1,562
New Mexico	12	0	0	45	10	1,894
Ohio	0	0	0	97	72	1,585
Oklahoma	6	4	42	30	22	2,127
Pennsylvania	0	0	0	110	95	2,228
Texas	3	0	0	115	60	14,410
Utah	0	0	0	6	1	146
West Virginia	5	5	2,842	73	59	4,026
Wyoming	0	0	0	18	1	40
Total	32	14	2,925	888	579	43,094

[a] New natural gas and certain natural gas produced from the Outer Continental Shelf.
[b] New onshore production wells.
[c] High cost natural gas.
[d] Stripper well natural gas.
[e] Not all filings report estimated volumes. The "With Volumes" columns show number reporting volumes.
[f] Annual volumes are often estimated by producers prior to actual operations or based on short periods of operation. For this reason the accuracy of estimates may vary.

Notes: Data shown are based on filings received at FERC during the month indicated by the table heading. Values include affirmative determinations only. See explanatory Note 10 for discussion of Title I of the Natural Gas Policy Act. Geographic coverage is the 50 States and the District of Columbia. Totals may not equal sum of components because of independent rounding.

Source: Form FERC -121.

Table 10. Well Determination Filings by Category, July 1991
(Volumes in Million Cubic Feet)

NGPA Category	Total Filings	Filings Reporting Volume	Estimated Annual Volume[a] [b]
Section 102[c]			
New OCS Lease	0	0	0
New Onshore Well (2.5 miles)	2	0	0
New Onshore Well (1,000 ft. deeper)	0	0	0
New Onshore Reservoir	37	14	1,687
New Reservoir on Old OCS Lease	11	6	901
Unspecified	4	2	336
Total	54	22	2,924
Section 103[d]			
Less than 5,000 Feet Deep	201	131	5,022
5,000 Feet and Deeper	75	50	7,242
Depth Not Reported	12	7	692
Total	288	188	12,956
Section 107[e]			
Deep	29	29	688
Geopressurized Brine	0	0	0
Coal Seam Gas	102	49	5,104
Devonian Shale	171	135	3,814
Production Enhancement	0	0	0
New Tight Formation	211	141	14,262
Recompletion Tight Formation	1	1	420
Unspecified	0	0	0
Total	514	355	24,289
Section 108[f]			
Stripper Well	19	14	2,925
Seasonally Affected	0	0	0
Enhanced Recovery	2	0	0
Temporary Pressure Buildup	11	0	0
Unspecified	0	0	0
Total	32	14	2,925
Total All Sections	888	579	43,094

[a] Includes all filings reporting volume.
[b] Annual volumes are often estimated by producers prior to actual operations or based on short periods of operation. For this reason the accuracy of estimates may vary.
[c] New natural gas and certain natural gas produced from the Outer Continental Shelf.
[d] New onshore production wells.
[e] High cost natural gas.
[f] Stripper well natural gas.

Note: Data shown are based on filings received at FERC during the month indicated by the table heading. Data include affirmative determinations only. See Explanatory Note 10 for discussion of Title I of the Natural Gas Policy Act. Geographic coverage is the 50 States and the District of Columbia. Totals may not equal sum of components because of independent rounding.

Source: Form FERC-121.

Table 11. Natural Gas Ceiling Prices by Category of Gas, Type of Sale, or Contract,[a] 1985-1991
(Dollars per Million Btu)

NGPA Category	Sept 1991	Sept 1990	Sept 1989	Sept 1988	Sept 1987	Sept 1986	Sept 1985
Section 102							
New Natural Gas, Certain OCS Gas[b]	6.349	5.872	5.420	4.990	4.660	4.354	4.068
Section 103 (b)(1)							
New Onshore Production Wells[b]	3.777	3.626	3.474	3.321	3.220	3.125	3.031
Section 103 (b)(2)							
New Onshore Production Wells[b]	—	—	—	3.321	—	3.740	3.550
Section 105[c]							
Intrastate Existing Contracts	5.969	5.571	5.188	4.821	4.546	4.288	4.043
Section 106 (b)(1)(B)							
Alternate Maximum Lawful Price for Certain Intrastate Rollover Gas[d]	2.160	2.075	1.988	1.899	1.843	1.787	1.735
Section 107							
Gas Produced from Tight Formations	7.554	7.252	6.948	6.642	6.440	6.250	6.062
Section 108							
Stripper Gas	6.801	6.289	5.804	5.343	4.990	4.663	4.354
Section 109							
Not Otherwise Covered	3.124	3.000	2.876	2.751	2.668	2.588	2.512
Section 104 and 106 (a)							
Post-1974 Gas: All Producers	3.124	3.000	2.876	2.751	2.668	2.588	2.512
1973-1974 Biennium Gas:							
Small Producer	2.635	2.531	2.428	2.322	2.254	2.188	2.124
Large Producer	2.022	1.941	1.859	1.777	1.723	1.672	1.620
Interstate Rollover Gas:[e]							
Small Producer	1.158	1.113	1.068	1.020	.991	.962	.932
Large Producer	1.158	1.113	1.068	1.020	.991	.962	.932
Replacement Contract Gas or Recompletion Gas							
Small Producer	1.486	1.426	1.366	1.305	1.264	1.227	1.193
Large Producer	1.134	1.089	1.044	.999	.972	.943	.913
Flowing Gas:							
Small Producer	.747	.719	.689	.660	.642	.622	.604
Large Producer	.632	.605	.581	.557	.542	.522	.510
Certain Permian Basin Gas:							
Small Producer	.884	.848	.814	.778	.752	.732	.710
Large Producer	.784	.751	.718	.686	.668	.648	.629
Certain Rocky Mountain Gas:							
Small Producer	.884	.848	.814	.778	.752	.732	.710
Large Producer	.747	.719	.689	.650	.642	.622	.604
Certain Appalachian Basin Gas:							
North Subarea Contracts dated after Oct. 7, 1969	.713	.685	.655	.626	.611	.591	.573
Other Contracts	.661	.634	.606	.581	.566	.546	.528
Minimum Rate Gas: All Producers (dollars per Mcf)	.387	.372	.357	.345	.333	.324	.312

[a] See Appendix A, Explanatory Note 10 for discussion of Title I of the Natural Gas Policy Act.

[b] Commencing January 1, 1985 and July 1, 1987, the price of some natural gas finally determined to be produced from a new, onshore production well under Section 103 is deregulated. Thus, for all months succeeding June 1987, publication of a maximum lawful price per MMBtu under NGPA Section 103(b)(2) is discontinued.

[c] New category as of January 1, 1985.

[d] Section 106(b) of the NGPA provides that for certain gas sold under an intrastate rollover contract, the maximum lawful price is the higher of the price paid under the expired contract adjusted for inflation, or an alternative Maximum Lawful Price specified in this table. This alternative Maximum Lawful Price for each month appears in this row.

[e] The price for interstate rollover gas is the higher of the price listed in this table or the just and reasonable price under the expired contract as adjusted for inflation.

— = Not Applicable.

Notes: Geographic coverage is the 50 States and the District of Columbia. A "small producer" is one with annual sales subject to FERC jurisdiction not in excess of 10 billion cubic feet. On November 16, 1984, the FERC issued Order No. 406 in Docket No. RM 84-14-000 providing for inclusion of maximum lawful prices under Sections 103(b)(2) and 105(b)(3) of the Natural Gas Policy Act. Order No. 406 became effective on January 1, 1985.

Source: *Federal Register*, "Rules and Regulations."

Table 12. Revenues, Expenses, and Income of Major Interstate Natural Gas Pipeline Companies, 1985-1991
(Million Dollars)

Year and Month	Total Sales Volume[a] (Bcf)	Gas Operating Revenues	Gas Operating Expenses				Total Operating Income	Total Income Before Interest Charges and Extraordinary Expenses	Net Income[c]
			Operation and Maintenance	Depreciation, Depletion, and Amortization	Taxes[b]	Total Gas Operating Expenses			
1985 Total	11,286	48,470	42,071	1,655	666	45,835	2,582	4,303	1,791
1986 Total	8,130	34,541	28,538	1,672	602	32,250	2,335	3,761	1,490
1987 Total	6,758	27,469	21,871	1,520	552	25,151	2,333	3,493	1,414
1988 Total	6,414	26,637	22,640	1,579	582	24,940	1,803	3,350	1,366
1989									
January	711	2,902	2,278	132	56	2,589	313	454	280
February	721	2,922	2,306	137	56	2,619	303	447	267
March	520	2,436	2,077	130	53	2,293	144	329	130
April	357	1,885	1,461	120	54	1,678	207	304	122
May	305	1,945	1,547	130	44	1,769	169	351	168
June	252	1,471	1,141	129	51	1,331	138	331	162
July	271	1,520	1,192	129	51	1,382	138	222	43
August	300	1,565	1,214	131	51	1,406	141	293	110
September	303	1,695	1,279	154	40	1,513	172	368	190
October	388	1,827	1,512	116	50	1,683	219	387	214
November	518	2,443	1,965	119	48	2,230	213	396	228
December	1,006	4,092	3,550	24	42	3,675	418	713	397
Total	5,652	26,703	21,522	1,451	596	24,168	2,575	4,595	2,311
1990									
January	710	3,106	2,495	130	59	2,783	323	492	326
February	556	2,601	2,053	131	60	2,329	272	411	249
March	440	2,200	1,638	109	56	1,899	301	456	291
April	343	1,733	1,329	124	53	1,550	183	365	208
May	278	1,525	1,183	111	52	1,371	154	294	141
June	246	1,460	1,110	108	52	1,270	189	398	234
July	349	1,492	1,173	123	53	1,359	133	215	62
August	247	1,487	1,093	39	53	1,182	304	269	122
September	244	1,431	1,102	90	48	1,268	163	302	155
October	337	1,840	1,376	115	47	1,600	240	391	86
November	415	2,206	1,721	120	52	2,016	190	367	233
December	594	2,558	2,115	85	49	2,272	290	317	193
Total	[R] 4,759	[R] 23,639	[R] 18,388	1,285	[R] 634	20,899	[R] 2,742	[R] 4,277	2,300
1991									
January	695	3,208	2,461	120	65	2,805	403	455	310
February	435	2,196	1,616	120	62	1,899	297	367	234
March	398	2,040	1,502	121	57	1,770	269	296	159
April	292	1,580	1,258	122	56	1,448	132	197	63
May	233	1,416	1,064	122	60	1,255	161	214	86
June	189	1,283	1,882	122	55	1,779	-496	-423	-542

[a] Includes sales for resale and sales to ultimate consumers.
[b] Excludes income taxes.
[c] Total Income before Interest Charges and Extraordinary Expenses and Investment Tax Credits minus Income Taxes, Interest Charges, and Extraordinary Items.
[R] = Revised Data.

Notes: Data up to 3 years prior to current month are final. All other data are preliminary unless otherwise indicated. See Explanatory Note 9 for discussion of major interstate pipeline companies. Totals may not equal sum of components because of independent rounding. This table shows selected items only and therefore does not balance mathematically.

Source: Form FERC-11.

Table 13. Volumes and Prices of Natural Gas Sold by Major Interstate Natural Gas Pipeline Companies, 1985-1991
(Volumes in Million Cubic Feet, Prices in Dollars per Thousand Cubic Feet)

Year and Month	To Industrial Users		To Other Ultimate Consumers		Total Sales to Ultimate Consumers		Sales For Resale		Total Sales of Natural Gas		Number of Companies
	Volume	Price[a]	Volume	Price[a]	Volume	Price[a]	Volume	Price[a]	Volume	Price[a]	
1985 Total	885,254	3.91	557,602	5.30	1,442,856	4.45	8,074,803	3.90	9,517,659	3.98	45
1986 Total	549,956	3.23	433,058	5.08	983,014	4.04	6,023,893	3.69	7,006,907	3.74	48
1987 Total	442,041	3.07	301,567	5.06	743,608	3.91	5,213,629	3.37	5,957,237	3.44	47
1988 Total	294,821	2.65	440,683	4.99	R 735,504	4.05	4,866,193	3.47	R 5,601,697	3.55	46
1989											
January	23,906	2.80	64,345	4.83	88,251	4.28	540,346	3.32	628,597	3.45	46
February	57,581	2.45	69,901	4.73	R 127,482	3.74	556,103	3.37	R 683,585	3.44	46
March	34,247	2.29	56,503	4.96	90,750	3.95	379,148	3.47	469,898	3.57	47
April	31,606	2.69	34,276	5.40	65,882	4.10	248,753	3.80	R 314,635	3.85	48
May	32,223	2.66	21,016	5.59	53,239	3.82	205,407	4.19	R 258,646	4.11	49
June	27,766	2.68	14,648	6.19	42,414	3.89	171,725	4.19	214,139	4.13	49
July	41,014	2.44	17,461	5.57	58,475	3.37	181,101	4.24	R 239,576	4.04	48
August	32,280	2.51	18,844	4.92	51,124	3.40	219,754	3.93	270,878	3.86	49
September	33,768	2.50	16,516	5.76	50,284	3.57	225,374	3.86	R 275,658	3.83	50
October	29,222	2.62	25,710	5.61	54,932	4.02	300,253	3.59	R 355,185	3.65	50
November	25,864	2.70	41,965	5.06	67,829	4.16	408,232	3.40	476,061	3.51	50
December	23,366	3.03	84,407	4.49	107,773	4.18	888,153	3.06	R 995,926	3.20	50
Total	392,843	2.58	465,592	5.02	R 858,435	3.91	4,324,349	3.51	R 5,182,784	3.58	50
1990											
January	23,281	3.52	61,566	4.90	84,847	4.52	488,521	3.43	573,368	3.59	51
February	22,294	2.95	54,121	5.00	76,415	4.40	478,331	3.19	554,746	3.36	51
March	25,138	2.64	45,531	5.05	70,669	4.20	333,858	3.09	404,527	3.29	51
April	23,943	2.51	31,740	5.20	55,683	4.04	285,462	3.26	R 341,145	3.39	51
May	24,714	2.40	21,818	5.63	46,532	3.91	229,978	3.47	R 275,510	3.54	51
June	24,376	2.[illegible]	R 432,904	R 5.08	R 457,280	R 4.28	R 3,716,448	R 3.12	R 4,173,728	R 3.30	51
July	26,454	2.4[illegible]	18,235	5.04	44,689	3.48	282,032	1.97	R 326,721	2.18	51
August	9,908	2.69	17,356	5.25	27,264	4.32	189,863	2.85	217,127	3.04	51
September	8,001	2.90	16,719	5.84	24,720	4.89	191,281	3.00	R 216,001	3.22	51
October	10,810	3.20	27,253	4.90	38,063	4.42	271,770	2.52	309,833	2.75	51
November	14,840	3.23	37,629	5.24	52,469	4.67	331,138	3.57	383,607	3.72	51
December	18,440	3.32	85,477	4.92	103,917	4.64	451,433	3.48	555,350	3.69	50
Total	R 232,199	R 2.84	R 850,349	5.08	R 1,082,548	R 4.31	R 7,249,115	R 3.13	R 8,331,663	R 3.31	51
1991											
January	17,618	2.98	103,880	4.81	121,498	4.54	523,936	3.45	645,434	3.66	50
February	12,031	2.66	68,645	4.70	80,676	4.39	320,765	3.23	401,441	3.46	50
March	10,023	2.78	58,730	4.72	68,753	4.44	311,445	2.95	380,198	3.22	50
April	9,051	2.74	34,718	4.92	43,769	4.47	236,270	2.90	280,039	3.15	50
May	12,053	2.37	25,608	5.28	37,661	4.35	183,783	3.01	221,444	3.24	50
June	12,386	2.19	18,765	5.56	31,151	4.22	144,782	2.99	R 175,933	3.21	50

[a] All prices are weighted averages.
R = Revised Data.
Notes: The summaries presented in this table are exclusive of transactions between major pipeline companies in the computation of total pipeline activities to eliminate double-counting. Data up to 3 years prior to current month are final. All other data are preliminary unless otherwise indicated. See Explanatory Note 9 for discussion of major interstate pipeline companies. Totals may not equal sum of components because of independent rounding.
Source: Form FERC-11.

Table 14. Volumes and Prices of Natural Gas Sold by Major Interstate Natural Gas Pipeline Companies, by Company, June 1991
(Volumes in Million Cubic Feet, Prices in Dollars per Thousand Cubic Feet)

Pipeline Company	To Industrial Users		To Other Ultimate Consumers		Total Sales to Ultimate Consumers		Sales For Resale		Total Sales of Natural Gas	
	Volume	Price[a]	Volume	Price[a]	Volume	Price[a]	Volume	Price[a]	Volume	Price[a]
Algonquin Gas	0	0.00	0	0.00	0	0.00	168	3.10	168	3.10
ANR	0	.00	0	.00	0	.00	3,376	4.87	3,376	4.87
Arkla, Inc	3,759	2.50	10,526	5.75	14,285	4.90	268	1.19	14,553	4.83
Bear Creek Storage	0	.00	0	.00	0	.00	0	.00	0	.00
Canyon Creek Transm Co	0	.00	0	.00	0	.00	0	.00	0	.00
Colorado Interstate	62	2.50	0	.00	62	2.50	4,220	5.53	4,282	5.49
Columbia Gas Transm	0	.00	0	.00	0	.00	3,133	3.75	3,133	3.75
Columbia Gulf	0	.00	2	2.50	2	2.50	0	.00	2	2.50
Consolidated Gas	0	.00	0	.00	0	.00	1,691	2.46	1,661	2.50
East Tennessee	1,535	2.54	1	4.00	1,536	2.54	2,651	2.88	4,187	2.75
El Paso	4,587	1.34	0	.00	4,587	1.34	2,303	2.02	6,890	1.57
Equitrans	136	1.87	0	.00	136	1.87	1,134	5.33	1,270	4.96
Florida Gas	1,665	2.91	0	.00	1,665	2.91	3,704	2.60	5,369	2.70
Great Lakes Gas	0	.00	0	.00	0	.00	0	.00	0	.00
High Island Offshore	0	.00	0	.00	0	.00	0	.00	0	.00
K N Energy Inc	25	3.24	2,154	4.35	2,179	4.34	619	3.41	2,798	4.13
Michigan Consolidated	243	4.50	5,720	5.89	5,963	5.84	0	.00	5,963	5.84
Michigan Gas Storage	0	.00	0	.00	0	.00	94	2.55	94	2.55
Midwestern	0	.00	0	.00	0	.00	1,693	4.12	1,693	4.12
Mississippi River	101	3.47	0	.00	101	3.47	1,736	5.48	1,837	5.37
Mountain Fuel Res	0	.00	0	.00	0	.00	1,220	6.54	1,220	6.54
National Fuel	0	.00	0	.00	0	.00	2,950	4.88	2,950	4.88
Natural Gas Pipeline	2	2.00	0	.00	2	2.00	11,363	5.17	11,365	5.17
Northern Border	0	.00	0	.00	0	.00	0	.00	0	.00
Northern Natural	0	.00	1	2.00	1	2.00	20,099	2.20	20,100	2.20
Northwest Alaskan	0	.00	0	.00	0	.00	27,912	1.48	27,912	1.48
Northwest Pipeline	0	.00	0	.00	0	.00	949	4.31	949	4.31
Overthrust Pipeline	0	.00	0	.00	0	.00	0	.00	0	.00
Pacific Gas Transm	0	.00	0	.00	0	.00	21,737	2.54	21,737	2.54
Pacific Interstate	0	.00	0	.00	0	.00	6,555	3.68	6,555	3.68
Panhandle Eastern	34	2.21	331	1.94	365	1.96	1,592	4.60	1,957	4.11
Sabine Pipeline Co	0	.00	0	.00	0	.00	0	.00	0	.00
Sea Robin Pipeline	0	.00	0	.00	0	.00	0	.00	0	.00
Southern Natural	2	3.00	0	.00	2	3.00	3,415	2.50	3,417	2.50
Stingray Pipeline	0	.00	0	.00	0	.00	0	.00	0	.00
Tenneco, Inc	110	2.86	0	.00	110	2.86	821	3.62	931	3.53
Texas Eastern	0	.00	0	.00	0	.00	884	3.46	884	3.46
Texas Gas Transm	0	.00	0	.00	0	.00	2,825	5.93	2,825	5.93
Trailblazer Pipeline	0	.00	0	.00	0	.00	0	.00	0	.00
Transcontinental	0	.00	0	.00	0	.00	15,993	2.64	15,993	2.64
Transwestern Pipeline	8	1.63	8	1.63	16	1.63	2,438	1.18	2,454	1.18
Trunkline Gas Co	1	3.00	19	2.05	20	2.10	6,929	3.87	6,949	3.86
Trunkline LNG	0	.00	0	.00	0	.00	0	.00	0	.00
U-T Offshore	0	.00	0	.00	0	.00	0	.00	0	.00
United Gas Pipeline	15	8.60	0	.00	15	8.60	538	2.88	553	3.03
Valero Interstate Transm	0	.00	0	.00	0	.00	1,361	1.65	1,361	1.65
Viking Gas Company	0	.00	0	.00	0	.00	47	2.28	47	2.28
Williams Natural	101	3.50	3	2.00	104	3.45	897	4.57	1,001	4.45
Williston Basin	0	.00	0	.00	0	.00	157	3.90	157	3.90
Wyoming Interstate	0	.00	0	.00	0	.00	0	.00	0	.00
Total/Average Price[a]	12,386	2.19	18,765	5.56	31,151	4.22	157,472	3.03	188,593	3.23
Sales to Other Major Companies	--	--	--	--	--	--	12,690	3.41	12,690	3.41
Sales Excluding Sales to Major Companies	--	--	--	--	--	--	144,782	2.99	175,903	3.21

[a] All prices are computed weighted averages based on dollar and volume amounts reported, which may include or reflect out-of-period dollar or volume adjustments, restatements or revisions, or account reclassifications or provisions for ending regulatory adjustments. See Appendix A, Explanatory Note 9 for discussion of apparent anomalies.

-- Not Applicable.

Notes: Two lines have been added to this table to explicitly differentiate transactions between major and nonmajor pipeline companies. Totals may not equal sum of components due to independent rounding and provisions for pending regulatory adjustments.

Source: Form FERC-11.

Table 15. Natural and Other Gases Produced and Purchased by Major Interstate Natural Gas Pipeline Companies, 1985-1991
(Million Cubic Feet)

Year and Month	Transported Gas[a]	Natural Gas[b] Production	Manufactured Gas, Liquefied Natural Gas, Gasified Coal, and Synthetic Gas Production	Purchased Natural Gas				
				From Producers	Intracompany Transfers	Imports	From Others	Total
1985 Total	8,922,483	206,967	18,166	8,211,227	363,055	887,187	596,926	[R] 10,058,395
1986 Total	10,588,148	136,921	22,634	6,466,257	166,954	697,249	345,309	[R] 7,675,779
1987 Total	13,479,989	152,039	22,905	4,848,577	124,572	759,345	400,134	6,132,628
1988 Total	15,950,507	139,621	23,960	4,516,120	66,879	962,383	374,983	[R] 5,920,365
1989								
January	1,604,355	12,145	2,018	400,130	7,077	76,463	72,507	556,177
February	1,495,146	12,008	1,763	372,710	8,143	66,282	45,791	492,926
March	1,638,521	11,077	2,134	314,545	6,881	79,191	27,718	428,335
April	1,629,112	8,935	2,010	224,007	4,975	74,285	24,877	328,144
May	1,621,453	6,610	2,083	237,163	4,994	73,118	15,864	331,139
June	1,512,971	6,410	1,956	247,553	5,623	68,512	25,409	347,097
July	1,421,878	7,932	2,150	239,428	6,091	74,761	25,283	345,563
August	1,414,240	6,857	2,031	249,948	5,540	67,871	17,378	[R] 340,737
September	1,418,307	5,851	2,052	240,590	4,275	73,787	19,642	[R] 338,294
October	1,540,630	9,872	2,171	259,112	5,788	72,313	27,491	364,704
November	1,682,778	8,321	2,060	339,534	6,777	77,522	44,754	[R] 468,587
December	1,717,007	12,018	2,181	407,868	7,894	99,383	65,283	580,428
Total	18,696,398	[R] 108,036	24,609	3,532,588	74,058	903,488	411,997	[R] 4,922,131
1990								
January	2,042,330	9,249	2,064	487,025	7,656	102,640	73,255	670,576
February	1,819,590	7,301	1,948	368,096	5,752	77,018	28,383	479,249
March	1,983,023	10,077	2,295	297,445	6,243	79,441	23,978	407,107
April	1,660,666	6,844	2,095	245,781	4,621	81,523	24,224	[R] 356,149
May	1,666,594	6,608	2,141	294,466	5,278	79,549	19,329	[R] 398,622
June	1,500,305	6,476	1,971	237,229	4,376	78,303	20,390	340,298
July	1,530,684	7,192	2,118	231,879	7,479	80,772	25,705	345,835
August	1,598,638	6,743	1,956	225,496	6,175	84,595	23,209	339,475
September	1,544,694	7,194	1,902	227,631	6,033	79,456	19,209	332,329
October	1,723,553	9,510	1,945	227,925	5,966	88,286	21,771	343,948
November	1,798,333	7,655	1,555	278,097	6,156	89,861	31,570	405,684
December	1,786,087	9,206	2,245	348,589	7,459	92,484	45,519	494,051
Total	20,654,497	94,055	24,235	3,469,659	73,194	1,013,928	[R] 356,542	[R] 4,913,323
1991								
January	2,065,653	6,817	1,577	370,281	7,194	94,938	50,983	523,396
February	1,815,889	6,447	2,149	255,977	5,669	86,062	27,674	375,382
March	1,839,209	6,075	2,118	228,929	5,388	78,343	21,841	334,501
April	1,846,584	5,840	2,093	193,403	4,453	64,319	21,970	284,145
May	1,682,063	5,743	2,202	183,079	4,808	61,258	20,922	270,067
June	1,560,849	12,013	2,121	153,562	4,294	52,828	25,585	236,269

[a] Gas transported for other companies through the production, transmission, or distribution lines or compressor stations of the reporting pipelines.
[b] Mixture of hydrocarbons existing in gaseous phase or in solution with crude oil in natural underground reservoirs.
[c] Includes out-of-period adjustments to correct data in prior month.
[R] = Revised Data.
[NA] = Not Available.

Notes: Previously published manufactured gas is now summarized with liquefied natural gas, gasified coal, and synthetic gas production. Also, the summaries presented in this table are exclusive of transactions between major pipeline companies in the computation of total pipeline activities to eliminate double counting. See Explanatory Note 9 for discussion of major interstate pipeline companies. Totals may not equal sum of components because of independent rounding.

Source: Form FERC-11.

Table 16. Natural and Other Gases Produced and Purchased by Major Interstate Natural Gas Pipeline Companies, June 1991
(Million Cubic Feet)

Pipeline Company	Transported Gas	Natural Gas Production	Manufactured Gas, Liquefied Natural Gas, Gasified Coal and Synthetic Gas Production	Purchased Natural Gas				
				From Producers	Intracompany Transfers	Imports	From Others	Total
Algonquin Gas	13,785	0	0	0	0	0	1,115	1,115
ANR	101,905	0	1,169	10,577	0	0	0	10,577
Arkla, Inc	38,501	0	13	4,560	0	0	10,877	15,437
Bear Creek Storage	0	0	0	0	0	0	0	0
Canyon Creek Transm Co	3,139	0	0	0	0	0	0	0
Colorado Interstate	27,868	3,604	0	2,836	3,604	0	0	6,440
Columbia Gas Transm	56,501	0	0	10,871	0	0	2	10,873
Columbia Gulf	80,378	0	0	0	0	0	2,387	2,387
Consolidated Gas	22,851	1,201	0	4,551	* -30	0	3	4,524
East Tennessee	0	0	0	4,235	0	0	0	4,235
El Paso	95,712	* -153	0	7,168	0	0	2,252	9,420
Equitrans	3,341	0	0	3,701	0	0	0	3,701
Florida Gas	23,524	0	0	1,617	0	0	5,723	7,340
Great Lakes Gas	48,467	0	0	0	0	42	0	42
High Island Offshore	35,871	0	0	0	0	0	0	0
K N Energy Inc	4,915	0	0	4,348	0	0	1,700	6,048
Michigan Consolidated	8,421	207	0	12,806	0	0	3,442	16,248
Michigan Gas Storage	23,105	0	0	0	0	0	94	94
Midwestern	11,105	0	0	1,673	0	0	1	1,674
Mississippi River	13,460	0	0	4,862	0	0	0	4,862
Mountain Fuel Res	15,797	0	0	5,487	0	0	999	6,486
National Fuel	9,778	388	0	7,176	388	0	6	7,570
Natural Gas Pipeline	88,112	26	939	11,802	26	887	3,537	16,252
Northern Border	34,279	0	0	0	0	0	0	0
Northern Natural	116,384	6,453	0	712	0	0	12,426	13,138
Northwest Alaskan	0	0	0	0	0	27,912	0	27,912
Northwest Pipeline	57,509	0	0	2,126	0	349	0	2,475
Overthrust Pipeline	3,952	0	0	0	0	0	0	0
Pacific Gas Transm	14,868	0	0	163	0	22,010	0	22,173
Pacific Interstate	0	0	0	0	0	0	7,200	7,200
Panhandle Eastern	41,059	0	0	5,009	0	0	10	5,019
Sabine Pipeline Co	12,366	0	0	0	0	0	0	0
Sea Robin Pipeline	16,761	0	0	152	0	0	0	152
Southern Natural	32,202	0	0	7,949	0	0	0	7,949
Stingray Pipeline	20,213	0	0	0	0	0	0	0
Tenneco, Inc	113,890	284	0	79	0	1,243	2,584	3,906
Texas Eastern	61,432	3	0	1,849	0	264	* -55	2,058
Texas Gas Transm	40,266	0	0	6,315	0	0	54	6,369
Trailblazer Pipeline	8,415	0	0	0	0	0	0	0
Transcontinental	95,237	0	0	16,675	0	0	1,092	17,767
Transwestern Pipeline	27,420	0	0	1,716	0	0	0	1,716
Trunkline Gas Co	33,899	0	0	6,994	0	0	0	6,994
Trunkline LNG	0	0	0	0	0	0	0	0
U-T Offshore	19,895	0	0	0	0	0	0	0
United Gas Pipeline	41,180	0	0	1,827	0	0	0	1,827
Valero Interstate Transm	3,687	0	0	0	0	0	1,361	1,361
Viking Gas Company	9,581	0	0	0	0	121	0	121
Williams Natural	19,951	0	0	2,432	0	0	90	2,522
Williston Basin	3,300	0	0	1,294	306	0	0	1,600
Wyoming Interstate	6,567	0	0	0	0	0	0	0
Total	1,560,849	12,013	2,121	153,562	4,294	52,828	56,900	267,584
Purchases from Other Major Companies	—	—	—	0	0	0	31,315	31,315
Purchases Excluding Purchases from Other Major Companies	—	—	—	153,562	4,294	52,828	25,585	236,269

* Includes out-of-period adjustments to correct data in prior month.
— Not Applicable.
Notes: Previously published manufactured gas is now summarized with liquefied natural gas, gasified coal, and synthetic gas production. Two lines have been added to this table that explicitly differentiate transactions between major and nonmajor pipeline companies. See Explanatory Note 9 for discussion of major interstate pipeline companies. Totals may not equal sum of components because of independent rounding.
Source: Form FERC-11.

Table 17. Underground Natural Gas Storage - All Operators, 1985-1991
(Volumes in Billion Cubic Feet)

Year and Month	Natural Gas in Underground Storage at End of Period			Change in Working Gas from Same Period Previous Year		Storage Activity		
	Base Gas	Working Gas	Total[b]	Volume	Percent	Injections	Withdrawals	Net[c]
1985 Total[a]	3,842	2,607	6,448	-270	-9.4	2,128	2,359	-231
1986 Total[a]	3,819	2,749	6,567	142	5.5	1,952	1,812	140
1987 Total[a]	3,792	2,756	6,548	7	.3	1,887	1,881	6
1988 Total[a]	3,800	2,850	6,650	94	3.4	2,174	2,244	-69
1989								
January	3,798	2,509	6,307	281	12.6	53	418	-365
February	3,801	1,994	5,796	168	9.2	32	602	-570
March	3,801	1,776	5,578	94	5.6	106	362	-256
April	3,801	1,823	5,624	54	3.0	181	138	43
May	3,802	2,062	5,863	34	1.7	321	44	277
June	3,802	2,374	6,176	82	3.6	375	20	355
July	3,802	2,644	6,446	77	3.0	371	29	341
August	3,802	2,938	6,740	103	3.6	356	29	328
September	3,802	3,187	6,990	67	2.2	320	39	281
October	3,792	3,268	7,061	25	.8	221	96	124
November	3,809	3,199	7,008	28	.9	105	223	-118
December	3,812	2,513	6,325	-337	-11.8	52	805	-752
Total	—	—	—	—	—	2,493	2,804	-311
1990								
January	3,818	2,265	6,083	-243	-9.7	91	339	-248
February	3,814	2,013	5,827	19	.9	70	324	-253
March	3,818	1,878	5,695	101	5.7	124	256	-131
April	3,839	1,932	5,771	109	6.0	183	140	43
May	3,823	2,159	5,982	97	4.7	289	45	245
June	3,844	2,454	6,297	79	3.3	327	42	285
July	3,850	2,747	6,597	103	3.9	325	27	298
August	3,851	2,995	6,846	57	1.9	321	37	283
September	3,852	3,267	7,119	80	2.5	284	36	248
October	3,852	3,426	7,277	158	4.8	214	61	153
November	3,868	3,417	7,285	218	6.8	136	144	-8
December	3,868	3,009	6,876	496	19.7	72	467	-395
Total	—	—	—	—	—	2,436	1,918	520
1991								
January	3,831	2,262	6,094	-3	-.1	57	632	-576
February	3,889	2,080	5,969	67	3.3	60	360	-300
March	3,865	1,912	5,777	34	1.8	98	262	-164
April	3,878	2,039	5,917	107	5.5	212	83	129
May	3,914	[R] 2,279	6,192	[R] 120	[R] 5.6	306	31	276
June	[R] 3,942	[R] 2,548	[R] 6,490	[R] 94	[R] 3.8	[R] 308	20	[R] 288
July	3,923	2,750	6,673	3	.1	266	46	220

[a] Total as of December 31.

[b] Total underground storage capacity at the end of each calendar Year (in billion cubic feet): 1985 - 8,087; 1986 - 8,145; 1987, 1988, and 1989 - 8,124; and 1990 - 8,125.

[c] Positive numbers indicate the volume of injections in excess of withdrawals. Negative numbers indicate the volume of withdrawals in excess of injections.

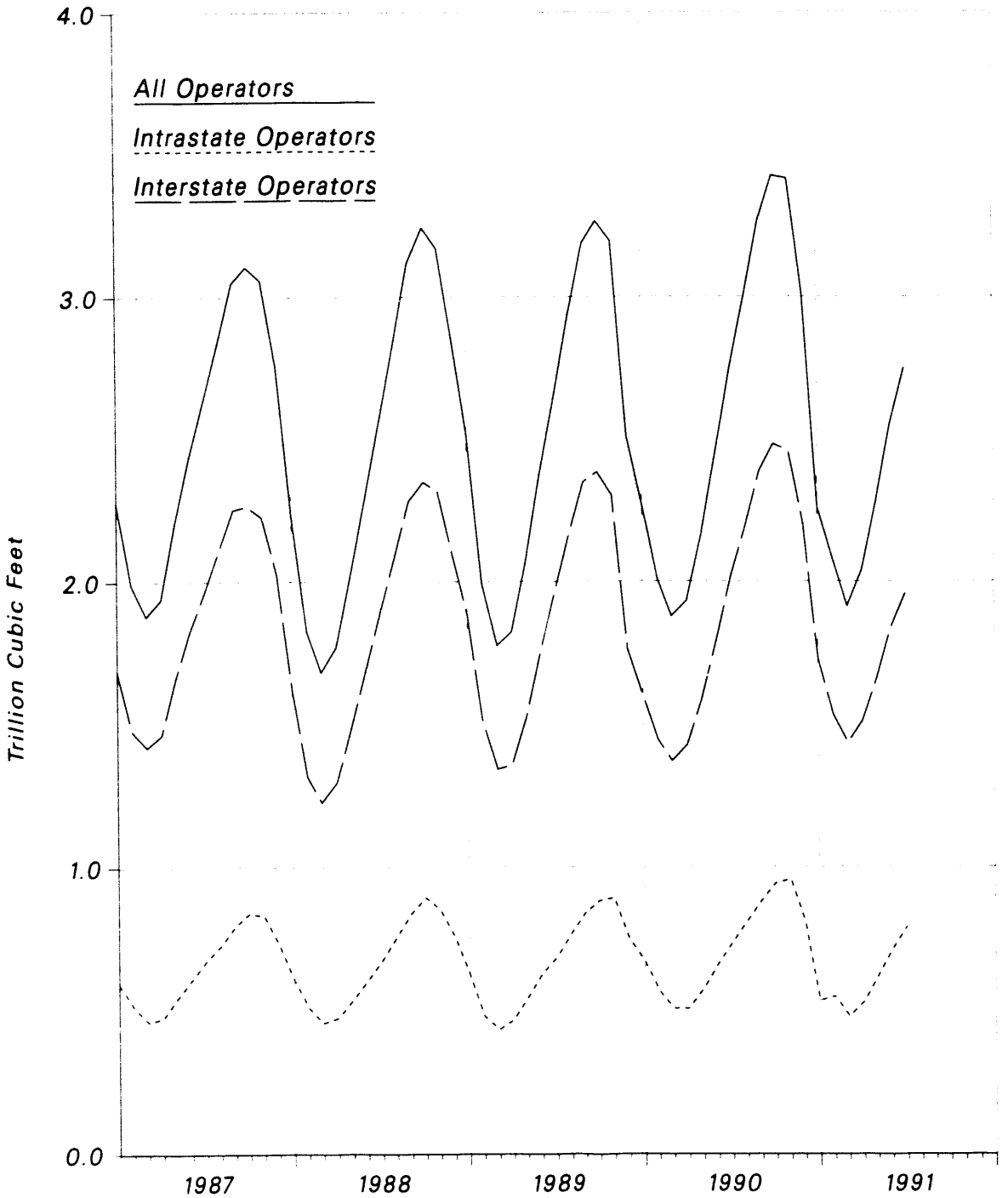
[R] = Revised Data.

— = Not Applicable.

Notes: Data for 1985 through 1989 are final. All other data are preliminary unless otherwise noted. See Explanatory Note 7 for discussion of revision policy. Gas in storage at the end of a reporting period may not equal the quantity derived by adding or subtracting net injections or withdrawals during the period to the quantity of gas in storage at the beginning of the period. This is due to changes in the quantities of native gas included in base gas and/or losses in base gas due to migration from storage reservoirs. Totals may not equal sum of components because of independent rounding. Geographic coverage is the 50 States and the District of Columbia.

Sources: Form EIA-191, Form FERC-8, and Form EIA-176.

Figure 6. Underground Natural Gas Storage in the United States, 1987-1991



Source: Form EIA-191, Form FERC-8, and Form EIA-176.

Table 18. Underground Natural Gas Storage - Interstate Operators of Storage Fields, 1985-1991
(Volumes in Billion Cubic Feet)

Year and Month	Natural Gas in Underground Storage at End of Period			Change in Working Gas from Same Period Previous Year		Storage Activity		
	Base Gas	Working Gas	Total[b]	Volume	Percent	Injections	Withdrawals	Net[c]
1985 Total[a]	2,517	1,905	4,422	-189	-9.0	1,590	1,758	-167
1986 Total[a]	2,483	2,010	4,492	104	5.5	1,448	1,353	95
1987 Total[a]	2,461	2,024	4,485	14	.7	1,364	1,347	17
1988 Total[a]	2,469	2,092	4,561	68	3.3	1,587	1,532	55
1989								
January	2,469	1,881	4,350	261	16.1	41	271	-230
February	2,469	1,515	3,983	197	15.0	18	430	-413
March	2,469	1,343	3,812	117	9.5	71	278	-206
April	2,469	1,357	3,825	61	4.7	125	109	16
May	2,469	1,519	3,988	29	1.9	230	34	196
June	2,469	1,748	4,217	59	3.5	277	11	266
July	2,469	1,960	4,429	68	3.6	282	14	268
August	2,469	2,170	4,639	88	4.2	258	18	240
September	2,469	2,348	4,817	65	2.9	232	26	207
October	2,461	2,386	4,847	37	1.6	154	77	77
November	2,478	2,305	4,783	-11	-.5	73	175	-103
December	2,478	1,764	4,242	-328	-15.7	28	630	-602
Total	—	—	—	—	—	1,788	2,072	-285
1990								
January	2,479	1,597	4,076	-285	-15.1	72	240	-169
February	2,479	1,446	3,926	-68	-4.5	60	206	-146
March	2,479	1,371	3,850	28	2.1	101	176	-74
April	2,479	1,427	3,906	70	5.2	131	107	24
May	2,459	1,586	4,046	67	4.4	202	36	167
June	2,479	1,793	4,273	46	2.6	233	32	201
July	2,486	2,012	4,498	52	2.7	238	15	223
August	2,487	2,186	4,673	16	.7	227	18	210
September	2,488	2,386	4,874	38	1.6	198	22	176
October	2,488	2,483	4,971	97	4.1	139	50	89
November	2,505	2,460	4,966	155	6.7	98	113	-16
December	2,496	2,200	4,696	436	24.7	64	318	-254
Total	—	—	—	—	—	1,763	1,333	431
1991								
January	2,534	1,729	4,263	132	8.3	49	458	-409
February	2,543	1,532	4,076	86	5.9	42	261	-219
March	2,527	1,434	3,961	63	4.6	79	175	-96
April	2,524	1,511	4,035	84	5.9	150	62	88
May	2,556	1,660	4,216	74	4.7	205	21	184
June	[R] 2,582	[R] 1,836	[R] 4,419	[R] 43	[R] 2.4	[R] 208	14	[R] 194
July	2,562	1,958	4,520	-54	-2.7	171	34	137

[a] Total as of December 31.
[b] Total underground storage capacity at the end of each calendar year (in billion cubic feet): 1985 - 5,602; 1986 - 5,642; 1987, 1988, 1989, and 1990 - 5,622.
[c] Positive numbers indicate the volume of injections in excess of withdrawals. Negative numbers indicate the volume of withdrawals in excess of injections.
[R] = Revised Data.
— = Not Applicable.
Notes: Data for 1985 through 1989 are final. All other data are preliminary unless otherwise noted. See Explanatory Note 7 for discussion of revision policy. Gas in storage at the end of a reporting period may not equal the quantity derived by adding or subtracting net injections or withdrawals during the period to the quantity of gas in storage at the beginning of the period. This is due to changes in the quantities of native gas included in base gas and/or losses in base gas due to migration from storage reservoirs. Totals may not equal sum of components because of independent rounding. Geographic coverage is the 50 States and the District of Columbia.
Sources: Form EIA-191, Form FERC-8, and EIA-176.

Table 19. Underground Natural Gas Storage - Intrastate Operators and Independent Producers, 1985-1991
(Volumes in Billion Cubic Feet)

Year and Month	Natural Gas in Underground Storage at End of Period			Change in Working Gas from Same Period Previous Year		Storage Activity		
	Base Gas	Working Gas	Total[b]	Volume	Percent	Injections	Withdrawals	Net[c]
1985 Total[a]	1,325	701	2,026	-81	10.3	538	602	-64
1986 Total[a]	1,336	739	2,075	38	5.4	504	459	45
1987 Total[a]	1,331	732	2,063	-7	.1	522	533	-11
1988 Total[a]	1,331	758	2,089	26	3.8	587	711	-124
1989								
January	1,329	628	1,957	20	3.3	12	147	-135
February	1,332	480	1,812	-30	-5.8	14	172	-157
March	1,332	433	1,765	-23	-5.1	35	84	-50
April	1,332	466	1,799	-7	-1.5	56	29	27
May	1,332	543	1,875	6	1.0	91	10	81
June	1,332	627	1,959	23	3.7	98	9	89
July	1,333	684	2,017	9	1.3	89	15	74
August	1,333	768	2,101	14	1.9	99	10	88
September	1,333	840	2,173	2	.2	88	13	74
October	1,331	883	2,214	-12	-1.3	67	19	47
November	1,331	893	2,225	39	4.6	32	47	-15
December	1,335	749	2,083	-9	-1.2	25	175	-150
Total	--	--	--	--	--	705	732	-26
1990								
January	1,338	669	2,007	41	6.6	20	99	-79
February	1,335	567	1,901	87	18.2	11	118	-107
March	1,338	507	1,845	74	17.0	23	80	-57
April	1,360	505	1,865	39	8.3	52	33	19
May	1,364	573	1,937	30	5.5	87	9	78
June	1,365	660	2,025	34	5.4	94	10	84
July	1,364	735	2,099	51	7.5	86	12	75
August	1,364	809	2,173	41	5.3	93	20	73
September	1,364	881	2,245	41	4.9	86	14	72
October	1,364	943	2,307	60	6.8	75	11	64
November	1,362	957	2,319	64	7.2	38	31	7
December	1,372	809	2,180	60	8.0	8	149	-142
Total	--	--	--	--	--	673	586	87
1991								
January	1,298	533	1,831	-136	-20.3	8	175	-167
February	1,346	548	1,894	-19	-3.4	18	99	-81
March	1,339	478	1,816	-29	-5.7	18	87	-68
April	1,354	528	1,882	23	4.6	61	21	40
May	1,358	[R] 619	1,977	[R] 46	[R] 8.0	101	10	91
June	1,360	712	2,072	52	7.9	100	6	94
July	1,361	792	2,153	57	7.8	95	13	83

[a] Total as of December 31.

[b] Total underground storage capacity at the end of each calendar year (in billion cubic feet): 1985 - 2,485; 1986 - 2,503; 1987, 1988, and 1989 - 2,502; and 1990 - 2,503.

[c] Positive numbers indicate the volume of injections in excess of withdrawals. Negative numbers indicate the volume of withdrawals in excess of injections.

[R] = Revised Data.

-- = Not Applicable.

Notes: Data for 1985 through 1989 are final. All other data are preliminary unless otherwise noted. See Explanatory Note 7 for discussion of revision policy. Gas in storage at the end of a reporting period may not equal the quantity derived by adding or subtracting net injections or withdrawals during the period to the quantity of gas in storage at the beginning of the period. This is due to changes in the quantities of native gas included in base gas and/or losses in base gas due to migration from storage reservoirs. Totals may not equal sum of components because of independent rounding. Geographic coverage is the 50 States and the District of Columbia.

Sources: Form EIA-191, Form FERC-8, and EIA-176.

Table 20. Net Withdrawals from Underground Storage, by State, 1991
(Volume in Million Cubic Feet)

States	July 1991	June 1991	May 1991	April 1991	March 1991	February 1991	January 1991
Arkansas	-487	-339	-131	195	321	366	762
California	-13,565	-24,259	-26,643	-20,856	16,809	-588	24,479
Colorado	-4,160	R -5,101	-1,124	4,031	6,961	2,049	3,245
Illinois	-28,656	-30,236	-31,113	-2,860	25,269	48,753	67,685
Indiana	-2,490	-394	R -1,883	531	3,290	4,662	5,861
Iowa	-5,577	-10,637	-4,496	-1,740	3,643	10,470	21,081
Kansas	-2,484	R -8,668	-6,375	2,272	5,245	3,897	18,025
Kentucky	-6,340	-3,797	-2,455	-4,056	782	954	3,064
Louisiana	-11,898	-22,515	-19,498	-6,250	13,652	32,121	49,641
Maryland	-1,360	-1,629	-1,558	-924	1,605	3,286	3,089
Michigan	-58,764	-57,648	-48,242	-24,601	23,577	57,119	114,929
Minnesota	-291	-312	-151	•-261	106	5,197	386
Mississippi	-1,705	-2,637	-3,887	-6,236	-98	4,553	11,129
Missouri	-295	-89	-683	-2,136	1,056	1,796	165
Montana	-1,713	-1,236	-1,227	79	1,328	1,413	4,874
Nebraska	264	-2,142	R -2,926	-1,136	719	1,035	1,846
New Mexico	-1,041	-3,009	-2,925	-3,068	2,168	2,003	3,429
New York	-9,059	R -7,680	R -6,775	-3,687	4,788	8,355	14,907
Ohio	-14,909	R -19,315	R -22,509	-9,924	15,731	22,848	33,537
Oklahoma	-1,063	-10,465	-14,594	-13,979	-5,225	4,954	35,168
Oregon	-1,458	-1,554	-713	978	1,767	965	1,090
Pennsylvania	-22,464	R -30,000	R -40,416	R -5,634	26,616	47,074	76,436
Texas	-4,328	R -17,996	-15,301	-16,808	641	8,937	33,701
Utah	-6,328	-5,842	-2,553	-1,015	3,623	7,206	8,179
Washington	-2,138	-2,716	-1,522	-2,833	2,944	103	2,437
West Virginia	-15,412	R -16,245	R -15,210	R -8,905	6,615	19,839	33,937
Wyoming	-2,208	-1,978	-803	44	-26	655	2,683
Total	-219,929	R -288,440	-275,713	-128,780	163,905	300,021	575,765

R = Revised Data.

Notes: This table contains total net withdrawals for each State with natural gas storage facilities. Positive numbers indicate the volume of withdrawals in excess of injections. Negative values indicate the volume of injections in excess of withdrawals. All data are preliminary at this time and are not considered final until publication of the *Natural Gas Annual* for that year.

Source: Form EIA-191.

Table 21. Activities of Underground Natural Gas Storage Operators, by State, July 1991
(Volumes in Million Cubic Feet)

State	Total Storage Capacity	Natural Gas in Underground Storage at End of Period			Change in Working Gas from Same Period Previous Year		Net Injections or Withdrawals[a]	
		Base Gas	Working Gas	Total	Volume	Percent	Current Period	Same Period Previous Year
Arkansas	31,278	19,202	8,371	27,573	NA	NA	487	NA
California	291,679	243,944	201,080	445,024	NA	NA	13,565	NA
Colorado	99,000	45,252	25,340	70,592	NA	NA	4,160	NA
Illinois	949,914	568,128	241,628	809,756	NA	NA	28,656	NA
Indiana	97,333	66,856	18,016	84,872	NA	NA	2,490	NA
Iowa	229,700	154,574	79,723	234,297	NA	NA	5,577	NA
Kansas	301,200	191,136	63,460	254,596	NA	NA	2,484	NA
Kentucky	312,061	109,582	93,361	202,943	NA	NA	6,340	NA
Louisiana	550,823	251,557	150,114	401,671	NA	NA	11,898	NA
Maryland	61,978	46,677	9,321	55,998	NA	NA	1,360	NA
Michigan	994,543	413,617	431,771	845,387	NA	NA	58,764	NA
Minnesota	7,000	4,655	2,222	6,878	NA	NA	291	NA
Mississippi	108,601	46,090	51,231	97,321	NA	NA	1,705	NA
Missouri	29,791	21,600	8,033	29,633	NA	NA	295	NA
Montana	373,960	109,573	181,094	290,667	NA	NA	1,713	NA
Nebraska	143,312	27,312	56,409	83,721	NA	NA	-264	NA
New Mexico	94,600	30,413	15,689	46,102	NA	NA	1,041	NA
New York	147,619	88,494	51,822	140,317	NA	NA	9,059	NA
Ohio	591,494	357,566	147,602	505,168	NA	NA	14,909	NA
Oklahoma	362,616	172,757	151,400	324,157	NA	NA	1,063	NA
Oregon	9,791	3,291	5,706	8,997	NA	NA	1,458	NA
Pennsylvania	640,939	350,902	218,825	569,727	NA	NA	22,464	NA
Texas	586,502	161,280	318,742	480,022	NA	NA	4,328	NA
Utah	114,980	51,258	15,226	66,484	NA	NA	6,328	NA
Washington	32,100	21,300	12,718	34,018	NA	NA	2,138	NA
West Virginia	525,138	331,275	132,996	464,271	NA	NA	15,412	NA
Wyoming	106,130	34,651	58,178	92,829	NA	NA	2,208	NA
Total	7,794,083	3,922,941	2,750,080	6,673,020	NA	NA	219,929	NA

[a] Positive numbers indicate the volume of injections in excess of withdrawals. Negative numbers indicate the volume of withdrawals in excess of injections.

Notes: Gas in storage at the end of a reporting period may not equal the quantity derived by adding or subtracting net injections or withdrawals during the period to the quantity of gas in storage at the beginning of the period. This is due to changes in the quantities of native gas included in base gas and/or losses in base gas due to migration from storage reservoirs. Totals may not equal sum of components because of independent rounding. Geographic coverage is the 50 States and the District of Columbia.

Source: Form EIA-191.

Table 22. Natural Gas Deliveries to Residential Consumers by State, 1989-1991

(Million Cubic Feet)

State	YTD 1991	YTD 1990	YTD 1989	June 1991	May 1991	April 1991
Alabama	30,117	31,523	31,007	1,595	2,075	3,921
Alaska	8,082	8,091	8,226	662	907	1,258
Arizona	19,627	19,112	17,923	1,153	1,545	3,065
Arkansas	26,358	26,191	27,792	1,260	1,669	2,977
California	304,837	306,504	313,128	28,478	34,775	46,113
Colorado	64,555	63,171	62,117	3,597	7,103	9,182
Connecticut	23,651	24,719	25,241	1,173	1,975	3,431
Delaware	4,960	5,196	5,164	211	409	795
District of Columbia	10,125	10,703	11,558	503	804	1,494
Florida	7,557	8,035	7,719	711	762	1,075
Georgia	54,519	51,130	55,985	3,082	3,768	5,112
Hawaii	291	305	299	45	46	51
Idaho	6,644	5,404	5,918	391	694	905
Illinois	271,391	247,170	291,689	11,054	18,220	32,311
Indiana	92,594	87,246	93,145	3,282	5,822	11,044
Iowa	51,225	48,779	50,902	1,992	4,061	6,329
Kansas	50,207	49,652	50,553	2,032	3,660	5,551
Kentucky	35,019	33,502	38,685	1,377	1,804	3,428
Louisiana	33 563	33,712	35,063	2,262	2,540	3,668
Maine	459	422	410	32	46	76
Maryland	42,501	45,311	48,308	2,312	3,192	5,895
Massachusetts	68,700	74,548	74,513	3,758	6,318	11,064
Michigan	213,191	210,691	223,992	10,036	18,696	29,146
Minnesota	70,478	66,692	72,951	2,837	5,690	8,528
Mississippi	16,403	16,544	16,508	889	1,126	1,919
Missouri	79,483	77,884	84,217	3,038	4,910	8,066
Montana	11,046	10,287	11,436	600	1,228	1,563
Nebraska	27,883	26,838	28,451	1,167	2,242	3,134
Nevada	12,789	10,972	10,739	887	1,256	1,951
New Hampshire	3,795	4,135	4,192	189	359	599
New Jersey	111,710	114,983	122,255	5,324	8,457	16,167
New Mexico	20,300	19,619	17,645	1,099	1,765	3,088
New York	220,963	218,648	233,985	9,614	20,077	34,014
North Carolina	24,876	23,759	25,445	935	1,496	2,973
North Dakota	6,608	6,143	6,581	277	671	859
Ohio	199,949	189,434	206,723	7,992	13,638	25,983
Oklahoma	46,244	45,916	47,987	2,049	2,938	4,847
Oregon	17,966	15,349	15,154	1,461	1,936	2,631
Pennsylvania	153,313	160,577	170,997	6,690	11,077	22,276
Rhode Island	11,366	12,096	11,898	565	1,088	1,759
South Carolina	13,099	12,468	13,346	451	621	1,356
South Dakota	6,924	6,496	7,204	301	656	857
Tennessee	31,469	31,302	32,272	1,120	1,617	3,222
Texas	133,594	126,353	136,821	8,375	9,120	13,526
Utah	32,672	27,560	29,955	2,041	3,544	4,514
Vermont	1,459	1,464	1,391	64	124	225
Virginia	34,456	34,307	38,416	1,631	2,163	4,544
Washington	30,389	25,458	25,389	2,290	3,087	4,709
West Virginia	20,733	21,906	23,510	702	1,361	2,853
Wisconsin	74,244	73,347	81,584	2,489	6,026	9,655
Wyoming	7,185	7,009	7,924	429	854	1,041
Total	2,841,560	2,778,664	2,964,311	146,504	230,018	374,749

See footnote at end of table.

Table 22. Natural Gas Deliveries to Residential Consumers by State, 1989-1991 (Continued)
(Million Cubic Feet)

State	March 1991	February 1991	January 1991	Total 1990	December 1990	November 1990
Alabama	6,777	8,393	7,356	46,079	5,434	3,409
Alaska	1,477	1,847	1,931	14,165	2,216	1,586
Arizona	3,392	4,405	6,067	28,435	4,195	1,605
Arkansas	5,069	6,916	8,467	39,170	4,802	3,266
California	60,562	53,001	81,908	514,590	76,556	40,097
Colorado	11,679	15,104	17,890	91,871	10,951	7,138
Connecticut	5,010	5,705	6,357	37,601	4,837	3,214
Delaware	1,079	1,217	1,249	7,269	830	483
District of Columbia	2,077	2,543	2,704	15,575	1,881	1,035
Florida	1,561	1,776	1,672	12,846	1,424	896
Georgia	10,836	13,289	18,432	89,688	15,441	9,057
Hawaii	49	50	50	573	48	46
Idaho	1,055	1,463	2,136	8,562	1,396	896
Illinois	54,733	62,682	92,391	419,212	72,402	38,780
Indiana	19,411	23,070	29,965	140,388	21,695	13,121
Iowa	10,016	12,688	16,139	72,012	9,716	5,823
Kansas	9,055	12,492	17,417	71,487	8,942	5,093
Kentucky	7,160	9,633	11,617	55,958	9,394	5,730
Louisiana	6,322	8,812	9,959	53,118	6,710	4,357
Maine	94	105	106	648	83	56
Maryland	[R] 8,997	[R] 10,282	[R] 11,823	67,543	8,238	4,913
Massachusetts	14,659	16,612	16,289	106,979	12,176	7,725
Michigan	44,016	49,800	61,497	329,245	45,323	29,683
Minnesota	14,227	16,431	22,765	106,544	17,110	9,907
Mississippi	3,419	4,384	4,666	25,034	3,016	2,069
Missouri	15,396	20,727	27,346	115,868	15,666	9,326
Montana	2,059	2,110	3,486	16,973	2,692	1,706
Nebraska	5,231	6,567	9,542	41,469	6,247	3,456
Nevada	2,129	2,564	4,002	17,157	2,594	1,271
New Hampshire	799	944	905	5,903	665	465
New Jersey	23,955	27,287	30,520	174,201	22,931	14,390
New Mexico	3,701	4,875	5,772	28,757	3,844	1,915
New York	48,387	51,987	56,884	[R] 333,637	[R] 42,783	28,700
North Carolina	5,548	6,843	7,081	35,088	5,010	2,993
North Dakota	1,254	1,528	2,019	9,183	1,235	828
Ohio	42,648	51,215	58,473	302,756	44,407	29,246
Oklahoma	8,466	11,496	16,448	66,310	8,335	4,725
Oregon	3,075	3,529	5,334	23,435	3,414	1,977
Pennsylvania	32,659	38,064	42,547	242,616	31,689	21,101
Rhode Island	2,449	2,715	2,790	17,735	2,094	1,354
South Carolina	2,956	3,845	3,870	18,430	2,781	1,608
South Dakota	1,339	1,569	2,202	10,204	1,523	973
Tennessee	6,891	8,740	9,879	46,089	6,259	3,996
Texas	22,925	31,567	48,081	209,118	33,352	16,622
Utah	5,715	7,276	9,582	43,424	6,463	3,699
Vermont	299	366	381	2,150	273	183
Virginia	7,286	9,120	9,712	53,031	7,518	4,566
Washington	5,553	6,244	8,506	40,273	6,133	3,939
West Virginia	4,818	5,482	5,517	32,943	4,441	3,028
Wisconsin	15,663	17,180	23,231	[R] 116,709	[R] 17,946	10,522
Wyoming	1,241	1,546	2,074	10,580	1,433	897
Total	[R] 575,170	[R] 668,085	[R] 847,034	[R] 4,368,632	[R] 626,546	[R] 373,467

See footnote at end of table.

Table 22. Natural Gas Deliveries to Residential Consumers by State, 1989-1991 (Continued)
(Million Cubic Feet)

State	October 1990	September 1990	August 1990	July 1990	June 1990	May 1990
Alabama	1,552	1,375	1,354	1,432	1,649	2,696
Alaska	929	527	407	409	548	771
Arizona	979	868	803	873	1,074	1,338
Arkansas	1,479	1,169	1,110	1,154	1,366	2,160
California	24,439	22,096	22,338	22,558	25,129	30,984
Colorado	3,449	2,330	2,356	2,477	4,189	7,245
Connecticut	1,667	1,124	934	1,104	1,350	2,212
Delaware	222	190	166	183	260	449
District of Columbia	558	448	445	505	613	874
Florida	627	612	597	654	692	802
Georgia	5,323	2,960	2,882	2,895	3,133	3,757
Hawaii	43	44	40	49	50	46
Idaho	349	186	160	173	360	475
Illinois	28,758	11,977	10,241	9,883	11,719	22,246
Indiana	8,493	3,682	3,113	3,040	3,977	7,049
Iowa	2,891	1,613	1,543	1,648	2,474	4,209
Kansas	2,521	1,774	1,682	1,823	2,463	4,497
Kentucky	3,300	1,373	1,285	1,374	1,596	2,444
Louisiana	2,337	2,022	1,962	2,017	2,252	2,761
Maine	27	22	19	20	30	48
Maryland	2,717	2,104	2,019	2,240	2,704	3,618
Massachusetts	3,732	2,994	2,639	3,166	4,899	7,203
Michigan	18,039	9,388	8,299	7,823	11,156	19,384
Minnesota	5,589	2,611	2,272	2,363	3,283	5,519
Mississippi	947	798	808	850	921	1,265
Missouri	4,464	2,874	2,711	2,944	3,781	6,236
Montana	1,047	453	395	392	706	1,113
Nebraska	1,895	1,033	947	1,056	1,294	2,274
Nevada	717	521	520	562	775	862
New Hampshire	203	162	128	145	262	395
New Jersey	6,807	5,415	4,582	5,092	6,248	9,720
New Mexico	967	829	771	812	1,065	1,707
New York	14,603	9,959	8,818	10,126	12,968	20,239
North Carolina	1,073	754	733	765	959	1,607
North Dakota	398	220	167	191	337	581
Ohio	16,503	8,398	7,023	7,744	9,672	16,921
Oklahoma	2,441	1,579	1,616	1,697	2,229	4,066
Oregon	895	533	561	706	1,209	1,480
Pennsylvania	10,718	6,737	5,759	6,037	8,484	13,354
Rhode Island	688	539	481	482	762	1,219
South Carolina	484	376	347	367	440	738
South Dakota	527	237	215	231	346	600
Tennessee	1,574	1,012	957	988	1,297	2,107
Texas	10,193	7,481	7,510	7,609	8,501	10,751
Utah	1,932	1,222	1,236	1,314	1,880	2,576
Vermont	95	51	40	43	82	130
Virginia	2,151	1,645	1,410	1,434	1,785	2,475
Washington	1,963	939	794	1,048	1,941	2,570
West Virginia	1,352	799	695	723	1,054	1,745
Wisconsin	[R] 6,811	[R] 3,153	[R] 2,533	[R] 2,398	[R] 3,647	6,752
Wyoming	446	235	265	295	539	782
Total	211,910	[R] 131,444	[R] 120,690	[R] 125,911	[R] 160,149	247,052

See footnote at end of table.

Table 22. Natural Gas Deliveries to Residential Consumers by State, 1989-1991 (Continued)
(Million Cubic Feet)

State	April 1990	March 1990	February 1990	January 1990	Total 1989	December 1989
Alabama	4,204	5,332	6,589	11,053	47,932	7,212
Alaska	1,181	1,756	2,090	1,745	13,589	1,656
Arizona	2,060	3,784	5,235	5,621	27,084	3,945
Arkansas	3,808	4,626	5,554	8,677	42,312	6,356
California	37,608	60,256	73,943	78,584	514,276	63,104
Colorado	9,869	12,625	13,552	15,691	91,567	11,066
Connecticut	3,723	5,020	5,696	6,718	40,687	6,991
Delaware	797	1,008	1,069	1,613	7,595	1,085
District of Columbia	1,566	2,041	2,257	3,352	17,433	2,537
Florida	1,037	1,249	1,455	2,800	13,089	1,825
Georgia	6,357	10,030	11,719	16,134	103,657	22,132
Hawaii	51	56	53	49	565	46
Idaho	630	1,077	1,418	1,444	8,783	1,241
Illinois	35,498	49,308	60,983	67,416	496,487	93,702
Indiana	13,284	17,214	20,144	25,578	155,887	29,647
Iowa	7,402	9,690	10,759	14,245	77,403	12,401
Kansas	7,545	9,101	10,976	15,070	76,034	11,694
Kentucky	4,997	6,355	8,393	9,717	65,086	13,034
Louisiana	4,242	5,700	6,462	12,295	57,705	9,714
Maine	67	82	86	109	638	95
Maryland	6,976	8,944	9,121	13,948	75,138	12,076
Massachusetts	11,652	14,924	15,746	20,124	111,661	16,224
Michigan	31,785	43,683	48,436	56,247	361,667	60,266
Minnesota	9,482	13,504	16,000	18,904	116,909	20,120
Mississippi	2,204	2,792	3,305	6,057	26,312	4,241
Missouri	11,830	14,371	16,795	24,871	129,144	21,588
Montana	1,470	1,914	2,439	2,645	18,195	2,518
Nebraska	3,956	5,259	6,467	7,588	44,804	7,297
Nevada	1,127	2,209	3,011	2,988	16,765	2,359
New Hampshire	655	815	890	1,118	6,290	926
New Jersey	18,005	23,457	24,764	32,789	195,542	33,347
New Mexico	2,596	3,938	4,846	5,467	26,591	3,746
New York	33,991	46,015	52,072	53,363	364,713	57,291
North Carolina	3,304	4,412	4,921	8,556	38,658	6,866
North Dakota	949	1,175	1,440	1,661	9,825	1,411
Ohio	28,381	38,373	46,783	49,304	359,148	69,403
Oklahoma	6,710	8,350	10,320	14,241	71,793	11,039
Oregon	1,824	3,226	3,795	3,815	22,504	2,886
Pennsylvania	24,753	32,217	34,646	47,123	270,756	44,962
Rhode Island	1,868	2,456	2,533	3,258	16,283	2,744
South Carolina	1,541	2,257	2,596	4,896	20,472	3,911
South Dakota	959	1,293	1,529	1,769	11,342	1,764
Tennessee	4,383	5,544	6,478	11,493	49,136	8,590
Texas	15,181	22,880	26,822	42,218	230,100	43,770
Utah	3,287	5,699	6,949	7,169	45,168	5,923
Vermont	219	304	327	402	2,126	353
Virginia	4,733	6,964	7,389	10,961	61,712	11,473
Washington	3,309	5,328	6,372	5,938	38,359	5,091
West Virginia	3,399	4,170	4,686	6,852	37,128	6,382
Wisconsin	R 10,268	R 15,157	R 17,718	R 19,805	127,009	20,661
Wyoming	1,050	1,392	1,558	1,688	11,780	1,412
Total	397,773	R 549,330	639,189	R 785,171	4,776,838	790,223

R = Revised Data.
Notes: Geographic coverage is the 50 States and the District of Columbia. See Explanatory Note 5 for discussion of computations and revision policy.
Source: Form EIA-857

Table 23. Natural Gas Deliveries to Commercial Consumers by State, 1989-1991

(Million Cubic Feet)

State	YTD 1991	YTD 1990	YTD 1989	June 1991	May 1991	April 1991
Alabama	13,502	15,129	15,627	1,104	1,284	R 1,820
Alaska	11,915	11,859	12,254	1,191	1,590	1,920
Arizona	16,327	16,785	16,571	1,685	2,088	2,839
Arkansas	15,913	15,823	17,021	1,023	1,207	1,774
California	151,481	152,455	139,283	20,008	21,448	28,373
Colorado	43,936	43,910	43,952	2,820	4,839	6,317
Connecticut	18,213	17,699	18,223	1,371	1,748	2,789
Delaware	2,756	2,699	2,674	163	240	419
District of Columbia	9,872	8,916	9,657	784	1,063	1,381
Florida	20,656	18,748	18,796	2,710	3,019	3,409
Georgia	28,927	28,473	29,044	2,402	2,833	3,357
Hawaii	1,071	1,115	1,070	173	173	187
Idaho	5,931	5,069	5,738	404	622	820
Illinois	110,433	113,603	114,551	5,183	7,844	13,058
Indiana	42,381	40,610	43,122	1,701	2,630	4,684
Iowa	29,481	28,247	29,495	1,306	2,275	3,525
Kansas	33,178	30,247	33,362	2,819	R 3,047	R 4,228
Kentucky	19,039	18,464	20,962	1,017	1,186	1,910
Louisiana	14,850	15,172	15,542	1,420	1,540	1,973
Maine	1,137	1,059	1,005	73	101	180
Maryland	22,659	15,912	17,364	1,605	R 2,112	R 3,326
Massachusetts	34,287	32,432	32,857	2,493	R 3,813	5,594
Michigan	102,463	102,342	109,196	5,420	9,322	14,209
Minnesota	49,636	46,870	51,442	2,610	3,668	6,179
Mississippi	10,915	10,579	10,378	921	955	1,351
Missouri	39,656	37,233	39,994	2,204	2,787	4,299
Montana	7,549	7,316	8,166	426	833	1,041
Nebraska	18,747	17,731	19,189	1,840	R 1,790	2,183
Nevada	10,032	8,810	8,808	1,131	1,345	1,607
New Hampshire	3,224	3,366	3,444	186	291	484
New Jersey	71,506	70,955	71,558	5,093	6,625	11,652
New Mexico	18,394	18,248	17,905	1,526	1,651	2,646
New York	120,395	111,241	114,859	10,036	12,255	18,432
North Carolina	18,896	18,120	19,803	1,557	1,793	2,495
North Dakota	6,346	6,378	6,842	319	627	845
Ohio	92,539	89,982	94,782	3,973	6,343	11,779
Oklahoma	23,978	24,490	25,038	1,315	1,674	2,432
Oregon	14,135	12,487	12,781	1,270	1,605	2,042
Pennsylvania	75,538	77,496	79,307	4,123	5,780	10,785
Rhode Island	4,585	4,668	4,891	412	654	602
South Carolina	9,288	8,904	9,684	856	950	1,197
South Dakota	5,564	5,313	5,511	303	511	720
Tennessee	27 531	27,025	28,717	1,812	2,209	3,091
Texas	96,064	93,790	102,933	10,434	10,954	14,750
Utah	13,200	10,558	11,291	668	1,316	1,771
Vermont	1,258	1,275	1,268	61	105	187
Virginia	25,814	25,347	26,567	2,141	2,459	3,543
Washington	25,610	23,225	24,045	2,399	3,023	4,045
West Virginia	12,754	12,644	13,647	938	1,198	1,850
Wisconsin	42,469	41,970	44,306	1,689	3,132	5,522
Wyoming	5,372	5,043	5,623	339	635	775
Total	1,601,398	1,557,834	1,610,739	119,454	R 153,189	R 226,395

See footnote at end of table.

Table 23. Natural Gas Deliveries to Commercial Consumers by State, 1989-1991 (Continued)

(Million Cubic Feet)

State	March 1991	February 1991	January 1991	Total 1990	December 1990	November 1990
Alabama	R 2,643	R 3,428	R 3,223	R 24,551	R 2,507	R 1,969
Alaska	2,183	2,421	2,610	21,622	2,818	2,106
Arizona	2,808	3,140	3,767	28,360	3,133	2,014
Arkansas	2,845	4,038	5,026	25,140	2,951	1,949
California	26,077	23,861	31,714	285,358	30,784	22,660
Colorado	7,897	9,968	12,095	66,117	7,661	5,286
Connecticut	3,771	4,124	4,410	R 29,257	3,515	2,443
Delaware	587	662	685	4,078	485	312
District of Columbia	2,132	2,308	2,204	13,860	1,635	860
Florida	3,836	3,772	3,910	35,288	3,592	3,185
Georgia	5,904	6,771	7,660	49,361	6,241	4,219
Hawaii	169	177	192	2,223	185	184
Idaho	954	1,288	1,843	8,527	1,314	821
Illinois	22,730	26,266	35,352	R 200,362	R 29,185	R 19,963
Indiana	8,848	11,006	13,512	67,337	10,476	6,649
Iowa	5,708	7,368	9,299	43,634	5,912	3,699
Kansas	R 5,664	R 7,308	R 10,112	R 56,198	R 5,922	R 3,887
Kentucky	3,614	5,055	6,257	31,696	4,862	3,183
Louisiana	2,716	3,558	3,643	25,194	2,513	2,101
Maine	236	265	282	1,678	219	157
Maryland	R 4,553	R 5,344	R 5,719	24,677	2,809	1,730
Massachusetts	7,024	7,662	7,701	50,879	5,734	4,298
Michigan	20,818	24,315	28,379	162,059	21,497	14,351
Minnesota	10,052	11,538	15,589	77,660	11,988	7,447
Mississippi	2,085	2,708	2,895	18,344	2,221	1,635
Missouri	7,533	9,998	12,835	58,487	7,800	4,730
Montana	1,433	1,419	2,397	12,242	1,901	1,214
Nebraska	3,379	4,100	5,455	36,469	4,092	2,554
Nevada	1,643	1,848	2,458	15,050	1,702	1,024
New Hampshire	672	797	794	5,073	585	380
New Jersey	14,411	16,250	17,475	114,882	13,924	9,170
New Mexico	3,358	4,162	5,051	29,051	3,872	2,132
New York	24,372	26,298	29,002	R 194,430	R 24,536	17,06[illegible]
North Carolina	3,788	4,457	4,806	30,709	3,734	2,657
North Dakota	1,251	1,391	1,913	10,183	1,355	912
Ohio	19,701	24,471	26,272	142,047	18,957	13,607
Oklahoma	4,170	5,857	8,530	37,081	4,558	2,517
Oregon	2,400	2,756	4,062	20,345	2,722	1,689
Pennsylvania	15,885	18,117	20,848	126,940	16,735	11,770
Rhode Island	859	974	1,084	8,170	815	815
South Carolina	1,823	2,166	2,296	15,522	1,760	1,326
South Dakota	1,110	1,211	1,709	R 8,561	R 1,270	R 826
Tennessee	5,719	7,331	7,369	43,136	5,436	3,399
Texas	16,302	18,142	25,482	169,717	19,869	11,930
Utah	2,282	3,108	4,055	16,220	2,540	1,381
Vermont	259	311	335	2,049	261	195
Virginia	5,208	5,878	6,585	41,233	5,103	3,268
Washington	4,594	5,274	6,275	38,652	5,061	3,438
West Virginia	2,587	3,046	3,135	R 21,028	2,526	1,937
Wisconsin	8,828	10,201	13,097	R 67,495	R 10,209	R 6,137
Wyoming	930	1,165	1,528	7,812	1,048	703
Total	R 310,350	R 359,081	R 432,929	R 2,626,043	R 332,532	R 223,876

See footnote at end of table.

Table 23. Natural Gas Deliveries to Commercial Consumers by State, 1989-1991 (Continued)
(Million Cubic Feet)

State	October 1990	September 1990	August 1990	July 1990	June 1990	May 1990
Alabama	R 1,371	R 1,213	R 1,187	R 1,174	R 994	R 1,654
Alaska	1,554	1,148	1,077	1,061	1,134	1,456
Arizona	1,552	1,608	1,581	1,686	1,853	2,171
Arkansas	1,261	1,082	1,044	1,031	1,066	1,399
California	17,406	23,266	17,726	21,061	17,410	18,552
Colorado	2,911	2,064	2,122	2,162	3,114	5,101
Connecticut	1,596	1,345	1,309	1,352	1,476	R 1,735
Delaware	165	137	140	140	176	241
District of Columbia	590	742	589	528	720	979
Florida	2,439	2,406	2,417	2,502	2,587	2,769
Georgia	3,099	2,425	2,539	2,365	2,503	2,849
Hawaii	183	180	180	195	188	181
Idaho	459	292	279	293	389	478
Illinois	R 15,144	R 8,016	R 7,392	R 7,060	R 6,836	R 10,701
Indiana	4,091	1,992	1,861	1,659	1,965	3,193
Iowa	2,071	1,293	1,196	1,217	1,590	2,392
Kansas	R 2,900	R 3,847	R 4,475	R 4,920	R 2,856	R 3,120
Kentucky	2,046	1,026	1,078	1,038	1,128	1,575
Louisiana	1,500	1,286	1,249	1,373	1,512	1,643
Maine	83	62	47	52	70	108
Maryland	1,123	1,042	986	1,075	1,160	1,597
Massachusetts	2,428	1,916	2,051	2,020	2,504	3,398
Michigan	8,792	5,283	5,025	4,769	5,790	9,402
Minnesota	4,853	2,340	2,059	2,103	2,366	4,016
Mississippi	1,248	918	851	892	962	1,161
Missouri	2,796	2,030	1,918	1,980	2,260	3,250
Montana	787	349	350	325	490	771
Nebraska	2,336	2,332	2,595	4,829	1,326	1,480
Nevada	1,155	700	781	878	968	1,005
New Hampshire	265	170	153	153	221	307
New Jersey	5,726	5,293	4,901	4,912	5,427	7,297
New Mexico	1,441	1,204	1,102	1,052	1,266	1,765
New York	12,420	10,080	9,586	9,507	10,121	11,441
North Carolina	1,777	1,579	1,464	1,378	1,428	1,795
North Dakota	558	368	297	314	381	612
Ohio	7,206	4,210	4,138	3,948	4,802	7,380
Oklahoma	1,614	1,235	1,354	1,312	1,516	2,272
Oregon	1,045	819	765	817	1,151	1,262
Pennsylvania	6,757	5,118	4,623	4,441	5,195	6,904
Rhode Island	586	508	365	413	244	577
South Carolina	974	879	838	843	854	1,062
South Dakota	R 459	R 239	R 223	R 230	R 307	R 537
Tennessee	2,263	1,589	1,779	1,644	1,977	2,460
Texas	9,333	9,284	11,482	14,029	14,138	12,116
Utah	629	374	364	373	581	860
Vermont	127	84	62	46	68	116
Virginia	2,244	1,680	1,782	1,809	1,839	2,422
Washington	2,245	1,573	1,474	1,637	1,948	2,723
West Virginia	1,262	885	863	913	937	1,212
Wisconsin	R 3,947	R 1,836	R 1,663	R 1,732	R 2,178	R 3,766
Wyoming	350	223	217	229	379	581
Total	R 151,164	R 121,569	R 115,594	R 123,475	R 124,351	R 157,843

See footnote at end of table.

Table 23. Natural Gas Deliveries to Commercial Consumers by State, 1989-1991 (Continued)
(Million Cubic Feet)

State	April 1990	March 1990	February 1990	January 1990	Total 1989	December 1989
Alabama	R 2,199	R 2,671	R 3,061	R 4,550	26,438	3,503
Alaska	1,809	2,429	2,584	2,447	21,738	2,429
Arizona	2,336	3,159	3,569	3,697	28,580	3,106
Arkansas	2,224	2,808	3,369	4,957	27,284	3,943
California	23,439	27,435	34,912	30,807	259,118	26,192
Colorado	6,882	8,608	9,518	10,687	67,477	8,102
Connecticut	R 2,994	R 3,351	3,848	4,295	30,781	3,891
Delaware	422	535	534	791	4,184	630
District of Columbia	1,424	1,840	1,911	2,042	15,741	2,052
Florida	2,963	3,178	3,235	4,016	35,105	3,620
Georgia	3,954	5,157	5,912	8,098	53,114	8,393
Hawaii	180	188	188	190	2,129	177
Idaho	609	999	1,282	1,312	8,994	1,172
Illinois	R 17,659	R 22,054	R 25,727	R 30,626	196,133	33,840
Indiana	6,091	7,966	9,387	12,008	73,613	13,611
Iowa	4,231	5,678	6,328	8,028	46,142	7,110
Kansas	R 4,813	R 5,128	R 6,247	R 8,083	58,554	6,763
Kentucky	2,693	3,481	4,259	5,328	36,145	6,648
Louisiana	2,154	2,512	2,782	4,569	26,617	3,454
Maine	175	211	227	268	1,660	269
Maryland	2,542	3,137	3,197	4,279	26,920	3,647
Massachusetts	5,261	6,399	6,581	8,289	51,508	6,864
Michigan	15,650	21,126	23,071	27,303	176,181	28,269
Minnesota	6,708	9,801	11,356	12,623	85,183	13,661
Mississippi	1,537	1,670	2,005	3,244	17,568	2,727
Missouri	5,547	6,763	7,887	11,526	63,039	9,903
Montana	1,005	1,411	1,715	1,924	13,141	1,781
Nebraska	2,798	3,352	4,015	4,760	37,351	4,196
Nevada	1,184	1,737	1,960	1,956	15,116	1,690
New Hampshire	518	618	803	899	5,371	817
New Jersey	11,724	14,352	14,395	17,760	117,385	16,342
New Mexico	2,543	3,592	4,324	4,758	28,459	3,830
New York	17,718	22,969	24,053	24,939	196,380	27,650
North Carolina	2,692	3,329	3,612	5,264	33,145	4,396
North Dakota	1,043	1,236	1,449	1,657	10,609	1,506
Ohio	13,235	20,125	19,418	25,022	161,516	30,143
Oklahoma	3,408	4,162	5,592	7,540	38,493	5,871
Oregon	1,542	2,549	3,015	2,968	20,249	2,363
Pennsylvania	12,604	15,310	16,567	20,916	132,500	21,010
Rhode Island	857	893	903	1,194	8,767	1,014
South Carolina	1,271	1,587	1,660	2,470	16,525	1,964
South Dakota	R 770	R 1,065	R 1,235	R 1,399	8,826	1,374
Tennessee	3,771	4,523	5,732	8,562	47,573	7,414
Texas	13,869	16,409	16,090	21,168	184,179	24,013
Utah	1,203	2,271	2,779	2,864	16,522	2,304
Vermont	196	269	288	338	2,081	307
Virginia	4,583	5,133	5,196	6,174	44,181	6,474
Washington	3,284	4,488	5,656	5,126	38,502	4,433
West Virginia	2,020	R 2,322	R 2,613	3,540	23,257	3,704
Wisconsin	R 5,520	R 8,880	R 9,561	R 12,065	70,090	11,182
Wyoming	761	1,004	1,110	1,208	8,551	1,022
Total	R 236,612	R 301,870	R 336,619	R 400,539	2,718,716	390,776

R = Revised Data.
Notes: Geographic coverage is the 50 States and the District of Columbia. See Explanatory Note 5 for discussion of computations and revision policy.
Source: Form EIA-857

Table 24. Natural Gas Deliveries to Industrial Consumers by State, 1989-1991
(Million Cubic Feet)

State	YTD 1991	YTD 1990	YTD 1989	June 1991	May 1991	April 1991
Alabama	72,046	76,360	75,482	11,086	11,307	R 11,903
Alaska	40,814	38,844	31,414	6,627	6,230	6,954
Arizona	9,677	9,104	10,522	1,482	1,619	1,530
Arkansas	55,012	61,758	66,152	7,125	6,886	11,338
California	292,968	260,580	232,151	45,737	45,287	52,590
Colorado	24,398	25,901	25,926	3,105	R 3,790	R 4,125
Connecticut	14,859	12,462	10,244	2,020	2,247	2,431
Delaware	8,405	8,855	8,189	1,221	1,491	1,556
District of Columbia	0	0	0	0	0	0
Florida	43,080	39,168	39,998	6,390	7,601	7,465
Georgia	83,225	82,004	77,441	13,025	13,762	13,693
Hawaii	0	0	0	0	0	0
Idaho	13,937	11,709	12,063	2,238	2,302	2,310
Illinois	146,588	148,032	144,779	17,151	19,450	20,995
Indiana	116,823	115,544	114,817	16,136	16,888	17,912
Iowa	46,251	44,265	48,247	7,257	7,357	7,457
Kansas	67,620	58,561	54,268	9,779	R 10,535	R 10,742
Kentucky	36,985	34,614	34,160	5,203	5,335	5,553
Louisiana	494,649	460,202	439,500	80,682	R 84,176	R 82,773
Maine	954	979	670	171	179	144
Maryland	24,468	32,513	36,342	3,414	R 3,838	R 4,103
Massachusetts	30,664	20,724	18,706	6,740	R 5,677	5,460
Michigan	127,490	122,905	107,335	17,883	18,859	20,429
Minnesota	49,620	44,015	41,209	6,687	7,864	7,742
Mississippi	59,044	49,363	48,689	9,655	9,795	10,117
Missouri	28,108	33,597	32,879	3,710	3,917	3,948
Montana	4,806	4,376	4,564	534	670	750
Nebraska	9,912	12,845	17,333	1,378	R 1,399	1,453
Nevada	3,362	3,999	3,812	551	536	549
New Hampshire	1,633	1,573	1,139	245	264	310
New Jersey	51,052	45,261	42,818	7,320	7,754	9,364
New Mexico	8,922	9,818	9,306	1,212	1,507	1,626
New York	59,466	49,533	50,082	7,299	8,228	9,606
North Carolina	43,532	43,596	42,796	7,001	7,040	7,028
North Dakota	2,412	2,308	2,367	337	343	375
Ohio	138,499	137,636	147,824	18,845	19,940	21,576
Oklahoma	89,641	95,604	86,297	12,954	14,884	15,194
Oregon	25,824	26,237	21,206	3,807	4,325	4,258
Pennsylvania	121,656	123,474	127,265	17,284	18,585	20,201
Rhode Island	3,038	2,278	2,438	638	641	474
South Carolina	44,619	39,694	35,747	8,083	8,287	7,611
South Dakota	2,469	2,940	2,619	301	298	375
Tennessee	55,966	55,622	54,855	8,410	8,725	8,950
Texas	768,748	988,201	852,939	123,040	R 130,558	R 133,611
Utah	20,544	18,873	17,449	2,753	3,211	3,466
Vermont	869	1,011	1,087	98	116	132
Virginia	34,043	28,316	31,906	5,955	6,424	5,836
Washington	39,714	40,329	36,018	5,988	6,336	6,693
West Virginia	19,970	26,075	24,853	3,346	2,900	3,306
Wisconsin	68,400	64,896	69,682	7,749	8,613	10,124
Wyoming	11,459	8,819	8,104	2,196	1,739	1,909
Total	3,518,251	3,625,373	3,405,687	531,849	R 559,713	R 588,048

See footnotes at end of table

Table 24. Natural Gas Deliveries to Industrial Consumers by State, 1989-1991 (Continued)

(Million Cubic Feet)

State	March 1991	February 1991	January 1991	Total 1990	December 1990	November 1990
Alabama	R 12,890	R 11,775	R 13,085	R 145,824	R 12,282	R 11,862
Alaska	6,998	6,472	7,533	78,651	7,349	6,672
Arizona	1,625	1,612	1,809	18,440	1,801	1,437
Arkansas	7,721	10,080	11,862	113,861	9,226	9,283
California	49,842	46,465	53,047	555,041	53,450	51,237
Colorado	R 4,230	R 4,423	R 4,725	48,673	4,026	4,386
Connecticut	2,794	2,523	2,844	R 25,509	R 2,780	2,477
Delaware	1,325	1,289	1,523	17,034	1,423	1,435
District of Columbia	0	0	0	0	0	0
Florida	7,586	6,426	7,612	80,574	7,431	7,094
Georgia	14,380	13,600	14,765	160,858	13,794	14,095
Hawaii	0	0	0	0	0	0
Idaho	2,372	2,293	2,422	23,329	2,463	2,054
Illinois	26,754	27,360	34,878	279,128	28,672	24,060
Indiana	20,550	20,731	24,606	225,539	21,004	19,183
Iowa	7,717	7,681	8,782	R 87,523	R 8,023	R 7,945
Kansas	R 12,341	R 11,045	R 13,178	R 116,611	R 11,161	R 10,264
Kentucky	6,512	6,667	7,715	67,913	6,373	6,400
Louisiana	R 81,760	78,237	87,021	907,289	74,955	72,659
Maine	176	160	124	2,024	155	237
Maryland	R 4,555	R 4,305	R 4,253	61,728	6,043	5,300
Massachusetts	4,495	4,051	4,241	45,420	4,054	4,043
Michigan	21,783	23,961	24,575	246,012	24,129	23,136
Minnesota	8,723	8,923	9,681	89,074	8,864	8,388
Mississippi	9,445	9,852	10,180	105,110	10,356	9,601
Missouri	4,883	5,175	6,475	63,216	6,101	5,343
Montana	778	826	1,248	9,491	1,203	1,035
Nebraska	1,577	1,924	2,181	R 25,345	R 2,428	2,248
Nevada	552	563	611	7,369	485	579
New Hampshire	283	296	235	3,276	259	347
New Jersey	8,652	8,741	9,221	89,745	7,988	8,766
New Mexico	1,452	1,505	1,620	19,204	1,804	1,644
New York	10,310	10,887	13,136	R 99,848	R 10,651	9,660
North Carolina	7,235	7,432	7,796	86,732	7,212	7,621
North Dakota	419	428	510	4,358	443	424
Ohio	25,701	24,790	27,647	R 261,497	24,488	R 24,581
Oklahoma	15,107	14,585	16,917	192,183	19,278	15,379
Oregon	4,490	4,170	4,774	50,292	4,158	4,285
Pennsylvania	21,116	20,148	24,322	R 239,895	21,140	20,556
Rhode Island	362	504	419	4,376	294	429
South Carolina	7,926	5,588	7,124	90,776	6,926	7,581
South Dakota	438	567	490	R 5,768	R 470	R 466
Tennessee	9,363	9,833	10,685	109,474	9,815	11,052
Texas	R 121,109	R 120,768	R 139,662	R 2,032,331	175,799	161,419
Utah	4,155	3,042	3,917	35,981	3,477	3,281
Vermont	183	171	169	1,878	185	181
Virginia	5,527	4,913	5,388	63,889	4,017	5,046
Washington	6,968	6,383	7,346	78,414	6,787	6,817
West Virginia	3,157	3,392	3,869	49,592	3,927	4,110
Wisconsin	12,456	13,758	15,700	R 123,198	R 12,899	R 11,457
Wyoming	1,605	1,862	2,148	19,177	2,335	1,933
Total	R 592,378	R 582,188	R 664,075	R 7,268,472	R 654,382	R 619,486

See footnotes at end of table

Table 24. Natural Gas Deliveries to Industrial Consumers by State, 1989-1991 (Continued)

(Million Cubic Feet)

State	October 1990	September 1990	August 1990	July 1990	June 1990	May 1990
Alabama	R 11,692	R 11,027	R 11,649	R 10,952	R 11,125	R 11,411
Alaska	6,841	6,092	6,470	6,382	6,949	5,603
Arizona	1,485	1,395	1,536	1,680	1,357	1,487
Arkansas	9,023	7,732	8,299	8,541	8,559	9,296
California	50,029	50,810	40,655	48,280	46,155	42,521
Colorado	3,757	3,607	3,511	3,485	3,692	3,627
Connecticut	2,205	1,931	1,914	1,739	1,932	R 2,108
Delaware	1,258	1,489	1,365	1,208	1,393	1,428
District of Columbia	0	0	0	0	0	0
Florida	7,359	6,427	6,606	6,490	6,466	6,683
Georgia	14,268	13,374	12,598	10,725	11,791	13,403
Hawaii	0	0	0	C	0	0
Idaho	2,229	2,021	1,459	1,394	1,563	1,828
Illinois	23,444	18,707	17,336	18,877	19,340	20,950
Indiana	19,563	17,494	16,765	15,985	16,207	18,969
Iowa	R 7,987	R 6,666	R 6,416	R 6,221	R 6,728	R 7,224
Kansas	R 10,008	R 9,162	R 8,054	R 9,401	R 8,900	R 8,688
Kentucky	6,067	5,067	4,970	4,422	4,865	5,243
Louisiana	70,822	73,226	77,273	78,154	74,028	77,334
Maine	174	176	155	148	171	184
Maryland	4,764	4,787	4,348	3,971	4,488	4,184
Massachusetts	4,252	3,810	5,236	3,300	3,361	3,279
Michigan	22,489	17,825	19,022	16,506	17,303	18,904
Minnesota	7,768	6,785	6,869	6,384	6,038	6,907
Mississippi	9,476	9,024	8,795	8,497	8,742	8,848
Missouri	5,300	4,362	4,318	4,196	4,295	4,883
Montana	1,030	670	605	571	547	692
Nebraska	2,000	R 1,852	R 2,095	1,878	1,871	2,047
Nevada	509	617	592	587	617	644
New Hampshire	379	305	256	157	238	370
New Jersey	7,537	7,095	6,960	6,139	6,835	7,139
New Mexico	1,521	1,504	1,497	1,418	1,602	1,676
New York	8,685	7,079	7,668	6,572	6,680	7,612
North Carolina	7,963	7,256	7,079	6,005	6,460	7,401
North Dakota	374	292	280	239	290	362
Ohio	R 22,391	19,524	16,442	16,434	18,829	20,188
Oklahoma	14,892	15,671	15,946	15,413	14,222	14,913
Oregon	4,290	3,732	4,000	3,591	3,527	3,928
Pennsylvania	R 20,275	19,220	18,224	17,007	18,290	18,793
Rhode Island	456	397	331	189	326	416
South Carolina	8,641	9,301	9,787	8,846	7,049	6,787
South Dakota	R 562	R 445	R 447	R 440	R 488	R 487
Tennessee	6,550	8,742	8,988	8,705	8,554	9,362
Texas	191,909	R 169,174	181,100	164,729	171,634	189,586
Utah	3,179	2,333	2,467	2,372	2,722	2,872
Vermont	152	128	119	102	123	153
Virginia	7,861	6,161	6,388	6,099	5,400	4,909
Washington	6,424	6,041	5,946	6,070	6,907	6,574
West Virginia	3,811	3,845	3,908	3,918	4,039	4,602
Wisconsin	R 10,325	R 8,371	R 8,040	R 7,209	R 7,699	R 9,186
Wyoming	1,745	1,308	1,495	1,544	1,567	1,391
Total	R 635,722	R 584,056	R 586,281	R 563,172	R 571,965	R 607,079

See footnotes at end of table

Table 24. Natural Gas Deliveries to Industrial Consumers by State, 1989-1991 (Continued)

(Million Cubic Feet)

State	April 1990	March 1990	February 1990	January 1990	Total 1989	December 1989
Alabama	R 12,830	R 13,523	R 12,926	R 14,545	149,047	13,173
Alaska	7,000	6,571	6,129	6,592	59,341	4,501
Arizona	1,431	1,761	1,552	1,516	20,705	1,580
Arkansas	12,160	10,896	9,879	10,968	129,333	11,015
California	51,107	33,779	39,271	47,747	507,948	47,723
Colorado	3,961	4,911	5,058	4,652	51,348	4,589
Connecticut	R 2,516	R 2,341	2,043	1,522	19,724	1,644
Delaware	1,408	1,581	1,315	1,730	15,141	1,217
District of Columbia	0	0	0	0	0	0
Florida	6,037	6,382	6,159	7,441	75,485	6,625
Georgia	13,243	14,542	13,924	15,101	152,516	10,125
Hawaii	0	0	0	0	0	0
Idaho	1,781	2,183	2,079	2,275	22,903	2,228
Illinois	24,489	27,807	25,987	29,459	278,826	32,148
Indiana	18,987	20,616	18,986	21,779	219,952	21,374
Iowa	R 7,272	R 7,465	R 7,394	R 8,182	89,347	7,055
Kansas	R 10,411	R 11,321	R 9,840	R 9,401	100,623	8,892
Kentucky	5,744	6,033	6,032	6,697	64,003	6,970
Louisiana	78,124	77,301	75,956	77,459	897,754	89,418
Maine	296	92	143	93	1,374	125
Maryland	5,273	5,953	6,541	6,074	66,271	5,800
Massachusetts	4,664	3,355	2,840	3,225	35,588	2,620
Michigan	21,712	22,862	20,270	21,854	192,981	19,149
Minnesota	7,542	8,011	7,669	7,848	81,479	7,596
Mississippi	7,522	7,677	7,976	8,598	99,790	8,790
Missouri	5,539	6,008	5,922	6,950	62,680	6,612
Montana	657	689	764	1,027	9,903	1,070
Nebraska	2,083	2,332	2,312	2,200	30,545	2,175
Nevada	670	692	650	726	7,859	646
New Hampshire	337	188	203	237	2,241	179
New Jersey	8,228	9,041	7,249	6,769	84,771	6,897
New Mexico	1,797	1,563	1,530	1,650	18,710	1,943
New York	7,751	9,033	8,984	9,473	96,864	10,813
North Carolina	7,498	7,997	7,107	7,133	82,629	5,036
North Dakota	381	414	420	441	4,525	484
Ohio	23,005	24,161	24,626	26,827	278,205	28,523
Oklahoma	15,792	15,292	16,607	18,778	180,182	17,255
Oregon	3,791	4,348	5,760	4,883	43,752	4,090
Pennsylvania	21,458	21,476	21,590	21,867	242,526	21,766
Rhode Island	478	375	306	377	4,624	310
South Carolina	6,801	6,976	5,863	6,218	74,534	4,052
South Dakota	R 449	R 489	R 542	R 485	4,962	491
Tennessee	9,202	9,417	9,278	9,809	106,860	9,399
Texas	177,936	156,703	137,262	155,080	1,787,888	170,883
Utah	3,007	3,346	3,435	3,491	33,963	3,784
Vermont	170	198	175	192	1,901	119
Virginia	4,248	4,453	4,444	4,862	57,761	3,419
Washington	6,120	6,899	6,788	7,041	73,239	6,863
West Virginia	4,409	4,631	4,249	4,145	49,943	4,694
Wisconsin	R 10,174	R 12,356	R 12,116	R 13,365	127,439	15,030
Wyoming	1,450	1,379	1,409	1,623	16,217	1,713
Total	R 628,943	R 607,419	R 579,559	R 630,408	6,816,200	642,602

R = Revised Data.

Notes: Geographic coverage is the 50 States and the District of Columbia. See Explanatory Note 5 for discussion of computations and revision policy.

Source: Form EIA-857.

Table 25. Natural Gas Deliveries to Electrical Utility[a] Consumers by State, 1989-1991
(Million Cubic Feet)

State	YTD 1991	YTD 1990	YTD 1989	June 1991	May 1991	April 1991
Alabama	1,464	1,600	962	318	358	274
Alaska	16,977	16,438	15,979	2,519	2,807	2,617
Arizona	7,492	14,920	20,722	2,128	1,143	2,185
Arkansas	14,691	10,057	12,463	3,590	4,330	2,799
California	185,364	192,014	212,442	21,606	25,672	31,486
Colorado	2,153	2,473	5,166	447	475	224
Connecticut	783	243	1,569	332	283	141
Delaware	6,422	4,381	2,757	1,733	1,037	1,184
District of Columbia	0	0	0	0	0	0
Florida	97,634	88,261	90,077	18,896	18,067	16,213
Georgia	155	364	364	31	53	5
Hawaii	0	0	0	0	0	0
Idaho	0	0	0	0	0	0
Illinois	5,316	3,685	3,641	1,119	1,059	732
Indiana	2,940	2,802	2,206	511	738	156
Iowa	1,466	1,280	1,123	583	318	147
Kansas	14,930	9,910	6,888	4,737	3,700	2,923
Kentucky	116	146	173	16	15	16
Louisiana	113,143	115,133	112,088	28,517	26,324	19,110
Maine	0	0	0	0	0	0
Maryland	5,998	3,412	9,716	1,609	1,736	886
Massachusetts	14,921	20,199	18,668	3,672	3,663	3,274
Michigan	9,306	11,106	10,910	1,838	1,636	1,298
Minnesota	2,865	1,986	1,713	673	578	385
Mississippi	28,142	19,233	18,623	8,024	5,221	3,312
Missouri	5,047	684	527	1,878	1,593	754
Montana	127	173	173	43	52	6
Nebraska	1,662	1,235	1,122	190	511	540
Nevada	8,405	10,942	8,903	2,425	1,930	1,474
New Hampshire	0	0	8	0	0	0
New Jersey	29,813	11,252	29,133	7,956	8,078	6,281
New Mexico	13,408	12,801	12,353	2,648	2,254	2,230
New York	91,748	85,541	86,678	24,003	21,362	14,965
North Carolina	1,350	910	592	240	326	124
North Dakota	0	0	0	0	0	0
Ohio	1,294	306	305	261	366	387
Oklahoma	75,955	77,929	86,078	17,100	16,687	12,529
Oregon	555	1,731	4,367	9	2	460
Pennsylvania	1,130	1,049	2,220	189	271	114
Rhode Island	612	1,550	596	243	137	75
South Carolina	1,499	476	923	491	652	173
South Dakota	104	28	70	96	7	0
Tennessee	1	123	0	1	0	0
Texas	460,296	471,756	483,563	97,029	93,375	84,134
Utah	2,156	487	463	297	433	547
Vermont	443	176	0	276	124	12
Virginia	3,442	871	2,627	1,025	1,223	892
Washington	41	24	5,855	0	4	3
West Virginia	52	84	61	6	2	11
Wisconsin	1,479	1,221	935	360	472	131
Wyoming	33	33	37	10	2	6
Total	1,232,923	1,201,024	1,275,837	259,673	249,071	215,213

See footnotes at end of table.

Table 25. Natural Gas Deliveries to Electrical Utility[a] Consumers by State, 1989-1991 (Continued)
(Million Cubic Feet)

State	March 1991	February 1991	January 1991	Total 1990	December 1990	November 1990
Alabama	239	173	102	3,958	300	172
Alaska	3,158	2,658	3,218	34,366	3,382	3,269
Arizona	1,708	226	102	24,278	290	353
Arkansas	2,205	843	924	32,090	1,776	2,434
California	39,826	34,475	32,299	456,406	26,630	29,386
Colorado	342	307	358	5,485	547	502
Connecticut	25	1	1	4,843	34	381
Delaware	1,396	628	444	10,776	724	952
District of Columbia	0	0	0	0	0	0
Florida	15,694	13,743	15,021	188,293	13,919	14,594
Georgia	6	17	43	1,932	42	53
Hawaii	0	0	0	0	0	0
Idaho	0	0	0	0	0	0
Illinois	742	676	988	9,195	803	717
Indiana	480	422	633	6,632	492	526
Iowa	140	120	158	3,478	147	244
Kansas	1,454	1,084	1,032	26,978	992	777
Kentucky	17	24	28	283	21	17
Louisiana	14,535	11,895	12,762	268,797	17,072	16,217
Maine	0	0	0	0	0	0
Maryland	728	429	610	17,536	660	1,000
Massachusetts	1,554	461	2,297	55,226	2,394	3,934
Michigan	1,682	1,877	975	22,999	2,011	1,547
Minnesota	672	366	191	5,231	221	255
Mississippi	3,341	3,418	4,826	65,304	3,558	5,905
Missouri	493	216	113	3,532	86	96
Montana	6	2	18	418	18	41
Nebraska	39	60	322	3,766	428	435
Nevada	1,123	830	623	24,348	486	932
New Hampshire	0	0	0	0	0	0
New Jersey	1,911	1,913	3,674	47,591	1,556	3,701
New Mexico	2,524	2,003	1,749	25,420	1,562	899
New York	13,305	8,538	9,575	223,253	15,059	19,990
North Carolina	153	209	298	2,461	94	163
North Dakota	0	0	0	2	0	1
Ohio	176	41	63	1,254	46	42
Oklahoma	9,668	8,026	11,945	168,960	10,921	9,094
Oregon	6	6	72	7,386	340	3
Pennsylvania	160	178	218	2,364	216	230
Rhode Island	140	17	0	5,484	27	166
South Carolina	158	15	10	6,975	8	66
South Dakota	1	0	0	235	68	1
Tennessee	0	0	0	565	0	0
Texas	71,055	49,645	65,058	1,007,381	67,723	64,516
Utah	577	146	156	907	113	150
Vermont	26	4	1	685	11	31
Virginia	280	7	15	6,299	35	925
Washington	22	5	7	191	79	3
West Virginia	14	11	8	139	8	14
Wisconsin	92	230	194	2,381	98	82
Wyoming	6	4	5	69	9	5
Total	191,879	145,947	171,140	2,786,153	175,003	184,820

See footnotes at end of table.

Table 25. Natural Gas Deliveries to Electrical Utility[a] Consumers by State, 1989-1991 (Continued)
(Million Cubic Feet)

State	October 1990	September 1990	August 1990	July 1990	June 1990	May 1990
Alabama	302	591	473	520	542	318
Alaska	2,901	2,772	2,787	2,819	2,649	2,570
Arizona	1,036	1,958	1,908	3,813	4,130	2,583
Arkansas	2,564	4,264	4,976	6,019	4,491	2,591
California	41,697	49,434	57,965	59,280	40,590	31,653
Colorado	297	471	694	503	518	469
Connecticut	1,158	1,192	1,157	679	72	168
Delaware	701	871	1,867	1,279	1,081	680
District of Columbia	0	0	0	0	0	0
Florida	17,715	17,252	18,275	18,277	14,856	17,557
Georgia	148	531	572	222	204	74
Hawaii	0	0	0	0	0	0
Idaho	0	0	0	0	0	0
Illinois	762	1,024	1,127	1,077	1,125	681
Indiana	1,120	480	1,009	202	243	634
Iowa	468	554	413	373	440	301
Kansas	2,563	3,429	4,255	5,052	4,058	2,090
Kentucky	22	31	22	25	26	12
Louisiana	25,659	29,132	32,495	33,089	32,409	22,521
Maine	0	0	0	0	0	0
Maryland	3,084	3,069	4,259	2,055	1,208	556
Massachusetts	6,885	6,438	8,056	7,320	4,906	7,819
Michigan	1,915	2,455	1,967	2,001	2,207	1,718
Minnesota	217	1,152	742	658	467	389
Mississippi	7,854	7,720	10,633	10,401	5,024	3,583
Missouri	118	1,070	1,174	304	395	83
Montana	46	59	52	29	48	27
Nebraska	563	627	334	144	239	370
Nevada	2,147	3,026	3,084	3,731	2,754	2,458
New Hampshire	0	0	0	0	0	0
New Jersey	6,107	7,461	10,181	7,332	3,853	1,594
New Mexico	1,858	2,526	2,763	3,011	3,366	2,751
New York	27,425	25,609	26,558	23,069	20,603	18,466
North Carolina	241	299	351	404	390	163
North Dakota	0	0	0	0	0	0
Ohio	170	337	279	73	80	49
Oklahoma	13,550	18,056	20,117	19,293	17,968	13,624
Oregon	1,483	781	1,674	1,375	0	0
Pennsylvania	150	238	234	247	181	156
Rhode Island	939	1,015	1,184	602	403	629
South Carolina	709	1,898	2,020	1,798	404	28
South Dakota	3	69	59	9	24	1
Tennessee	27	78	113	223	113	0
Texas	80,233	101,014	115,186	106,952	123,879	103,766
Utah	146	2	2	7	81	122
Vermont	75	119	174	99	55	49
Virginia	1,262	1,092	1,019	1,094	672	153
Washington	2	2	12	69	1	9
West Virginia	14	7	4	9	7	10
Wisconsin	137	385	241	218	284	280
Wyoming	9	4	5	5	6	7
Total	256,480	300,596	342,469	325,760	297,052	243,760

See footnotes at end of table.

Table 25. Natural Gas Deliveries to Electrical Utility[a] Consumers by State, 1989-1991 (Continued)
(Million Cubic Feet)

State	April 1990	March 1990	February 1990	January 1990	Total 1989	December 1989
Alabama	288	213	130	109	1,760	152
Alaska	2,535	2,860	2,920	2,904	32,746	2,711
Arizona	2,092	2,219	1,974	1,922	50,807	3,252
Arkansas	745	617	973	640	29,462	1,864
California	34,310	31,463	24,795	29,203	517,700	26,365
Colorado	375	499	258	354	8,375	659
Connecticut	0	1	1	1	3,294	1
Delaware	523	927	819	351	7,999	359
District of Columbia	0	0	0	0	0	0
Florida	16,239	15,353	12,531	11,725	186,814	9,698
Georgia	34	29	12	11	684	37
Hawaii	0	0	0	0	0	0
Idaho	0	0	0	0	0	0
Illinois	508	547	407	417	6,967	648
Indiana	561	499	433	432	4,075	550
Iowa	176	138	101	124	2,402	117
Kansas	925	1,121	821	895	19,152	923
Kentucky	26	36	32	14	328	21
Louisiana	17,817	17,916	11,415	13,055	244,984	14,446
Maine	0	0	0	0	0	0
Maryland	692	592	163	201	19,184	250
Massachusetts	5,734	1,165	557	18	48,448	6
Michigan	1,185	2,118	1,650	2,228	18,782	1,187
Minnesota	314	351	214	251	4,427	225
Mississippi	3,331	3,107	2,070	2,118	44,927	2,485
Missouri	52	61	43	50	1,242	104
Montana	31	22	19	26	336	31
Nebraska	336	185	46	59	2,593	71
Nevada	2,117	1,599	828	1,186	23,210	1,291
New Hampshire	0	0	0	0	23	0
New Jersey	3,273	1,631	686	215	55,412	756
New Mexico	2,213	1,931	997	1,543	27,365	1,814
New York	17,054	17,193	6,973	5,252	182,000	3,242
North Carolina	109	102	76	70	1,673	105
North Dakota	0	0	0	0	1	0
Ohio	73	34	30	40	983	168
Oklahoma	12,146	11,907	10,589	11,695	178,021	14,601
Oregon	0	0	1,496	235	12,942	2,185
Pennsylvania	222	161	156	173	4,022	456
Rhode Island	408	85	0	25	2,147	0
South Carolina	13	12	11	8	2,705	107
South Dakota	1	1	0	1	132	3
Tennessee	0	10	0	0	18	0
Texas	72,033	66,916	47,236	57,926	1,023,793	79,807
Utah	130	153	0	1	636	93
Vermont	46	3	2	21	37	1
Virginia	27	18	0	1	3,796	19
Washington	0	2	9	3	8,320	241
West Virginia	16	2	18	31	124	20
Wisconsin	281	177	101	98	2,076	246
Wyoming	5	5	5	5	85	9
Total	198,996	183,982	131,593	145,641	2,787,012	171,326

[a] Includes all steam electric utility generating plants with a combined capacity of 50 megawatts or greater.

Notes: Geographic coverage is the 50 States and the District of Columbia. See Explanatory Note 5 for discussion of computations and revision policy.

Source: Form EIA-759.

Table 26. Natural Gas Deliveries to All Consumers by State, 1989-1991
(Million Cubic Feet)

State	YTD 1991	YTD 1990	YTD 1989	June 1991	May 1991	April 1991
Alabama	117,128	124,612	123,078	14,103	15,024	R 17,918
Alaska	77,788	75,231	67,872	10,999	11,533	12,748
Arizona	53,121	59,922	65,735	6,448	6,395	9,618
Arkansas	111,974	113,827	123,431	12,997	14,093	18,888
California	934,653	911,554	897,006	115,829	127,183	158,563
Colorado	135,041	135,454	137,160	9,968	R 16,206	R 19,848
Connecticut	57,505	55,122	55,278	4,896	6,253	8,792
Delaware	22,544	21,132	18,783	3,329	3,177	3,955
District of Columbia	19,998	19,620	21,213	1,287	1,867	2,875
Florida	168,923	154,213	156,593	28,706	29,449	28,161
Georgia	166,827	161,972	162,834	18,541	20,416	22,167
Hawaii	1,363	1,419	1,367	218	220	238
Idaho	26,515	22,179	23,718	3,034	3,617	4,035
Illinois	533,731	512,490	554,662	34,508	46,574	67,096
Indiana	254,739	246,202	253,289	21,630	26,077	33,795
Iowa	128,424	122,570	129,765	11,137	14,012	17,458
Kansas	165,933	148,371	145,069	19,367	R 20,942	R 23,443
Kentucky	91,159	86,726	93,982	7,613	8,339	10,907
Louisiana	656,209	624,217	602,191	112,882	R 114,581	R 107,525
Maine	2,551	2,460	2,086	277	325	400
Maryland	95,625	97,150	111,730	8,941	R 10,878	R 14,210
Massachusetts	148,573	147,903	144,745	16,662	R 19,472	25,392
Michigan	452,448	447,041	451,435	35,176	48,512	65,081
Minnesota	172,599	159,562	167,314	12,807	17,800	22,834
Mississippi	114,504	95,720	94,200	19,489	17,097	16,699
Missouri	152,295	149,396	157,612	10,830	13,207	17,067
Montana	23,528	22,152	24,340	1,603	2,783	3,361
Nebraska	58,203	58,650	66,093	4,575	R 5,941	7,310
Nevada	34,587	34,724	32,263	4,994	5,067	5,580
New Hampshire	8,652	9,076	8,779	620	914	1,393
New Jersey	264,080	242,454	265,761	25,693	30,914	43,463
New Mexico	61,024	60,486	57,209	6,485	7,177	9,590
New York	492,574	464,962	485,601	50,951	61,923	77,017
North Carolina	88,654	86,388	88,639	9,733	10,654	12,620
North Dakota	15,365	14,831	15,791	933	1,640	2,079
Ohio	432,280	417,358	449,632	31,070	40,287	59,725
Oklahoma	235,820	243,941	245,397	33,419	36,183	35,002
Oregon	58,478	55,802	53,510	6,547	7,867	9,391
Pennsylvania	351,638	362,595	380,388	28,286	35,714	53,376
Rhode Island	19,600	20,592	19,821	1,858	2,520	2,909
South Carolina	68,504	61,543	59,702	9,881	10,510	10,337
South Dakota	15,062	14,776	15,402	1,001	1,472	1,952
Tennessee	114,965	114,073	115,845	11,342	12,551	15,263
Texas	1,458,701	1,680,100	1,576,256	238,878	R 244,006	R 246,020
Utah	68,572	57,474	59,160	5,759	8,504	10,297
Vermont	4,026	3,925	3,746	499	469	555
Virginia	97,755	88,844	99,517	10,753	12,268	14,814
Washington	95,753	89,037	91,307	10,677	12,450	15,449
West Virginia	53,508	60,706	62,070	4,991	5,461	8,020
Wisconsin	186,591	181,435	196,506	12,287	18,242	25,432
Wyoming	24,049	20,900	21,688	2,973	3,230	3,732
Total	9,194,132	9,162,896	9,256,576	1,057,480	R 1,191,992	R 1,404,405

See footnotes at end of tables.

Table 26. Natural Gas Deliveries to All Consumers by State, 1989-1991 (Continued)
(Million Cubic Feet)

State	March 1991	February 1991	January 1991	Total 1990	December 1990	November 1990
Alabama	R 22,549	R 23,769	R 23,765	R 220,413	R 20,524	R 17,412
Alaska	13,817	13,398	15,293	148,804	15,765	13,633
Arizona	9,533	9,382	11,745	99,513	9,419	5,409
Arkansas	17,840	21,876	26,280	210,262	18,754	16,932
California	176,307	157,803	198,968	1,811,395	187,420	143,380
Colorado	R 24,148	R 29,802	R 35,069	212,146	23,185	17,313
Connecticut	11,599	12,353	13,612	R 97,209	R 11,166	8,515
Delaware	4,387	3,795	3,901	39,157	3,462	3,182
District of Columbia	4,209	4,852	4,908	29,434	3,516	1,894
Florida	28,676	25,716	28,215	317,001	26,365	25,770
Georgia	31,126	33,677	40,900	301,838	35,518	27,424
Hawaii	218	227	242	2,796	234	230
Idaho	4,382	5,045	6,402	40,418	5,174	3,770
Illinois	104,959	116,984	163,610	R 907,897	R 131,061	R 83,520
Indiana	49,290	55,230	68,717	439,896	53,666	39,479
Iowa	23,582	27,858	34,377	R 206,647	R 23,798	R 17,710
Kansas	R 28,514	R 31,929	R 41,738	R 271,274	R 27,018	R 20,020
Kentucky	17,303	21,379	25,618	155,849	20,650	15,330
Louisiana	R 105,333	102,503	113,385	1,254,398	101,250	95,334
Maine	506	531	512	4,350	456	450
Maryland	R 18,832	R 20,359	R 22,405	171,484	17,750	12,942
Massachusetts	27,732	28,787	30,528	258,504	24,358	20,000
Michigan	88,300	99,953	115,426	760,316	92,960	68,717
Minnesota	33,674	37,258	48,226	278,508	38,183	25,998
Mississippi	18,290	20,362	22,567	213,792	19,151	19,209
Missouri	28,305	36,117	46,769	241,103	29,653	19,494
Montana	4,276	4,356	7,149	39,124	5,815	3,995
Nebraska	10,226	12,652	17,499	R 107,050	R 13,195	8,692
Nevada	5,447	5,805	7,694	63,924	5,267	3,805
New Hampshire	1,753	2,038	1,934	14,252	1,509	1,192
New Jersey	48,928	54,191	60,891	426,420	46,398	36,027
New Mexico	11,034	12,546	14,192	102,432	11,081	6,589
New York	96,375	97,711	108,597	R 851,168	R 93,030	75,410
North Carolina	16,724	18,941	19,982	154,991	16,050	13,434
North Dakota	2,923	3,347	4,443	23,726	3,034	2,164
Ohio	88,226	100,516	112,456	R 707,553	87,898	R 67,476
Oklahoma	37,412	39,964	53,840	464,534	43,092	31,715
Oregon	9,970	10,461	14,242	101,458	10,635	7,954
Pennsylvania	69,819	76,507	87,936	R 611,815	69,779	53,657
Rhode Island	3,811	4,209	4,293	35,765	3,230	2,765
South Carolina	12,862	11,614	13,300	131,703	11,475	10,580
South Dakota	2,888	3,348	4,401	R 24,768	R 3,331	R 2,266
Tennessee	21,973	25,903	27,933	199,264	21,510	16,448
Texas	R 231,392	R 220,122	R 278,283	R 3,418,548	296,744	254,486
Utah	12,729	13,572	17,711	96,532	12,593	8,511
Vermont	766	852	885	6,761	731	589
Virginia	18,301	19,918	21,701	164,453	16,673	13,805
Washington	17,137	17,906	22,134	157,529	18,059	14,197
West Virginia	10,576	11,931	12,529	R 103,703	10,901	9,088
Wisconsin	37,039	41,369	52,222	R 309,783	R 41,152	R 28,197
Wyoming	3,782	4,577	5,755	37,638	4,825	3,537
Total	R 1,669,777	R 1,755,300	R 2,115,178	R 17,049,300	R 1,788,463	R 1,401,650

See footnotes at end of tables.

Table 26. Natural Gas Deliveries to All Consumers by State, 1989-1991 (Continued)
(Million Cubic Feet)

State	October 1990	September 1990	August 1990	July 1990	June 1990	May 1990
Alabama	R 14,917	R 14,207	R 14,663	R 14,078	R 14,310	R 16,080
Alaska	12,224	10,539	10,742	10,671	11,280	10,400
Arizona	5,053	5,829	5,827	8,052	8,414	7,580
Arkansas	14,327	14,247	15,430	16,745	15,482	15,446
California	133,571	145,607	138,685	151,180	129,285	123,710
Colorado	10,413	8,472	8,683	8,626	11,512	16,442
Connecticut	6,625	5,593	5,314	4,875	4,830	6,222
Delaware	2,347	2,687	3,537	2,810	2,910	2,798
District of Columbia	1,148	1,190	1,034	1,033	1,333	1,853
Florida	28,139	26,696	27,895	27,923	24,600	27,810
Georgia	22,838	19,290	18,590	16,207	17,630	20,083
Hawaii	225	224	220	244	238	227
Idaho	3,036	2,499	1,898	1,860	2,311	2,781
Illinois	R 68,109	R 39,723	R 36,096	R 36,897	R 39,020	R 54,578
Indiana	33,267	23,648	22,748	20,886	22,392	29,845
Iowa	R 13,417	R 10,126	R 9,567	R 9,459	R 11,232	R 14,126
Kansas	R 17,992	R 18,211	R 18,466	R 21,196	R 18,277	R 18,395
Kentucky	11,434	7,496	7,354	6,859	7,615	9,273
Louisiana	100,317	105,666	112,980	114,633	110,201	104,258
Maine	283	260	222	219	272	340
Maryland	11,688	11,001	11,612	9,342	9,560	9,955
Massachusetts	17,297	15,159	17,982	15,806	15,669	21,700
Michigan	51,235	34,950	34,312	31,098	36,456	49,407
Minnesota	18,427	12,888	11,942	11,508	12,154	16,830
Mississippi	19,525	18,460	21,087	20,640	15,650	14,857
Missouri	12,678	10,336	10,121	9,425	10,731	14,453
Montana	2,910	1,531	1,403	1,317	1,791	2,602
Nebraska	6,794	R 5,844	R 5,970	7,906	4,729	6,171
Nevada	4,528	4,864	4,977	5,758	5,114	4,969
New Hampshire	847	637	537	454	721	1,073
New Jersey	26,178	25,264	26,623	23,475	22,363	25,750
New Mexico	5,786	6,062	6,133	6,293	7,300	7,899
New York	63,132	52,728	52,630	49,275	50,372	57,758
North Carolina	11,054	9,887	9,626	8,552	9,237	10,967
North Dakota	1,330	880	743	743	1,009	1,555
Ohio	R 46,269	32,469	27,883	28,199	33,383	44,539
Oklahoma	32,497	36,541	39,033	37,714	35,935	34,875
Oregon	7,713	5,865	7,000	6,489	5,887	6,669
Pennsylvania	R 37,899	31,313	28,840	27,732	32,150	39,207
Rhode Island	2,670	2,461	2,361	1,686	1,736	2,840
South Carolina	10,808	12,453	12,991	11,854	8,746	8,615
South Dakota	R 1,551	R 990	R 944	R 910	R 1,165	R 1,624
Tennessee	10,415	11,421	11,837	11,560	11,942	13,929
Texas	291,667	R 286,954	315,278	293,320	318,152	316,218
Utah	5,885	3,931	4,070	4,065	5,263	6,429
Vermont	448	381	396	290	328	447
Virginia	13,518	10,578	10,599	10,437	9,697	9,958
Washington	10,634	8,555	8,225	8,823	10,798	11,876
West Virginia	6,439	5,536	5,470	5,564	6,036	7,569
Wisconsin	R 21,220	R 13,745	R 12,477	R 11,558	R 13,808	R 19,984
Wyoming	2,550	1,770	1,983	2,072	2,491	2,760
Total	1,255,276	1,137,665	1,165,034	R 1,138,318	R 1,153,518	R 1,255,734

See footnotes at end of tables.

Table 26. Natural Gas Deliveries to All Consumers by State, 1989-1991 (Continued)
(Million Cubic Feet)

State	April 1990	March 1990	February 1990	January 1990	Total 1989	December 1989
Alabama	R 19,520	R 21,739	R 22,705	R 30,258	225,178	24,040
Alaska	12,524	13,616	13,723	13,688	127,414	11,296
Arizona	7,919	10,923	12,329	12,757	127,177	11,883
Arkansas	18,937	18,946	19,774	25,242	228,392	23,178
California	146,464	152,934	172,820	186,341	1,799,042	163,384
Colorado	21,087	26,643	28,386	31,384	218,766	24,416
Connecticut	9,233	10,713	11,588	12,536	94,487	12,527
Delaware	3,150	4,051	3,737	4,486	34,919	3,290
District of Columbia	2,990	3,882	4,167	5,395	33,174	4,689
Florida	26,277	26,162	23,381	25,983	310,493	21,767
Georgia	23,588	29,759	31,567	39,345	309,970	40,687
Hawaii	230	244	241	239	2,694	224
Idaho	3,020	4,258	4,779	5,030	40,679	4,641
Illinois	R 78,154	R 99,716	R 113,104	R 127,918	978,413	160,338
Indiana	38,924	46,295	48,949	59,797	453,526	65,183
Iowa	R 19,081	R 22,970	R 24,581	R 30,580	215,294	26,682
Kansas	R 23,694	R 26,671	R 27,884	R 33,450	254,362	28,272
Kentucky	13,461	15,905	18,716	21,756	165,562	26,673
Louisiana	102,337	103,428	96,615	107,378	1,227,060	117,032
Maine	538	385	455	470	3,672	490
Maryland	15,483	18,626	19,023	24,503	187,512	21,772
Massachusetts	27,311	25,843	25,724	31,656	247,205	25,714
Michigan	70,331	89,789	93,426	107,632	749,612	108,871
Minnesota	24,046	31,667	35,239	39,626	287,997	41,602
Mississippi	14,594	15,246	15,356	20,017	188,597	18,242
Missouri	22,967	27,202	30,646	43,397	256,105	38,207
Montana	3,163	4,037	4,937	5,622	41,575	5,400
Nebraska	9,174	11,128	12,841	14,607	115,293	13,739
Nevada	5,098	6,238	6,448	6,857	62,950	5,986
New Hampshire	1,509	1,622	1,897	2,254	13,925	1,922
New Jersey	41,231	48,481	47,095	57,534	453,110	57,341
New Mexico	9,149	11,024	11,696	13,418	101,126	11,333
New York	76,513	95,211	92,081	93,027	839,957	98,996
North Carolina	13,603	15,841	15,717	21,023	156,105	16,403
North Dakota	2,373	2,826	3,309	3,759	24,959	3,401
Ohio	64,694	82,691	90,858	101,193	799,852	128,237
Oklahoma	38,057	39,711	43,109	52,254	468,488	48,765
Oregon	7,157	10,123	14,065	11,901	99,448	11,524
Pennsylvania	59,036	69,163	72,959	90,080	649,804	88,193
Rhode Island	3,611	3,808	3,743	4,854	33,821	4,068
South Carolina	9,626	10,832	10,131	13,593	114,237	10,035
South Dakota	R 2,179	R 2,847	R 3,306	R 3,655	25,263	3,633
Tennessee	17,356	19,493	21,488	29,865	203,588	25,403
Texas	279,019	262,909	227,409	R 276,393	3,225,961	318,473
Utah	7,626	11,469	13,163	13,524	96,288	12,103
Vermont	631	773	792	954	6,145	781
Virginia	13,591	16,569	17,030	21,990	167,450	21,385
Washington	12,714	16,717	18,824	18,108	158,420	16,628
West Virginia	9,843	R 11,124	R 11,566	14,568	110,452	14,800
Wisconsin	R 26,244	R 36,571	R 39,496	R 45,332	326,613	47,119
Wyoming	3,265	3,779	4,082	4,523	36,633	4,157
Total	R 1,462,323	R 1,642,602	R 1,686,959	R 1,961,760	17,098,767	1,994,928

R = Revised Data.
Notes: Geographic coverage is the 50 States and the District of Columbia. See Explanatory Note 5 for discussion of computations and revision policy.
Sources: Form EIA-857 and Form EIA-759.

Table 27. Average City Gate Price by State, 1989-1991
(Dollars per Thousand Cubic Feet)

State	YTD 1991	YTD 1990	YTD 1989	June 1991	May 1991	April 1991	March 1991	February 1991
Alabama	3.17	3.08	2.96	2.92	2.95	2.93	2.92	3.41
Alaska	.33	.33	.33	.33	.33	.34	.33	.33
Arizona	2.48	2.71	2.62	2.45	2.84	2.31	2.24	2.32
Arkansas	2.52	2.46	2.47	2.51	2.33	2.41	2.54	2.55
California	2.75	2.85	2.72	2.78	2.63	2.69	2.64	2.84
Colorado	2.81	2.90	2.98	3.56	3.09	2.93	2.82	2.69
Connecticut	3.43	3.55	3.37	3.43	3.10	2.78	3.50	3.82
Delaware	2.54	2.77	2.91	2.15	2.38	2.33	2.48	2.82
District of Columbia	—	—	—	—	—	—	—	—
Florida	2.51	2.68	2.62	2.37	2.45	2.26	2.42	2.55
Georgia	3.56	3.54	3.63	2.84	2.79	2.73	3.63	3.98
Hawaii	8.62	7.04	6.45	7.22	8.57	8.18	8.62	9.99
Idaho	2.18	2.10	2.12	2.61	2.43	2.11	2.10	2.24
Illinois	2.97	3.19	3.10	2.53	2.51	2.84	3.09	3.27
Indiana	3.11	3.15	3.24	3.29	2.87	3.02	2.88	3.18
Iowa	2.54	2.92	2.83	2.58	2.82	2.34	2.44	2.55
Kansas	2.66	2.86	2.08	2.40	2.44	2.32	2.69	2.66
Kentucky	3.00	3.34	3.13	3.11	3.35	3.26	2.90	2.89
Louisiana	2.68	3.00	2.95	2.52	2.53	2.50	2.68	2.68
Maine	3.05	3.06	3.23	2.78	2.68	2.48	2.40	3.77
Maryland	2.84	2.96	3.19	3.92	2.91	2.57	2.60	2.73
Massachusetts	3.36	3.29	3.10	2.54	3.21	3.10	3.07	3.86
Michigan	3.13	3.16	3.39	2.86	2.82	2.91	3.37	3.39
Minnesota	2.45	2.85	2.72	2.85	2.71	2.39	2.42	2.11
Mississippi	2.60	2.95	3.08	2.33	2.34	2.34	2.51	2.75
Missouri	2.86	3.17	2.91	3.04	3.00	2.69	2.92	2.67
Montana	3.71	3.20	3.60	4.05	3.81	3.54	3.63	3.78
Nebraska	2.72	2.97	2.93	2.92	2.92	2.70	2.70	2.59
Nevada	2.36	2.97	3.47	2.30	2.32	2.08	2.22	2.43
New Hampshire	3.46	3.57	3.28	3.00	2.86	2.74	3.13	3.99
New Jersey	3.03	3.17	3.11	3.30	3.00	[R] 2.89	2.61	3.17
New Mexico	2.55	2.68	2.57	2.90	2.72	2.94	2.23	2.43
New York	2.93	3.04	3.00	2.69	2.64	2.77	2.79	2.92
North Carolina	2.64	2.87	3.07	2.75	2.81	2.82	2.51	2.53
North Dakota	3.44	2.99	3.28	3.93	3.62	3.32	3.28	3.38
Ohio	3.07	3.05	3.26	3.42	3.31	2.90	3.00	3.09
Oklahoma	2.02	2.07	2.10	2.07	1.78	1.78	2.00	1.98
Oregon	2.35	2.50	2.58	2.37	[R] 2.30	2.20	[R] 2.29	[R] 2.56
Pennsylvania	3.16	3.35	3.23	4.04	4.04	3.17	2.88	2.99
Rhode Island	3.61	3.66	3.54	3.73	3.62	3.55	3.35	3.66
South Carolina	3.20	3.32	3.61	3.08	3.00	3.23	2.77	3.40
South Dakota	3.08	3.08	3.12	3.70	3.14	2.85	2.98	3.01
Tennessee	2.63	2.84	2.73	2.81	2.83	[R] 2.64	[R] 2.44	2.44
Texas	3.04	3.13	3.29	2.73	2.64	2.81	2.81	3.16
Utah	3.92	3.73	3.40	5.43	4.43	4.28	3.95	3.76
Vermont	2.82	2.82	2.59	2.62	2.97	3.07	2.69	2.89
Virginia	2.75	3.06	3.14	2.52	3.01	2.69	2.53	2.77
Washington	1.86	1.98	2.26	1.74	1.65	1.76	1.89	1.87
West Virginia	3.43	3.50	3.58	3.49	4.90	[R] 4.26	[R] 4.15	[R] 2.83
Wisconsin	3.08	3.30	3.66	3.78	3.08	2.77	2.82	3.01
Wyoming	3.18	3.10	2.99	3.72	3.39	3.08	3.11	3.15
Total	2.90	3.02	3.00	2.86	2.77	2.75	[R] 2.79	2.94

See footnotes at end of table.

Table 27. Average City Gate Price by State, 1989-1991 (Continued)
(Dollars per Thousand Cubic Feet)

State	January 1991	Total 1990	December 1990	November 1990	October 1990	September 1990	August 1990	July 1990
Alabama	3.50	3.13	3.20	3.18	3.02	2.94	3.91	2.95
Alaska	.33	.34	.35	.33	.33	38	.35	.33
Arizona	2.71	2.73	2.80	2.82	2.75	2.60	2.66	2.70
Arkansas	2.60	2.41	2.44	2.51	2.28	2.31	2.04	2.29
California	2.91	2.90	2.99	2.96	2.82	2.84	2.87	3.23
Colorado	2.64	2.94	2.79	2.90	3.06	3.38	3.39	3.40
Connecticut	3.56	3.66	3.89	3.94	3.64	3.72	3.59	3.78
Delaware	3.28	2.76	3.46	3.62	2.54	2.49	2.30	2.42
District of Columbia	—	—	—	—	—	—	—	—
Florida	2.87	2.71	3.17	2.97	2.90	2.65	2.32	2.31
Georgia	3.99	3.43	3.47	3.52	3.10	3.08	3.05	3.16
Hawaii	9.17	7.67	10.09	10.42	9.65	7.54	6.28	5.85
Idaho	2.03	2.08	2.01	1.95	1.96	2.44	2.24	2.20
Illinois	3.38	3.09	3.56	3.40	2.62	2.80	2.64	2.57
Indiana	3.30	3.15	3.45	3.27	2.84	2.89	2.78	3.38
Iowa	2.59	2.86	2.89	2.69	2.49	2.87	2.85	2.98
Kansas	2.88	2.76	3.10	2.42	2.45	2.48	2.31	2.27
Kentucky	2.97	3.07	R 3.13	3.04	2.57	R 2.38	R 2.48	R 2.74
Louisiana	2.87	2.97	3.24	3.17	2.79	2.64	2.58	2.73
Maine	3.98	3.06	3.94	2.91	2.91	2.92	2.67	2.72
Maryland	2.99	3.16	3.20	3.53	3.12	3.57	3.85	4.11
Massachusetts	3.89	3.34	4.18	3.59	3.09	3.35	2.84	2.81
Michigan	3.47	3.12	3.18	3.18	3.06	2.96	2.95	3.14
Minnesota	2.69	2.83	2.89	2.75	2.43	2.91	2.87	3.09
Mississippi	2.86	2.89	3.02	2.98	2.70	2.65	2.65	2.65
Missouri	2.92	3.14	3.06	3.18	2.78	3.35	2.97	3.57
Montana	3.73	3.30	3.49	3.52	3.32	3.40	3.15	3.21
Nebraska	2.72	2.95	2.97	2.90	2.62	3.11	2.93	3.10
Nevada	2.54	2.75	2.46	2.62	2.33	2.50	2.67	3.00
New Hampshire	4.05	3.51	4.17	3.49	2.85	2.92	2.95	3.32
New Jersey	3.32	3.23	3.39	3.46	3.18	3.26	3.27	3.14
New Mexico	2.50	2.63	2.43	3.17	2.36	2.58	2.00	3.06
New York	3.36	3.05	R 3.54	3.28	2.66	2.79	2.74	2.77
North Carolina	2.68	2.88	3.06	2.78	3.00	2.86	2.74	2.86
North Dakota	3.52	3.07	3.42	3.23	2.81	3.05	2.74	3.12
Ohio	3.07	3.09	3.27	3.34	2.86	2.66	2.88	3.03
Oklahoma	2.18	2.03	2.24	2.17	1.86	1.69	1.74	1.73
Oregon	R 2.39	2.47	2.38	2.55	2.30	2.54	2.53	2.61
Pennsylvania	3.09	3.47	3.24	3.54	3.77	4.12	4.17	4.17
Rhode Island	3.74	3.71	3.91	3.74	3.44	3.59	3.84	4.21
South Carolina	3.45	3.14	3.66	3.40	2.85	2.46	2.64	2.65
South Dakota	3.16	3.12	3.21	3.08	2.82	3.48	3.46	3.45
Tennessee	2.79	2.88	3.27	3.10	2.55	2.67	2.56	2.86
Texas	3.40	3.14	3.50	3.29	2.72	2.88	3.14	2.88
Utah	3.57	3.91	3.55	4.06	4.38	5.26	4.87	5.27
Vermont	2.78	2.88	2.82	2.99	2.98	2.95	2.76	3.49
Virginia	2.92	3.09	3.44	3.45	2.77	2.74	2.60	3.20
Washington	2.02	1.95	1.98	1.96	1.85	1.89	1.84	1.88
West Virginia	3.05	3.54	3.14	3.03	3.41	5.52	5.76	5.31
Wisconsin	3.30	3.34	3.40	3.27	3.04	3.46	3.99	3.90
Wyoming	3.12	3.00	2.77	2.68	2.56	3.37	3.88	3.27
Total	3.08	3.03	3.19	3.14	2.81	2.92	2.91	3.03

See footnotes at end of table.

Table 27. Average City Gate Price by State, 1989-1991 (Continued)
(Dollars per Thousand Cubic Feet)

State	June 1990	May 1990	April 1990	March 1990	February 1990	January 1990	Total 1989	December 1989
Alabama	3.09	2.96	2.93	3.03	3.22	3.15	3.00	3.09
Alaska	.33	.33	.33	.33	.33	.33	.33	.33
Arizona	2.67	2.39	2.54	2.51	2.60	3.13	2.67	2.72
Arkansas	2.34	2.34	2.36	2.50	2.50	2.55	2.47	2.50
California	2.90	2.83	2.79	2.70	2.87	3.02	2.75	2.85
Colorado	3.46	3.19	2.88	2.79	2.80	2.85	2.96	2.79
Connecticut	3.47	3.10	3.21	3.50	3.79	3.86	3.46	3.34
Delaware	2.44	2.97	2.41	2.91	3.16	2.84	2.82	3.29
District of Columbia	—	—	—	—	—	—	—	—
Florida	2.37	2.45	2.48	2.57	2.98	3.05	2.63	2.90
Georgia	3.24	2.96	3.19	3.62	3.84	3.73	3.54	3.56
Hawaii	6.24	7.29	6.96	7.24	7.27	7.18	6.49	6.65
Idaho	2.77	2.15	2.09	1.92	1.98	2.10	2.17	2.06
Illinois	2.75	2.48	2.85	3.28	3.72	3.91	2.99	3.24
Indiana	3.50	3.12	2.80	3.10	2.93	3.57	3.13	3.24
Iowa	3.06	2.79	2.48	2.62	2.77	3.55	2.80	3.00
Kansas	2.25	2.42	2.87	3.09	2.83	3.09	2.28	3.12
Kentucky	3.05	R 3.29	3.29	3.34	R 3.36	R 3.45	3.01	3.00
Louisiana	2.64	2.84	2.82	2.85	3.20	3.29	2.98	3.01
Maine	3.05	2.79	2.69	3.06	3.59	3.13	3.23	2.71
Maryland	3.99	3.45	2.80	2.60	3.04	2.90	3.20	3.18
Massachusetts	3.28	2.84	2.96	3.28	3.73	3.51	3.20	3.55
Michigan	3.04	2.52	3.11	3.48	3.43	3.36	3.24	2.98
Minnesota	3.22	2.66	2.35	2.60	2.72	3.40	2.72	2.85
Mississippi	2.77	2.64	2.67	2.81	3.11	3.30	3.08	2.96
Missouri	3.55	3.40	2.71	3.16	3.21	3.24	3.00	3.20
Montana	3.26	2.97	3.13	3.18	3.27	3.26	3.43	3.24
Nebraska	3.20	2.85	2.59	2.78	2.76	3.50	2.91	2.90
Nevada	2.68	2.38	2.64	3.14	3.05	3.23	3.33	3.22
New Hampshire	3.12	2.91	3.06	3.44	4.12	4.02	3.28	3.36
New Jersey	3.11	2.81	2.88	3.07	3.47	3.57	3.17	3.41
New Mexico	3.41	3.40	2.40	2.37	2.54	2.72	2.66	2.72
New York	2.76	2.63	2.92	2.98	3.23	3.37	3.07	3.41
North Carolina	2.93	2.92	2.64	2.60	2.94	3.09	3.01	2.98
North Dakota	3.03	2.83	2.86	2.94	3.13	3.00	3.12	3.03
Ohio	3.12	3.03	2.74	3.16	3.16	3.01	3.31	3.32
Oklahoma	1.86	1.83	2.01	2.03	2.14	2.19	2.07	2.29
Oregon	2.90	2.51	2.55	2.43	2.38	2.53	2.67	2.49
Pennsylvania	3.74	3.51	3.39	3.18	3.28	3.36	3.26	3.01
Rhode Island	4.07	3.79	3.32	3.61	3.71	3.68	3.68	3.49
South Carolina	3.15	3.24	3.12	3.20	3.45	3.54	3.46	3.53
South Dakota	3.61	3.04	2.66	2.89	2.97	3.44	3.04	3.00
Tennessee	2.77	2.75	2.52	2.68	2.76	3.16	2.81	3.00
Texas	2.86	2.93	3.01	3.12	3.26	3.33	3.33	3.49
Utah	5.23	4.75	4.55	3.75	3.33	3.37	3.59	3.41
Vermont	3.42	2.84	2.70	2.86	2.77	2.70	2.59	2.47
Virginia	3.68	2.97	2.61	2.67	3.16	3.40	3.13	3.22
Washington	1.83	1.71	1.82	1.84	2.05	2.32	2.20	2.15
West Virginia	4.89	3.95	3.52	3.03	3.54	3.32	3.75	3.27
Wisconsin	3.87	3.22	3.05	3.10	3.38	3.40	3.40	2.28
Wyoming	3.63	4.65	2.86	2.88	2.94	2.81	2.99	2.86
Total	3.00	2.81	2.83	2.94	3.10	3.24	3.01	3.10

R = Revised Data.
— = Not Applicable.
Notes: Geographic coverage is the 50 States and the District of Columbia. Prices in this table represent the average price of natural gas by State at the point where the gas transferred from a pipeline to a local distribution company within the State. See Explanatory Note 5 for discussion of computations and revision policy.
Source: Form EIA-857.

Table 28. Average Price of Natural Gas Delivered to Residential Consumers by State, 1989-1991
(Dollars per Thousand Cubic Feet)

State	YTD 1991	YTD 1990	YTD 1989	June 1991	May 1991	April 1991	March 1991	February 1991
Alabama	6.94	6.10	5.91	8.90	8.59	7.45	6.73	6.47
Alaska	4.24	3.76	3.59	4.49	4.36	4.25	4.22	4.18
Arizona	6.56	6.55	6.68	8.22	7.40	6.54	6.62	6.41
Arkansas	4.78	4.77	4.61	6.22	5.96	5.09	4.84	4.55
California	6.27	5.70	5.54	6.69	6.34	5.91	6.05	6.04
Colorado	4.39	4.37	4.44	5.37	4.64	4.47	4.35	4.25
Connecticut	8.65	8.42	8.03	10.05	10.51	8.78	8.47	8.23
Delaware	5.95	6.26	6.26	7.53	6.50	5.86	6.13	5.20
District of Columbia	7.01	7.54	7.41	5.93	7.27	7.16	6.86	7.18
Florida	8.97	7.92	7.75	10.71	10.43	9.29	8.47	8.41
Georgia	6.72	6.75	6.12	8.03	7.91	7.76	6.64	6.47
Hawaii	18.28	16.00	15.25	17.59	17.22	17.18	18.69	19.32
Idaho	5.10	4.87	4.92	6.07	5.41	5.29	5.12	4.97
Illinois	5.02	5.03	4.96	6.30	5.66	5.09	4.71	4.97
Indiana	5.65	5.68	5.74	6.80	6.42	5.79	5.26	5.85
Iowa	4.60	4.88	4.53	6.25	5.01	4.61	4.28	4.36
Kansas	4.23	4.37	3.94	5.54	4.94	4.40	4.19	4.09
Kentucky	4.80	4.82	4.60	6.35	5.72	5.11	4.64	4.68
Louisiana	5.39	5.63	5.49	6.72	6.54	5.52	5.15	5.00
Maine	6.73	7.73	6.91	6.95	7.01	6.87	6.69	6.60
Maryland	6.02	6.20	6.15	7.33	R 6.92	6.09	R 5.79	R 5.84
Massachusetts	7.98	7.70	7.03	7.36	6.52	8.49	8.18	8.09
Michigan	4.94	4.84	5.14	6.14	5.37	4.97	4.84	4.81
Minnesota	4.33	4.55	4.51	5.05	4.49	4.24	4.13	3.98
Mississippi	5.12	5.16	5.10	5.78	6.03	5.46	5.06	4.90
Missouri	4.95	5.00	4.64	7.26	5.88	5.07	4.70	4.77
Montana	4.45	4.37	4.37	5.23	4.61	4.50	4.41	4.38
Nebraska	4.45	4.47	4.39	5.31	4.24	4.54	4.22	4.27
Nevada	5.37	5.44	5.38	6.18	5.80	5.38	5.40	5.18
New Hampshire	7.02	7.35	6.72	7.40	6.72	7.22	7.05	6.96
New Jersey	6.63	6.42	6.29	8.90	7.98	7.11	6.76	6.01
New Mexico	5.22	5.39	5.43	6.95	6.05	5.34	5.21	4.91
New York	7.29	7.18	7.00	9.19	7.78	7.14	7.05	7.20
North Carolina	5.87	5.91	6.46	8.21	7.06	6.03	5.62	5.56
North Dakota	4.60	4.53	4.58	5.85	4.84	4.65	4.49	4.50
Ohio	5.24	5.13	5.36	6.60	5.82	5.28	5.05	5.16
Oklahoma	4.54	4.53	4.18	6.02	5.46	4.77	4.43	4.39
Oregon	6.01	6.16	6.07	6.38	6.21	6.03	5.98	5.92
Pennsylvania	6.58	6.35	5.88	8.43	7.44	6.64	6.42	6.45
Rhode Island	7.40	7.01	7.00	8.92	8.02	7.63	7.30	7.09
South Carolina	7.09	6.96	6.63	8.15	7.65	7.11	6.91	7.06
South Dakota	4.76	4.91	4.75	5.84	4.98	4.78	4.54	4.49
Tennessee	5.03	4.94	4.68	6.53	6.01	5.36	4.92	4.90
Texas	5.55	5.54	5.41	6.91	6.77	6.10	5.45	5.22
Utah	5.36	5.16	4.99	5.59	5.09	5.31	5.60	5.42
Vermont	6.02	5.54	5.53	6.96	6.30	5.97	5.86	5.97
Virginia	6.67	6.37	6.43	8.01	7.94	6.62	6.32	6.53
Washington	4.51	5.01	5.36	5.29	4.97	4.75	4.36	4.32
West Virginia	6.50	6.30	5.44	8.66	7.37	6.64	6.34	6.30
Wisconsin	5.63	5.68	5.63	6.27	5.30	6.18	5.44	5.44
Wyoming	4.59	4.76	4.59	5.23	4.70	4.63	4.55	4.49
Total	5.73	5.64	5.54	6.94	6.28	5.88	5.60	5.55

See footnotes at end of table.

Table 28. Average Price of Natural Gas Delivered to Residential Consumers by State, 1989-1991 (Continued)

(Dollars per Thousand Cubic Feet)

State	January 1991	Total 1990	December 1990	November 1990	October 1990	September 1990	August 1990	July 1990
Alabama	6.51	6.47	6.33	6.74	8.32	8.57	8.57	8.49
Alaska	4.17	3.79	3.68	3.73	3.87	4.12	4.29	4.30
Arizona	6.17	6.88	6.35	7.38	8.70	9.12	9.37	9.10
Arkansas	4.38	4.99	4.71	4.93	6.01	6.5o	6.83	6.64
California	6.61	5.78	5.99	5.36	6.15	6.04	5.90	6.07
Colorado	4.19	4.53	4.29	4.50	5.29	5.97	5.95	5.85
Connecticut	8.27	8.58	8.25	8.35	9.07	10.27	10.46	10.09
Delaware	6.14	6.51	6.40	6.86	7.79	8.08	8.35	8.09
District of Columbia	7.00	7.51	7.14	7.41	8.25	8.67	6.97	6.98
Florida	8.45	8.57	8.92	9.92	10.43	9.92	9.93	9.65
Georgia	6.19	6.90	6.45	7.08	7.36	7.90	8.23	8.15
Hawaii	19.57	16.46	20.15	18.91	17.06	15.41	15.11	14.96
Idaho	4.83	5.05	4.96	5.30	5.59	6.27	6.61	6.32
Illinois	4.93	5.02	4.80	4.69	4.89	5.66	6.14	6.15
Indiana	5.43	5.54	5.07	5.15	4.78	6.22	6.54	6.77
Iowa	4.67	5.05	4.99	4.96	5.44	6.75	6.88	6.66
Kansas	4.00	4.49	4.26	4.52	5.20	5.60	5.70	5.64
Kentucky	4.59	4.91	4.74	4.66	5.20	5.93	6.27	6.46
Louisiana	5.26	6.10	6.34	6.77	7.23	7.49	7.72	7.49
Maine	6.59	7.61	6.77	7.04	7.84	8.21	8.37	8.31
Maryland	[R] 5.80	6.41	5.98	6.42	7.36	8.06	8.16	7.93
Massachusetts	8.05	7.84	8.29	8.53	7.24	8.11	8.29	7.87
Michigan	4.79	5.00	4.74	4.94	5.39	6.25	6.56	6.65
Minnesota	4.60	4.63	4.85	4.75	4.56	4.55	4.63	5.07
Mississippi	4.88	5.21	5.06	5.29	5.51	5.60	5.52	5.43
Missouri	4.78	5.21	5.02	5.21	6.04	7.14	7.06	6.65
Montana	4.30	4.57	4.47	4.66	5.12	5.72	5.91	5.76
Nebraska	4.62	4.60	4.76	4.74	4.77	5.06	5.14	5.26
Nevada	5.16	5.66	5.26	5.78	6.69	7.15	7.35	7.08
New Hampshire	6.97	7.41	7.14	7.37	7.77	8.07	8.53	8.32
New Jersey	6.04	6.56	6.02	5.67	7.99	8.43	8.92	8.59
New Mexico	4.83	5.67	5.17	6.08	7.51	7.92	7.81	7.58
New York	7.19	7.48	7.43	7.49	8.47	9.11	9.71	9.12
North Carolina	5.75	6.14	5.95	6.14	7.45	8.38	8.40	8.33
North Dakota	4.46	4.70	4.57	4.65	5.23	6.19	6.82	6.48
Ohio	5.12	5.26	5.20	5.24	5.40	6.12	6.52	6.48
Oklahoma	4.29	4.75	4.42	4.92	5.87	6.58	6.73	6.66
Oregon	5.91	6.26	6.01	6.27	6.89	7.55	7.39	7.01
Pennsylvania	6.27	6.59	6.39	6.70	7.34	8.23	8.64	8.48
Rhode Island	7.08	7.21	7.21	7.44	8.01	8.18	8.35	8.34
South Carolina	7.05	7.20	7.35	7.49	8.02	8.68	8.88	8.74
South Dakota	4.88	5.13	5.35	5.19	5.40	6.20	6.47	6.81
Tennessee	4.79	5.10	5.07	5.16	5.80	6.50	6.56	6.29
Texas	5.19	5.79	5.45	5.90	6.60	7.21	7.30	7.13
Utah	5.24	5.28	5.29	5.36	5.58	5.95	5.93	5.81
Vermont	5.96	5.79	6.06	6.24	6.42	6.79	7.11	7.00
Virginia	6.57	6.79	6.70	7.38	8.53	8.74	8.78	8.70
Washington	4.25	5.03	4.34	4.74	5.54	6.70	7.06	6.49
West Virginia	6.29	6.52	6.42	6.56	7.28	8.38	8.72	8.30
Wisconsin	5.69	5.73	5.84	5.51	[R] 5.52	[R] 6.12	[R] 6.44	[R] 6.53
Wyoming	4.50	4.88	4.65	4.93	5.56	6.30	5.75	5.78
Total	5.53	5.77	5.59	5.66	6.11	6.86	7.04	7.01

See footnotes at end of table

Table 28. Average Price of Natural Gas Delivered to Residential Consumers by State, 1989-1991 (Continued)
(Dollars per Thousand Cubic Feet)

State	June 1990	May 1990	April 1990	March 1990	February 1990	January 1990	Total 1989	December 1989
Alabama	8.14	7.11	6.38	6.12	5.92	5.33	5.27	5.88
Alaska	4.10	3.93	3.79	3.71	3.68	3.72	3.63	3.55
Arizona	8.37	7.77	7.02	6.38	6.20	6.13	6.84	6.06
Arkansas	6.24	5.39	4.84	4.81	4.66	4.47	4.85	4.44
California	6.22	5.96	5.07	5.64	5.77	5.72	5.55	5.38
Colorado	5.04	4.55	4.37	4.27	4.25	4.30	4.83	4.49
Connecticut	9.91	9.25	8.39	8.22	8.26	8.17	8.25	7.90
Delaware	7.74	6.84	6.35	6.18	6.15	5.95	6.42	6.16
District of Columbia	6.81	7.37	7.21	8.05	7.84	7.37	7.44	7.31
Florida	9.35	8.97	8.35	8.18	8.01	6.95	8.06	7.18
Georgia	7.78	7.40	6.38	6.75	6.89	6.45	6.24	5.62
Hawaii	15.68	16.32	16.28	16.12	15.79	15.81	15.66	15.89
Idaho	5.47	5.34	5.17	4.83	4.68	4.64	5.05	4.81
Illinois	5.79	5.17	4.88	4.98	5.25	4.75	4.92	4.54
Indiana	6.60	5.98	5.56	5.50	5.54	5.75	5.51	4.84
Iowa	5.61	4.89	4.51	4.62	4.95	5.05	4.70	4.60
Kansas	5.17	4.63	4.40	4.34	4.32	4.21	4.17	4.24
Kentucky	5.85	5.50	4.78	4.61	4.75	4.70	4.68	4.39
Louisiana	7.32	6.20	6.11	5.01	5.90	5.18	5.97	6.01
Maine	7.56	7.77	8.27	8.08	7.95	7.00	7.16	7.08
Maryland	7.40	6.78	6.11	6.17	6.29	5.81	6.30	5.74
Massachusetts	6.95	6.73	8.39	8.12	8.02	7.25	7.16	7.31
Michigan	5.88	5.26	4.86	4.76	4.72	4.66	5.19	4.68
Minnesota	4.77	4.40	4.12	4.23	4.57	4.98	4.57	4.56
Mississippi	5.37	5.57	5.01	5.30	5.25	4.97	5.10	4.73
Missouri	6.11	5.30	5.07	5.02	4.99	4.73	4.84	4.65
Montana	4.94	4.62	4.45	4.33	4.24	4.23	4.37	4.25
Nebraska	5.04	4.54	4.23	4.22	4.44	4.66	4.48	4.37
Nevada	6.48	6.35	6.03	5.46	5.05	5.07	5.55	5.18
New Hampshire	7.51	7.08	7.77	7.63	7.60	6.76	6.85	6.83
New Jersey	8.08	7.35	6.69	6.46	6.43	5.63	6.51	6.19
New Mexico	6.95	6.02	5.51	5.23	5.20	5.10	5.73	5.28
New York	8.22	7.72	7.16	6.99	7.26	6.84	7.22	6.77
North Carolina	7.90	6.79	5.83	5.81	5.77	5.69	6.55	5.99
North Dakota	5.45	4.85	4.54	4.50	4.39	4.38	4.68	4.34
Ohio	5.93	5.21	5.28	4.97	5.06	5.06	5.32	4.90
Oklahoma	6.20	5.21	4.62	4.47	4.38	4.18	4.50	4.35
Oregon	6.55	6.40	6.24	6.06	6.07	6.06	6.19	6.16
Pennsylvania	7.57	6.98	6.44	6.27	6.22	6.07	6.14	6.01
Rhode Island	7.74	7.34	7.07	6.88	6.93	6.83	7.13	6.84
South Carolina	8.29	7.32	6.98	6.92	6.86	6.86	6.73	6.68
South Dakota	5.93	5.12	4.72	4.67	4.82	4.98	4.85	4.83
Tennessee	5.90	5.34	4.98	4.98	4.99	4.70	4.83	4.77
Texas	6.86	6.49	5.98	5.62	5.36	4.96	5.55	5.03
Utah	5.30	5.28	5.44	5.15	5.05	5.08	5.14	5.17
Vermont	6.20	5.84	5.58	5.47	5.45	5.40	5.62	5.43
Virginia	7.49	7.14	6.19	6.02	6.53	6.22	6.59	6.19
Washington	5.61	5.28	5.09	4.91	4.86	4.92	5.49	5.09
West Virginia	7.37	6.83	6.31	6.25	6.19	6.09	5.73	6.17
Wisconsin	[R] 5.83	5.62	5.54	5.79	5.81	5.54	5.64	5.38
Wyoming	4.82	4.93	4.80	4.74	4.74	4.68	4.71	4.61
Total	[R] 6.54	5.98	5.62	5.58	5.62	5.41	5.64	5.30

[R] = Revised Data.

Notes: Data for 1989 are final. All other data are preliminary unless otherwise indicated. Geographic coverage is the 50 States and the District of Columbia. See Explanatory Note 5 for discussion of computations and revision policy.

Source: Form EIA-857.

Table 29. Average Price of Natural Gas Sold to Commercial Consumers by State, 1989-1991
(Dollars per Thousand Cubic Feet)

State	YTD 1991	YTD 1990	YTD 1989	June 1991	May 1991	April 1991	March 1991	February 1991
Alabama	5.82	5.25	5.07	5.59	5.81	R 5.97	R 6.07	R 5.76
Alaska	3.02	2.66	2.67	2.84	2.93	3.00	3.00	3.13
Arizona	4.93	4.79	4.76	5.05	4.88	4.86	4.99	5.02
Arkansas	4.30	4.35	4.28	4.46	4.57	4.45	4.39	4.27
California	5.78	5.29	4.93	5.17	4.71	5.60	6.29	6.29
Colorado	3.94	3.91	3.99	4.19	4.02	3.97	3.93	3.90
Connecticut	6.64	6.51	6.09	5.85	6.94	6.35	6.72	6.71
Delaware	5.03	5.42	5.36	5.18	5.05	5.03	5.18	4.47
District of Columbia	5.24	5.80	5.36	4.45	4.76	5.53	4.88	5.55
Florida	5.02	4.91	4.86	5.26	4.68	4.64	4.79	5.25
Georgia	5.79	5.82	5.42	5.37	5.61	6.16	5.86	5.87
Hawaii	13.80	11.94	11.19	12.94	12.65	12.89	14.22	15.00
Idaho	4.34	4.02	4.14	4.89	4.55	4.52	4.26	4.23
Illinois	4.72	4.75	4.62	5.30	5.73	4.64	4.45	4.62
Indiana	4.82	4.99	5.05	4.83	4.80	4.96	4.45	5.03
Iowa	3.88	4.17	3.89	4.01	3.81	3.78	3.65	3.77
Kansas	3.72	3.72	3.16	3.63	R 3.69	R 3.55	R 3.73	3.78
Kentucky	4.44	4.49	4.32	4.69	4.59	4.61	4.41	4.40
Louisiana	4.85	5.13	5.00	4.90	4.91	4.47	4.62	4.76
Maine	6.02	7.02	6.17	5.71	5.89	6.17	6.06	6.02
Maryland	5.13	5.34	5.35	4.95	5.10	R 5.06	R 5.11	R 5.15
Massachusetts	6.33	6.47	6.02	5.02	4.29	6.55	6.64	6.87
Michigan	4.68	4.61	4.85	5.27	4.83	4.60	4.63	4.65
Minnesota	3.75	4.02	4.01	3.66	3.85	3.56	3.57	3.49
Mississippi	4.29	4.44	4.85	3.90	4.32	4.28	4.34	4.31
Missouri	4.48	4.61	4.26	4.85	4.48	4.25	4.32	4.51
Montana	4.33	4.27	4.40	4.63	4.37	4.34	4.28	4.32
Nebraska	3.99	3.89	3.85	3.58	R 3.68	3.79	3.71	3.90
Nevada	4.30	4.37	4.44	4.18	4.21	4.23	4.32	4.21
New Hampshire	6.38	6.87	6.18	5.91	5.82	6.57	6.48	6.46
New Jersey	5.45	5.52	5.29	5.22	5.06	5.68	5.88	5.26
New Mexico	4.16	4.41	3.68	4.29	4.37	4.23	4.16	4.07
New York	5.62	5.75	5.76	5.24	5.38	5.39	5.46	5.92
North Carolina	4.56	4.64	5.20	4.33	4.39	4.49	4.51	4.57
North Dakota	4.20	4.17	4.20	4.51	4.20	4.13	4.08	4.20
Ohio	4.83	4.62	4.97	5.06	4.88	4.80	4.69	4.84
Oklahoma	4.06	3.99	3.85	3.96	3.69	4.02	4.06	4.12
Oregon	4.76	4.87	4.82	4.75	4.71	4.73	4.73	4.75
Pennsylvania	6.10	5.96	5.21	6.53	6.63	6.13	6.04	6.11
Rhode Island	6.51	6.43	6.56	5.07	5.24	7.26	7.01	6.81
South Carolina	5.73	5.67	5.68	5.27	5.23	5.69	5.55	6.05
South Dakota	3.97	4.14	3.98	4.14	3.83	3.81	3.77	3.85
Tennessee	4.74	4.86	4.42	4.79	4.92	4.67	4.70	4.71
Texas	4.29	4.28	4.12	3.95	4.00	3.87	4.22	4.47
Utah	4.47	4.25	4.09	4.45	4.16	4.40	4.72	4.56
Vermont	5.24	4.93	4.70	5.71	5.06	4.98	4.95	5.38
Virginia	4.96	4.78	5.01	4.09	4.40	5.00	4.72	5.35
Washington	4.00	4.20	4.69	4.16	4.09	3.99	3.93	3.93
West Virginia	5.77	6.04	4.96	6.17	5.96	5.78	5.75	5.71
Wisconsin	4.54	4.60	4.52	4.49	4.00	4.86	4.38	4.43
Wyoming	4.25	4.44	4.31	4.24	4.21	4.24	4.24	4.22
Total	4.92	4.90	4.76	4.79	4.71	4.90	4.93	4.97

See footnotes at end of table

Table 29. Average Price of Natural Gas Sold to Commercial Consumers by State, 1989-1991 (Continued)
(Dollars per Thousand Cubic Feet)

State	January 1991	Total 1990	December 1990	November 1990	October 1990	September 1990	August 1990	July 1990
Alabama	R 5.68	R 5.32	R 5.42	R 5.47	R 5.32	R 5.36	R 5.42	R 5.53
Alaska	3.10	2.63	2.75	2.69	2.57	2.49	2.41	2.44
Arizona	4.84	4.79	4.83	4.79	4.81	4.79	4.78	4.73
Arkansas	4.12	4.39	4.30	4.35	4.52	4.67	4.75	4.67
California	6.09	5.12	5.58	5.05	5.03	4.37	4.64	4.40
Colorado	3.87	3.94	3.86	3.87	4.10	4.27	4.28	4.24
Connecticut	6.79	6.30	6.62	6.34	5.66	5.52	5.02	5.05
Delaware	5.42	5.48	5.47	5.51	5.79	5.99	5.41	5.67
District of Columbia	5.56	5.54	5.47	5.06	4.82	4.56	4.80	5.12
Florida	5.47	4.99	5.57	5.48	5.10	4.73	4.61	4.64
Georgia	5.70	5.77	5.72	6.02	5.72	5.48	5.37	5.56
Hawaii	15.04	12.25	15.52	14.35	12.76	11.28	10.75	10.76
Idaho	4.19	4.18	4.20	4.52	4.54	4.61	4.66	4.53
Illinois	4.76	4.66	4.58	4.27	4.38	4.38	4.94	R 5.13
Indiana	4.85	4.78	4.48	4.41	4.08	4.71	4.69	4.85
Iowa	4.13	4.12	4.28	3.95	3.62	3.94	3.93	3.95
Kansas	3.77	3.41	3.53	3.38	R 3.11	R 2.62	R 2.74	R 2.83
Kentucky	4.39	4.49	4.47	4.27	4.42	4.75	4.68	4.96
Louisiana	5.29	5.34	5.65	5.89	5.64	5.53	5.71	5.42
Maine	6.00	6.72	6.08	6.12	6.26	6.39	6.47	6.43
Maryland	R 5.22	5.33	5.30	5.22	5.43	5.39	5.35	5.28
Massachusetts	6.77	6.26	6.89	6.64	4.75	5.14	4.97	4.72
Michigan	4.67	4.68	4.57	4.65	4.94	5.35	5.46	5.48
Minnesota	4.13	3.99	4.30	4.06	3.56	3.27	3.17	3.64
Mississippi	4.36	4.31	4.33	4.25	3.90	3.93	3.93	3.98
Missouri	4.58	4.60	4.64	4.49	4.55	4.68	4.60	4.54
Montana	4.29	4.36	4.38	4.47	4.58	4.76	4.73	4.62
Nebraska	4.51	3.83	4.15	4.08	3.74	3.54	3.55	3.53
Nevada	4.49	4.36	4.32	4.40	4.29	4.36	4.50	4.33
New Hampshire	6.43	6.73	6.50	6.79	6.01	6.37	6.39	6.50
New Jersey	5.32	5.30	5.03	4.52	5.17	5.04	5.00	5.05
New Mexico	4.09	4.38	3.93	4.82	4.35	4.57	4.49	4.44
New York	5.81	5.57	5.70	5.56	5.12	4.87	4.86	4.94
North Carolina	4.74	4.60	4.73	4.53	4.40	4.37	4.48	4.45
North Dakota	4.26	4.21	4.24	4.39	4.23	3.87	4.58	4.53
Ohio	4.88	4.66	4.87	4.78	4.52	4.66	4.69	4.32
Oklahoma	4.10	3.98	3.98	4.07	3.95	3.97	3.86	3.96
Oregon	4.81	4.87	4.76	4.79	4.97	5.06	5.11	5.06
Pennsylvania	5.90	6.00	5.90	6.03	6.21	6.33	6.27	6.28
Rhode Island	6.74	6.20	6.98	6.06	5.53	5.50	5.20	4.85
South Carolina	5.95	5.63	6.14	5.90	5.17	5.22	5.13	5.12
South Dakota	4.26	4.19	4.45	4.31	4.02	3.80	4.04	4.39
Tennessee	4.77	4.82	4.86	4.75	4.60	4.78	4.55	4.70
Texas	4.72	4.28	4.71	4.56	4.45	4.08	3.90	3.68
Utah	4.39	4.30	4.43	4.43	4.42	4.36	4.35	4.30
Vermont	5.45	5.05	5.39	5.36	5.08	4.90	4.95	5.41
Virginia	5.23	4.84	5.19	5.19	4.33	5.00	4.61	4.78
Washington	4.03	4.15	3.96	4.05	4.09	4.19	4.18	4.24
West Virginia	5.72	6.21	6.12	6.23	6.94	7.64	7.42	7.45
Wisconsin	4.72	R 4.56	R 4.66	R 4.37	R 4.17	R 4.59	R 4.66	R 4.50
Wyoming	4.31	4.49	4.42	4.45	4.54	4.67	5.05	5.23
Total	4.98	4.83	4.92	R 4.81	4.67	R 4.56	4.56	4.46

See footnotes at end of table

Table 29. Average Price of Natural Gas Sold to Commercial Consumers by State, 1989-1991 (Continued)
(Dollars per Thousand Cubic Feet)

State	June 1990	May 1990	April 1990	March 1990	February 1990	January 1990	Total 1989	December 1989
Alabama	R 5.99	R 5.48	R 5.23	R 5.16	R 5.22	R 5.12	5.17	5.23
Alaska	2.52	2.55	2.62	2.71	2.74	2.67	2.57	2.53
Arizona	4.66	4.67	4.79	4.78	4.89	4.83	4.76	4.75
Arkansas	4.68	4.46	4.34	4.39	4.34	4.25	4.38	4.21
California	4.37	4.54	5.29	5.64	5.64	5.56	4.88	5.49
Colorado	4.09	3.95	3.89	3.85	3.86	3.93	4.05	4.04
Connecticut	5.15	5.88	6.09	6.76	6.85	6.95	6.08	6.79
Delaware	5.60	5.54	5.43	5.51	5.36	5.32	5.39	5.35
District of Columbia	5.21	5.09	5.41	6.51	5.73	6.04	5.30	5.61
Florida	4.66	4.68	4.72	4.94	5.23	5.08	4.85	5.00
Georgia	5.46	5.49	5.38	6.02	6.26	5.78	5.46	5.29
Hawaii	11.51	11.94	12.36	12.17	11.94	11.73	11.44	11.52
Idaho	4.32	4.34	4.25	3.96	3.91	3.87	4.20	4.02
Illinois	5.02	4.68	4.52	R 4.85	4.99	4.58	4.55	4.38
Indiana	5.00	5.01	4.90	4.88	4.94	5.13	4.78	4.37
Iowa	3.71	3.73	3.72	3.97	4.32	4.63	3.91	4.14
Kansas	R 3.02	R 3.42	R 3.63	R 3.89	R 3.93	R 3.89	3.14	3.79
Kentucky	4.73	4.69	4.37	4.39	4.50	4.51	4.35	4.23
Louisiana	5.45	5.02	5.28	4.61	5.40	5.12	5.26	5.67
Maine	6.25	6.57	7.50	7.40	7.42	6.46	6.30	6.43
Maryland	5.23	5.07	5.11	5.68	5.43	5.29	5.43	5.36
Massachusetts	4.89	5.27	6.79	7.06	7.13	6.24	5.87	6.04
Michigan	5.07	4.75	4.56	4.57	4.61	4.55	4.85	4.54
Minnesota	3.74	3.56	3.57	3.70	4.06	4.66	4.00	4.19
Mississippi	3.93	4.20	4.14	4.49	4.62	4.67	4.73	4.55
Missouri	4.49	4.45	4.60	4.69	4.70	4.56	4.34	4.41
Montana	4.59	4.36	4.32	4.23	4.23	4.19	4.36	4.26
Nebraska	3.67	3.93	3.57	3.81	3.79	4.27	3.77	3.99
Nevada	4.32	4.39	4.42	4.43	4.34	4.32	4.44	4.57
New Hampshire	6.41	6.23	7.29	7.30	7.18	6.38	6.23	6.39
New Jersey	5.14	5.10	5.41	5.55	5.62	5.74	5.30	5.65
New Mexico	4.71	4.40	4.32	4.37	4.44	4.39	3.72	3.68
New York	5.02	5.63	5.75	5.73	6.15	5.70	5.62	5.48
North Carolina	4.53	4.53	4.40	4.58	4.63	4.86	5.14	5.16
North Dakota	4.33	4.15	4.06	4.19	4.17	4.18	4.19	4.05
Ohio	4.69	4.46	4.67	4.04	4.96	4.83	4.90	4.73
Oklahoma	3.91	3.75	3.99	4.13	3.99	3.99	3.94	3.96
Oregon	4.86	4.83	4.82	4.86	4.89	4.89	4.80	4.81
Pennsylvania	6.39	6.09	5.96	5.91	5.90	5.90	5.35	5.51
Rhode Island	7.09	5.65	5.75	6.81	6.74	6.63	6.41	6.42
South Carolina	5.25	5.24	5.67	5.65	5.78	5.94	5.65	6.11
South Dakota	4.27	4.01	3.90	3.97	4.15	4.40	3.99	4.14
Tennessee	4.74	4.62	4.76	5.09	4.91	4.84	4.49	4.72
Texas	3.71	4.03	4.10	4.52	4.54	4.56	4.11	4.32
Utah	4.10	4.21	4.43	4.26	4.21	4.23	4.16	4.30
Vermont	5.39	4.86	4.75	4.87	4.99	4.97	4.74	4.96
Virginia	4.48	4.40	4.30	4.89	5.10	4.99	4.93	5.26
Washington	4.68	3.88	4.17	4.24	4.06	4.31	4.68	4.45
West Virginia	7.44	6.51	6.16	6.02	5.93	5.76	5.25	5.59
Wisconsin	R 4.10	R 4.32	R 4.44	R 4.74	R 4.81	R 4.56	4.44	4.23
Wyoming	4.77	4.42	4.41	4.42	4.42	4.42	4.33	4.33
Total	R 4.57	4.63	4.82	4.93	5.05	4.98	4.74	4.81

R = Revised Data.

Notes: Data for 1989 are final. All other data are preliminary unless otherwise indicated. Geographic coverage is the 50 States and the District of Columbia. Average prices for gas delivered to commercial consumers for 1988 forward reflect onsystem sales prices only. See Explanatory Note 5 for discussion of computations and revision policy. See Table 32 for data on onsystem sales expressed as a percentage of both total commercial and total industrial deliveries.

Source: Form EIA-857.

Table 30. Average Price of Natural Gas Sold to Industrial Consumers by State, 1989-1991
(Dollars per Thousand Cubic Feet)

State	YTD 1991	YTD 1990	YTD 1989	June 1991	May 1991	April 1991	March 1991	February 1991
Alabama	2.86	3.14	2.93	2.55	R 2.83	R 2.64	R 2.74	R 3.07
Alaska	1.35	1.15	1.15	1.27	1.34	1.35	1.38	1.32
Arizona	3.38	3.73	3.95	3.31	3.33	3.34	3.41	3.57
Arkansas	3.21	3.06	3.09	3.07	3.08	3.05	3.43	3.37
California	4.09	3.91	4.03	3.70	3.95	3.73	4.21	4.44
Colorado	2.84	2.89	2.61	3.27	R 2.57	R 2.64	R 2.61	R 3.18
Connecticut	5.07	4.94	4.69	4.38	4.76	4.86	5.06	5.19
Delaware	3.21	3.49	3.47	2.94	2.88	2.95	3.33	2.99
District of Columbia	—	—	—	—	—	—	—	—
Florida	3.10	3.19	3.10	2.97	2.95	2.94	3.02	3.04
Georgia	3.31	3.65	3.68	2.86	2.92	2.93	3.38	4.01
Hawaii	—	—	—	—	—	—	—	—
Idaho	2.97	2.66	2.63	2.95	2.96	2.96	2.98	2.99
Illinois	4.07	4.21	3.93	3.81	3.25	3.84	3.95	4.67
Indiana	3.81	4.02	4.10	2.94	3.49	3.78	3.73	4.28
Iowa	2.48	2.87	2.60	2.11	2.16	2.27	2.45	2.61
Kansas	2.65	2.97	2.96	2.53	R 2.43	R 2.60	R 2.75	R 2.70
Kentucky	3.77	3.93	3.78	3.33	R 3.55	R 3.62	R 3.83	R 3.96
Louisiana	1.77	2.10	2.02	1.57	1.57	1.59	1.64	1.92
Maine	4.24	5.34	4.63	3.59	3.73	4.18	4.36	4.97
Maryland	3.61	4.60	4.80	3.52	R 3.54	R 3.52	R 3.50	R 3.74
Massachusetts	4.06	4.53	4.33	2.43	2.98	4.11	5.21	6.00
Michigan	4.27	4.18	4.27	4.21	4.25	4.27	4.26	4.29
Minnesota	2.80	3.07	2.86	2.68	2.50	2.67	2.81	2.80
Mississippi	2.35	2.55	2.58	2.13	R 2.21	2.27	2.38	2.37
Missouri	4.24	4.54	4.13	4.02	3.84	3.84	4.11	4.40
Montana	3.30	3.17	3.02	3.03	2.99	3.12	3.03	3.60
Nebraska	2.78	3.07	2.97	2.35	R 2.37	2.45	2.68	2.93
Nevada	3.91	4.20	4.79	4.46	4.15	4.32	3.66	3.72
New Hampshire	4.68	4.49	4.22	3.66	3.83	4.34	5.22	5.58
New Jersey	3.98	4.35	4.18	3.25	3.36	3.61	4.40	4.46
New Mexico	3.62	3.78	3.04	3.36	3.48	3.59	3.76	4.38
New York	4.91	4.92	5.05	3.96	4.29	4.74	4.87	5.48
North Carolina	3.39	3.44	3.61	2.97	3.13	3.20	3.35	3.49
North Dakota	3.16	3.42	3.41	3.04	2.96	2.87	2.98	3.30
Ohio	4.28	3.99	4.32	3.90	R 4.09	R 4.32	R 4.19	R 4.36
Oklahoma	1.72	1.72	1.87	2.02	1.45	1.68	1.64	1.80
Oregon	3.40	3.53	3.64	3.44	3.38	3.34	R 3.68	R 2.68
Pennsylvania	4.22	4.32	3.86	3.95	R 3.97	R 3.89	R 4.07	R 4.48
Rhode Island	5.75	5.35	5.42	4.87	4.68	5.28	6.76	6.40
South Carolina	3.01	3.31	3.53	2.45	2.54	2.78	2.84	3.62
South Dakota	3.11	3.32	3.12	3.34	2.84	3.08	2.69	3.13
Tennessee	3.11	3.42	3.39	2.91	2.87	3.02	3.03	3.17
Texas	1.89	2.34	2.29	1.75	R 1.76	R 1.74	R 1.85	R 1.89
Utah	3.77	3.72	3.23	3.41	3.44	3.31	3.75	4.84
Vermont	3.16	3.34	2.98	2.57	2.58	2.64	2.78	3.71
Virginia	3.85	3.78	3.91	3.08	R 3.30	R 4.20	R 3.99	R 4.21
Washington	2.83	2.73	3.05	2.63	2.65	2.66	3.00	2.94
West Virginia	2.61	3.41	2.81	1.54	2.09	2.09	3.36	3.47
Wisconsin	3.55	3.70	3.80	2.96	2.92	3.89	3.42	3.57
Wyoming	2.97	3.17	3.27	3.67	2.72	2.78	2.97	2.86
Total	2.75	3.03	3.06	2.33	R 2.39	R 2.54	R 2.79	R 3.00

See footnotes at end of table.

Table 30. Average Price of Natural Gas Sold to Industrial Consumers by State, 1989-1991 (Continued)
(Dollars per Thousand Cubic Feet)

State	January 1991	Total 1990	December 1990	November 1990	October 1990	September 1990	August 1990	July 1990
Alabama	R 3.28	R 3.05	R 3.20	R 3.11	R 3.07	R 2.88	2.72	R 2.76
Alaska	1.43	1.18	1.26	1.24	1.24	1.20	1.17	1.13
Arizona	3.31	3.71	3.37	3.52	3.41	4.20	4.30	4.30
Arkansas	3.19	3.01	3.14	3.13	2.93	2.90	2.75	2.81
California	4.42	3.93	4.07	4.12	3.58	4.19	4.07	3.65
Colorado	R 3.07	2.79	3.44	2.67	2.77	2.71	2.32	2.41
Connecticut	5.56	4.77	5.19	5.05	4.53	4.40	3.83	3.84
Delaware	4.06	3.58	4.14	4.06	4.00	3.40	3.16	3.32
District of Columbia	--	--	--	--	--	--	--	--
Florida	3.50	3.28	3.64	3.67	3.60	3.36	3.25	2.80
Georgia	3.92	3.52	3.72	3.87	3.59	3.13	2.99	3.02
Hawaii	--	--	--	--	--	--	--	--
Idaho	2.98	2.72	2.96	2.94	2.94	2.92	2.95	2.97
Illinois	4.06	4.09	3.97	3.74	4.13	4.08	3.45	3.85
Indiana	4.08	3.75	3.79	3.60	3.24	3.30	3.07	3.09
Iowa	2.94	2.73	3.02	2.78	2.38	R 2.41	R 2.29	2.31
Kansas	R 2.84	R 2.83	R 2.53	R 2.70	R 2.67	R 2.79	R 2.72	R 2.74
Kentucky	R 3.92	3.84	3.80	3.81	3.51	3.65	3.65	3.76
Louisiana	2.32	1.98	2.38	2.03	1.74	1.58	1.69	1.75
Maine	5.02	5.12	5.02	4.80	4.86	5.61	4.97	4.10
Maryland	R 3.72	4.58	4.53	4.67	4.45	4.45	4.51	4.44
Massachusetts	6.05	4.14	5.21	4.47	3.16	3.51	3.69	2.98
Michigan	4.28	4.19	4.15	4.14	4.24	4.32	4.22	4.48
Minnesota	3.06	2.97	3.15	2.89	2.68	2.72	2.54	2.72
Mississippi	2.69	2.51	2.83	2.71	2.46	2.24	2.23	2.32
Missouri	4.59	4.37	4.31	4.07	3.78	4.17	4.16	3.88
Montana	3.76	3.23	3.96	3.87	3.29	2.88	2.54	2.70
Nebraska	3.36	3.00	3.20	3.10	2.73	2.72	2.66	2.74
Nevada	3.63	4.33	4.57	3.45	4.39	5.03	5.58	4.36
New Hampshire	5.57	4.36	5.44	4.85	3.77	3.93	3.75	3.61
New Jersey	4.34	4.02	4.00	3.67	3.49	3.51	3.45	3.46
New Mexico	3.97	3.69	3.97	3.96	3.83	3.66	3.44	3.39
New York	5.14	4.75	5.07	4.36	4.58	4.65	3.86	4.16
North Carolina	3.72	3.48	3.89	3.68	3.50	3.39	3.08	2.97
North Dakota	3.50	3.32	3.51	3.16	2.94	2.94	2.97	3.00
Ohio	R 4.49	3.94	4.34	3.92	3.64	3.49	3.73	3.66
Oklahoma	1.80	1.72	1.85	1.73	1.69	1.64	1.70	1.61
Oregon	R 3.79	3.53	4.21	3.38	3.33	3.32	3.32	3.40
Pennsylvania	R 4.51	4.33	4.51	4.31	R 4.65	4.43	3.94	4.13
Rhode Island	6.41	5.32	6.29	5.80	4.95	4.84	4.54	5.03
South Carolina	3.87	3.14	3.87	3.63	3.25	2.74	2.53	2.43
South Dakota	3.59	3.28	3.64	3.31	3.00	3.08	3.12	3.03
Tennessee	3.53	3.30	3.74	3.31	3.03	2.94	2.95	2.91
Texas	R 2.34	2.21	R 2.50	R 2.36	R 2.03	1.82	R 1.82	1.93
Utah	3.51	3.59	3.66	3.57	3.42	3.27	3.26	3.28
Vermont	4.18	3.51	4.23	4.13	3.92	3.73	2.88	2.60
Virginia	R 4.50	3.75	3.88	3.78	3.89	3.48	3.49	3.66
Washington	2.98	2.72	3.10	2.92	2.57	2.54	2.53	2.58
West Virginia	3.63	R 3.36	R 3.69	3.42	3.56	3.01	3.01	3.08
Wisconsin	3.90	R 3.67	R 4.16	R 3.86	R 3.32	R 3.24	R 3.27	R 3.19
Wyoming	2.98	3.22	3.14	3.30	3.31	3.33	3.55	3.27
Total	R 3.25	R 2.89	R 3.21	R 2.99	R 2.64	2.56	2.48	R 2.46

See footnotes at end of table.

Table 30. Average Price of Natural Gas Sold to Industrial Consumers by State, 1989-1991 (Continued)
(Dollars per Thousand Cubic Feet)

State	June 1990	May 1990	April 1990	March 1990	February 1990	January 1990	Total 1989	December 1989
Alabama	R 2.85	R 3.02	R 3.13	R 3.06	R 3.25	R 3.46	3.02	3.55
Alaska	1.10	1.20	1.18	1.13	1.14	1.14	1.08	1.06
Arizona	4.23	4.11	3.70	3.48	3.59	3.66	3.67	4.13
Arkansas	2.81	2.84	2.88	3.17	3.22	3.29	3.09	3.12
California	3.64	3.66	3.65	4.29	4.57	3.84	3.75	3.88
Colorado	2.44	2.95	2.99	2.80	2.83	3.30	2.53	2.65
Connecticut	3.96	4.01	4.70	5.27	5.59	6.00	4.51	5.55
Delaware	3.08	3.29	3.04	3.53	3.82	4.00	3.45	3.70
District of Columbia	—	—	—	—	—	—	—	—
Florida	2.91	2.95	2.97	3.06	3.48	3.65	3.13	3.40
Georgia	3.31	3.33	3.56	3.77	4.21	3.70	3.73	4.13
Hawaii	—	—	—	—	—	—	—	—
Idaho	2.87	2.83	2.84	2.83	2.83	2.59	2.92	2.73
Illinois	4.33	4.16	4.05	4.19	4.17	4.34	3.73	3.70
Indiana	3.25	3.49	3.95	4.19	4.08	4.48	3.89	4.04
Iowa	R 2.30	2.44	2.61	2.77	3.09	3.49	2.54	3.25
Kansas	R 3.06	R 2.96	R 2.59	R 2.89	R 3.02	3.26	3.06	3.27
Kentucky	3.71	3.79	3.94	3.96	3.94	4.00	3.69	3.47
Louisiana	1.76	1.79	1.82	2.20	2.56	2.52	1.97	2.12
Maine	4.05	4.22	5.64	6.35	6.89	5.58	4.57	5.68
Maryland	4.55	4.40	4.41	4.53	4.59	4.86	4.81	5.14
Massachusetts	2.91	3.77	4.12	5.39	5.99	5.42	4.07	5.33
Michigan	4.04	4.17	4.11	4.15	4.22	4.27	4.22	3.83
Minnesota	2.65	2.66	2.78	2.89	3.24	3.67	2.86	3.26
Mississippi	2.24	2.34	2.35	2.51	2.78	2.99	2.54	2.87
Missouri	4.25	4.69	4.41	4.67	4.42	4.62	4.13	4.33
Montana	2.88	2.92	2.93	3.11	3.45	3.63	2.98	3.76
Nebraska	2.67	2.47	2.88	3.03	3.20	3.60	2.92	3.19
Nevada	4.12	5.05	4.11	3.80	4.37	4.04	4.98	4.48
New Hampshire	3.37	3.27	4.11	5.92	6.09	5.54	4.20	6.04
New Jersey	3.53	3.64	4.03	4.42	4.89	5.03	3.98	4.40
New Mexico	3.38	3.65	3.87	4.18	4.27	4.34	3.12	3.20
New York	4.36	4.24	4.87	5.26	5.22	4.94	4.83	5.10
North Carolina	3.15	3.22	3.23	3.46	3.54	3.73	3.64	4.18
North Dakota	2.97	2.99	3.09	3.25	4.13	3.67	3.55	5.13
Ohio	3.66	3.70	3.91	3.88	4.28	4.13	4.19	4.21
Oklahoma	1.71	1.71	1.67	1.81	1.55	1.85	1.97	2.11
Oregon	3.50	3.40	3.31	3.45	3.71	3.66	3.52	3.67
Pennsylvania	3.91	4.25	4.26	4.19	4.44	4.55	3.90	4.17
Rhode Island	4.49	4.43	4.77	5.84	6.23	6.36	5.16	6.17
South Carolina	2.86	3.02	3.16	3.33	3.62	3.93	3.46	4.17
South Dakota	2.92	2.97	3.07	3.19	3.56	3.82	3.09	3.33
Tennessee	3.06	3.01	3.27	3.33	3.70	3.94	3.37	3.71
Texas	2.00	2.00	2.09	R 2.08	R 2.63	R 3.12	2.26	2.68
Utah	3.24	3.28	3.48	3.48	4.93	3.45	3.30	3.38
Vermont	2.87	2.90	3.00	3.37	3.95	3.69	3.01	3.35
Virginia	3.42	3.34	3.64	3.74	4.25	4.03	3.91	4.17
Washington	2.47	2.43	2.64	2.59	2.93	3.17	2.93	3.03
West Virginia	3.07	3.17	3.22	3.49	3.65	3.62	2.92	3.62
Wisconsin	R 3.22	R 3.33	R 3.37	R 3.79	R 3.95	R 3.93	3.73	3.53
Wyoming	3.15	3.13	3.18	3.14	3.24	3.15	3.23	3.07
Total	2.54	R 2.64	R 2.81	R 3.04	R 3.37	R 3.50	2.97	3.32

R = Revised Data.
— = Not Applicable.

Notes: Data for 1989 are final. All other data are preliminary unless otherwise indicated. Geographic coverage is the 50 States and the District of Columbia. Average prices for gas delivered to commercial consumers for 1988 forward reflect onsystem sales prices only. See Explanatory Note 5 for discussion of computations and revision policy. See Table 32 for data on onsystem sales expressed as a percentage of both total commercial and total industrial deliveries.

Source: Form EIA-857.

Table 31. Average Price of Natural Gas Delivered to Electric Utility[a] Consumers by State, 1989-1991
(Dollars per Thousand Cubic Feet)

State	YTD 1991	YTD 1990	YTD 1989	May 1991	April 1991	March 1991	February 1991	January 1991
Alabama	1.95	2.22	2.24	1.90	1.86	1.84	2.01	2.51
Alaska	.54	—	—	.52	.55	.56	.56	.52
Arizona	2.11	2.59	2.23	1.90	2.27	2.01	2.06	2.71
Arkansas	1.45	1.59	1.51	1.45	1.42	1.40	1.35	1.76
California	3.16	3.31	2.99	2.91	3.07	3.12	3.21	3.43
Colorado	2.25	2.19	2.14	2.06	2.10	2.02	2.75	2.40
Connecticut	2.45	2.21	2.73	2.05	2.83	4.58	6.06	5.86
Delaware	2.52	3.02	2.68	2.44	2.33	2.32	2.75	3.48
District of Columbia	—	—	—	—	—	—	—	—
Florida	2.18	2.46	2.51	2.11	2.15	2.03	1.91	2.68
Georgia	3.17	3.52	3.21	2.81	3.40	3.28	3.43	3.43
Hawaii	—	—	—	—	—	—	—	—
Idaho	—	—	—	—	—	—	—	—
Illinois	2.69	3.24	3.43	2.28	2.50	2.70	3.04	3.00
Indiana	2.42	2.66	2.69	2.15	2.09	2.25	2.46	2.93
Iowa	2.74	3.04	2.84	2.29	2.88	2.85	2.84	3.30
Kansas	1.72	1.95	2.25	1.59	1.54	1.89	1.99	2.20
Kentucky	2.92	3.38	2.97	3.31	3.02	2.86	2.57	2.96
Louisiana	1.58	1.71	1.74	1.55	1.53	1.39	1.55	1.93
Maine	—	—	—	—	—	—	—	—
Maryland	2.56	2.81	2.71	2.31	2.33	2.49	3.00	3.36
Massachusetts	2.58	2.32	2.59	2.12	2.24	2.99	3.90	3.24
Michigan	.53	.40	.19	.78	.79	.52	.30	.23
Minnesota	1.71	2.16	2.27	1.69	1.59	1.62	1.61	2.53
Mississippi	1.73	1.94	1.81	1.55	1.55	1.58	1.68	2.20
Missouri	1.57	2.65	2.44	1.53	1.47	1.49	1.76	2.79
Montana	6.57	1.70	1.18	8.19	6.86	6.09	4.19	2.07
Nebraska	1.71	1.83	2.42	1.61	1.43	2.24	2.50	2.13
Nevada	1.82	2.06	2.00	1.68	1.62	1.69	2.18	2.49
New Hampshire	—	—	—	—	—	—	—	—
New Jersey	2.19	2.42	2.68	1.93	1.89	2.15	2.69	3.05
New Mexico	1.72	2.04	2.15	1.67	1.58	1.58	1.69	2.20
New York	2.41	2.50	2.48	2.11	2.02	2.12	2.63	3.92
North Carolina	3.01	—	—	2.57	2.62	3.11	3.14	3.51
North Dakota	—	—	—	—	—	—	—	—
Ohio	2.19	3.83	3.68	2.29	1.95	1.93	2.13	3.83
Oklahoma	3.06	3.42	3.03	2.81	2.94	3.14	3.53	3.16
Oregon	1.42	—	—	—	1.34	—	1.58	2.11
Pennsylvania	3.21	3.10	3.80	3.16	3.57	3.11	3.16	3.23
Rhode Island	2.04	2.10	2.75	2.07	2.24	2.17	—	—
South Carolina	1.75	4.36	3.05	1.69	1.73	1.73	3.47	3.73
South Dakota	—	—	—	—	—	—	—	—
Tennessee	—	—	—	—	—	—	—	—
Texas	2.02	2.19	2.21	1.84	1.91	2.00	2.06	2.40
Utah	1.73	1.61	—	1.64	1.66	1.51	1.48	3.32
Vermont	—	—	—	—	—	—	—	—
Virginia	1.98	—	2.74	1.87	1.77	2.87	6.79	5.15
Washington	—	—	—	—	—	—	—	—
West Virginia	3.85	5.39	4.48	3.58	3.35	3.07	2.73	7.22
Wisconsin	2.80	3.01	3.38	2.62	2.94	2.65	2.92	3.09
Wyoming	3.70	3.41	3.70	7.33	3.41	3.24	3.24	3.23
Total	2.24	2.46	2.40	2.01	2.10	2.21	2.35	2.71

See footnotes at end of table.

Table 31. Average Price of Natural Gas Delivered to Electric Utility[a] Consumers by State, 1989-1991 (Continued)

(Dollars per Thousand Cubic Feet)

State	Total 1990	December 1990	November 1990	October 1990	September 1990	August 1990	July 1990	June 1990
Alabama	2.22	2.86	2.64	2.17	1.91	1.89	1.97	2.03
Alaska	—	—	—	—	—	—	—	—
Arizona	2.45	2.97	2.49	2.51	R 2.34	2.31	2.28	2.30
Arkansas	1.57	2.08	1.90	1.55	R 1.45	1.45	1.52	R 1.46
California	3.13	R 3.52	3.44	3.23	3.00	2.86	2.82	2.93
Colorado	2.15	2.25	1.88	2.26	2.23	2.11	2.21	2.22
Connecticut	R 2.79	5.64	R 3.52	3.44	R 3.00	2.25	2.04	2.13
Delaware	2.72	3.37	3.55	3.55	3.82	2.32	2.29	2.13
District of Columbia	—	—	—	—	—	—	—	—
Florida	2.56	3.09	3.12	2.75	2.79	2.66	2.23	1.91
Georgia	3.04	3.54	1.87	3.31	2.94	2.94	2.89	3.29
Hawaii	—	—	—	—	—	—	—	—
Idaho	—	—	—	—	—	—	—	—
Illinois	2.73	2.96	2.71	2.35	2.18	2.45	2.77	2.47
Indiana	2.58	3.17	2.77	2.51	2.15	2.34	2.53	2.29
Iowa	3.06	3.46	3.06	2.99	2.93	3.15	2.96	2.68
Kansas	1.74	2.25	2.06	R 1.65	1.68	1.68	1.60	1.62
Kentucky	3.04	3.10	2.97	2.43	2.23	2.44	2.49	3.12
Louisiana	1.73	2.29	1.93	1.75	1.58	1.60	1.72	1.72
Maine	—	—	—	—	—	—	—	—
Maryland	2.55	4.13	3.58	2.57	2.34	2.29	2.27	2.34
Massachusetts	2.53	3.82	3.77	2.82	2.67	2.25	2.03	2.29
Michigan	.47	.23	.66	.47	.50	.63	.65	.51
Minnesota	1.93	2.67	2.60	1.99	1.70	1.74	1.75	1.95
Mississippi	1.83	2.47	2.31	1.88	R 1.63	1.61	1.69	R 1.75
Missouri	1.75	2.61	2.48	2.30	1.48	1.55	2.00	2.26
Montana	1.77	2.07	1.41	1.13	1.35	2.01	3.20	5.18
Nebraska	1.90	2.14	2.08	1.81	1.65	2.10	2.13	2.12
Nevada	2.02	2.63	2.26	1.81	1.80	1.95	2.09	2.05
New Hampshire	—	—	—	—	—	—	—	—
New Jersey	2.24	3.10	3.03	2.08	2.12	1.98	2.20	2.13
New Mexico	1.97	2.32	2.33	1.92	1.78	1.80	1.90	1.91
New York	2.46	4.12	3.22	2.31	2.09	2.01	2.05	2.11
North Carolina	—	—	—	—	—	—	—	—
North Dakota	4.01	—	4.12	3.90	—	3.84	- -	—
Ohio	2.57	3.77	4.27	3.35	2.16	1.94	1.97	3.21
Oklahoma	3.14	3.44	3.35	2.96	2.76	2.74	3.01	3.11
Oregon	—	—	—	—	—	—	—	—
Pennsylvania	3.05	3.16	2.89	3.07	3.04	3.08	—	3.02
Rhode Island	2.24	—	3.12	2.50	2.25	2.12	1.99	2.02
South Carolina	1.76	4.00	3.36	2.15	1.70	1.69	1.69	1.83
South Dakota	—	—	—	—	—	—	—	—
Tennessee	—	—	—	—	—	—	—	—
Texas	R 2.18	2.48	2.48	2.27	1.95	2.16	2.10	2.00
Utah	5.04	—	—	—	—	—	—	—
Vermont	—	—	—	—	—	—	—	—
Virginia	2.69	4.00	2.53	5.20	2.53	2.26	2.06	1.68
Washington	—	—	—	—	—	—	—	—
West Virginia	5.13	7.32	6.79	6.38	6.56	6.63	3.31	6.58
Wisconsin	2.95	3.30	3.32	2.86	2.59	2.75	2.71	2.95
Wyoming	3.26	2.87	2.84	2.83	3.27	3.23	3.26	3.28
Total	2.38	2.89	2.79	2.45	2.21	2.23	2.22	2.16

See footnotes at end of table.

Table 31. Average Price of Natural Gas Delivered to Electric Utility[a] Consumers by State, 1989-1991 (Continued)
(Dollars per Thousand Cubic Feet)

State	May 1990	April 1990	March 1990	February 1990	January 1990	Total 1989	December 1989	November 1989
Alabama	1.99	1.97	2.16	2.65	3.11	2.27	2.68	2.29
Alaska	—	—	—	—	—	[b] 1.36	—	—
Arizona	2.30	2.34	2.25	[R] 2.91	3.30	2.32	2.95	2.49
Arkansas	1.51	[R] 1.36	[R] 1.34	1.94	1.93	1.69	2.21	1.82
California	[R] 3.11	3.06	3.02	3.66	3.82	3.04	4.00	3.28
Colorado	2.13	2.13	2.12	2.30	2.37	2.23	2.26	2.78
Connecticut	2.19	—	—	6.51	6.27	2.59	6.23	2.67
Delaware	2.17	3.15	2.95	3.51	3.48	2.73	3.50	3.01
District of Columbia	—	—	—	—	—	—	—	—
Florida	2.19	2.10	2.36	2.63	3.29	2.49	2.99	2.42
Georgia	3.34	3.52	3.73	3.80	3.75	3.23	3.78	3.67
Hawaii	—	—	—	—	—	—	—	—
Idaho	—	—	—	—	—	—	—	—
Illinois	2.77	2.99	3.39	3.90	3.48	3.32	3.32	2.85
Indiana	2.35	2.46	2.61	2.82	3.25	2.70	3.37	2.61
Iowa	2.09	3.00	3.46	3.71	4.36	2.69	3.79	3.30
Kansas	1.65	1.97	1.98	2.23	2.33	1.92	2.35	2.33
Kentucky	3.19	3.14	3.65	3.35	3.37	2.73	3.14	2.84
Louisiana	1.65	1.62	1.64	1.73	2.01	1.78	2.03	1.66
Maine	—	—	—	—	—	—	—	—
Maryland	2.53	2.75	3.00	3.38	2.84	2.72	3.56	3.20
Massachusetts	2.29	2.30	2.36	2.75	5.13	2.49	6.08	2.77
Michigan	.50	.37	.34	.49	.31	.19	.22	.25
Minnesota	1.81	1.90	1.92	2.46	3.12	2.16	2.73	2.22
Mississippi	1.76	1.74	[R] 1.83	2.14	2.52	1.88	2.45	2.04
Missouri	2.32	2.79	2.48	2.79	3.19	2.50	3.25	2.39
Montana	1.60	1.27	1.51	3.16	1.40	1.38	1.53	1.49
Nebraska	1.67	1.66	1.74	2.68	3.35	2.26	3.14	2.06
Nevada	1.80	1.72	1.73	2.76	3.18	2.17	2.73	2.43
New Hampshire	—	—	—	—	—	[b] 3.16	—	—
New Jersey	2.29	2.19	2.59	3.02	3.78	2.54	2.88	2.93
New Mexico	1.84	1.89	1.90	2.14	2.71	2.20	2.70	2.28
New York	2.21	2.31	2.50	[R] 2.96	3.47	2.42	3.17	2.67
North Carolina	—	—	—	—	—	[b] 3.57	—	—
North Dakota	—	—	—	—	—	4.61	—	4.08
Ohio	3.28	4.00	3.67	4.10	4.14	3.15	4.07	3.84
Oklahoma	3.06	3.61	3.52	3.62	3.34	3.05	3.20	3.15
Oregon	—	—	—	—	—	—	—	—
Pennsylvania	2.95	2.92	2.86	3.47	3.34	3.58	3.59	3.63
Rhode Island	2.07	2.22	2.35	—	—	2.49	—	2.61
South Carolina	3.95	4.70	4.53	4.49	4.37	2.27	2.97	2.44
South Dakota	—	—	—	—	—	[b] 2.62	—	—
Tennessee	—	—	—	—	—	[b] 2.83	—	—
Texas	1.96	1.96	2.12	2.46	2.76	2.23	2.56	2.24
Utah	—	5.04	—	—	—	[b] 3.38	—	—
Vermont	—	—	—	—	—	—	—	—
Virginia	—	—	—	—	—	2.57	.44	6.53
Washington	—	—	—	—	—	[b] 5.19	—	—
West Virginia	6.45	6.63	5.99	4.82	4.76	4.59	4.81	5.09
Wisconsin	2.95	2.81	2.83	3.40	3.64	3.11	3.02	3.24
Wyoming	3.23	3.24	3.93	3.92	3.88	3.61	3.61	3.63
Total	[R] 2.18	[R] 2.28	2.37	2.76	[R] 3.00	2.42	2.85	2.56

[a] Includes all steam electric utility generating plants with a combined capacity of 50 megawatts or greater.
[b] Average prices calculated from data reported on Form EIA-176.
[R] = Revised Data.
— = Not Applicable.
Notes: Data for 1989 are final. All other data are preliminary unless otherwise indicated. Geographic coverage is the 50 States and the District of Columbia. See Explanatory Note 5 for discussion of computations and revision policy. See
Sources: Form FERC-423 and Form EIA-176.

Table 32. Percentage of Total Deliveries Represented by Onsystem Sales by State, 1989-1991

State	June 1991		May 1991		April 1991		March 1991	
	Commercial	Industrial	Commercial	Industrial	Commercial	Industrial	Commercial	Industrial
Alabama	83.2	29.6	81.7	27.8	81.2	25.1	86.2	32.2
Alaska	100.0	72.0	100.0	78.8	100.0	70.2	100.0	71.0
Arizona	89.7	52.1	91.7	49.8	92.6	52.9	93.1	50.6
Arkansas	85.5	17.9	88.0	21.3	91.2	14.4	96.2	22.6
California	70.8	28.5	82.0	27.5	70.7	33.3	90.1	37.1
Colorado	97.0	18.5	96.6	47.0	95.9	44.6	95.8	44.0
Connecticut	84.3	54.2	88.1	56.5	93.6	69.9	97.6	75.0
Delaware	100.0	67.9	100.0	67.0	100.0	68.1	100.0	69.8
District of Columbia	92.4	—	100.0	—	100.0	—	100.0	—
Florida	97.5	37.8	97.5	38.0	97.8	38.5	97.1	37.7
Georgia	78.5	32.6	80.5	33.1	83.8	39.8	88.1	29.4
Hawaii	100.0	—	100.0	—	100.0	—	100.0	—
Idaho	86.7	.2	87.3	.2	87.3	.3	88.4	.3
Illinois	44.3	7.7	45.3	9.0	55.2	14.8	59.9	16.9
Indiana	89.2	19.4	92.6	15.7	93.2	17.7	93.2	21.0
Iowa	95.6	30.4	97.1	28.0	97.4	30.5	98.2	32.7
Kansas	86.6	11.2	87.9	13.8	90.2	13.7	86.4	11.0
Kentucky	85.8	10.3	86.5	10.0	89.7	11.5	94.6	12.8
Louisiana	98.3	47.7	100.0	43.9	100.0	45.0	100.0	46.2
Maine	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.7
Maryland	94.7	9.0	95.8	8.4	94.7	30.6	95.5	41.1
Massachusetts	99.8	80.9	99.8	91.8	99.8	73.4	99.8	68.9
Michigan	52.3	6.2	63.1	8.8	68.4	12.3	73.3	16.7
Minnesota	80.5	29.7	87.0	39.9	95.7	35.8	97.4	39.6
Mississippi	90.5	35.1	89.5	36.3	91.9	33.9	91.7	36.6
Missouri	74.9	16.7	78.5	20.6	81.7	26.8	88.8	31.5
Montana	96.8	64.2	97.7	68.8	97.6	64.3	97.9	76.5
Nebraska	85.7	46.0	84.7	58.1	88.7	58.1	92.3	65.0
Nevada	87.2	11.7	90.6	14.8	92.2	13.8	93.9	10.3
New Hampshire	100.0	100.0	100.0	100.0	100.0	100.0	100.0	87.7
New Jersey	88.9	47.4	92.1	53.2	91.5	50.9	95.6	52.6
New Mexico	64.0	19.1	83.3	20.2	85.0	13.6	83.6	8.0
New York	66.5	21.9	73.9	30.7	79.5	30.3	83.2	34.1
North Carolina	84.2	46.8	85.6	42.6	87.8	46.6	98.8	90.7
North Dakota	59.0	14.2	70.7	23.8	71.7	28.0	74.9	33.5
Ohio	74.6	9.3	78.4	8.2	83.4	9.7	89.0	11.3
Oklahoma	87.7	34.8	89.4	51.8	90.5	49.4	92.1	53.5
Oregon	98.0	19.5	97.4	19.9	97.6	21.4	97.7	22.5
Pennsylvania	73.1	12.0	72.3	13.7	77.8	18.5	78.9	21.9
Rhode Island	100.0	48.8	100.0	50.2	100.0	69.4	100.0	87.2
South Carolina	97.0	63.3	96.8	66.0	96.4	64.3	98.4	68.2
South Dakota	74.8	41.0	90.1	70.5	83.5	53.8	85.9	60.1
Tennessee	93.0	50.8	93.6	53.2	95.1	53.0	92.1	56.4
Texas	93.9	31.5	91.2	32.2	94.4	31.3	94.2	29.3
Utah	100.0	15.6	100.0	14.9	100.0	16.8	100.0	14.9
Vermont	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Virginia	90.1	18.7	91.2	13.2	93.1	14.2	94.7	12.6
Washington	90.5	43.4	91.2	43.3	93.2	44.2	94.2	47.7
West Virginia	38.5	18.7	44.3	12.1	54.2	22.4	63.6	15.7
Wisconsin	80.4	34.4	86.2	37.2	89.1	42.1	91.2	47.6
Wyoming	97.9	6.2	98.7	9.5	98.6	9.2	99.2	9.8
Total	79.4	31.5	83.0	32.1	83.7	32.8	87.6	34.1

See footnotes at end of table.

Table 32. Percentage of Total Deliveries Represented by Onsystem Sales by State, 1989-1991 (Continued)

State	February 1991		January 1991		Total 1990		December 1990	
	Commercial	Industrial	Commercial	Industrial	Commercial	Industrial	Commercial	Industrial
Alabama	85.2	29.3	80.0	28.3	77.6	30.8	79.6	33.8
Alaska	100.0	69.1	100.0	70.8	100.0	68.5	100.0	69.1
Arizona	94.9	51.6	97.9	58.2	95.5	43.2	96.8	58.3
Arkansas	94.8	19.6	93.9	19.2	92.2	20.3	91.4	23.5
California	88.2	31.8	90.4	34.3	86.4	39.3	88.2	40.3
Colorado	96.9	40.1	96.6	41.1	97.2	31.7	97.0	20.4
Connecticut	99.4	89.4	99.4	90.7	95.3	87.0	99.1	99.1
Delaware	100.0	66.4	100.0	67.9	100.0	71.5	100.0	68.3
District of Columbia	100.0	—	100.0	—	100.0	—	100.0	—
Florida	96.6	39.0	96.1	48.4	98.2	60.1	96.3	48.9
Georgia	90.0	27.1	91.6	32.7	87.7	34.3	93.7	40.8
Hawaii	100.0	—	100.0	—	100.0	—	100.0	—
Idaho	91.7	.3	90.9	.4	87.9	1.0	86.5	.4
Illinois	61.4	19.0	65.2	25.4	62.5	19.1	66.9	27.0
Indiana	93.3	24.2	94.2	25.0	95.7	20.4	98.6	27.6
Iowa	98.5	40.6	98.3	41.4	97.5	37.1	97.7	41.7
Kansas	90.5	13.6	91.4	13.3	91.9	15.4	89.8	15.7
Kentucky	95.6	15.3	97.0	17.9	94.6	17.1	96.0	23.7
Louisiana	100.0	47.4	100.0	45.0	100.0	49.3	100.0	52.6
Maine	100.0	82.5	100.0	100.0	100.0	96.5	100.0	77.6
Maryland	96.0	43.4	96.0	44.9	95.7	35.5	95.7	45.2
Massachusetts	99.8	67.8	99.7	65.7	99.9	89.1	99.7	72.0
Michigan	73.1	17.4	73.9	18.4	68.0	12.2	72.9	14.3
Minnesota	96.1	51.0	96.6	56.0	95.6	40.5	98.7	56.4
Mississippi	92.5	38.3	90.6	41.3	94.5	46.3	91.5	41.5
Missouri	90.9	36.2	90.6	35.4	86.9	32.5	86.8	31.8
Montana	98.1	64.1	98.4	58.5	97.8	65.3	99.6	56.3
Nebraska	94.0	61.9	94.0	62.8	93.6	42.6	93.3	56.7
Nevada	99.3	12.3	99.4	34.4	97.6	14.2	99.1	13.5
New Hampshire	100.0	87.7	100.0	100.0	100.0	98.4	100.0	90.4
New Jersey	96.4	62.4	98.0	67.4	94.7	59.0	96.5	71.5
New Mexico	84.0	5.1	83.9	6.2	81.1	15.5	81.3	8.9
New York	85.4	38.0	86.6	43.7	86.4	37.7	84.6	36.4
North Carolina	99.2	92.5	99.2	95.1	94.1	67.9	99.0	93.1
North Dakota	79.9	38.0	79.4	32.9	74.7	24.3	75.8	29.0
Ohio	89.9	14.7	91.5	14.5	86.8	11.6	91.1	12.5
Oklahoma	94.5	54.5	94.0	62.1	91.3	59.0	89.7	69.7
Oregon	98.2	22.2	98.6	23.6	97.6	21.3	98.1	26.9
Pennsylvania	79.5	23.9	82.3	25.0	78.0	20.3	78.8	26.1
Rhode Island	100.0	65.6	100.0	85.6	94.8	86.7	86.5	97.8
South Carolina	98.6	82.8	98.4	74.7	97.2	75.7	98.3	77.5
South Dakota	87.9	67.5	88.1	56.8	88.7	50.3	87.6	61.1
Tennessee	93.3	56.4	97.4	55.3	96.9	57.2	97.0	56.6
Texas	93.8	30.6	94.4	27.1	93.7	24.7	94.9	24.8
Utah	100.0	25.6	100.0	22.9	100.0	20.7	100.0	23.0
Vermont	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Virginia	96.6	16.8	95.6	16.5	92.7	16.1	93.3	18.8
Washington	94.8	50.4	97.8	54.6	93.6	52.9	96.5	46.9
West Virginia	64.0	13.3	62.7	12.2	53.5	12.1	56.7	13.7
Wisconsin	90.5	47.2	92.2	50.1	89.3	40.7	92.4	46.8
Wyoming	99.8	9.5	99.8	9.0	99.7	9.8	99.7	7.6
Total	88.3	35.1	89.3	35.2	87.2	33.6	88.4	36.2

See footnotes at end of table.

Table 32. Percentage of Total Deliveries Represented by Onsystem Sales by State, 1989-1991 (Continued)

State	November 1990		October 1990		September 1990		August 1990	
	Commercial	Industrial	Commercial	Industrial	Commercial	Industrial	Commercial	Industrial
Alabama	67.3	29.9	76.0	31.1	74.5	32.1	71.3	33.8
Alaska	100.0	68.4	100.0	68.6	100.0	67.9	100.0	68.8
Arizona	96.5	55.1	96.2	53.3	94.4	28.8	90.6	25.6
Arkansas	90.5	21.7	86.7	21.4	87.3	19.9	86.8	20.9
California	85.5	34.6	82.2	39.8	79.0	35.4	82.5	38.0
Colorado	97.0	31.3	94.5	29.1	95.4	35.2	94.4	39.3
Connecticut	98.3	92.8	91.2	80.6	87.1	76.5	86.8	77.2
Delaware	100.0	69.8	100.0	65.2	100.0	75.8	100.0	73.7
District of Columbia	100.0	—	100.0	—	100.0	—	100.0	—
Florida	97.7	49.5	97.2	52.0	97.4	51.0	97.2	49.1
Georgia	87.2	29.6	83.4	26.0	77.9	36.1	81.6	40.6
Hawaii	100.0	—	100.0	—	100.0	—	100.0	—
Idaho	86.3	.7	79.3	.1	85.1	.2	85.2	.3
Illinois	56.4	17.0	60.9	14.9	53.0	11.1	49.9	9.4
Indiana	98.4	23.6	91.9	16.9	88.5	14.4	89.8	15.6
Iowa	97.5	41.2	95.5	36.5	92.3	33.9	95.6	32.5
Kansas	88.7	13.8	87.9	12.5	93.6	14.6	94.2	15.5
Kentucky	94.6	13.5	92.8	12.4	88.4	10.8	88.8	10.8
Louisiana	100.0	50.7	100.0	52.6	100.0	51.1	100.0	50.3
Maine	100.0	85.1	100.0	100.0	100.0	100.0	100.0	100.0
Maryland	94.8	30.8	93.5	20.8	92.8	19.0	93.3	19.9
Massachusetts	99.7	83.0	99.8	84.5	99.8	86.2	99.8	93.3
Michigan	68.3	10.6	60.1	7.3	50.0	6.1	49.3	5.9
Minnesota	97.7	54.7	92.4	32.9	89.5	26.0	89.3	29.0
Mississippi	89.8	43.1	89.0	42.5	89.0	42.5	93.0	44.4
Missouri	84.8	29.4	76.3	23.2	74.2	20.8	72.4	22.0
Montana	97.6	53.8	96.9	51.2	93.4	63.3	95.9	75.5
Nebraska	89.6	49.1	89.9	41.0	92.8	31.3	94.1	30.6
Nevada	98.4	14.6	96.7	19.2	95.0	14.8	95.0	8.6
New Hampshire	100.0	92.1	100.0	100.0	100.0	100.0	100.0	100.0
New Jersey	91.7	64.3	86.1	47.9	87.0	47.2	86.4	45.9
New Mexico	76.8	9.1	76.2	9.8	74.1	20.6	73.0	21.3
New York	84.0	35.3	79.6	29.2	80.2	24.7	83.4	29.5
North Carolina	98.6	88.2	83.0	36.5	83.7	37.7	84.0	45.2
North Dakota	69.8	23.1	58.5	17.7	57.4	17.4	53.4	17.1
Ohio	87.5	10.6	82.5	8.6	77.1	8.3	74.9	9.6
Oklahoma	89.0	63.6	86.7	63.8	87.5	58.4	88.5	53.3
Oregon	96.4	21.5	95.4	20.7	96.8	21.1	96.5	19.1
Pennsylvania	74.5	20.3	69.1	14.8	66.8	13.8	67.8	15.0
Rhode Island	91.1	78.5	80.2	72.8	75.5	75.5	100.0	81.4
South Carolina	97.5	70.1	96.7	62.0	97.4	72.1	97.0	79.1
South Dakota	83.7	56.5	79.7	38.3	84.8	36.1	84.9	32.5
Tennessee	95.8	50.2	94.6	75.2	94.2	55.5	95.1	51.4
Texas	92.7	27.7	92.3	24.4	93.3	24.1	94.4	24.6
Utah	100.0	20.3	100.0	18.6	100.0	20.6	100.0	19.7
Vermont	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Virginia	92.1	15.8	92.4	12.1	91.5	11.8	91.4	13.4
Washington	95.7	49.5	91.7	58.0	90.1	52.7	88.4	47.2
West Virginia	51.5	13.8	34.0	9.5	30.6	11.4	33.5	11.2
Wisconsin	88.7	43.3	85.8	35.0	81.3	33.5	80.1	30.2
Wyoming	99.6	8.3	99.4	6.8	99.5	6.5	99.6	6.2
Total	85.4	34.3	82.3	31.2	81.4	31.2	82.9	32.0

See footnotes at end of table.

Table 32. Percentage of Total Deliveries Represented by Onsystem Sales by State, 1989-1991 (Continued)

State	July 1990		June 1990		May 1990		April 1990	
	Commercial	Industrial	Commercial	Industrial	Commercial	Industrial	Commercial	Industrial
Alabama	74.8	29.8	78.3	32.3	72.7	29.2	74.8	27.4
Alaska	100.0	70.5	100.0	65.3	100.0	80.5	100.0	67.1
Arizona	91.7	22.0	92.5	29.5	95.5	37.2	94.7	41.7
Arkansas	88.4	19.3	88.7	20.1	90.6	19.5	93.2	15.4
California	77.9	30.9	85.6	30.2	90.1	41.8	90.3	40.6
Colorado	94.6	36.8	97.4	33.1	97.2	30.1	97.5	30.4
Connecticut	87.4	77.4	89.9	78.6	91.1	79.0	95.6	86.2
Delaware	100.0	69.9	100.0	70.6	100.0	67.5	100.0	69.9
District of Columbia	100.0	—	100.0	—	100.0	—	100.0	—
Florida	97.4	59.6	97.2	61.0	97.3	62.5	100.0	74.2
Georgia	79.0	39.6	79.9	32.4	81.0	27.7	86.2	27.5
Hawaii	100.0	—	100.0	—	100.0	—	100.0	—
Idaho	86.2	.5	88.1	.6	85.8	.6	87.7	.6
Illinois	48.8	13.7	50.6	8.6	61.0	14.9	60.0	16.8
Indiana	92.2	16.7	90.7	16.0	92.1	15.9	90.2	18.5
Iowa	95.3	31.8	96.3	30.5	97.2	29.6	97.8	34.2
Kansas	94.5	17.3	93.6	13.4	92.2	15.9	95.0	15.1
Kentucky	88.8	11.6	91.0	12.2	91.0	11.4	94.4	13.0
Louisiana	100.0	50.4	100.0	49.4	100.0	49.0	100.0	49.8
Maine	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Maryland	93.8	19.2	94.7	20.3	94.5	27.6	95.8	36.9
Massachusetts	100.0	96.9	100.0	92.7	100.0	94.6	100.0	93.4
Michigan	47.4	6.6	55.9	7.3	65.5	11.5	70.5	14.7
Minnesota	85.4	27.0	90.9	31.9	94.6	30.5	94.6	35.2
Mississippi	89.0	42.6	89.6	44.2	90.2	44.9	99.3	54.3
Missouri	72.5	22.3	78.8	23.0	83.7	27.7	89.0	32.7
Montana	96.3	77.0	98.4	79.7	96.9	82.1	98.6	75.0
Nebraska	96.8	28.1	89.3	31.1	92.1	34.4	93.0	40.5
Nevada	95.7	8.6	96.7	9.9	96.4	10.6	97.0	11.3
New Hampshire	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
New Jersey	89.2	48.8	93.2	50.4	94.3	51.6	94.4	59.8
New Mexico	76.3	34.1	76.7	28.0	78.2	18.1	82.4	13.3
New York	83.5	31.2	81.4	28.0	82.4	33.2	87.9	35.2
North Carolina	84.3	52.6	85.4	47.8	88.3	47.3	96.8	71.6
North Dakota	54.3	19.2	69.7	20.3	75.4	22.2	76.1	29.4
Ohio	76.4	8.9	77.9	9.4	81.8	9.3	86.0	11.4
Oklahoma	88.1	55.9	89.8	44.3	91.9	49.4	92.5	55.1
Oregon	96.5	19.2	97.5	20.0	97.4	18.9	97.3	21.1
Pennsylvania	68.0	14.0	69.7	16.7	73.6	15.2	79.6	20.8
Rhode Island	100.0	82.2	100.0	85.4	100.0	88.6	100.0	89.4
South Carolina	97.1	81.2	97.1	77.6	90.5	74.3	97.7	76.9
South Dakota	85.5	38.5	86.2	42.4	87.1	55.4	89.5	51.5
Tennessee	94.2	53.0	94.5	52.1	94.6	52.6	97.5	54.7
Texas	94.1	23.8	95.4	22.5	94.1	21.1	94.2	21.0
Utah	100.0	19.1	100.0	18.7	100.0	18.5	100.0	19.8
Vermont	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Virginia	93.8	10.0	93.5	12.9	93.8	16.0	85.8	19.9
Washington	88.3	45.8	88.8	47.4	90.9	49.6	92.1	50.3
West Virginia	30.0	11.6	37.2	10.5	49.2	10.8	55.9	10.1
Wisconsin	79.7	30.6	83.5	29.8	88.9	35.4	90.7	39.2
Wyoming	99.6	6.2	99.7	7.7	99.7	11.8	99.8	11.4
Total	82.9	31.5	85.0	29.9	86.5	30.6	87.6	32.3

See footnotes at end of table.

Table 32. Percentage of Total Deliveries Represented by Onsystem Sales by State, 1989-1991 (Continued)

State	March 1990		February 1990		January 1990		Total 1989	
	Commercial	Industrial	Commercial	Industrial	Commercial	Industrial	Commercial	Industrial
Alabama	78.1	29.9	80.4	28.9	85.5	31.8	82.9	37.4
Alaska	100.0	66.2	100.0	65.7	100.0	65.4	100.0	55.1
Arizona	96.1	46.1	97.3	56.6	97.5	60.5	93.7	44.5
Arkansas	93.7	18.2	94.7	21.9	95.8	22.9	93.1	19.4
California	94.4	46.7	81.0	37.4	95.8	57.7	91.8	44.1
Colorado	97.8	32.1	98.0	32.5	98.1	31.7	97.3	43.3
Connecticut	93.6	93.9	100.0	98.5	100.0	99.7	91.2	91.4
Delaware	100.0	74.0	100.0	72.2	100.0	78.2	100.0	75.6
District of Columbia	100.0	—	100.0	—	100.0	—	100.0	—
Florida	100.0	72.4	100.0	72.5	100.0	72.4	100.0	74.7
Georgia	88.1	27.3	89.8	25.0	96.3	58.3	90.2	36.4
Hawaii	100.0	—	100.0	—	100.0	—	100.0	—
Idaho	89.7	.5	90.4	.6	91.5	6.4	87.5	.5
Illinois	64.1	22.3	68.9	31.4	68.2	28.5	69.3	29.6
Indiana	93.5	18.4	98.6	28.3	99.2	29.3	95.1	21.7
Iowa	98.1	39.0	98.2	46.2	98.5	44.5	97.8	44.2
Kansas	91.0	14.0	91.1	17.4	92.9	21.0	93.1	22.1
Kentucky	96.0	15.5	96.7	21.8	97.0	40.2	94.9	30.9
Louisiana	100.0	45.4	100.0	45.4	100.0	45.5	99.9	47.4
Maine	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Maryland	96.1	42.1	97.2	59.9	97.6	59.0	96.2	32.5
Massachusetts	100.0	90.2	100.0	91.8	100.0	94.2	99.9	98.4
Michigan	72.8	17.7	72.3	18.8	71.4	21.0	70.4	17.6
Minnesota	95.6	45.5	96.2	51.3	97.5	53.3	95.8	47.2
Mississippi	99.3	57.1	99.5	51.5	99.6	52.2	100.0	50.7
Missouri	89.9	37.7	91.4	46.3	94.1	55.8	92.3	47.4
Montana	97.7	68.8	97.8	73.3	97.9	56.5	98.1	73.7
Nebraska	93.9	43.9	95.2	56.6	95.5	59.6	98.4	43.3
Nevada	97.7	11.8	99.4	18.8	99.1	27.3	96.1	11.3
New Hampshire	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
New Jersey	96.6	61.4	99.3	73.2	99.6	81.3	97.8	61.5
New Mexico	85.1	8.7	83.4	9.1	85.5	8.6	88.1	17.3
New York	88.2	40.5	93.7	60.9	92.2	58.2	85.5	39.7
North Carolina	97.9	93.1	98.2	97.5	98.5	99.3	93.5	70.1
North Dakota	78.4	29.5	82.5	30.4	83.9	27.7	80.3	26.2
Ohio	89.5	12.6	88.9	12.8	89.6	20.4	86.4	16.0
Oklahoma	91.3	59.3	92.6	65.1	94.3	65.0	89.6	50.0
Oregon	98.4	21.5	98.5	18.9	98.2	26.6	98.2	21.9
Pennsylvania	80.5	23.5	83.3	28.2	85.7	30.6	85.3	29.1
Rhode Island	100.0	95.1	100.0	100.0	100.0	100.0	83.9	82.3
South Carolina	97.9	76.6	98.0	85.6	98.3	79.4	98.1	78.5
South Dakota	91.7	55.3	92.1	63.1	92.5	76.0	92.1	60.6
Tennessee	98.4	61.0	98.2	63.3	98.7	65.5	98.1	62.4
Texas	90.0	27.1	94.0	27.2	94.6	29.8	89.9	25.5
Utah	100.0	19.1	100.0	23.9	100.0	24.9	100.0	28.4
Vermont	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Virginia	90.1	24.0	95.6	20.9	97.1	25.6	97.1	36.3
Washington	93.2	60.5	95.9	63.4	96.2	61.0	94.0	58.6
West Virginia	60.1	10.8	63.6	15.0	68.5	17.1	61.5	27.9
Wisconsin	90.8	44.1	90.3	47.0	90.5	55.6	92.6	36.9
Wyoming	93.7	13.9	99.7	13.8	99.7	19.1	99.9	16.7
Total	88.9	35.3	89.1	37.4	91.1	41.3	89.0	36.3

See footnotes at end of table.

Table 32. Percentage of Total Deliveries Represented by Onsystem Sales by State, 1989-1991 (Continued)

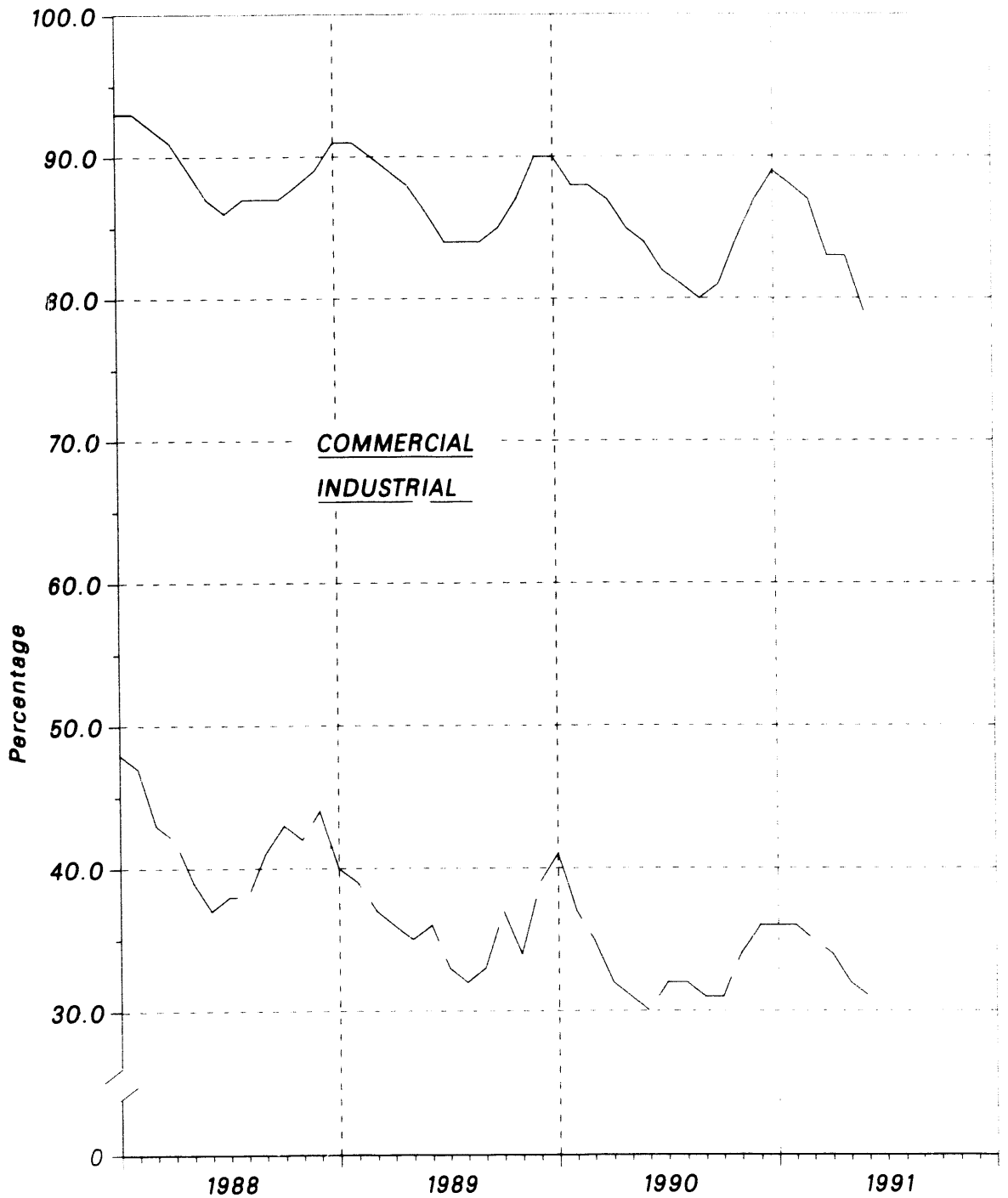
State	December 1989		November 1989		October 1989		September 1989	
	Commercial	Industrial	Commercial	Industrial	Commercial	Industrial	Commercial	Industrial
Alabama	85.6	42.4	78.3	32.6	84.4	33.0	78.9	33.3
Alaska	100.0	51.7	100.0	61.4	100.0	48.0	100.0	48.6
Arizona	95.3	57.5	94.8	55.6	91.6	44.2	91.5	51.5
Arkansas	93.4	23.5	90.7	18.1	87.5	16.4	88.2	22.0
California	92.2	52.6	90.1	25.9	88.5	72.4	91.0	39.4
Colorado	97.2	35.4	96.9	34.6	95.6	41.7	95.8	42.8
Connecticut	99.5	100.0	90.8	96.5	85.5	86.4	74.8	85.4
Delaware	100.0	74.1	100.0	68.9	100.0	68.0	100.0	64.0
District of Columbia	100.0	—	100.0	—	100.0	—	100.0	—
Florida	100.0	74.7	100.0	68.7	100.0	72.4	100.0	71.3
Georgia	96.8	59.6	89.4	36.4	86.4	29.6	83.0	30.2
Hawaii	100.0	—	100.0	—	100.0	—	100.0	—
Idaho	87.4	.6	84.5	.6	79.3	.3	84.1	.3
Illinois	74.5	36.9	68.9	30.6	64.5	27.6	62.4	23.2
Indiana	98.9	32.0	97.7	22.5	91.9	17.2	89.1	15.3
Iowa	98.3	45.7	97.6	48.4	96.6	49.5	95.2	41.5
Kansas	92.9	26.7	88.2	19.7	88.9	22.6	91.8	22.1
Kentucky	97.0	41.0	94.4	21.8	90.7	20.8	89.8	16.3
Louisiana	99.9	40.5	99.9	42.4	99.9	45.4	99.9	47.9
Maine	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Maryland	96.8	45.7	94.6	31.5	94.2	24.3	94.1	20.7
Massachusetts	99.9	99.6	99.9	96.9	99.9	100.0	99.9	100.0
Michigan	73.5	22.5	69.5	15.5	64.4	12.3	57.5	10.8
Minnesota	97.0	56.2	94.9	45.4	91.9	46.1	92.7	34.5
Mississippi	100.0	56.4	100.0	49.7	100.0	50.6	100.0	52.9
Missouri	92.3	48.5	90.3	47.2	88.8	41.3	86.9	42.8
Montana	98.1	59.2	97.9	61.3	97.5	56.8	96.3	60.5
Nebraska	98.5	58.7	98.1	60.5	98.8	76.7	99.7	30.8
Nevada	98.8	13.0	97.2	7.4	96.2	11.2	91.2	6.9
New Hampshire	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
New Jersey	99.7	83.5	99.0	71.6	94.7	53.9	93.5	51.6
New Mexico	87.6	16.8	85.6	13.7	86.9	16.6	80.2	21.9
New York	89.7	51.7	82.4	39.4	74.8	35.0	73.6	29.1
North Carolina	98.1	98.0	97.1	92.1	86.3	48.7	84.4	48.1
North Dakota	81.6	27.3	74.8	21.2	70.9	15.5	71.4	18.5
Ohio	90.3	19.9	87.8	15.8	85.1	15.9	78.9	14.3
Oklahoma	91.2	61.1	89.1	55.5	86.5	46.2	86.8	47.3
Oregon	98.0	22.1	97.3	21.8	96.7	20.8	97.4	17.8
Pennsylvania	85.3	39.0	82.9	31.6	80.3	23.3	76.4	20.4
Rhode Island	100.0	100.0	100.0	88.9	82.7	87.5	44.6	67.8
South Carolina	97.3	91.3	98.0	82.9	97.8	70.5	97.7	75.7
South Dakota	92.0	63.9	91.1	57.8	89.6	56.4	90.0	55.2
Tennessee	99.1	66.3	97.4	62.7	97.1	61.0	96.9	55.9
Texas	92.7	24.6	86.9	24.5	86.3	24.7	81.8	25.1
Utah	100.0	23.4	100.0	23.3	100.0	22.9	100.0	23.6
Vermont	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Virginia	97.9	44.6	96.4	38.7	93.3	24.8	95.4	21.9
Washington	96.5	52.9	93.6	51.0	93.0	62.5	87.3	58.1
West Virginia	71.5	34.4	58.6	26.3	49.5	22.8	40.5	24.2
Wisconsin	95.0	58.0	91.1	36.6	84.3	25.0	84.2	22.1
Wyoming	99.7	16.2	99.7	11.9	99.6	12.9	99.8	12.6
Total	90.7	39.2	87.6	34.4	85.2	37.2	84.7	33.2

— = Not Applicable

Notes: Volumes of natural gas reported for the commercial and industrial sectors in this publication include data for both sales and deliveries for the account of others. This table shows the percent of the total State volume that represents natural gas sales to the commercial and industrial sectors. This information may be helpful in evaluating commercial and industrial price data which are based on sales data only. See Appendix C, Statistical Considerations, for a discussion of the computation of natural gas prices.

Source: Form EIA-857.

Figure 7. Percentage of Total Deliveries Represented by Onsystem Sales, 1989-1991



Source: Form EIA-857.

Appendix A

Explanatory Notes

Appendix A

Explanatory Notes

Note 1. Nonhydrocarbon Gases Removed

Annual Data

Data on nonhydrocarbon gases removed from marketed production--carbon dioxide, helium, hydrogen sulfide, and nitrogen--are reported by State agencies on the voluntary Form EIA-627. For 1989, of the 32 producing States, 22 reported data on nonhydrocarbon gases removed. The 22 States accounted for 57 percent of total 1989 gross withdrawals. Of the 22 States reporting nonhydrocarbon gases removed, 11 reported zero values: Alaska, Arizona, Arkansas, Illinois, Indiana, Maryland, Missouri, New York, Oregon, South Dakota, and Virginia. The nine States reporting volumes greater than zero are Alabama, California, Colorado, Florida, Mississippi, New Mexico, North Dakota, Texas, and Wyoming. Two States (Kentucky and Nebraska) reported quantities unknown but considered insignificant. In addition, Kansas, Louisiana, Montana, and Oklahoma, which together accounted for 38 percent of gross withdrawals, did not report nonhydrocarbon gases removed separately. However, their gross withdrawal data excluded all or most of the nonhydrocarbon gases removed on leases. No estimates are made for States not reporting nonhydrocarbon gases removed.

Preliminary Monthly Data

All monthly data are considered preliminary until after publication of the *Natural Gas Annual* for the year in which the report month falls. Three States report monthly data on nonhydrocarbon gases removed: Alabama, Texas, and Mississippi. Monthly data for California, Colorado, Florida, New Mexico, North Dakota, and Wyoming are estimated based on annual data reported on Form EIA-627. Nonhydrocarbon gases as an annual percentage of gross withdrawals reported by each of the six States is applied to each State's monthly gross withdrawal data to produce an estimate of nonhydrocarbon gases removed.

Final Monthly Data

Monthly data are revised after publication of the *Natural Gas Annual* by proportionally allocating the differences between annual data reported on the Form EIA-627 and the sum of monthly data (January-December).

Note 2. Supplemental Gaseous Fuels

Annual Data

Annual data are published from Form EIA-176.

Preliminary Monthly Data

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

Final Monthly Data

Monthly data are revised after publication of the *Natural Gas Annual*. Final monthly data are estimated based on the revised annual ratio of supplemental gaseous fuels to the sum of dry gas production, net imports, and net withdrawals from storage. This ratio is applied to the revised monthly sum of these three elements to compute final monthly data.

Note 3. Production

Annual Data

Natural gas production data are collected from 32 gas-producing States on Form EIA-627 which includes gross withdrawals, vented and flared, respressuring, nonydrocarbon gases removed, marketed production (wet), and extraction loss. The U.S. Minerals Management Service (MMS)also supplies data on the quantity and value of natural gas production on the Gulf of Mexico and Outer Continental Shelf. No adjustments are made to the data.

Estimated Monthly Data

State marketed production data for a particular month are estimated if data are unavailable at the time of publication. The data are estimated based on an average rate of change between the report month and the prior month over the previous 3 years. The rate-of-change percentage is applied to the data for the month prior to the report month to compute the estimate for the report month in the current year.

Estimates for total U.S. marketed production are based on the application of historical (latest 3 calendar years) month-to-month ratios of daily production rates to the latest preliminary reported monthly production data. State estimates for nonhydrocarbon gas removed, gas used for repressuring, and gas vented and flared are based on the ratio of the latest preliminary reported 3-month average of these categories to marketed production. These ratios are applied to the estimates of marketed production to calculate figures for nonhydrocarbon gases removed, gas used for repressuring, and gas vented and flared. Estimates for gross withdrawal data are the sum of the estimates calculated for nonhydrocarbon gases removed, gas used for repressuring, gas vented and flared, and marketed production.

Preliminary Monthly Data

All monthly data are considered preliminary until after publication of the *Natural Gas Annual* for the year in which the report month falls. Preliminary monthly data are published from reports from the Interstate Oil Compact Commission (IOCC) and the MMS. Volumetric data are converted, as necessary, to a standard 14.73 psia pressure base. Data are revised as Table 7 monthly data are updated.

Final Monthly Data

The differences between each State's annual production data reported on the annual Form EIA-627 and the sum of its monthly IOCC reports (January-December) are allocated proportionally to the monthly IOCC data.

Note 4. Imports and Exports

Annual Data and Final Monthly Data

Annual and final monthly data are published from the annual Form FPC-14, which requires data to be reported by month for the calendar year.

Preliminary Monthly Data - Imports

Preliminary monthly import data are based on data from the National Energy Board of Canada and responses to informal industry contacts and EIA estimates. Preliminary data are revised after the publication of the article "U.S. Imports and Exports of Natural Gas" for the calendar year.

Preliminary Monthly Data - Exports

Preliminary monthly export data are based on historical data from the Form FPC-14, informal industry contacts, and information gathered from natural gas industry trade publications. Preliminary monthly data are revised after publication of "U.S. Imports and Exports of Natural Gas" for the calendar year in which the report month falls.

Note 5. Consumption

All Annual Data

All consumption data except electric utility data are from the Form EIA-857 and Form EIA-176. No adjustments are made to the data. Electric utility data are reported on Form EIA-759.

Monthly Data

All monthly data are considered preliminary until after publication of the *Natural Gas Annual.*

Total Consumption

Preliminary Monthly Data

The most current month estimate is calculated based on the arithmetic average change from the previous month for the previous 3 years. The following month this estimate is revised by summing the components (pipeline fuel, lease and plant fuel, and deliveries to consumers).

Final Monthly Data

Monthly data are revised after publication of the *Natural Gas Annual.* Final monthly total consumption is obtained by summing its components.

Residential, Commercial, and Industrial Sector Consumption

Preliminary Monthly Data

Preliminary monthly residential, commercial, and industrial data are from Form EIA-857. See Appendix C, "Statistical Considerations," for a detailed explanation of sample selection and estimation procedures.

Price data are representative of prices for gas sold and delivered to residential, commercial, and industrial consumers. These prices do not reflect average prices of natural gas transported to consumers for the account of third parties or "spot-market" prices.

Final Monthly Data

Monthly data are revised after the publication of the *Natural Gas Annual.* Final monthly data are estimated by allocating annual consumption data from the Form EIA-176 to each month in proportion to monthly sales volumes reported in Form EIA-857.

Electric Utility Sector Consumption

All Monthly Data

Monthly data published are from Form EIA-759.

Pipeline Fuel Consumption

Preliminary Monthly Data

Preliminary data are estimated based on the pipeline fuel consumption as an annual percentage of total consumption from the previous year's Form EIA-176. This percentage is applied to each month's total consumption figure to compute the monthly estimate.

Final Monthly Data

Monthly data are revised after the publication of the *Natural Gas Annual.* Final monthly data are based on the revised annual ratio of pipeline fuel consumption to total consumption from the Form EIA-176. This ratio is applied to each month's revised total consumption figure to compute final monthly pipeline fuel consumption estimates.

Lease and Plant Fuel Consumption

Preliminary Monthly Data

Preliminary monthly data are estimated based on lease and plant fuel consumption as an annual percentage of marketed production (excluding nonhydrocarbon gases). This percentage is applied to each month's marketed production figure to compute estimated lease and plant fuel consumption.

Final Monthly Data

Monthly data are revised after publication of the *Natural Gas Annual.* Final monthly data are based on a revised annual ratio of lease and plant fuel consumption to marketed production (excluding nonhydrocarbon gases) from Form EIA-176. This ratio is applied to each month's revised marketed production figure to compute final monthly lease and plant fuel consumption estimates.

Note 6. Extraction Loss

Annual Data

Extraction loss data are calculated from filings of Form EIA-64A, "Annual Report of the Origin of Natural Gas Liquids Production." For a fuller discussion, see the *Natural Gas Annual 1989.*

Preliminary Monthly Data

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

Final Monthly Data

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

Note 7. Natural Gas Storage

Underground Natural Gas Storage

All monthly data concerning underground storage are published from the essentially identical forms, FERC-8 and EIA-191. A new EIA-191 became effective in January 1991. Monthly data are revised after publication of "Underground Natural Gas Storage in the United States" for the heating year (April through March) in which the report month falls. In addition, injection and withdrawal data from the FERC-8/EIA-191 survey are adjusted to correspond to data from Form EIA-176 following publication of the *Natural Gas Annual.*

Underground and Liquefied Natural Gas Storage

The final monthly and annual storage and withdrawal data for 1985 through 1989 shown in Table 2 include both underground and liquefied natural gas (LNG) storage. Underground storage data are obtained from the FERC-8/EIA-191 and EIA-176 surveys in the manner described earlier. Annual data on LNG additions and withdrawals are taken from Form EIA-176. Monthly data are estimated by computing the ratio of each month's underground storage additions and withdrawals to annual underground storage additions and withdrawals and applying it to annual LNG data.

Note 8. Average Wellhead Value

Annual Data

Form EIA-627 requests State agencies to report the quantity and value of marketed production. When complete data are unavailable, the form instructs the State agency to report the available value and the quantity of marketed production associated with this value. A number of States reported volumes of production and associated values for other than marketed production. In addition, information for several States which were unable to provide data was obtained from Form EIA-176. It should be noted that Form EIA-176 reports a fraction of State production. The imputed value of marketed production in each State is calculated by dividing the State's reported value by its associated wellhead value. This unit price is then applied to the quantity of the State's marketed production to derive the imputed value of marketed production.

Preliminary Monthly Data

An estimate of the U.S. gas price is made each month based on monthly gas prices from four States: Mississippi, New Mexico, Oklahoma, and Texas.

Final Monthly Data

Preliminary monthly data are revised after the publication of the *Natural Gas Annual.* The weighted average 12-month prices for Texas, New Mexico, Oklahoma, and Mississippi are compared to the wellhead prices published for each of the four States in the *Natural Gas Annual.* The ratio derived from this comparison is then applied to each month's estimates for those States, and the monthly data are revised.

Note 9. Financial Data of Major Interstate Pipeline Companies

The prices in Table 4 for imports and purchases from producers, and industrial sales by major interstate pipeline companies, and all data in Tables 12 through 16 are derived from Form FERC-11. Form FERC-11 is filed monthly by the approximately 47 major interstate natural gas pipeline companies. A major pipeline company is defined as one "whose combined sales for resale, and gas transported interstate or stored for a fee exceeded 50 billion cubic feet in the previous calendar year."

Data reported by the major interstate pipeline companies on Form FERC-11 generally reflect the timing of data entry, revision, and/or reclassification of accounts in the companies' accounting records in accordance with the FERC regulations and regulatory filings. Certain data may also be estimated. Consequently, the data reported and shown in Tables 12 through 16 for any given month may include or reflect out-of-period dollar or volume adjustments, restatements or revisions, or account reclassifications. The dollar amounts reported as paid or received and volumes reported as delivered

or received may also include amounts paid, delivered, or received under contractual provisions such as prepayment, take-or-pay, minimum take, or minimum bill provisions. Unless otherwise footnoted, the individual data items, computed averages, and aggregated totals shown include the effect of any and all such adjustments, revisions, estimates, reclassifications, and/or contractual provisions. Average prices are not reported on the Form 11. The averages shown are computed by dividing the total dollars reported for the particular item by the total volume reported for the same item.

Final Monthly Data

Final revisions for the prior year's data are made upon receipt of the December data for the current survey year.

Note 10. Natural Gas Policy Act of 1978

Tables 5 and 8 through 11, in this publication contain data reported by the natural gas industry under Title I of the Natural Gas Policy Act of 1978 (NGPA).

Title I of the NGPA - Wellhead Prices

The NGPA signed into law on November 9, 1978, mandated a new framework for the regulation of most facets of the natural gas industry. Ceiling prices were established for all production of natural gas. For gas produced from both new and old (pre-NGPA) reserves, ceiling prices depend on contract provisions and the characteristics of the well. If a well qualifies under more than one provision in Title I of the NGPA, the highest maximum ceiling price is applicable. Further, all price ceilings are adjusted by a monthly inflation adjustment.

Natural gas dedicated to interstate commerce on or before the November 9, 1978 enactment of the NGPA has as a maximum lawful price the "just and reasonable" rate as established by the Federal Energy Regulatory Commission under Section 104.

The maximum lawful price of natural gas under old intrastate contracts (Section 105) is based on its contract price on November 9, 1978, and is, in general much higher than for comparable old interstate gas. Gas production under Sections 104, 105, and 106 (old contracts that have "rolled over") constitute what is referred to as "old gas."

Almost all development and extension wells begun after February 19, 1977, qualify as new onshore production (Section 103). In order to qualify for new gas status under Section 102, an onshore well started after February 19, 1977, must produce from a new reservoir or be at least 2.5 miles from, or 1,000 feet deeper than, a "marker well" (a well producing in commercial quantities any time between January 1, 1970, and April 20, 1977). Offshore gas qualifies for Section 102 if production is from new leases (entered into on or after April 20, 1977) or reservoirs "discovered" on or after July 27, 1976.

Production from wells qualifying under Section 107 is given special treatment as "high-cost gas" and is defined as gas produced:

- from wells started after February 19, 1977, and completed to produce from a depth greater than 15,000 feet
- from geopressured brine
- from coal seams
- from Devonian shale
- under conditions determined by the Federal Energy Regulatory Commission to present extraordinary risks or costs.

On November 1, 1979, gas from the first four categories was deregulated. On August 15, 1980, natural gas produced from tight formations (geologic formation where tight packing of the reservoir rock causes low production rates) was defined as high-cost gas with a ceiling price set at 200 percent of the Section 103 price.

Under the NGPA, producers applying for price classification under Sections 102, 103, 107, or 108 must file Form FERC-121, with the applicable State jurisdictional agency. The forms are then sent to FERC for review. The filings are grouped according to the month received by FERC. Not all submissions contain estimated annual volumes or contract prices. Annual volumes are often estimated by producers prior to actual operations or based on short periods of operation. Price data from Form FERC-121 are not included in this publication, since submission dates vary and prices may have changed subsequent to submission.

On January 1, 1985, the following categories of gas were deregulated pursuant to NGPA Section 121:

- Section 102(c) "new natural gas"
- Section 103(c) "new onshore production wells" which were not committed or dedicated to interstate commerce on April 20, 1977, and which produce gas from a completion location deeper than 5,000 feet.
- Sections 105 and 106(b) "intrastate gas under contracts" where the price paid on December 31, 1984, is higher than $1.00 per million Btu, provided that such price over $1.00 was not established by operation of an indefinite escalator clause.

On July 1, 1987, the following category of gas was deregulated pursuant to NGPA Section 121:

- Section 103(b)(2) "new onshore production wells" which were not committed or dedicated to interstate commerce on April 20, 1977, and which produce gas from a completion location less than 5,000 feet deep.

On July 26, 1989, the President signed legislation to remove all remaining natural gas wellhead price controls by 1993.

Note 11. Balancing Item

The "balancing item" category represents the difference between the sum of the components of natural gas supply and the sum of the components of natural gas disposition. These differences may be due to quantities lost or to the effects of data reporting problems. Reporting problems include differences due to the net result of conversions of flow data metered at varying temperatures and pressure bases and converted to a standard temperature and pressure base; the effect of variations in company accounting and billing practices; differences between billing cycles and calendar periods; and imbalances resulting from the merger of data reporting systems, which vary in scope, format, definitions, and type of respondents.

Annual Data

Annual data are from the *Natural Gas Annual.* For an explanation of the methodology involved in calculating annual "balancing item" data, see the *Natural Gas Annual 1989.*

Preliminary Monthly Data

Preliminary monthly data in the "balancing item" category are calculated by subtracting dry gas production, withdrawals from storage, supplemental gaseous fuels, and imports from total supply/ disposition.

Final Monthly Data

Final monthly data in the "balancing item" category are calculated by subtracting dry gas production, withdrawals from storage, supplemental gaseous fuels, and imports from total supply/disposition.

Note 12. Purchased Gas Adjustments

The Purchased Gas Adjustment filings for selected interstate pipeline companies have been aggregated to present volume and price data by NGPA category as shown in Table 5. These filings represent over 85 percent of the wellhead purchases subject to the NGPA and dedicated to the interstate market.

Respondents file projections quarterly in an abbreviated format, and one detailed filing per year. The projected volume and price data are used for each month for which the filing is effective.

Table A1. PGA Respondents

Pipeline Company
Alabama-Tenn
Algonguin Gas Trans
ANR Pipeline
Arkla Gas
Carnegie Nat Gas
CNG Trans Corp
Colorado Inter
Columbia
E. Tenn Natural Gas
Eastern Shore
El Paso
Equitrans Inc
Florida
Granite St Gas Trans
Great Lakes Gas
KN Energy
Kentucky W. Va
Mid-Louisiana Gas
Midwestern
MS. River Trans
National Fuel Supply
Natural (a)
North Penn Gas
Northern Natural
Northwest Pipeline
Pacific Gas Trans
Paiute Pipeline Co
Panhandle Eastern (a)
Questar Pipeline Co
Ringwood Gathering
South Georgia
Southern Natural
Tennessee Gas Pipeline
Texas Eastern
Texas Gas Trans
Transcontinental (a)
Trunkline
United
Valero Interstate
Viking Gas Trans
West Texas Gas Inc
Western Gas Inter
Williams Nat Gas
Williston Basin

(a) Temporary filing waiver.

Appendix B

Data Sources

Appendix B

Data Sources

The data in this publication are taken from survey reports authorized by the U.S. Department of Energy (DOE), Energy Information Administration (EIA) and by the Federal Energy Regulatory Commission (FERC). The EIA is the independent statistical and analytical agency within the DOE. The FERC is an independent regulatory commission within the DOE which has jurisdiction primarily in the regulation of electric utilities and the interstate natural gas industry. The EIA conducts and processes some of the surveys authorized by the FERC.

Data are collected from two annual surveys and five monthly surveys. Filings with the FERC also provide sources of data for this publication.

The annual reports are the Form EIA-176, a mandatory survey of all companies that deliver natural gas to consumers or that transport gas across State lines, and the Form EIA-627, a voluntary survey completed by energy or conservation agencies in the gas-producing States.

The monthly reports include three surveys of the natural gas industry and two surveys of the electric utility industry. The natural gas industry surveys are the Forms FERC-8 and EIA-191 filed by companies that operate underground storage facilities, the Form FERC-11 filed by major interstate natural gas pipeline companies, and the Form EIA-857 filed by a sample of companies that deliver natural gas to consumers. The electric utility industry surveys are the Form EIA-759 filed by all generating electric utilities and the Form FERC-423 filed by fossil fueled plants. Responses to these five monthly surveys are mandatory.

Data in this publication are also taken from two types of reports that are filed with the FERC under its regulatory functions. One filing is the Form FERC-121, filed by natural gas producers who are the first seller of gas that qualified for an incentive price. The other filing is the "Purchased Gas Adjustment," which is filed by interstate pipeline companies to allow them to recover changes in their purchase prices for natural gas above the cost of service reflected in their current filings.

A description of the survey respondents, reporting requirements, and processing and editing of the data is given on the following pages for each of the surveys. Also shown are copies of the EIA and FERC survey forms that are sources of data for this publication.

Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition"

Survey Design

The original version of Form EIA-176 was approved in 1980 with a mandatory response requirement. Prior to 1980, published data were based on voluntary responses to Bureau of Mines, U.S. Department of the Interior predecessor Forms BOM-6-1340-A and BOM-6-1341-A of the same title. Beginning with 1990 data, the responses are not considered proprietary.

In 1982, the scope of the revised EIA-176 survey was expanded to collect the number of electric utility consumers in each State, volumes of gas transported to industrial and electric utility consumers, detailed information on volumes transported across State borders by the respondent for others and for the responding company, and detailed information on other disposition. These changes were incorporated to provide more complete survey information with a minimal change in respondent burden. The 1982 revision of the Form EIA-176 continues to be the basis of the current version of this form. On March 4, 1985, the Form EIA-176 was again approved by the Office of Management and Budget for use through report year 1986.

In 1988, the Form EIA-176 was revised to include data collection for deliveries of natural gas to commercial consumers for the account of others. The revised form was approved for use during report years 1987 through 1989. Response to the form continues to be mandatory.

A short version of Form EIA-176 was also approved in 1988. Companies engaged in purchase and delivery activities, but not in transportation and storage

acitivies, may file the short form. Usually, these companies are municipals handling small volumes of gas.

Survey Universe and Response Statistics

The Form EIA-176 is mailed to all identified interstate and intrastate natural gas pipeline companies, investor and municipally owned natural gas distributors, underground natural gas storage operators, synthetic natural gas plant operators, and field, well, or processing plant operators that deliver natural gas directly to consumers (including their own industrial facilities) and/or that transport gas to, across, or from a State border through field or gathering facilities.

Each company and its parent company or subsidiaries were required to file if they met the survey specifications. The original mailing in February 1990 for report year 1989 totaled 2,138 questionnaire packages. To this original mailing, 9 names were added and 2 were deleted as a result of the survey processing. Additions were the result of comparisons of the mailing list to other survey mailing lists. Deletions resulted from post office returns and determinations that companies were out of business, sold, or not within the scope of the survey. After all updates, the survey universe was 2,145 responses from approximately 1,800 companies.

Following the original mailing, second request mailing, and nonrespondents followup, 2,145 responses were entered into the data base, and there were no nonrespondents.

Summary of Form EIA-176 Data Reporting Requirements

The EIA-176 is a multiline schedule for reporting all supplies of natural gas and supplemental gaseous fuels and their disposition within the State indicated. Respondents file completed forms with EIA in Washington, DC. Data for the report year are due by April 1 of the following year. Extensions of the filing deadline for up to 45 days are granted to any respondent on request.

All natural gas and supplemental gaseous fuels volumes are reported on a physical custody basis in thousand cubic feet (Mcf), and dollar values are reported to the nearest whole dollar. All volumes are reported at 14.73 pounds per square inch absolute pressure (psia) and 60 degrees Fahrenheit.

Routine Form EIA-176 Edit Checks

A series of manual and computerized edit checks are used to screen the Form EIA-176. The edits performed include validity, arithmetic, and analytical checks.

The incoming forms are reviewed prior to keying. This prescan determines if the respondent identification (ID) number and the company name and address are correct, if the data on the form appear complete and reasonable, and if the certifying information is complete.

Manual checks on the data are also made. Each form is prescanned to determine that data were reported on the correct lines. The flow of gas through interstate pipelines is checked at the company level to ensure that each delivery from a State is matched with a corresponding receipt in an adjoining State.

After the data are keyed, computer edit procedures are performed. Edit programs verify the report year, State code, and arithmetic totals. Further tests are made to ensure that all necessary data elements are present and that the data are reasonable and internally consistent. The computerized edit system produces error listings with messages for each failed edit test. When problems occur, respondents are contacted by telephone and required to file amended forms with corrected data.

Other EIA Publications Referencing Form EIA-176

Data from Form EIA-176 are also published in the *Natural Gas Annual*.

Form EIA-176

U.S. DEPARTMENT OF ENERGY
ENERGY INFORMATION ADMINISTRATION

Form Approved
OMB No. 1905-0175
Expires: 12/31/90

ANNUAL REPORT OF NATURAL AND SUPPLEMENTAL GAS SUPPLY AND DISPOSITION, 19 ☐☐

This report is mandatory under the Federal Energy Administration Act of 1974 (Public Law 93-275). Failure to report may result in criminal fines, civil penalties, and other sanctions as provided by law. See Section VI of the instructions for confidentiality statement. Public reporting burden for this collection of information is estimated to average 19.8 hours per response, including the time of reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Energy Information Administration, Office of Statistical Standards EI-73, Mail Station 1H-023 Forrestal, 1000 Independence Ave SW, Washington DC 20585; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington DC 20503.

EIA USE

EIA COPY. Tear out, complete, and return to:

Energy Information Administration
Mail Station: BG-094 FORSTL
U.S. Department of Energy
Washington, D.C. 20585
Attn: Form EIA-176

Affix mailing label or enter mail address

Control (ID) No. _____

Name: _____
Operations in (State): _____
Street or Post Office Box: _____
City, State, Zip Code: _____
Attention: _____

PART I: IDENTIFICATION

1.0 Control No.	2.0 Company Name:	3.0 Report State	EIA ☐☐	4.0 Resubmittal ☐ Date:

5.0 Company status, name, and/or address change or correction. (Check appropriate box.)

a. ☐ Name and address on mailing label are correct.
b. ☐ Change name, attention line, and/or mail address as indicated below.
c. ☐ Company was sold to, or merged with, company entered below.
d. ☐ Company went out of business. Customer accounts taken over by company entered below.
e. ☐ Other changes, corrections, or comments: _____

5.1 Change mail address to:

a. Company Name: _____
b. Operations in (State): _____
c. Street or Post Office Box: _____
d. City, State, Zip Code: _____
e. Attention: _____

6.0 Contact person:

Name: _____ Telephone Number: Area Code _____ No. _____ Ext. _____

PART II: CERTIFICATION AND DISCLOSURE STATEMENT

1.0 I certify that (Check appropriate box):

a. ☐ The information provided herein and appended hereto is true and accurate or, where indicated on the form, reasonable estimates to the best of my knowledge.

b. ☐ My company does not meet any of the criteria set forth in Section II, "Who must submit," of the instructions and is therefore not required to complete and submit a Form EIA-176 for the report State.

c. Does the information supplied on this form contain trade secrets and/or confidential commercial information? ☐ Yes ☐ No

2.0 Name	3.0 Title
4.0 Signature	5.0 Date

Title 18, USC 1001, makes it a crime for any person knowingly and willingly to make to any agency or department of the United States any false, fictitious or fraudulent statements as to any matter within its jurisdiction.

EIA-176
(Revised 1988)

ANNUAL REPORT OF NATURAL AND SUPPLEMENTAL GAS SUPPLY AND DISPOSITION, 19 ☐☐

1.0 Control No.	2.0 Company Name	3.0 Report State	EIA ☐☐	4.0 Resubmittal ☐ Date

PART III: TYPE OF COMPANY AND GAS ACTIVITIES OPERATED IN THE REPORT STATE

1.0 Type of Company (check one)

- a ☐ Investor owned distributor
- b ☐ Municipally owned distributor
- c ☐ Interstate pipeline
- d ☐ Intrastate pipeline
- e ☐ Storage operator
- f ☐ SNG plant operator
- g ☐ Integrated oil and gas
- h ☐ Producer
- i ☐ Gatherer
- j ☐ Processor
- k ☐ Other (specify)

2.0 Gas Activities Operated On-system Within the Report State (check all that apply)

- a ☐ Produced Natural Gas
- b ☐ Gathered
- c ☐ Processed
- d ☐ Purchased
- e ☐ Transported Interstate
- f ☐ Transported Intrastate
- g ☐ Stored Underground
- h ☐ Stored LNG
- i ☐ Injected Propane-air
- j ☐ Produced SNG
- k ☐ Imported
- l ☐ Exported
- m ☐ Delivered for Resale
- n ☐ Delivered directly to consumers
- ☐ Other (specify) _____

PART IV: SUPPLY OF NATURAL AND SUPPLEMENTAL GAS RECEIVED WITHIN OR TRANSPORTED INTO REPORT STATE

	Volume (Mcf at 14.73 psia)	e or f	Cost (Dollars)	e or f
1.0 Company owned natural gas produced on-system				
2.0 On-system purchases received				
2.1 From producers, gatherers, and/or gas processors				
2.2 From pipeline, distribution, and/or storage operators				
2.3 From synthetic natural gas plants or SNG pipeline				
2.4 At State line or U.S. border from:				
(Company) _____				
(State or Country) _____ ☐☐☐☐☐☐☐☐☐				
(Continue on Part VI, if more space is needed)				
3.0 Transportation, exchange, and/or storage receipts				
3.1 Received within the report State				
3.2 Received at the State line or U.S. border from:				
(Company) _____				
(State or Country) _____ ☐☐☐☐☐☐☐☐☐				
(Continue on Part VI, if more space is needed)				
4.0 Transported into the report State from				
(State or Country) _____ ☐☐☐☐☐☐☐☐☐				
(Continue on Part VI, if more space is needed)				
5.0 Withdrawn from company operated storage facilities				
5.1 From underground storage				
5.2 From liquefied natural gas storage				
6.0 Synthetic natural gas produced				
7.0 Other sources of supply (specify)				
(Source and/or kind of fuel)				
_____ ☐☐☐☐☐☐☐☐☐				
(Continue on Part VI, if more space is needed)				
8.0 Total supply within report State				

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ANNUAL REPORT OF NATURAL AND SUPPLEMENTAL GAS SUPPLY AND DISPOSITION, 19 ☐☐

1.0 Control No.	2.0 Company Name	3.0 Report State	EIA ☐☐	4.0 Resubmittal ☐ Date

PART V: DISPOSITION OF NATURAL AND SUPPLEMENTAL GAS WITHIN OR TRANSPORTED OUT OF REPORT STATE

	Volume (Mcf at 14.73 psia)	e or f	Cost or Revenue (Dollars)	e or f
1.0 Used in well, lease, and field operations				
2.0 Returned to oil and/or gas reservoirs				
3.0 Used, removed, or lost in gas processing or treating plants				
3.1 Company operated plants:				
3.1.1 Volume delivered to company operated plants for redelivery ☐ Mcf				
3.1.2 Volume used for plant fuel				
3.1.3 Extraction loss (Estimated gas phase volume of liquids extracted)				
3.1.4 Volume of nonhydrocarbons removed (e.g., H_2S & CO_2)				
3.1.5 Vented, flared, and/or lost				
3.2 Plants operated by others:				
3.2.1 Volume delivered to plants operated by others for redelivery ☐ Mcf				
3.2.2 Total volume used, removed, vented, and/or flared				
4.0 Used in pipeline, storage, and/or distribution operations				
5.0 Added to company operated storage facilities:				
5.1 Injected into underground storage				
5.2 Added to liquefied natural gas storage				
6.0 Transportation, exchange, and/or storage deliveries:				
6.1 Delivered at point(s) within the report State				
6.2 Delivered at the State line or U.S. border to:				
(Company) _____				
(State or Country) _____ ☐☐☐☐☐☐☐☐☐				
(Continue on Part VI, if more space is needed)				
7.0 Transported out of the report State to				
(State or Country) _____ ☐☐☐☐☐☐☐☐☐				
(Continue on Part VI, if more space is needed)				
8.0 Delivered for sales for resale:				
8.1 Delivered within the report State				
8.2 Delivered at the State line or U.S. border to				
(Company) _____				
(State or Country) _____ ☐☐☐☐☐☐☐☐☐				
(Continue on Part VI, if more space is needed)				
9.0 Delivered directly to consumers:				
(Type of transaction and consumer) / (Number of consumers)				
9.1 Residential sales				
9.2 Commercial sales				
9.3 Industrial sales				
9.4 Electric utility sales				
9.5 Transported to industrials				
9.6 Transported to electric utilities				
9.7 Transported to commercial consumers				
10.0 Average heat content of gas delivered directly to consumers (Btu per cubic foot) ☐ Btu				
11.0 Other disposition (specify)				
_____ ☐☐☐☐☐☐☐☐☐				
(Continue on Part VI, if more space is needed)				
12.0 Total disposition accounted for				
13.0 Unaccounted for gas supply (+) or disposition (−)				

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ANNUAL REPORT OF NATURAL AND SUPPLEMENTAL GAS SUPPLY AND DISPOSITION, 19 ☐☐

1.0 Control No.	2.0 Company Name	3.0 Report State	EIA	4.0 Resubmittal
			☐☐	☐ Date

PART VI: CONTINUATION SHEET Sheet ____ of ____

(To be used only if insufficient space was provided on Part IV and/or Part V)

Supply (Continued)	Volume (Mcf at 14.73 psia)	e or f	Cost or Revenue (Dollars)	e or f
PART IV, 2.4 On-system purchases received at State line or U.S. border from: (Continued)				
Company				
State or Country				
Company				
State or Country				
PART IV, 3.2 Transportation, exchange, and/or storage receipts at State line or U.S. border from: (Continued)				
Company				
State or Country				
Company				
State or Country				
PART IV, 4.0 Transported into report State from: (Continued)				
State or Country				
State or Country				
State or Country				
State or Country				
PART IV, 7.0 Other sources of supply (specify) (Continued)				
(Source and/or kind of fuel)				
Disposition (Continued)				
PART V, 6.2 Transportation, exchange, and/or storage deliveries at State line or U.S. border to: (Continued)				
Company				
State or Country				
Company				
State or Country				
PART V, 7.0 Transported out of report State to: (Continued)				
State or Country				
State or Country				
State or Country				
State or Country				
PART V, 8.2 Delivered for sale for resale at State line or U.S. border to: (Continued)				
Company				
State or Country				
Company				
State or Country				
PART V, 11.0 Other Disposition (specify) (Continued)				

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ANNUAL REPORT OF NATURAL AND SUPPLEMENTAL GAS SUPPLY AND DISPOSITION, 19 ☐☐

1.0 Control No	2.0 Company Name	3.0 Report State	EIA	4.0 Resubmittal ☐ Date
			☐☐	

PART VII: FOOTNOTES

Part No.	Item No.	EIA Use	Sub-item (State, Company, or Line)	Line No.	Footnote
		☐☐☐☐☐☐☐☐			
		☐☐☐☐☐☐☐☐			
		☐☐☐☐☐☐☐☐			
		☐☐☐☐☐☐☐☐			
		☐☐☐☐☐☐☐☐			

EIA-176

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Form Approved
OMB No. 19050175
Expires: 12/31/90

U.S. DEPARTMENT OF ENERGY
ENERGY INFORMATION ADMINISTRATION

ANNUAL REPORT OF NATURAL AND SUPPLEMENTAL GAS SUPPLY AND DISPOSITION, 19 ☐☐

SHORT FORM

EIA USE

EIA COPY. Tear out, complete, and return to:

Energy Information Administration
Mail Station: BG-094 FORSTL
U.S. Department of Energy
Washington, D.C. 20585
Attn: Form EIA-176

Affix mailing label or enter mail address

Control (ID) No. _____ _____

Name: _____
Operations in (State): _____
Street or Post Office Box: _____
City, State, Zip Code: _____
Attention: _____

PART I: IDENTIFICATION

1.0 Control No.	2.0 Company Name:	3.0 Report State	EIA ☐☐	4.0 Resubmittal ☐ Date:

5.0 Company status, name, and/or address change or correction. (Check appropriate box.)

a. ☐ Name and address on mailing label are correct.
b. ☐ Change name, attention line, and/or mail address as indicated below.
c. ☐ Company was sold to, or merged with, company entered below.
d. ☐ Company went out of business. Customer accounts taken over by company entered below.
e. ☐ Other changes, corrections, or comments: _____

5.1 Change mail address to:

a. Company Name: _____
b. Operations in (State): _____
c. Street or Post Office Box: _____
d. City, State, Zip Code: _____
e. Attention: _____

6.0 Contact person:

Name: _____ Telephone Number Area Code _____ No. _____ Ext. _____

PART II: CERTIFICATION AND DISCLOSURE STATEMENT

1.0 I certify that (Check appropriate box):

a. ☐ The information provided herein and appended hereto is true and accurate or, where indicated on the form, reasonable estimates to the best of my knowledge.

b. ☐ My company does not meet any of the criteria set forth in Section II, "Who must submit," of the instructions and is therefore not required to complete and submit a Form EIA-176 for the report State.

c. Does the information supplied on this form contain trade secrets and or confidential commercial information? ☐ Yes ☐ No

2.0 Name	3.0 Title
4.0 Signature	5.0 Date

Title 18, USC 1001, makes it a crime for any person knowingly and willingly to make to any agency or department of the United States any false, fictitious or fraudulent statements as to any matter within its jurisdiction.

ANNUAL REPORT OF NATURAL AND SUPPLEMENTAL GAS SUPPLY AND DISPOSITION, 19 ☐☐

1.0 Control No.	2.0 Company Name:	3.0 Report State	EIA ☐☐	4.0 Resubmittal ☐ Date:

PART III: TYPE OF COMPANY AND GAS ACTIVITIES OPERATED IN THE REPORT STATE

1.0 Type of Company (check one)

- a. ☐ Investor owned distributor
- b. ☐ Municipally owned distributor
- c. ☐ Interstate pipeline
- d. ☐ Intrastate pipeline
- e. ☐ Storage operator
- f. ☐ SNG plant operator
- g. ☐ Integrated oil and gas
- h. ☐ Producer
- i. ☐ Gatherer
- j. ☐ Processor
- k. ☐ Other (specify) _____

2.0 Gas Activities Operated On-system Within the Report State (check all that apply)

- a. ☐ Produced Natural Gas
- b. ☐ Gathered
- c. ☐ Processed
- d. ☐ Purchased
- e. ☐ Transported Interstate
- f. ☐ Transported Intrastate
- g. ☐ Stored Underground
- h. ☐ Stored LNG
- i. ☐ Injected Propane-air
- j. ☐ Produced SNG
- k. ☐ Imported
- l. ☐ Exported
- m. ☐ Delivered for Resale
- n. ☐ Delivered directly to consumers
- o. ☐ Other (specify) _____

PART IV: SUPPLY OF NATURAL AND SUPPLEMENTAL GAS RECEIVED WITHIN OR TRANSPORTED INTO REPORT STATE

	Volume (Mcf at 14.73 psia)	e or f	Cost (Dollars)	e or f
2.0 On-system purchases received:				
2.1 From producers, gatherers, and/or gas processors				
2.2 From pipeline, distribution, and/or storage operators				
2.3 From synthetic natural gas plants or SNG pipeline				
7.0 Other sources of supply (specify): (Source and/or kind of fuel)				
(Continue on Part VI, if more space is needed)				
8.0 Total Supply within report State				

PART V: DISPOSITION OF NATURAL AND SUPPLEMENTAL GAS WITHIN OR TRANSPORTED OUT OF REPORT STATE

	(Number of consumers)	Volume (Mcf at 14.73 psia)	e or f	Cost or Revenue (Dollars)	e or f
4.0 Used in pipeline, storage and/or distribution operations					
9.0 Delivered directly to consumers: (Type of transaction and consumer)					
9.1 Residential sales					
9.2 Commercial sales					
9.3 Industrial sales					
9.4 Electric utility sales					
10.0 Average heat content of gas delivered directly to consumers (Btu per cubic foot) ____ Btu					
11.0 Other disposition (specify)					
(Continue on Part VI, if more space is needed)					
12.0 Total disposition accounted for					
13.0 Unaccounted for gas supply (+) or disposition (-)					

ANNUAL REPORT OF NATURAL AND SUPPLEMENTAL GAS SUPPLY AND DISPOSITION, 19 ☐☐

1.0 Control No.	2.0 Company Name:	3.0 Report State	EIA	4.0 Resubmittal Date:

PART VI: CONTINUATION SHEET — Sheet ____ of ____

(To be used only if insufficient space was provided on Part IV and/or Part V)

Supply (Continued)	Volume (Mcf at 14.73 psia)	e or f	Cost or Revenue (Dollars)	e or f
PART IV. 7.0 Other sources of supply (specify): (Continued) (Source and/or kind of fuel)				
Disposition (Continued)				
PART V. 11.0 Other Disposition (specify): (Continued)				

PART VII: FOOTNOTES

Part No.	Item No.	EIA Use	Sub-item (State, Company, or Line)	Line No.	Footnote

EIA-176 SHORT FORM — EIA COPY — Page 3

Form EIA-627, "Annual Quantity and Value of Natural Gas Report"

Survey Design

Beginning with 1980, natural gas production data previously obtained on an informal basis from State conservation agencies were collected on Form EIA-627 (Figure D2). This form was designed by EIA to collect annual natural gas production data from the appropriate State agencies under a standard data reporting system within the limits imposed by the diversity of data collection systems of the various producing States. Data are not considered proprietary. It was also designed to avoid duplication of effort in collecting production and value data by producing States and to avoid an unnecessary respondent burden on gas and oil well operators.

Survey Universe and Response Statistics

Form EIA-627 is mailed to energy or conservation agencies in all 32 natural gas producing States. All producing States participate voluntarily in the EIA-627 survey by filing the completed form or by responding to telephone contacts. For 1989, data on the quantities of nonhydrocarbon gases removed were reported by the appropriate agencies of 22 of the 32 States. These 22 States accounted for 57 percent of total 1989 gross withdrawals. In addition, gross withdrawal data from Kansas, Oklahoma, Louisiana, and Montana, which together accounted for 38 percent of total production, excluded all or most of the nonhydrocarbon gases removed on leases.

Summary of Form EIA-627 Data Reporting Requirements

Form EIA-627 is a multipart form that collects data on the production volume of natural gas (including gross withdrawals from both gas and oil wells); volumes returned to formation for repressuring, pressure maintenance, and cycling; quantities vented and flared; quantities of nonhydrocarbon gases removed; marketed production; the value of marketed production; and the number of producing gas wells.

Respondents are asked to report all volumes in million cubic feet at the State's standard pressure base and at 60 degrees Fahrenheit. All dollar values are reported in thousands.

Routine Form EIA-627 Edit Checks

Each filing of Form EIA-627 is manually checked for reasonableness and mathematical accuracy. Information on the forms is compared to totals of monthly data reported to the Interstate Oil Compact Commission (see Appendix B, "Data Sources"). Volumes are converted, as necessary, to a standard 14.73 psia pressure base. Reasonableness of data is assessed by comparing reported data to the previous year's data. State agencies are contacted by telephone to correct errors. Amended filings or resubmissions are not a requirement, since participation in the survey is voluntary.

Other EIA Publications Referencing Form EIA-627

Data from Form EIA-627 are also published in the EIA publication, *Natural Gas Annual.*

Interstate Oil Compact Commission Form "Monthly Report of Natural Gas Production"

Survey Design

The Interstate Oil Compact Commission (IOCC) is an organization comprised of 32 gas and oil producing States; the Governor of each State sits on the board of the IOCC. The IOCC form, "Monthly Report of Natural Gas Production," (Figure D3) is a voluntary report filed to the IOCC by most of the producing States. The IOCC forwards copies of these forms to the EIA. The purpose of the form is to standardize, to the extent possible, the reporting of natural gas data by the States. Data are not considered proprietary.

Survey Universe and Response Statistics

Most of the 32 States report data to the IOCC. Two exceptions are Florida, which submits its own form, and California, whose data are taken from the Conservation Committee of California Oil Producers publication. Reports on State production are forwarded to the EIA by the IOCC approximately 80 days after the end of the report month.

Form EIA-627

U.S. DEPARTMENT OF ENERGY

Energy Information Administration

Form Approved
OMB No. 19050175
Expires: 12/31/90

ANNUAL QUANTITY AND VALUE OF NATURAL GAS REPORT

This report is collected under P.L. 93-275, Federal Energy Administration Act of 1974. Your voluntary cooperation and response are urgently needed to provide comprehensive, accurate and timely energy information. Because the data collected on EIA-627 are already aggregated by state, no confidentiality pledges are required.

PART I: IDENTIFICATION DATA

1. Name of State Reporting	2. Calendar Year Being Reported ☐☐☐☐
3. Name of Office/Agency	
4. Office Address (Street, City, State, Zip Code)	
5. Name of Contact Person	6. Phone Number of Contact Person (☐☐☐) ☐☐☐ - ☐☐☐☐

PART II: NATURAL GAS VOLUMES

7. Enter the pressure base at which all volumes are reported (psia at 60°F) :

8. Gross Withdrawals

REPORT ALL VOLUMES IN MILLIONS OF CUBIC FEET

Gross withdrawals should represent full well stream volumes including all natural gas plant liquids and nonhydrocarbon gases, but excluding lease condensate. Also, include amounts delivered as royalty payments or consumed in field operations.

PROVIDE BEST ESTIMATE WHEN GAS IS NOT METERED

Item *(a)*	Volume *(b)*
(1) Are the gross withdrawal quantities available from your records consistent with the definition stated above? (i) ☐ Yes (ii) ☐ No . . . *Explain the difference(s) in PART IV*	
(2) Enter the volume of natural gas from gas and condensate wells	
(3) Enter the volume of natural gas from oil wells (casinghead)	
(4) Enter the total of 8(2) and 8(3)	
9. Enter quantity of natural gas returned to formation for repressuring, pressure maintenance and cycling	
10. Enter quantity of natural gas vented to air or burned in flares on the lease or at gas processing plants	
11. Enter quantity of nonhydrocarbon gases removed in treating or processing operations	
12. Enter marketed production *(Enter the result of line 8(4) less lines 9, 10, and 11)*	

ANNUAL QUANTITY AND VALUE OF NATURAL GAS REPORT

PART III: NATURAL GAS VALUES

13. Value of Marketed Production (Wellhead Sales Prices)

NOTE

The value reported on line 14 below should represent wellhead sales prices including charges for natural gas plant liquids subsequently removed from the gas and for gathering and compression, in addition to state production, severance, and/or similar taxes.

Complete the table below only if your method of reporting is inconsistent with the above note. For each item in column (a) of the table, enter an "X" in column (b) or (c) to indicate whether the item is included or excluded from the amount reported on line 14.

Line No.	Item (a)	Included (b)	Excluded (c)
(1)	Natural gas plant liquids		
(2)	Lease condensate		
(3)	Gathering and compression charges		
(4)	State production, severance, and/or similar taxes		

14. Enter the available value of marketed production **REPORT IN THOUSANDS OF DOLLARS**	$
15. Enter the quantity of marketed production associated with the value entered in 14. **REPORT IN MILLIONS OF CUBIC FEET**	
16. Enter the total number of producing gas wells in operation as of December 31 for the reporting year.	

PART IV: COMMENTS

17. Enter any additional comments you may have, including identification and explanation of any data elements submitted based on definitions differing from those applications to data which you provided for the previous year. If more space is needed, please attach separate sheet(s) and put "sheet ____ of ____ " in the upper right corner of those sheets.

INTERSTATE OIL COMPACT COMMISSION

HEADQUARTERS OFFICE: 900 N. E. 23RD STREET • P. O. BOX 53127 • OKLAHOMA CITY, OKLAHOMA 73152
TELEPHONE: (405) 525-3556

Address Reply to Headquarters Office

Monthly Report of Natural Gas Production for the State of _____

Month of _____

Please return two copies of this report as soon as the figures are available after the close of the month for which data are reported. Reports should be addressed to the Interstate Oil Compact Commission, Box 53127, Oklahoma City, OK 73152.

Name of Reporting Agency _____
Address _____
Correspondent & Title _____

Please adjust all volumes to the same pressure base:
Report pressure base used (_____ lbs. absolute at 60° F.)

(Millions of Cubic Feet)

1. Gross gas production* _____
   (a) Natural gas from gas and condensate wells _____
   (b) Natural gas from oil wells (casinghead) _____

* Include amounts delivered as royalty payments or consumed in field operations. Please provide best estimates when gas is not metered.

2. Quantity of natural gas returned to formation for repressuring, pressure maintenance and cycling. _____

3. Quantity of natural gas vented to air or burned in flares on the lease or at gas processing plants. _____

Summary of Data Requirements

The IOCC form consists of three questions on one page, and requires volumetric information on gross production, quantities of gas vented or flared, and gas used for repressuring.

Routine Edit Checks

State data are checked for reasonableness and, in the event of problems, the appropriate State agency is called.

EIA-191 Survey, "Underground Natural Gas Storage Report"

Survey Design

Beginning in January 1991, the EIA-191, "Underground Natural Gas Storage Report," was revised. All prior data on the storage of natural gas was collected on a survey jointly implemented in 1975 by the Federal Power Commission (FPC), the Federal Energy Administration (FEA), and the Bureau of Mines (BOM) as the FPC-8/ FEA-G-318 system. The data received on both the FPC-8 and FEA-G-318 were computerized and aggregated by FPC. The new form will collect storage data by country, field, and reservoir of which there are approximately 400 operating reservoirs in the United States. Data are considered proprietary.

At the beginning of 1979, the EIA assumed responsibility for the collection, processing, and publication of the data gathered in the survey. Form FEA-G-318 was renewed on July 1, 1979, as Form EIA-191 and the survey was retitled the FPC-8/EIA-191 Survey (Figure D4 shows the EIA-191). Form FPC-8 was renewed in December 1985 and the survey retitled FERC-8/ EIA-191 Survey. The forms were not merged because of FERC's stated desire to maintain the separate identity of the FERC-8 for administrative reasons. FERC jurisdictional firms will continue to file the FERC-8 in addition to the new EIA-191.

Survey Universe and Response Statistics

The same group of 91 companies that operate underground facilities will file the new Form EIA-191. Of these companies, 40 are subject to the jurisdiction of FERC and are required to report data on Form FERC-8.

The response rate as of the filing deadline is approximately 20 percent. Data from the remaining 80 percent of respondents are received in writing and/or by telephone within 3 to 4 days after the filing deadline. All data supplied by telephone are subsequently filed in writing, generally within 15 days of the filing deadline. The final response rate is 100 percent.

Summary of EIA-191 Data Reporting Requirements

The EIA-191 is a multipart form that reports the quantities of gas in storage, injections and withdrawals, and the location (including State and county, field, reservoirs) and capacity of underground storage reservoirs along with peak day send out during the reporting period. Information on co-owners of storage reservoirs is also required.

Collection of the survey is on a custody basis, although some respondent ownership data are required. Information requested must be provided within 10 days after the first day of each month. Twelve reports are required per calendar year. Respondents are required to indicate whether the data reported are actual or estimated. In the case of most estimated filings, the necessary revisions are reflected in subsequent scheduled filings or in a revised submission that provides actual data filed, although there is no specific requirement that the respondent do either. Actual data on natural gas injections and withdrawals from underground storage are based on metered quantities. Data on quantities of gas in storage and on storage capacity represent, in part, reservoir engineering evaluations. All volumes are reported at 14.73 psia and 60 degrees Fahrenheit.

Routine Form EIA-191 Edit Checks

Data received on Form EIA-191 are entered into the survey processing system. The survey's five principal data elements (total, base, and working gas in storage, injections, and withdrawals) receive a preliminary visual edit to eliminate and correct obvious errors or omissions. Respondents are required to refile reports containing any inconsistencies or errors.

Other EIA Publications Referencing Forms FERC-8/EIA-191

The EIA publication *Monthly Energy Review* contains data from the FERC-8/EIA-191 survey.

EIA-191 (Revised 1991)

U.S. DEPARTMENT OF ENERGY
ENERGY INFORMATION ADMINISTRATION
WASHINGTON, D.C. 20585

Form Approved
OMB No. 19050175
Expires 12/31/93

UNDERGROUND GAS STORAGE REPORT

I RESPONDENT IDENTIFICATION DATA

Control (ID) No.

Name

Street or Post Office Box:

City, State, Zip Code:

	Person to contact if questions arise concerning this report:	Tel. No. (*Include Area Code and Extension*)
II	GAS STORAGE DATA (All volumes in Mcf - 14.73 psia - 60°F)	Report Period Ending Date: Mo ☐☐ Yr ☐☐

	Field name	Location: State		Reservoir Capacity		
	Reservoir Name	Location: County		Winter Design Day Deliverability (in Mcf)		
	☐ Estimated ☐ Actual ☐ Revised	Base Gas	Working Gas	Total Gas In Storage	Injections	Withdrawals
	Respondent's Gas In Reservoirs Operated by Respondent					
	Gas Belonging To Others In Reservoirs Operated by Respondent					
	Total Gas (Sum of A and B)					
	Peak Day Sendout (in Mcf) Date Mo ☐☐ Da ☐☐					

	Field name	Location: State		Reservoir Capacity		
	Reservoir Name	Location: County		Winter Design Day Deliverability (in Mcf)		
	☐ Estimated ☐ Actual ☐ Revised	Base Gas	Working Gas	Total Gas In Storage	Injections	Withdrawals
	Respondent's Gas In Reservoirs Operated by Respondent					
	Gas Belonging To Others In Reservoirs Operated by Respondent					
	Total Gas (Sum Of A And B)					
	Peak Day Sendout (in Mcf) Date Mo ☐☐ Da ☐☐					

III CERTIFICATION — I certify that the information submitted in this report is the most accurate available at this time to the best of my knowledge.

	Name (*Type or Print*)	Title	Signature	Date

Energy Information Administration/ Natural Gas Monthly

Form FERC-11, "Natural Gas Pipeline Company Monthly Statement"

Survey Design

The collection of monthly data from major pipeline companies was begun in December 1964 by the Federal Power Commission (FPC). On October 1, 1977, FPC ceased to exist, and its functions and regulatory responsibilities were transferred to the Secretary of Energy and to the Federal Energy Regulatory Commission (FERC), an independent commission within the Department of Energy.

Information collected on Form FERC-11 (Figure D5) is used by FERC in carrying out its regulatory authority. Form FERC-11 is a monthly regulatory reporting form rather than one filed for statistical purposes. Data are not considered proprietary.

Survey Universe and Response Statistics

Form FERC-11 is filed by major interstate natural gas pipeline companies whose combined sales for resale and gas transported interstate or stored for a fee exceeded 50 billion cubic feet in the previous calendar year. Approximately 40 pipeline companies report data on Form FERC-11. Natural gas pipeline companies are monitored annually to determine whether each has met the requirements for classification as a major pipeline.

Information is collected monthly by mail. Historically, the response rate has been 100 percent.

Summary of Form FERC-11 Data Requirements

Form FERC-11 requires information on revenues, expenses, and sales data, as well as volumetric data on purchases and production.

Submission of Form FERC-11 is required no later than 40 days after the close of the report month. The form requires reporting of both preliminary data for the report month and final data for the same month in the previous year. All data are reported on an equity basis.

Routine Form FERC-11 Edit Checks

Data are collected on standard forms that initially are manually reviewed and coded. Reviews are made to ensure consistency in reporting within and among utilities in the presentation of current and 12-month financial and sales data. Also, receipts and disposition of gas are analyzed between domestic and foreign producers. Data are later sent for keying, which begins the automated processing. Data are keyed to tape or disk for data editing. Edit reports are produced and are reviewed manually.

Other EIA Publications Referencing Form FERC-11

The Energy Information Administration publication *Monthly Energy Review* contains data from Form FERC-11.

FERC-121, "Application for Determination of the Maximum Lawful Price Under the Natural Gas Policy Act"

Survey Design

Form FERC-121 (Figure D6) was designed by the Federal Energy Regulatory Commission (FERC) to carry out its authority to regulate natural gas prices under the Natural Gas Policy Act. Form FERC-121 is initially filed with the agency having jurisdiction over the lease on the land where the well is drilled, for example, State agencies or the Department of Interior. The agencies determine whether or not to grant the application. The application, support documentation, and decision are forwarded to FERC, which has 45 days to review the decision. Data are not considered proprietary.

Survey Universe and Response Statistics

Form FERC-121 must be filed by any natural gas producer who is the first seller of gas that qualifies for an incentive price. At the end of February 1988, FERC had 408,363 applications from 12,000 producers on file. Of the total applications, approximately 20 percent are reapplications requesting new price determinations on wells that have been producing under a previous application.

Form Approved, OMB No 1902-0032
(Expires 6-30-90)

U.S. DEPARTMENT OF ENERGY
Federal Energy Regulatory Commission
Washington, D C 20426

FERC FORM NO. 11: NATURAL GAS PIPELINE COMPANY MONTHLY STATEMENT

Company Code Number

This report is mandatory under the authority granted by Sections 10 and 16 and sanctions provided by Section 21(b) of the Natural Gas Act Failure to report may result in criminal fines, civil penalties and other sanctions as provided by law

Month Being Reported
19 ___

PART I IDENTIFICATION

1 Name of Company

2 Address of Company
(1) Number and Street (2) City (3) State (4) Zip Code

3 Person Authorized To Sign This Report
(1) Signature (2) Phone Number (Including area code)

PART II REVENUE DATA

Line No (a)	Item (b)	Revenues (In thousands of dollars) Current Year (c)	Revenues (In thousands of dollars) Previous Year (d)	Sales (In millions of cubic feet) Current Year (e)	Sales (In millions of cubic feet) Previous Year (f)	Footnote (g)
4	Sales of Natural Gas					
5	Firm Industrial					
6	Off-peak Industrial					
7	Interruptible Industrial					
8	TOTAL INDUSTRIAL (Enter total of lines 5, 6 and 7)					
9	Other Ultimate Consumers					
10	TOTAL SALES TO ULTIMATE CONSUMERS (Enter total of lines 8 and 9)					
	Sales For Resale (483)					
11	Total Major Gas Pipelines					
12	Total to All Other Pipelines and Gas Utilities					
13	TOTAL SALES FOR RESALE (Enter total of lines 11 and 12)					
14	TOTAL SALES OF NATURAL GAS (Enter total of lines 10 and 13)					
15	Intracompany Transfers (485)					
16	Revenues From Transportation of Gas of Others (489)			(Enter volume of gas transported)		
17	Provision for Rate Refunds (496)					

Company Code Number	Month and Year Being Reported

PART III INCOME DATA

Line No (a)	Item (b)	Current Year *(In thousands of dollars)* (c)	Previous Year *(In thousands of dollars)* (d)	Footnote (e)
18	Gas Operating Revenues (400)			
19	Operation and Maintenance Expense (401, 402)			
20	Depreciation, Depletion and Amortization Expense (403-407)			
21	Taxes Other Than Income Taxes, Utility Operating Income (408.1)			
22	Total Gas Operating Expenses (401, 402, 403-407, 408.1, 409.1, 410.1, 411.1, 411.4)			
23	Net Gas Operating Revenues (Enter the result of lines 18 minus 22) (including Plant Leased to Others)			
24	Total Gas Utility Operating Income (Refer to specific instruction for line 24.)			
25	Allowance For All Funds Used During Construction - Credit (419.1, 432)			
26	Total Income Before Interest Charges (427-432) and Extraordinary Items (409.3, 434,435)			
27	Net Income (433) Before Extraordinary Items (434, 435), Income Taxes (409.1, 409.2, 409.3, 410.1, 410.2, 411.1, 411.2), and Investment Tax Credits (411.4, 411.5, 420)			
28	Net Income (Monthly Amount Related to 433.)			

PART IV: OTHER SELECTED DATA

Line No. (a)	Item (b)	Current Year *(In thousands of dollars)* (c)	Previous Year *(In thousands of dollars)* (d)	Footnote (e)
29	Gas Utility Plant in Service (101)			
30	Accumulated Provision For Depreciation, Depletion, and Amortization of Gas Utility Plant (108, 111)			
31	Gas Plant Construction Work In Progress (107)			
32	Gross Additions To Construction Work In Progress (107) For This Month Being Reported			
33	Amount Collected Which Is Subject To Refund During This Month Being Reported			
34	Cumulative Amount Collected Since January 1 This Year Subject To Refund, At End Of This Month Being Reported			
35	Monthly Amount Subject To Refund Actually Refunded During This Month Being Reported			
36	Cumulative Amount Subject To Refund Refunded Since January 1 This Year, To The End Of This Month Being Reported			

Company Code Number	Month and Year Being Reported

PART V OPERATION AND MAINTENANCE EXPENSE DATA

Line No. (a)	Item (b)	Amount (In thousands of dollars) Current Year (c)	Amount (In thousands of dollars) Previous Year (d)	Gas Volume (In millions of cubic feet) Current Year (e)	Gas Volume (In millions of cubic feet) Previous Year (f)	Footnote (g)
37	Manufactured Gas Production					
38	Liquefied Petroleum Gas					
39	Other Manufactured Gas					
40	TOTAL (Enter total of lines 38 and 39)					
41	Natural Gas Production					
42	Production and Gathering (750-769)					
43	Products Extraction (770-791)			(Enter thousands of gallons)		
44	Exploration and Development (795-798)					
	Purchased Natural Gas From					
45	Producers (800, 801-803)					
46	Intracompany Transfers (800.1)					
47	Imports					
48	Major Gas Pipelines (800, 801-803)					
49	Other Piplines (800, 801-803)					
50	Other Gas Purchases (804, 805, 805.1 minus line 68 -71)					
51	TOTAL (Enter total of lines 45 to 50)					
52	Natural Gas Produced					
53	Exchange Gas - In (806)					
54	Exchange Gas - Out (806)					
55	Purchased Gas Expenses (807.1-807.5)					
56	Gas Withdrawn From Underground Storage - Debit (808.1, 809.1)					
57	Gas Delivered To Underground Storage - Credit (808.2, 809.2)					
58	Gas Used For Compressor Station Fuel - Credit (810)					
59	Gas Used For Products Extraction - Credit (811)					
60	Gas Used For Other Utility Operations - Credit (812)					
61	Other Gas Supply Expenses (813)					
62	TOTAL GAS PRODUCTION (Enter total of lines 40, 42, 43, 44, 51, 53 to 61)					
63	Storage Expenses (814-843.9)					
64	LNG Terminating and Processing Expenses (844.1-847.8)					
65	Transmission Expenses (850-867)					
66	Distribution Expenses (870-894)					
67	Other Gas Purchased and Produced (Entries here should not be included under any other item in this part.)					
68	Liquefied Natural Gas (804.1)					
69	Gasified Coal					
70	Synthetic Gas (Reformed (gasified) liquid hydrocarbons)					
71	TOTAL (Enter total of lines 68 to 70)					
72	All Other Operating and Maintenance Expenses (901-905, 907-916, 920-931, 935)					
73	TOTAL OPERATING AND MAINTENANCE EXPENSES (Enter total of lines 62, 63, 64, 65, 66, 71, 72)					

Summary of Form FERC-121 Data Reporting Requirements

Form FERC-121 requires information on the location and API number of the well, the name and address of the applicant, the type of determination being sought, the estimated annual production, and the contract price.

In addition to Form FERC-121, each application must be submitted with support documentation; for example, a well completion report for Section 103 filings, and geological information on surrounding wells for Section 102 applications.

Routine Form FERC-121 Edit Checks

Upon receipt at FERC, forms are checked manually for completeness. In addition, a computerized edit program flags incomplete or incorrect data.

Purchased Gas Adjustment Filings

The purpose of the PGA is to allow interstate natural gas pipeline companies to recover changes in their purchase prices for natural gas above the cost of service reflected in their current tariff filings. To allow recovery in a timely manner, the key data reported in the PGA are projections of purchases in the immediate future. In most cases, companies report both the NGPA Section number covering each contracted purchase and the date of the contract. These data make the PGA filings a unique source of information about the current state of the natural gas market. Data are not considered proprietary.

Description of Data

Fifty-eight interstate pipeline companies submit PGA filings. Pipeline companies that transport only intrastate supplies of natural gas do not submit filings, nor do companies that have no purchased gas adjustment clauses in their tariffs.

All PGA filings include projected purchases for a defined future period by NGPA category. Projected volumes and prices represent the company's best estimate of natural gas purchase volumes and costs during the subsequent effective tariff period. The figures are usually derived from those of similar past periods. Annual PGA filings also include "actual" volumes and prices for some past period. The two sets of figures cannot, in general, be used to check each other because the actual figures can cover periods other than past projections. To the extent that the two sets of figures can be compared, they appear to approximate but not to match each other.

Form FERC-121

U.S. DEPARTMENT OF ENERGY
Federal Energy Regulatory Commission
Washington, D.C. 20426

Form Approved
OMB No. 19050175
Expires: 12/31/90

APPLICATION FOR DETERMINATION OF THE MAXIMUM LAWFUL PRICE UNDER THE NATURAL GAS POLICY ACT (NGPA)
(Sections 102, 103, 107 and 108)

GENERAL INSTRUCTIONS

Complete this form if you are applying for price classification under sections 102, 103, 107 or 108 of the NGPA.

Complete each appropriate item on the reverse side of this page. The code numbers used in items 4 and 6 can be obtained from the Buyer/Seller Code Book. If there is more than one purchaser or contract, identify the additional information in the space below. Also enter any additional remarks in the space below. The data reported on this form are not considered to be confidential and will not be treated as such.

Submit the completed application to the appropriate Jurisdictional Agency as listed in title 18 of the CFR, part 274.501. If there are any questions, call (202) 357-8585.

SPECIFIC INSTRUCTIONS

Use the codes in the table below for type of determination in item 2.

Section of NGPA (a)	Category Code (b)	Description (c)
102	1	New OCS lease
102	2	New onshore well (2.5 mile test)
102	3	New onshore well (1000 feet deeper test)
102	4	New onshore reservoir
102	5	New reservoir on old OCS lease
103	-	New onshore production well
107	0	Deep (more than 15,000 feet) high-cost gas
107	1	Gas produced from geopressured brine
107	2	Gas produced from coal seams
107	3	Gas produced from Devonian shale
107	5	Production enhancement gas
107	6	New tight formation gas
107	7	Recompletion tight formation gas
108	0	Stripper well
108	1	Stripper well – seasonally affected
108	2	Stripper well – enhanced recovery
108	3	Stripper well – temporary pressure buildup
108	4	Stripper well – protest procedure

Enter the appropriate information regarding other Purchasers/Contracts.

Line No	Contract Date (Mo, Da, Yr) (a)	Purchaser (b)	Buyer Code (c)
1			
2			
3			
4			
5			
6			

Remarks:

FERC-121 (8-82)

APPLICATION FOR DETERMINATION OF THE MAXIMUM LAWFUL PRICE UNDER THE NATURAL GAS POLICY ACT (NGPA)

1.0 API well number.
(If not assigned, leave blank. 14 digits.) — — —

2.0 Type of determination being sought.
(Use the codes found on the front of this form.)
Section of NGPA ____ Category Code ____

3.0 Depth of the deepest completion location. (Only needed if sections 103 or 107 in 2.0 above.)
____ feet

4.0 Name, address and code number of applicant. (35 letters per line maximum. If code number not available, leave blank.)
Name ____ Seller Code ____
Street ____
City ____ State ____ Zip Code ____

5.0 Location of this well. (Complete (a) or (b).)
(a) For onshore wells (35 letters maximum for field name.)
Field Name ____
County ____ State ____

(b) For OCS wells
Area Name ____ Block Number ____
Date of Lease: Mo. Day Yr. ____ OCS Lease Number ____

(c) Name and identification number of this well. (35 letters and digits maximum.) ____

(d) If code 4 or 5 in 2.0 above, name of the reservoir. (35 letters maximum.) ____

6.0 (a) Name and code number of the purchaser. (35 letters and digits maximum. If code number not available, leave blank.)
Name ____ Buyer Code ____

(b) Date of the contract: Mo. Day Yr.

(c) Estimated total annual production from the well: ____ Million Cubic Feet

		(a) Base Price	(b) Tax	(c) All Other Prices (Indicate (+) or (-).)	(d) Total of (a), (b) and (c)
7.0 Contract price: (As of filing date. Complete to 3 decimal places.)	$/MMBTU				
8.0 Maximum lawful rate: (As of filing date. Complete to 3 decimal places.)	$/MMBTU				

9.0 Person responsible for this application:
Name ____ Title ____
Signature ____
Date Application is Completed ____ Phone Number ____

Agency Use Only
Date Received by Juris. Agency
Date Received by FERC

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Only projected figures for volumes and costs have been used. They are considered more generally useful and accurate than the reports of actual production for the following reasons:

- Companies file actual reports largely as a convenience to themselves. The data are not generally subjected to the same scrutiny as projections. Moreover, pipeline companies have considerable latitude as to which time they use in reporting actual figures.
- The costs reported as actual costs are costs derived from previous projections.
- As a general rule, neither projected nor actual volumes are audited. In the absence of such an audit, it is thought that actual volumes may be as subject to error as the projections.

The PGA filings contain a rough indication of the error due to using projections in the form of the surcharge adjustment. The surcharge adjustment is used to recover purchase costs beyond those expected or to repay costs below those expected. The surcharge adjustment cannot be applied directly to PGA filings because:

- It contains only a summary figure for all differences from projected levels. This includes costs of pipeline purchases and imports.
- No volumes are directly reported. A cost per thousand cubic feet figure is reported but is based on projected future purchases only.
- It covers time periods different from previous projections. Normally, the surcharge adjustment covers a period from 9 to 3 months prior to the beginning of a new projection period.

The PGA filings remain the only source of information for analyzing gas categories, however, and the data problems do not appear to be crippling for purposes of drawing general conclusions.

Interpretation of Data. The projected purchase cost for each contract volume represents the pipeline company's estimates of the purchase costs it will incur during the coverage period of the filing. These costs include:

- The average price to be paid to the producer
- Gathering charges
- Transportation charges
- Taxes.

Royalty payments and payments for gas not received under take-or-pay clauses are among the costs not included.

Projected volumes reported in the PGA filings are generally based on actual volumes for a similar preceding period (though they are typically adjusted to fit current market conditions). A number of projected gas purchases reported in the PGA filings have not been considered because they would have resulted in significant double counting. They are:

- Purchases from other pipelines
- Imports
- Exchange gas.

In addition, cost-of-service gas (a company's own production from specific leaseholds of pre-NGPA gas) is not considered because it is not covered by the NGPA and because most companies do not include it in their PGA filings.

The table included in this publication is therefore designed to cover a specific part of the overall national gas market: wellhead purchases that are both subject to the NGPA and dedicated to the interstate market.

Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas"

Survey Design

The collection of data covering natural gas imports and exports was begun in 1973 by the Federal Power Commission (FPC). On October 1977, FPC ceased to exist and its data collection functions were transferred to the Federal Energy Regulatory Commission (FERC) within the Department of Energy (DOE). Since 1979, the Energy Information Administration (EIA) has had the responsibility for collecting Form FPC-14. Data are not considered proprietary.

Survey Universe and Response Statistics

The Form FPC-14 is filed annually by each organization or individual having authorization to import and export natural gas regardless of whether any imports or exports took place during the reporting year. The authorization to import and export was originally granted by the FPC. In 1977, it was tranferred to the Economic Regulatory Commission (ERA) and it now resides with the Office of Fuels Programs in the Office of Fossil Energy. In 1989, 205 companies met the reporting criteria, only 76 reported import or export of natural gas.

The respondent list for the Form FPC-14 is updated at the beginning of each year. All new respondents with authorization to import or export natural gas are added to the list and respondents whose licenses have expirted are deleted. Five copies of Form FPC-14 are mailed in February to all companies authorized to im-

port or export natural gas. The completed original and three copies are to be filed with the EIA on or before March 31 of each year, for the preceding calendar year. Companies that have not filed by March 31 are contacted.

Routine Form FPC-14 Edit Checks

Respondents are required to certify the accuracy of all data reported. The survey forms are checked at the EIA for responableness and accuracy. If errors are found the companies are required to file corrected data. The data are processed at the EIA and published as reported. All natural gas volumes in this report are expressed at a pressure base of 14.73 pounds per square inch absolute and temperature of 60 degrees Fahrenheit, except as noted. All prices are in U.S. dollars and import/export prices are those paid at the U.S. border (except exports of LNG are those prices paid at the point of sale and delivery in Yokohama, Japan).

"Quarterly Natural Gas Import and Export Sales and Price Report"

This report is prepared quarterly by the Office of Fuels Programs in the Office of Fossil Energy based on information submitted by all firms having authorization to import or export natural gas. All data on this report is considered preliminary until the annual data on the Form FPC-14 is final, usually in September of the following year.

Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers"

Survey Design

The original Form EIA-857 was approved for use in December 1984. Response to the Form EIA-857 is mandatory on a monthly basis. Data collected on the Form EIA-857 cover the 50 States and the District of Columbia and include both price and volume data. Data are considered proprietary.

Survey Universe and Response Statistics

A sample of 389 natural gas companies including interstate pipelines, intrastate pipelines, and local distribution companies report to the survey. The sample was selected independently for each of the 50 States and the District of Columbia. Each selected company is required to complete and file the Form EIA-857 on a monthly basis. Initial response statistics on a monthly basis are as follows: responses received by due date, approximately 90 percent, and responses received after follow-up, 100 percent.

The Form EIA-857 is a monthly sample survey of natural gas marketers, including interstate pipelines, intrastate pipelines, and local distribution companies. It provides data that are used to estimate monthly sales of natural gas (volume and price) by State and monthly deliveries of natural gas on behalf of others (volume) by State to three consumer sectors - residential, commercial, and industrial. (Monthly deliveries and prices of natural gas to electric utilities are reported on the Form FERC-423, "Monthly Report of Cost and Quality of Fuels for Electric Plants," and the Form EIA-759, "Monthly Power Plant Report.")

See Appendix C for a discussion of the sample design and estimation procedures.

Summary of Form EIA-857 Data Reporting Requirements

Data collected monthly on the Form EIA-857 on a State level include the volume and cost of purchased gas, the volume and cost of natural gas consumed by sector (residential, commercial, and industrial), and the average heat content of all gas consumed. Respondents file completed forms with EIA in Washington, DC on or before the 30th day after the end of the report month.

All natural gas volumes are reported in thousand cubic feet at 14.73 psia at 60 degrees Fahrenheit and dollar values are reported to the nearest whole dollar.

Routine Form EIA-857 Edit Checks

A series of manual and computerized edit checks are used to screen the Form EIA-857. The edits performed include validity and analytical checks.

Figure B7. Form FPC-14

FEDERAL ENERGY REGULATORY COMMISSION
Washington D.C. 20426

Form Approved
OMB Number: 1902-0027
Expiration Date 09/30/92

ANNUAL REPORT FOR IMPORTERS AND EXPORTERS OF NATURAL GAS

GENERAL INSTRUCTIONS

1. The completed original and 3 conformed copies of this report shall be filed with the Federal Energy Regulatory Commission, Washington, D.C. 20426 on or before March 31, of each year, for the preceding calendar year.
2. The report will be filed by each person having authorization to import or export natural gas.
3. Use a separate schedule for each authorization. If one authorization involves more than one import or export point, a separate schedule must be filed for each point.
4. All volumes reported in Mcf will be at 14.73 Psia and 60°F.
5. Where transactions are based primarily on volumetric measurement, weighted average Btu data should be used to estimate total monthly Btu's.
6. Amounts paid or received and cost or receipts shall be reported in U.S. Dollars.
7. DEFINITIONS. – Transporter–the party or parties, other than buyer or seller, owning the facilities by which gas or LNG is physically transferred between buyer and seller. Costs–all expenses incurred by importer up to the U.S. point of delivery for the reported quantity imported; Receipts–all revenues received by exporter for the reported quantity exported.

Name of Respondent	Address of Respondent	Year Ending December 31, ____

SCHEDULE I – GASEOUS PHASE NATURAL GAS

NOTE: If authorization granted is increased, decreased, or extended under a succession of docket numbers and all related gas moved through the same border facilities and authorized expansions thereof, moved to or from the same purchaser or supplier, and was subject to the same rate, such transaction shall be combined for reporting purposes and appropriate Docket Numbers shown.

Report for *(Check one)* ☐ Import ☐ Export	Foreign Seller or Foreign Buyer	
U.S. Entry or Exit Point	Transporter	Docket Number(s)

Line No	Month *(a)*	QUANTITY RECEIVED OR SHIPPED AT THE ENTRY OR EXIT POINT				Amount Paid or Received at Entry or Exit Point *(f)*
		Peak Day				
		Date *(b)*	Mcf *(c)*	Mcf *(d)*	MMBtu *(e)*	
1	January					
2	February					
3	March					
4	April					
5	May					
6	June					
7	July					
8	August					
9	September					
10	October					
11	November					
12	December					
13	TOTAL					

ANNUAL WEIGHTED AVERAGE IN Btu's PER CUBIC FOOT *(Line 13, [Column (e) ÷ (Column (d) X 1000)])* _____

ANNUAL WEIGHTED AVERAGE PRICE IN CENTS PER MMBtu *(Line 13, Column (f) ÷ Column (e) X 100)* _____

FPC-14 (8-82)

MONTHLY REPORT OF NATURAL GAS PURCHASES AND DELIVERIES TO CONSUMERS

This report is mandatory under the Federal Energy Administration Act of 1974 (Public Law 93-275). Failure to report may result in criminal fines, civil penalties, and other sanctions as provided by law. See section VI of the instructions for the confidentiality statement. Public reporting burden for this collection of information is estimated to average 4 hours per response, including time of reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden or any other aspect of this collection of information, including suggestions for reducing this burden, to the Energy Information Administration, Office of Statistical Standards EI-73, Mail Station 2E-081 Forrestal, 1000 Independence Ave., SW, Washington, DC 20585, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

Affix Identification Label or Enter:

01 Control No.: _____

02 Company Name: _____

State of Operation: _____

Return completed forms to:

Energy Information Administration
Mail Station: BG-094
U.S. Department of Energy
Washington, D.C. 20585
Attn: Form EIA-857

Report Period Mo.	Yr.	Revised Report Indicator
03		04

SECTION I — Natural Gas Purchases and Deliveries to Consumers

	Volume (Mcf at 14.73 psia)	Cost or Revenue (Dollars)
Purchased Gas Received in Distribution Service Area 05		
Delivered to Residential Consumers (Onsystem Sales) 06		
Delivered to Commercial Consumers (Onsystem Sales) 07		
Delivered to Industrial Consumers (Onsystem Sales) 08		
Delivered to Electric Utilities (Onsystem Sales) 09		
Transported to Residential Consumers 10		Shaded areas not required
Transported to Commercial Consumers 11		
Transported to Industrial Consumers 12		
Transported to Electric Utilities 13		
Total Delivered and Transported to Consumers 14		
Average Btu Content of Gas Delivered to Consumers 15		(Btu/cu. ft.)

SECTION II — Footnotes

SECTION III — CONTACT PERSON AND CERTIFICATION

Contact Person: 16 Name:	(Area Code) Number Extension: 17 Telephone
Certification: I certify that the information provided hereon is true and accurate or, where indicated on the form, reasonable estimates to the best of my knowledge.	
18 Name:	19 Title:
Signature:	Date:

Appendix C

Statistical Considerations

Appendix C

Statistical Considerations

The monthly sales (volume and price) and monthly deliveries (volume) of natural gas to residential, commercial and industrial consumers presented in this report by State are estimated from data reported on the Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers." (See Appendix B for a description of this Form.) These estimations must be made from the reported data since the Form EIA-857 is a sample survey. A description of the sample design and the estimation procedures is given below.

Sample Design

The Form EIA-857 is a monthly sample survey of companies delivering natural gas to consumers. It includes interstate pipeline companies, intrastate pipeline companies, producers, and local distribution companies. The survey provides data that are used each month to estimate the volume and price for onsystem sales of natural gas by State and the volume of natural gas delivered for the account of others, by State, to three consumer sectors--residential, commercial, and industrial. Monthly deliveries and prices of natural gas to electric utilities are reported on the Form EIA-759, "Monthly Power Plant Report," and the Form FERC-423, "Monthly Report of Costs and Quality of Fuels for Electric Plants."

Sample Universe. The sample currently in use was selected from a universe of 1,730 companies. These companies were respondents to the Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition," for reporting year 1989 who reported sales or deliveries to consumers in the residential, commercial or industrial sectors. (See Appendix B for a description of the Form EIA-176.)

Sampling Plan. The goal was a sample that would provide estimates of monthly natural gas consumption by the three consuming sectors within each State and the District of Columbia. A stratified sample using a single stage and systematic selection with probability proportional to size was designed. The measure of size was the volume of natural gas physically delivered in the State to the three consuming sectors by the company in 1989. There were two strata--companies selected with certainty and companies selected under the systematic probability proportional to size design.

Initial calculations showed that a 25 percent sample of companies would yield reasonably accurate estimates. The sample was selected independently in each State, resulting in a national total of 392 respondent-companies. After adjustment for previously unrecorded mergers and acquisitions occuring since 1989 and reported as a result of the initial mail-out, the sample contains a national total of 389 respondent companies.

Certainty Stratum. Since estimates were needed for each of the 50 States and the District of Columbia, the strata were established independently within each State. In 16 States and the District of Columbia where sampling was not feasible due to small numbers of companies and/or small volumes of gas deliveries, all companies were selected. The 16 States were: Alaska, Connecticut, Delaware, Hawaii, Idaho, Maine, North Dakota, New Hampshire, New Jersey, Nevada, Oregon, Rhode Island, South Dakota, Utah, Vermont, and Washington.

For each of the remaining States, the total volumes of industrial sales and deliveries and of the combined residential/commercial sales and deliveries were determined. Companies with gas sales/deliveries to the industrial sector or to the combined residential/commercial sector above a certain level were selected with certainty. Since a few large companies often account for most of the natural gas delivered within a State, this ensures those companies' inclusion in the sample. The formula for determining certainty was applied independently in the two consumer sectors--the industrial and the combined residential/commercial. These selected companies, together with the companies in the jurisdictions discussed where sampling was not feasible, formed the certainty stratum.

All companies with gas sales/deliveries in sector j greater than the cut-off value (C_j) were included in the certainty stratum. The formula for C_j was:

$$C_{.j} = \frac{X_{.j}}{2n} \qquad (1)$$

where:

$C_{.j}$ = cutoff value for consumer sector j,

n = target sample size to be selected for the State, 25 percent of the companies in the State,

X_{ij} = the annual volume of gas sales/deliveries by company i to customers in consumer sector j,

$X_{i.}$ = the sum within State of annual gas volumes for company i,

$X_{.j}$ = the sum within State of annual gas volumes in consumer sector j,

$X_{..}$ = the sum within State of annual gas volumes in all consumer sectors.

Noncertainty Stratum. All other companies formed the noncertainty stratum. They were systematically sampled with probability proportional to size. The measure of size for each company was the total volume of gas sales to all consumer sectors ($X_{i.}$). The number of companies to be selected from the noncertainty stratum was calculated for each State, with a minimum of 2.

The formula for selecting the number of noncertainty stratum companies was:

$$m = n\frac{X2}{X} \qquad (2)$$

where:

m = the sample size for the noncertainty stratum within a State,

$X2$ = the sum within State of the $X_{i.}$ for all companies in the noncertainty stratum.

Companies were listed in ascending order according to their measure of size and then a cumulative measure of size in the stratum was calculated for each company. The cumulative measure of size was the sum of the measures of size for that company and all preceding companies on the list. An interval of width I for selecting the companies systematically was calculated using ($I = \frac{X2}{m}$). A uniform random number R was selected between zero and I. The first sampled company was the first company on the list to have a cumulative measure of size greater than R. The second company selected was the first company on the list to have a cumulative measure of size greater than R + I. R + I was increased again by I to determine the third company to be selected. This procedure was repeated until the entire sample was drawn.

Subgroups. In eight States, the noncertainty stratum was divided into subgroups to ensure that gas in each consumer sector could be estimated. The systematic sample with probability proportional to size design described above was applied independently in each subgroup. The methods for determining the subgroup sample size and calculating the subgroup interval for sample selection were the same as the methods described above for the noncertainty stratum, except that X2 was the sum within State of the $X_{i.}$ for only those companies in the subgroup.

These subgroups were defined only for the purpose of sample selection. They are:

Illinois and West Virginia: companies handling any industrial gas and all other companies.

California, Kansas, and Louisiana: companies handling only industrial gas and all other companies.

Texas: companies handling only residential/commercial gas, companies handling only industrial gas, and all other companies (three subgroups).

Arkansas: companies handling 1 billion cubic feet or more of gas and companies handling less than 1 billion cubic feet of gas.

New York: companies handling 8 million cubic feet or more of gas and companies handling less than 8 million cubic feet of gas.

Estimation Procedures

Estimates of Volumes. A ratio estimator is applied to the volumes reported in each State by the sampled companies to estimate the total gas sales and deliveries for the State. Ratio estimators are calculated for each consumer sector--residential, commercial, and industrial--in each State where companies are sampled. The following annual data are taken from the most recent 1989 submissions of Form EIA-176:

The formula for calculating the ratio estimator (E_{vj}) for the volume of gas in consumer sector j is:

$$E_{vj} = \frac{Y_{.j}}{Y'_{.j}} \qquad (3)$$

where:

$Y_{.j}$ = the sum within State of annual gas volumes in consumer sector j for all companies,

$Y'_{.j}$ = the sum within State of annual gas volumes in consumer sector j for those companies in the sample.

$$V_j = y_j \cdot E_{vj} \qquad (4)$$

where:

V_j = the State estimate of monthly gas volumes in consumer sector j.

y_j = the sum within State of reported monthly gas volumes in consumer sector j.

Estimates of Revenues. State revenues are estimated from monthly data reported by the sample companies in the same way as the volumes are estimated. Ratio estimators are calculated for each consumer sector based on annual *sales* revenue in each State where companies are sampled. The estimated revenues are subsequently used to calculate average prices.

The formula for calculating the ratio estimator for residential gas sales revenues in consumer sector j is:

$$E_{rj} = \frac{Z_j}{Z'_j},$$

where:

Z_j = the sum within State of annual gas sales revenues in consumer sector j.

Z'_j = the sum within State of annual gas sales revenues for those companies in the sample in consumer sector j.

The ratio estimator is applied as follows:

$$R_j = z_j \times E_j,$$

where:

R_j = the monthly estimated revenue for gas sales in consumer sector j.

z_j = the sum within State of reported monthly gas sales revenues in consumer sector j.

Computation of Natural Gas Prices. The natural gas volumes that are included in the computation of prices represent only those volumes associated with natural gas sales.

The average price of natural gas is calculated as follows:

$$P_j = \frac{R_j}{V_j},$$

where:

P_j = the average price of gas sales within a State in consumer sector j.

V_j = the estimate of gas sales within a State in consumer sector j.

All average prices are weighted by their corresponding sales volume estimates when national average prices are computed.

The monthly average prices of natural gas are based on sales data only. Volumes of gas delivered for the account of others to these consumer sectors are not included in the State or national average prices.

Table 33 shows the percent of the total State volume that represents volumes from natural gas sales to the commercial and industrial sectors. This table may be helpful in evaluating commercial and industrial price data. Virtually all natural gas deliveries to the residential sector represent onsystem sales volumes only.

Estimation for Nonrespondents. A volume for each consumer category is imputed for companies that fail to respond. The imputation is based on the previous month's value reported by the non-responding company and the change from the previous month to the current month in volumes reported by other companies in the State. The imputed volumes are included in the State totals. To estimate prices for non-respondents, the unit price (dollars per thousand cubic feet) reported by the company in the previous month is used.

The formula for imputing volumes of gas sales for nonrespondents was:

$$F_t = F_{t-1} \times \frac{y_{jt}}{y_j t-1} \qquad (5)$$

where:

F_t = imputed gas volume for current month t,

F_{t-1} = gas volume for the company for the previous month,

y_{jt} = gas volume reported by companies in the State stratum for report month t,

$y_j t-1$ = gas volume in the previous month for companies in the State stratum that reported in month t.

Final Revisions

Adjusting Monthly Data to Annual Data. After the annual data reported on the Form EIA-176 have been submitted, edited, and prepared for publication in the *Natural Gas Annual,* revisions are made to monthly data. The revisions are made to the volumes and prices of natural gas delivered to consumers that have appeared in the *Natural Gas Monthly* to match them to the annual values appearing in the *Natural Gas Annual.* The revised monthly estimates allocate the difference between the sum of monthly estimates and the annual reports according to the distribution of the estimated values across the months.

Before the final revisions are made, changes or additions to submitted data received after publication of the monthly estimate and not sufficiently large to require a revision to be published in the *Natural Gas Monthly,* are used to derive an updated estimate of monthly consumption and revenues for each State's residential, commercial, or industrial natural gas consumption.

For each State, two numbers are revised, the estimated consumption and the estimated price per thousand cubic feet.

The formula for revising the estimated consumption is:

$$V^{*}_{jm} = V_{jm} + \left[(V_{ja} - V'_{jm})(\frac{V_{jm}}{V'_{jm}}) \right] \qquad (6)$$

where:

V^{*}_{jm} = the final volume estimate for month m in consumer sector j,

V_{jm} = the estimated volume for month m in consumer sector j,

V_{ja} = the volume for the year reported on Form EIA-176,

V'_{jm} = The annual sum of estimated monthly volumes.

The price is calculated as described above in the Estimation Procedures section, using the final revised consumption estimate and a revised revenue estimate.

The formula for revising the estimated revenue is:

$$R^{*}_{jm} = R_{jm} + \left[(R_{ja} - R'_{jm})(\frac{R_{jm}}{R'_{jm}}) \right] \qquad (7)$$

where:

R^{*}_{jm} = the final revenue estimate for month m in consumer sector j,

R_{jm} = the estimated revenue for month m in consumer sector j,

R_{ja} = the revenue for the year reported on Form EIA-176,

R'_{jm} = The annual sum of estimated monthly revenues.

Revision of Volumes and Prices for Deliveries to Electric Utilities. Revisions to monthly electric utilities data are published throughout the year as they become available.

Reliability of Monthly Data

The monthly data published in this report are subject to two sources of error - nonsampling error and sampling error. Nonsampling errors occur in the collection and processing of the data. See the discussion of the Form EIA-857 in Appendix B for a description of nonsampling errors for monthly data.

Sampling error may be defined as the difference between the results obtained from a sample and the results that a complete enumeration would provide. The standard error statistic is a measurement of sampling error.

Standard Errors. A standard error of an estimate is a statistical measure that indicates how the estimate from the sample compares to the result from a complete enumeration. Standard errors are calculated based on statistical theory that refers to all possible samples of the same size and design.

The standard errors for monthly natural gas volume estimates by State are given in Table C2. Ninety-five percent of the time, the volume that would have been obtained from a complete enumeration will lie in the range between the estimated volume minus two standard errors and the estimated volume plus two standard errors.

Table C-1. Standard Error for Natural Gas Deliveries and Price to Consumers by State, June 1991

State	Volume Million Cubic Feet				Price Dollars per Thousand Cubic Feet			
	Residential	Commercial	Industrial	Total	Residential	Commercial	Industrial	Total
Alabama	331	144	535	645	0.66	0.33	0.79	1.34
Alaska	0	0	0	0	.00	.00	.00	.00
Arizona	8	30	4	32	.03	.02	.00	.06
Arkansas	30	48	450	453	.17	.08	.08	.24
California	291	249	1,000	1,070	.03	.04	.13	.15
Colorado	85	46	6	97	.15	.05	.38	.15
Connecticut	0	0	0	0	.00	.00	.00	.00
Delaware	0	0	0	0	.00	.00	.00	.00
District of Columbia	0	0	0	0	.00	.00	.00	.00
Florida	60	226	996	1,023	.09	.14	.24	.70
Georgia	126	37	5,287	5,289	.17	.07	.33	.30
Hawaii	0	0	0	0	.00	.00	.00	.00
Idaho	0	0	0	0	.00	.00	.00	.00
Illinois	69	74	96	139	.06	.05	.06	.11
Indiana	293	165	791	860	1.47	.45	.69	1.07
Iowa	21	27	60	69	.13	.06	.01	.04
Kansas	0	15	4,599	4,599	.00	.01	.85	.69
Kentucky	0	0	0	0	.00	.00	.00	.00
Louisiana	353	13	5,712	5,723	.32	.13	.09	.18
Maine	0	0	0	0	.00	.00	.00	.00
Maryland	4	30	15	34	.04	.06	.21	.17
Massachusetts	104	238	3,343	3,353	.36	.13	.34	.37
Michigan	736	635	3,934	4,052	.28	.25	.26	.43
Minnesota	347	148	410	557	.32	.20	.15	.66
Mississippi	163	190	1,864	1,880	.76	.19	.15	.96
Missouri	134	145	118	230	.10	.18	.06	.34
Montana	2	2	0	3	.01	.01	.00	.02
Nebraska	29	170	95	197	.11	.03	.29	.26
Nevada	0	0	0	0	.00	.00	.00	.00
New Hampshire	0	0	0	0	.00	.00	.00	.00
New Jersey	0	0	0	0	.00	.00	.00	.00
New Mexico	176	108	0	207	.32	.44	.00	.72
New York	1,228	615	1,427	1,980	.31	.08	.54	.62
North Carolina	23	21	310	312	.10	.02	.10	.20
North Dakota	0	0	0	0	.00	.00	.00	.00
Ohio	624	162	1,526	1,657	.18	.08	.24	.43
Oklahoma	453	157	90	488	1.27	.06	.07	.32
Oregon	0	0	0	0	.00	.00	.00	.00
Pennsylvania	27	189	3,438	3,444	.05	.22	1.74	2.21
Rhode Island	0	0	0	0	.00	.00	.00	.00
South Carolina	14	54	553	556	.33	.24	.28	.40
South Dakota	0	0	0	0	.00	.00	.00	.00
Tennessee	161	207	526	587	.69	.34	.12	.26
Texas	125	2,472	10,720	11,002	.03	.38	.62	1.00
Utah	0	0	0	0	.00	.00	.00	.00
Vermont	0	0	0	0	.00	.00	.00	.00
Virginia	31	131	758	770	.15	.23	.57	.27
Washington	0	0	0	0	.00	.00	.00	.00
West Virginia	24	934	923	1,313	.19	10.08	.34	4.00
Wisconsin	446	513	982	1,195	.27	.11	.93	.76
Wyoming	21	82	322	333	.39	.23	1.61	.60
U.S. Totals	1,880	2,921	15,794	16,172	.09	.08	.25	.12

Source: Energy Information Administration, Form EIA-857 , "Monthly Report of Natural Gas Purchases and Deliveries to Consumers."

The standard error of the natural gas volume estimate is the square root of the variance of the estimate. The formula for calculating the variance of the volume estimate is:

$$V(\hat{Y}) = \sum_{h=1}^{H} \left[N_h^2 \frac{\left(1 - \frac{n_h}{N_h}\right)}{n_h(n_h - 1)} \left(\sum_{i=1} (y_i - Tx_i)^2 \right) \right] \quad (8)$$

where:

H = the total number of strata

N_h = the total number of companies in stratum h

n_h = the sample size in stratum h

y_i = the reported monthly volume for company i

x_i = the reported annual volume for company i

T = the ratio of the sum of the reported monthly volumes for sample companies to the sum of the reported annual volumes for the sample companies.

Appendix D

Natural Gas Reports and Feature Articles

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Natural Gas Reports and Feature Articles

Reports Dealing Principally with Natural Gas and/or Natural Gas Liquids

- *Natural Gas Annual 1989*, DOE/EIA-0131(89), September 1990.
- *Statistics of Interstate Natural Gas Pipeline Companies 1989*, DOE/EIA-0145(88), February 1991. Published annually.
- *Gas Supplies of Interstate Natural Gas Pipeline Companies 1989*, DOE/EIA-0167(89), December 1990. Published annually.

Other Reports Covering Natural Gas, Natural Gas Liquids, and Other Energy Sources

- *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves - 1989 Annual Report*, DOE/EIA-0216(89), September 1990.
- *Monthly Energy Review*, DOE/EIA-0035. Published monthly. Provides national aggregate data for natural gas, natural gas liquids, and other energy sources.
- *Annual Report to Congress 1990*, DOE/EIA-0173(90), March 1991. Published annually.
- *Annual Energy Outlook 1991*, DOE/EIA-0383(91), March 1991. Published annually.
- *Annual Energy Review 1990*, DOE/EIA-0384(90), May 1991. Published annually.
- *Short-Term Energy Outlook*, DOE/EIA-0202. Published quarterly. Provides forecasts for next six quarters for natural gas and other energy sources.
- *Annual Outlook for Oil and Gas: 1991*, DOE/EIA-0517(91), June 1991.
- *International Oil and Gas Exploration and Development Activities*, DOE/EIA-0523. Published Quarterly. Provides a compilation of reported oil and gas reserve additions in foreign countries.

Selected One-Time Natural Gas and Related Reports

- *Drilling and Production Under Title I of the Natural Gas Policy Act, 1978-1986*, DOE/EIA-0448(86), January 1989.
- *An Examination of Domestic Natural Gas Resource Estimates*, SR/RNGD/89-01, February 1989.
- *Growth in Unbundled Natural Gas Transportation Services: 1982-1987*, DOE/EIA-0525, May 1989.
- *Assessment of Pipeline Capacity to Transport Domestic Natural Gas Supplies to the Northeast*, SR/RNGD/89-02, August 1989.
- *Natural Gas Production Responses to a Changing Market Environment, 1978-1988*, DOE/EIA-0532, June 1990.
- *Costs and Indices for Domestic Oil and Gas Field Equipment and Production Operations - 1987 through 1989*, DOE/EIA-0185(89), July 1990.
- *U.S. Oil and Gas Reserves by Year of Field Discovery*, DOE/EIA-0534, August 1990.
- *Natural Gas Productive Capacity for the Lower 48 States 1980 through 1991*, DOE/EIA-0542, January 1991.

Selected and Recurring Natural Gas and Related Data Reference Reports

- *Directory of Energy Data Collection Forms*, DOE/EIA-0249(90), January 1991.
- *Oil and Gas Field Code Master List, 1990*, EIA-0370(90), January 1991.

NGM Feature Articles

January 1989

Main Line Natural Gas Sales by Interstate Pipeline Companies, 1987

(Describes and analyzes direct sales to end users by interstate pipeline companies and SIC codes.)

Summary of An Examination of Domestic Gas Resource Estimates

(Provides an overview of the various natural gas resource estimates currently in use.)

May 1989

The Outlook for Natural Gas Supply in the 1990's

(Discusses recent conditions in the oil and gas producing industry.)

June 1989

Domestic Natural Gas Reserves and Production Dedicated to Interstate Pipeline Companies, 1988

(Provides preliminary data on natural gas reserves and production dedicated to the interstate market.)

August 1989

U.S. Natural Gas Imports and Exports - 1988

(Contains final 1988 data on all U.S. imports and exports of natural gas.)

September 1989

Natural Gas Production in the Post-NGPA Decade

(Presents data on the production of natural gas by categories defined under the Natural Gas Policy Act of 1978 (NGPA).)

November 1989

Natural Gas Wellhead Decontrol Act of 1989

(Describes the categories of natural gas most affected by the decontrol provisions and provides market data for these categories and the overall markets during the 1980's.)

March 1990

The Developing Natural Gas Futures Market and Its Potential Impact on Domestic Natural Gas Markets

(Discusses futures markets vs. physicals markets, which include spot markets.)

April 1990

The Outlook for Natural Gas

(Discusses projections of natural gas markets through the year 2010.)

May 1990

Domestic Natural Gas Reserves and Production Dedicated to Interstate Pipeline Companies, 1989

(Provides preliminary data on natural gas reserves and production dedicated to the interstate market.)

June 1990

U.S. Natural Gas Imports and Exports - 1989

(Contains final 1989 data on all U.S. imports and exports of natural gas.)

July 1990

Resurgence in Natural Gas Wellhead Productivity

(Explores the factors that contributed to the recent increases in natural gas wellhead production.)

October 1990

Update on U.S. Coalbed Methane Production

(Presents estimates of annual coalbed methane production through 1988 by basin and field.)

January 1991

Take-or-Pay Settlements

(Presents information on the resolutions of the take-or-pay issue.)

February 1991

Recent Trends and Regional Variability in Underground Storage Activities

(Discusses underground storage in the expansion of end-use markets.)

March 1991

Natural Gas Transportation Services: An Update

(Reassesses transportation market activities by examining data through 1989 for major interstate pipeline companies.)

April 1991

An Overview of Recent Developments in the Underground Storage Market

(Reviews the changing market for underground natural gas storage services in the United States.)

May 1991

Analysis of Long-Term Contracts for Imports of Canadian Natural Gas

(Focuses on the contractual provisions that will govern imports of natural gas from Canada through the 1990's and beyond.)

June 1991

Natural Gas Productive Capacity for the Lower 48 States, 1980 through 1991

(Summarizes the full report and contrasts the findings for two major producing regions: Texas and the Gulf of Mexico Outer Continental Shelf.)

July 1991

The Outlook for Natural Gas 1991

(Focuses upon the natural gas supply and market aspects of the forecasts contained in the *Annual Outlook for Oil and Gas 1991.*)

August 1991

U.S. Natural Gas Imports and Exports - 1990

(Contains final 1990 data on all U.S. imports and exports of natural gas.)

Appendix E

Technical Contacts

Appendix E

Technical Contacts

Section	Tables		Principal Data Sources	Technical Contact
Summary Statistics:				
Natural Gas Production and Consumption	1, 2, 3	Monthly:	Interstate Oil Compact Commission (IOCC)	Donna Dunston (202) 586-6135
		Annual:	Form EIA-627, "Annual Quantity and Value of Natural Gas Report"	
		Monthly:	Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers"	
Extraction Loss	1	Monthly:	EIA computations	Margo Natof (202) 586-6303
		Annual:	Form EIA-816, "Monthly Natural Gas Liquids Report" and Form EIA-64A, "Annual Report of the Origin of Natural Gas Liquids Production"	
Supplemental Gaseous Fuels	2	Monthly:	EIA computations	Margo Natof (202) 586-6303
		Annual:	Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition"	
Imports and Exports	2	Monthly	EIA computations	Margo Natof (202) 586-6303
		Annual:	Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas"	Fay Dillard (202) 586-6181
Price:				
City Gate, Residential, Commercial, and Industrial	4	Monthly:	Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers"	Roy Kass (202) 586-4790
Imports and Purchases from Producers	4	Monthly:	Form FERC-11, "Natural Gas Pipeline Company Monthly Statement"	James Keeling (202) 586-6107
Wellhead	4	Monthly:	EIA computations	Sheila Darnell (202) 586-6165
		Annual:	Form EIA-627, "Annual Quantity and Value of Natural Gas Report"	
Electric Utility	4	Monthly:	Form FPC-423, "Cost and Quality of Fuels for Electric Power Plants"	Margo Natof (202) 586-6303
NGPA Category - Prices And Volumes	5	Periodic:	Purchased Gas Adjustment Filings	Norman Crabtree (202) 586-6180
Summary of Natural Gas Imports and Exports	6	Quarterly:	Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas" and "Quarterly Sales and Price Report"	Fay Dillard (202) 586-6181
Producer Related Activities:				
Natural Gas Production	7	Monthly:	Interstate Oil Compact Commission (IOCC)	Donna Dunston (202) 586-6135
Well Determination Filings	8, 9, 10,	Monthly:	Form FERC-121, "Application for Determination of Maximum Lawful Price Under the Natural Gas Policy Act"	Eva Fleming (202) 586-6113
NGPA Ceiling Prices	11	Monthly:	*Federal Register*	Eva Fleming (202) 586-6113
Interstate Pipeline Activities:	12, 13, 14, 15, 16	Monthly:	Form FERC-11, "Natural Gas Pipeline Company Monthly Statement"	James Keeling (202) 586-6107

Underground Storage:	17, 18, 19, 20, 21	Monthly:	Forms FERC-8 and EIA-191, "Underground Gas Storage Report"	Ellis Maupin (202) 586-6178
Distribution and Consumption:				
Deliveries to:				
Residential,	22	Monthly:	Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers"	Roy Kass (202) 586-4790
Commercial,	23			
Industrial,	24			
Electric Utility,	25		Form FERC-423, "Cost and Quality of Fuels for Electric Power Plants"	Margo Natof (202) 586-6303
All Consumers	26			
Average Price to:				
City Gate	27	Monthly:	Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers"	Roy Kass (202) 586-4790
Residential,	28			
Commercial,	29			
Industrial,	30		Form FERC-423, "Cost and Quality of Fuels for Electric Power Plants"	Margo Natof (202) 586-6303
Electric Utility,	31			
and All Consumers	32			
Onsystem Sales	33	Monthly:	Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers"	Roy Kass (202) 586-4790
Heating Degree Days	34	Seasonal:	National Oceanic and Atmospheric Administration	Rosemary Jameson (202) 586-6229
Highlights and Industry Overview				James Todaro (202) 586-6305
Recent Developments				James Todaro (202) 586-6305

Glossary

Balancing Item: Represents the difference between the sum of the components of natural gas supply and the sum of the components of natural gas disposition. These differences may be due to quantities lost or to the effects of data reporting problems. Reporting problems include differences due to the net result of conversions of flow data metered at varying temperature and pressure bases and converted to a standard temperature and pressure base; the effect of variations in company accounting and billing practices; differences between billing cycle and calendar period time frames; and imbalances resulting from the merger of data reporting systems which vary in scope, format, definitions, and type of respondents.

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

British Thermal Unit (Btu): The heat required to raise the termperature of one pound of water by one degree Fahrenheit at or near 39.2 degrees Fahrenheit.

City-gate: A point or measuring station at which a gas distribution company receives gas from a pipeline company or transmission system.

Commercial Consumption: Gas used by nonmanufacturing organizations such as hotels, restaurants, retail stores, laundries, and other service enterprises, and gas used by local, State, and Federal agencies engaged in nonmanufacturing activities.

Depletion: The loss in service value incurred in connection with the exhaustion of the natural gas reserves in the course of service.

Depreciation: The loss in service value not restored by current maintenance, incurred in connection with the consumption or respective retirement of a gas plant in the course of service from causes that are known to be in current operation and against which the utility is not protected by insurance; for example, wear and tear, decay, obsolescence, changes in demand and requirements of public authorities, and the exhaustion of natural resources.

Dry Natural Gas Production: Marketed production less extraction loss.

Electric Utility Consumption: Gas used as fuel in electric utility plants.

Exports: Natural gas deliveries out of the Continental United States (including Alaska) to foreign countries.

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

Flared: The volume of gas burned in flares on the base site or at gas processing plants.

Gross Withdrawals: Full well stream volume, including all natural gas plant liquid and nonhydrocarbon gases, but excluding lease condensate. Also includes amounts delivered as royalty payments or consumed in field operations.

Hinshaw Pipeline: A pipeline or local distribution company that has received exemption, (by Section 1 (c) of the Natural Gas Act), from regulations pursuant to the Natural Gas Act. These companies transport interstate natural gas not subject to regulations under NGA.

Imports: Natural gas received in the Continental United States (including Alaska) from a foreign country.

Independent Producers: Any person who is engaged in the production or gathering of natural gas and who sells natural gas in interstate commerce for resale but who is not engaged in the transportation of natural gas (other than gathering) by pipeline in interstate commerce.

Industrial Consumption: Natural gas used by manufacturing and mining establishments for heat, power, and chemical feedstock.

Interstate Companies: Natural gas pipeline companies subject to FERC jurisdiction.

Intransit Deliveries: Redeliveries to a foreign country of foreign gas received for transportation across U.S. territory and deliveries of U.S. gas to a foreign country for transportation across its territory and redelivery to the United States.

Intransit Receipts: Receipts of foreign gas for transportation across U.S. territory and redelivery to a foreign country and redeliveries to the United States of U.S. gas transported across foreign territory.

Intrastate Companies: Companies not subject to FERC jurisdiction.

Lease and Plant Fuel: Natural gas used in well, field, lease operations and as fuel in natural gas processing plants.

Liquefied Natural Gas (LNG): Natural gas that has been liquefied by reducing its temperature to minus 260 degrees Fahrenheit at atmospheric pressure.

Major Interstate Pipeline Company: A company whose combined sales for resale, and gas transported interstate or stored for a fee, exceeded 50 million thousand cubic feet in the previous year.

Marketed Production: Gross withdrawals less gas used for repressuring, quantities vented and flared, and nonhydrocarbon gases removed in treating or processing operations. Includes all quantities of gas used in field and processing operations. See Explanatory Note 1 for discussion of coverage of data concerning nonhydrocarbon gases removed.

Native Gas: Gas in place at the time that a reservoir was converted to use as an underground storage reservoir as in contrast to injected gas volumes.

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

Natural Gas Policy Act of 1978 (NGPA): Signed into law on November 9, 1978, the NGPA is a framework for the regulation of most facets of the natural gas industry. See Explanatory Note 10 for a full discussion.

Nonhydrocarbon Gases: Typical nonhydrocarbon gases that may be present in reservoir natural gas are carbon dioxide, helium, hydrogen sulfide, and nitrogen.

Onsystem Sales: Sales to customers where the delivery point is a point on, or directly interconnected with, a transportation, storage, and/or distribution system operated by the reporting company.

Pipeline Fuel: Gas consumed in the operation of pipelines, primarily in compressors.

Repressuring: The injection of gas into oil or gas formations to effect greater ultimate recovery.

Residential Consumption: Gas used in private dwellings, including apartments, for heating, cooking, water heating, and other household uses.

Storage Additions: The volume of gas injected or otherwise added to underground natural gas or liquefied natural gas storage during the applicable reporting period.

Storage Withdrawals: Total volume of gas withdrawn from underground storage or liquefied natural gas storage during the applicable reporting period.

Supplemental Gaseous Fuels Supplies: Synthetic natural gas, propane-air, refinery gas, biomass gas, air injected for stabilization of heating content, and manufactured gas commingled and distributed with natural gas.

Synthetic Natural Gas (SNG): A manufactured product chemically similar in most respects to natural gas, that results from the conversion or reforming of petroleum hydorcarbons and may easily be substituted for or interchanged with pipeline quality natural gas.

Therm: One-hundred thousand British thermal units.

Underground Gas Storage Reservoir Capacity: Interstate company reservoir capacities are those certificated by FERC. Independent producer and intrastate company reservoir capacities are reported as developed capacity.

Vented Gas: Gas released into the air on the base site or at processing plants.

Wellhead Price: Represents the wellhead sales price, including charges for natural gas plant liquids subsequently removed from the gas, gathering and compression charges, and State production, severance, and/or similar charges.

Working (Top Storage) Gas: The volume of gas in an underground storage reservoir above the designed level of the base. It may or may not be completely withdrawn during any particular withdrawal season. Conditions permitting, the total working capacity could be used more than once during any season.

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