REPORT BY THE U.S.

General Accounting Office

State And Local Responses To Natural Gas Price Increases

Increasing natural gas prices affect gas customers, the distribution companies that supply them, and the State or local commissions that regulate such sales.

This report provides information on State and local responses to higher gas costs in the areas of

--rates charged by pipelines to distribution companies,

--recovery of purchased gas costs by distributors,

--rates charged by distributors to customers, and

--efforts by distributors to maintain or expand their markets.

The report is based on a survey of 15 States and 37 gas distribution companies.

GAO/RCED-83-142
APRIL 25, 1983

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UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

RESOURCES, COMMUNITY,
AND ECONOMIC DEVELOPMENT
DIVISION

APR 25 1983

B-211515

The Honorable Philip R. Sharp
Chairman, Subcommittee on Fossil
and Synthetic Fuels
Committee on Energy and Commerce
House of Representatives

Dear Mr. Chairman:

As requested in your July 8, 1982, letter, this report discusses the ways in which natural gas distribution companies and State public utility commissions are responding to increasing natural gas prices. We compiled information on actions in 15 States.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from the date of the report. At that time, we will send copies of this report to the Secretary of Energy; the Chairman, Federal Energy Regulatory Commission; and other interested parties. We will also make copies available to others upon request.

Sincerely yours,

J. Dexter Peach
Director

REPORT BY THE U.S.
GENERAL ACCOUNTING OFFICE

STATE AND LOCAL RESPONSES TO NATURAL GAS PRICE INCREASES

D I G E S T

Increasing natural gas prices are affecting consumers of gas, the distribution companies that supply them, and State public utility commissions that regulate end-user sales. Consumers seek relief from higher fuel bills and risk service disconnection if fuel bills are not paid.

Distributors are paying more for the gas they buy. They need to recover their purchased gas costs and receive adequate rate increases to maintain their financial stability.

State public utility commissions, generally authorized to regulate prices charged by distributors to their retail customers, try to accommodate the interests of distribution companies and consumers.

At the request of the Chairman, Subcommittee on Fossil and Synthetic Fuels, House Committee on Energy and Commerce, GAO contacted representatives of the State public utility commission, one or more major distribution companies, and consumer groups in 15 States.

GAO obtained information on what actions were taken in the following areas.

--Rates charged by pipelines to distribution companies.

--Recovery of purchased gas costs by distributors.

--Rates charged by distributors to customers.

--Efforts by distributors to maintain or expand their markets. (See pp. 1 to 5.)

GAO/RCED-83-142
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Tear Sheet

PIPELINE AND DISTRIBUTOR RELATIONS

The transmission and sale of natural gas by interstate pipelines is subject to regulation primarily at the Federal level. Distribution is subject primarily to State or local regulation, usually by State public utility commissions.

Distributors buy their gas at rates approved by the Federal Energy Regulatory Commission. Many State officials told GAO they cannot adjust the federally approved prices because distributors are obligated to take a specified amount of gas at a given price.

However, several State commissions are providing guidance to distribution companies on their purchases. The extent of involvement varies from a review of required forecasts of overall gas supplies to directions on specific purchases, such as imported Canadian gas.

Some distribution companies are seeking alternatives to their current pipeline suppliers. Several distributors are obtaining the lowest possible mix of gas under current contractual obligations. (See pp. 6 to 11.)

RECOVERY OF PURCHASED GAS COSTS

A distribution company is usually permitted to recover its cost of purchased gas. It can do this by submitting a purchased gas adjustment filing to the State public utility commission. Most distributors reported to GAO that purchased gas costs represent about 75 percent of their total cost of service.

Typically, the adjustment is based on the previous year's gas purchases at current rates. State public utility commissions generally permit distributors to file for an adjustment monthly, although some commissions only permit quarterly, semiannual, or annual filings.

Because it has become an increasingly large cost element for gas distributors, the purchased gas adjustment clause has received increasing attention from the public and from State commissions. There has been some

consumer and legislative activity directed at the purchased gas adjustment clause to more closely monitor distributors' purchases. (See pp. 12 to 16.)

SETTING OF RATES TO END-USERS

Distributors generally group their customers into three classes: residential, commercial, and industrial. Serving residential customers is usually more costly per unit than serving industrial users.

The setting of rates within a class is typically based on gas use. As usage increases, the cost per unit may decrease, increase, or remain the same. However, State law may specify a certain rate structure. For example, the lifeline rate implemented in California provides a minimum level of relatively low cost natural gas for residential uses such as space heating and cooling, cooking, and lighting. (See pp. 17 to 20.)

Federal legislation may also affect distributors' rate structures. The Natural Gas Policy Act of 1978 provides for an "incremental pricing" program whereby certain large industrial users pay a surcharge for the gas they buy. As a result of transferring costs to the industrial user, residential and small commercial users were to benefit by paying less for the gas than if no incremental pricing provisions had not been passed. The act provides that the surcharge operates to increase industrial customers' total gas cost--base price plus the incremental pricing surcharge--until the price paid is equal to the Btu equivalent price of an alternate fuel oil. Consequently, in areas where natural gas prices have approached or exceeded certain fuel oil prices, distributors told GAO that they collected little or no revenue from the surcharge. (See pp. 20 to 23.)

Many large industrial customers can readily switch from natural gas to another fuel--often residual fuel oil. Distributors are concerned that users with this capability will switch from

natural gas when prices are comparable. To discourage this, some State commissions have approved distributors' proposals to set industrial rates comparable to alternate fuel rates. (See pp. 23 to 26.)

EFFORTS TO EXPAND OR MAINTAIN MARKETS

Distribution companies are making efforts to control their sales, but many factors affect gas consumption.

Many distribution companies reported that they had experienced decreased sales over the past 3 years and named conservation, slow economic activity, relatively warm weather, and increasing natural gas prices as factors affecting consumption.

In contrast, in the mid-1970's when gas supplies in the interstate market were inadequate, many distributors placed moratoria on new service hookups. Most had lifted their moratoria, with few restrictions.

Gas consumption is extremely seasonal and the cost of providing service on the coldest days can be much higher than on other days. Therefore, distributors try to even out their demand by seeking new uses for gas, establishing differential prices, and other means. (See pp. 27 to 31.)

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This report does not evaluate the actions of any Federal, State, or local government unit nor of any private organization. However, portions of the draft report were sent to representatives of the State public utility commissions and distribution companies specifically named to verify factual content and update information where appropriate.

Contents

ABBREVIATIONS

Bcf	billion cubic feet
Btu	British thermal unit
FERC	Federal Energy Regulatory Commission
GAO	General Accounting Office
Mcf	thousand cubic feet
MmBtu	million British thermal units
Mmcf	million cubic feet
NGPA	Natural Gas Policy Act of 1978
PGA	purchased gas adjustment
Tcf	trillion cubic feet

CHAPTER 1

INTRODUCTION

Increasing natural gas prices are significantly affecting consumers of gas, the distribution companies that supply them, and the State public utility commissions that regulate end-user sales. Consumers seek relief from higher fuel bills and face service disconnection if they cannot pay them. Distributors pay more for the gas they buy and resell, and want to maintain their financial stability by receiving adequate rate increases. State public utility commissions try to accommodate the interests of the distributors and the public.

Natural gas accounted for about 25 percent of the energy consumed in the United States in 1981. Natural gas use totaled 19.3 trillion cubic feet (Tcf),[1] nearly all of it produced domestically. Natural gas is used in about 55 percent of all residential and commercial establishments and provides 40 percent of the energy consumed by industry and agriculture. Overall, industrial use in 1981 accounted for 41 percent of all gas use; residential, 24 percent; electric generation, 19 percent; commercial, 13 percent; and other uses, 3 percent.

OVERVIEW OF THE NATURAL GAS INDUSTRY

The natural gas industry may be divided into the following sectors:

--Producers, which explore for and extract gas from the ground.

--Pipelines, or transmission companies, which purchase the natural gas from producers, transport it, and then resell it to distributors or directly to end-users.

--Distributors, usually local public utilities, which sell gas to those who use it.

Production, transmission, and distribution of natural gas are regulated by various levels of government. Production is subject to price regulation primarily at the Federal level and other regulation at the State level. Transmission of gas across

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[1]Quantities of natural gas are often measured on the basis of volume. Frequently used measures include thousand cubic feet (Mcf), million cubic feet (Mmcf), billion cubic feet (Bcf), and trillion cubic feet (Tcf). Alternatively, gas may be measured on the basis of heat content, in terms of British thermal units (Btu's). A million British thermal units (MmBtu) are approximately equivalent to an Mcf.

State lines (by interstate pipelines) is subject to regulation primarily at the Federal level, while transmission entirely within a State (by intrastate pipelines) is subject primarily to State regulation. Distribution is subject primarily to State or local regulation.

Significant Federal involvement in the natural gas industry began in 1938 under the Natural Gas Act, which authorized Federal regulation of the transportation and resale of natural gas by interstate pipeline companies. In 1954, the Supreme Court ruled in Phillips Petroleum Co. v. Wisconsin (347 U.S. 672 (1954)) that under the Natural Gas Act, the wellhead prices for natural gas sold by producers in interstate commerce were also subject to Federal regulation. By law, the prices in the interstate market were to be "just and reasonable." Some State governments continued to regulate prices for gas produced and sold in the same State.

The Natural Gas Policy Act of 1978 (NGPA) extended wellhead price regulation to the intrastate market. It established eight major categories of natural gas, based on such factors as when and where the gas is discovered and produced. Under NGPA, ceiling prices for most categories increase monthly at the rate of inflation, but the price of certain gas increases more rapidly. As a result, ceiling prices ranged, in March 1983, from $0.29 per MmBtu to $5.48 per MmBtu. One category of gas has been deregulated and sales at over $9.00 per MmBtu have been reported.

Natural gas prices have been rising for many years--both the prices paid to producers and the prices paid by end-users. The average wellhead price was $0.16 per MmBtu in 1967, $0.77 in 1977, and $1.94 in 1981 (not adjusted for inflation). The average residential price was $1.02 per MmBtu in 1967, $2.30 in 1977, and $4.20 in 1981 (not adjusted for inflation).[2]

Based on American Gas Association statistics, the 1981 revenues derived from the sale of gas, on average, were distributed approximately as follows: producer, 53 percent; pipeline, 25 percent; and distributor, 21 percent. In 1970, the revenues, on

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[2]Energy Information Administration, Natural Gas Annual 1981, DOE/EIA-0131 (81), Sept. 1982, pp. 60 and 63. Prices were converted from Mcf to MmBtu at a rate of 1,021 Btu's per cubic foot.

average, were distributed as follows: producer, 26 percent; pipeline, 29 percent; and distributor, 45 percent.[3]

OBJECTIVES, SCOPE, AND METHODOLOGY

The Chairman, Subcommittee on Fossil and Synthetic Fuels, House Committee on Energy and Commerce, asked us to survey State and local actions in response to increasing natural gas prices. Those actions are

--rates charged by pipelines to distribution companies,

--distributors' recovery of purchased gas costs,

--rates charged by distributors to customers, and

--distributors' efforts to control their sales.

To obtain information on State and local actions, we visited 15 States. (See table 1.) We selected these States because they are served on the interstate and intrastate markets, consume relatively large amounts of natural gas, and cover several regions of the country. The States we visited accounted for about 70 percent of distribution company sales in 1981, according to the American Gas Association.

In each State, we selected a distribution company or a combination of distribution companies that covered a wide service area and sold a large proportion of natural gas. We contacted the State consumer or public advocate office, where possible. Our selection of States and distributors was not based on random sampling; therefore, the results do not necessarily apply to any States and distributors except those we contacted.

Our work was primarily based on interviews, as agreed with the subcommittee. We spoke to representatives of 37 major distribution companies (up to 4 in each State), 15 State public utility commissions (1 in each State),[4] and 19 public advocates and/or consumer groups (at least 1 in each State) to obtain a balanced viewpoint of the natural gas situation. (These are listed in app. II.) We did not attempt to independently validate

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[3]American Gas Association, Gas Facts, 1981, p. 124.

[4]State regulatory bodies are variously called public utility commissions, public service commissions, and other designations. We refer to them collectively as State commissions.

Table 1

Gas Utility Industry Sales in 1981,

by State

Top 20 States and Rank		Sales (trillions of Btu's)
* 1.	Texas	2,441.3
* 2.	California	1,776.9
* 3.	Illinois	1,053.3
* 4.	Ohio	861.4
* 5.	Michigan	788.7
* 6.	Pennsylvania	744.1
* 7.	New York	639.5
* 8.	Louisiana	574.2
* 9.	Indiana	480.5
10.	Oklahoma	453.0
* 11.	New Jersey	335.4
12.	Kansas	322.0
* 13.	Wisconsin	319.7
* 14.	Georgia	303.8
15.	Missouri	287.7
* 16.	Minnesota	254.5
17.	Iowa	242.1
18.	Florida	237.8
19.	Alabama	217.7
20.	Arkansas	214.9
Other States and Rank		
* * *		
* 23.	Massachusetts	187.0
* * *		
* 45.	Delaware	23.8
* * *		
United States total		15,379.9

* States we visited.

Source: American Gas Association, Gas Facts, 1981, p. 89.

the information provided in the interviews. Our interviews were generally conducted in the latter part of 1982.

Portions of the draft report were sent to representatives of the State public utility commissions and distribution companies specifically named to verify factual content and update information where appropriate. No consumer groups are cited in the report.

As agreed with the subcommittee, we did not evaluate the appropriateness or effectiveness of actions by any Federal, State, or local government agency or private party, nor do we make recommendations. As further agreed with the subcommittee, we did not compile information on State and local organizations' involvement in Federal proceedings, nor did we address the following issues: distribution company diversification into other lines of business, rules governing service disconnection, and the election or appointment of State commissioners.

Our report complements a study prepared for the subcommittee by the Congressional Research and the National Regulatory Research Institute, entitled Natural Gas Regulation Study (July 1982, Committee Print 97-GG). That study covers both Federal and State regulation of natural gas. With respect to State regulation, it addresses the scope of State authority, major issues confronting State regulators, and the effects of Federal regulation on State regulation.

This review was conducted in accordance with generally accepted government auditing standards. It was performed during the period from May 1982 through February 1983.

CHAPTER 2

RELATIONS BETWEEN PIPELINE AND DISTRIBUTION COMPANIES

The three sectors of the natural gas industry--production, transmission, and distribution--are regulated by various levels of government. This chapter provides information on regulation of the natural gas industry, particularly State monitoring of distributors' purchasing practices, and distribution companies' search for alternatives to their present supplies.

FEDERAL REGULATION OF INTERSTATE PIPELINES

The Federal Energy Regulatory Commission (FERC) regulates the setting of tariffs, or rates, that interstate pipelines may charge their customers. Pipelines are generally allowed to charge rates that enable them to recover direct expenditures, such as the cost of natural gas they purchase, to recover the cost of their investments, and to earn a fair and reasonable rate of return on their pipelines and other investments used to provide natural gas service. FERC reviews pipeline tariff rates at least every 3 years based on a cost-of-service review. A cost-of-service review includes a determination of the cost of gas purchased by the pipeline for resale. Recognizing that purchased gas costs represent the major cost item to most pipelines and would likely change more frequently than every 3 years, Federal regulators allowed pipelines, beginning in 1972, to reflect changes in the cost of purchased gas. A pipeline's request to change its base tariff rates to reflect purchased gas costs is known as a purchased gas adjustment filing. Most major interstate pipelines file an application every 6 months, while the remainder file on an annual basis. Purchased gas adjustment filings are subject to FERC's review and approval.

Pipeline companies charge distributors according to a rate schedule specifying the amount of gas to be bought at a given price as well as type of service. The rate consists of two general charges: demand and commodity. A demand charge is a fixed monthly charge that is based on the maximum daily volume of gas that may be taken by the distributor. The commodity charge is a variable charge based on the volume of gas actually taken by the distributor. The charge varies according to the type of service offered by the pipeline. For example, gas sold under "firm" service contracts to provide gas throughout the year is more expensive than "interruptible" gas that is subject to curtailment.

Natural gas is typically supplied by pipelines to distributors under long-term contracts. The distributor usually agrees to buy a specified daily quantity but may pay more for the gas if

that quantity is exceeded. The distributor may also be obligated to pay a minimum amount if the designated quantity or percentage of contracted gas is not taken. This percentage varies, but it is often about 75 percent.

STATE AND LOCAL REGULATION OF DISTRIBUTION COMPANIES

State and local government units generally regulate retail gas sales by distribution companies to end-users. The regulation of retail rates is generally conducted at the State level by regulatory bodies usually called public service commissions or public utility commissions. State commissions are responsible for ensuring that consumers receive adequate and reliable service and allowing the distributor to recover its costs and earn a reasonable rate-of-return on its investment.

In most States, a distribution company seeking a rate increase applies to the State commission, which reviews the request and ultimately issues its decision. However, of the States we visited, local or municipal governments in Ohio and Texas are sometimes directly involved in the setting of rates to final customers.

In Ohio, municipalities which have adopted a home rule charter under the Ohio Constitution may set rates for distribution companies. Otherwise, rates are regulated by the Public Utilities Commission of Ohio. After a distributor files its proposed rates, and they are accepted by the municipality, the rates are established by local ordinance which may extend from 1 to 4 years. When an ordinance is passed, the Ohio commission has no jurisdiction. In the event that the ordinance is unacceptable to the distributor, it may file a complaint. The distributor also has the option to file proposed rates directly with the Ohio commission.

Columbia Gas of Ohio, a major distributor in the State, files proposed rates with municipalities in its service area; another major distributor, East Ohio Gas Company, deals only with the State commission. Columbia had over 740 rate schedules in late 1982. It filed 50 cases before the Ohio commission in 1982, including 10 complaints.

Similarly, in Texas, State law provides that a municipality is permitted to deal with a distribution company to establish rates within its corporate limits. If new rates cannot be agreed upon, the company, the municipality, or another affected party can appeal to the Texas Railroad Commission. The commission is also empowered to regulate the rates and services for unincorporated and rural areas. Unlike the Ohio commission, appeals are less frequently filed in Texas; there were four in the year ending March 1983.

EXTENT OF STATE GUIDANCE

FERC sets the rates that interstate pipelines may charge their distribution company customers. Distributors buy their gas at the approved FERC rates and, in turn, apply to the State commission to recover their purchased gas costs. Many State commission officials told us that they can do little at the State level once FERC approves the pipelines' new rates and purchased gas costs because distributors are usually obligated to buy gas at the FERC-approved price.

However, a few of the State commissions we contacted provide guidance to distribution companies on their purchasing practices. The forum for the State commission to provide its guidance is often at hearings for a distribution company's request for a change in rates or purchased gas adjustment filing. The extent of the State commission's involvement varies from a general review of a distributor's supplies to guidance on specific purchases.

A Michigan State law requires that, in order to recover its purchased gas costs, a distributor must provide annual and 5-year forecasts showing, among other things, expected sources and volumes of its gas supply and projections of gas costs. A State law in Illinois requires that distributors demonstrate that purchased gas costs were prudent. In addition, the Illinois Commerce Commission directed designated distribution companies in August 1982 to show cause why certain high-cost gas should not be excluded from their purchased gas adjustment clauses. The Illinois commission in February 1983 asked three distributors to submit a report on the feasibility of obtaining alternative sources of gas supply, specifically by (1) connecting with other suppliers, (2) increasing purchases from lower priced pipelines, (3) buying directly from producers, and (4) coordinating purchases with other State distributors.

The Public Utilities Commission of Ohio, in March 1982, investigated the gas purchasing practices and policies of Columbia Gas of Ohio, with emphasis on its purchases of intrastate gas, as part of a periodic audit of distributors' recovery of purchased gas costs. Columbia Gas testified that the company will purchase local gas production as long as the delivered price of that gas does not exceed the commodity price of gas available from an affiliated pipeline company. Further, over 70 percent of the Ohio production has been recently accorded a "tight sands" designation by FERC under the NGPA. As such, this gas was priced in 1982 at a maximum of $4.94 per Mcf under the NGPA ceiling price. This compares to $3.46 per Mcf commodity cost of gas available from Columbia's supplier at that time. The commission found that Columbia's policy to purchase all Ohio gas was reasonable, as long as the delivered price of that gas did not exceed the

commodity price of gas available from its principal supplier. However, the commission stated that Columbia should purchase as much Ohio gas as possible when it can be obtained economically. At that time, about 1 to 2 percent of the company's gas supply came from Ohio producers.

The California Public Utilities Commission has monitored purchases of liquefied natural gas, deregulated high-cost natural gas, and imported Canadian gas by distributors and their pipeline suppliers. The commission generally considers whether supply purchases were prudent and reasonable and reflect the lowest priced gas available. The California commission required both Pacific Gas and Electric and Southern California Gas to operate under a least-cost purchase policy under threat of disallowed purchases. Such a policy provides that, within contractual obligations, the company must order its purchases so that less expensive supplies are taken before more expensive ones. (The third major California distributor, San Diego Gas and Electric, purchases all of its gas from Southern California Gas.)

According to Southern California Gas, the California commission also monitored short-term discretionary gas purchases under existing supply contracts or those purchases that exceed the minimum level established in the contract. The California commission stated that such purchases will be presumed reasonable if they do not exceed the "marginal rate," which the commission determines after considering the variable cost of the most expensive gas supply and the price of alternative fuels, such as low sulfur residual fuel oil or distillate fuel oil. Further, in planning for long-term gas supply projects, the company must demonstrate that the new supply at the California border does not exceed the cost of imported crude oil delivered to local refiners over the life of the gas supply project.

The California commission also became indirectly involved in pipeline rate negotiations. The President of the California commission asked--in correspondence in early 1982--Pacific Gas and Electric to renegotiate its contracts with Canadian producers to reduce its minimum purchase obligations. He urged the company's Chairman of the Board to initiate discussions with Canadian producers to obtain flexibility in Canadian gas purchases so that, to the extent practicable, the company could utilize less expensive domestic sources. Subsequently, Pacific Gas and Electric was able to negotiate a 15-percent reduction in its minimum purchase obligations. The commission also asked Southern California Gas to determine what steps, if any, its supplier of certain Canadian gas could take to obtain lower purchase obligations under its existing contract.

Finally, the California commission urged both Pacific Gas and Electric and Southern California Gas to meet with their pipeline suppliers in order to reduce the companies' purchased gas

costs. Southern California Gas met with its suppliers to encourage them to adopt a least-cost policy for their gas purchases. Similarly, Pacific Gas and Electric discussed with its only interstate pipeline supplier the pipeline's purchases of deregulated gas and the possible exercise of its "market-out" clause. Such a clause allows a pipeline to offer a producer a lower price than the existing price if the existing price makes the gas difficult to market; such a clause may also allow the producer to try to find another buyer for the gas.

CONSIDERATIONS OF DISTRIBUTORS' ALTERNATIVE SUPPLY SOURCES

The distribution companies we contacted are usually served by one to three pipeline suppliers. Distribution officials told us they are restricted to these suppliers due to geographical considerations and are thus limited in their sources of gas. However, the distributors we contacted located near a producing area may have more choice regarding their gas sources and may buy gas directly from producers.

Nearly half of the distributors we interviewed said that they had reassessed or were in the process of reassessing their current pipeline supplies. Of these, four distributors which are served by more than one pipeline were mixing purchases from among the suppliers to the extent possible under current contractual obligations to obtain the lowest cost mix of gas.

The majority of companies said that they had not considered, or had determined infeasible, plans to construct their own gas lines to hook up with other pipeline companies. However, Southern Union--serving parts of Texas, New Mexico, Oklahoma, and Arizona--built gas lines to deliver company-owned gas to other parts of the system to assure supply availability. Trans Louisiana Gas Company, which in 1982 bought 95 percent of its gas from producers, used a corporate affiliate pipeline to transport the gas.

Several distribution companies have corporate affiliates engaged in exploration and development activities, such as Citizens Gas and Coke Utility in Indiana. Peoples Gas Light and Coke in Illinois provided financing to producers for exploration and development. In another effort, 13 Northeast distributors formed a consortium called the Boundary Gas Project to seek natural gas from other suppliers, specifically Canadian gas. Officials of Boston Gas told us that, contingent on action taken by both the United States and Canadian Governments, the project could be operating by the 1984-85 winter season.

SUMMARY

FERC regulates the setting of tariffs that interstate pipelines may charge and approves their purchased gas adjustment filings. State commissions generally regulate the retail rates of natural gas that distribution companies sell to the end-users. However, in Texas and Ohio, municipalities may set rates for the distributors. The affected parties may appeal to their respective State commissions.

Many State commission officials expressed their view that they can do little at the State level once FERC approves the rates which pipelines may charge customers. However, several State commissions provide guidance to distribution companies on their purchasing practices. The extent of this State involvement varies from a general review of a distributor's supplies to guidance on specific natural gas purchases.

Finally, distribution companies are usually served by one to three pipelines and, in most cases, are restricted to them due to geographic considerations. However, nearly half of the distribution companies we contacted had reassessed or were in the process pf reassessing their pipeline supplies. Of these, four distributors are mixing their purchases to the extent possible under contractual obligations to obtain the lowest cost mix of gas. A few distribution companies built their own gas lines to deliver gas. One group of distributors formed a consortium to import Canadian gas.

CHAPTER 3

RECOVERY OF PURCHASED GAS COSTS BY DISTRIBUTORS

A distribution company is usually permitted to recover the cost of purchased gas through a provision in its tariff called a purchased gas adjustment (PGA) clause.[1] The PGA clause typically allows the distributor a dollar-for-dollar recovery of costs on a periodic basis. The clause is intended to prevent cash flow problems for the company and reduce the number of full scale rate proceedings. All of the companies we visited had some sort of PGA mechanism in place, although it is called by different names and administered differently in each State. This chapter discusses how frequently PGA filings may be made, what documentation is required, what expenses can be included in a filing, how the State authority reviews the filing, and consumer and legislative activity directed at the PGA mechanism.

THE DESIGN OF PURCHASED GAS ADJUSTMENT CLAUSES

Distribution company officials told us that they prefer the PGA clause mechanism over a separate rate case for gas costs or a general rate case combining both gas costs and other operational expenses because it is not as lengthy. According to the companies, it may take 12 to 15 months to settle rate cases.

The distributors we spoke to reported that gas purchased from pipeline suppliers represented, on average, about 75 percent of their total cost of service and that this percentage was a marked increase from 5 years ago. From the distribution companies' perspective, the cost of purchased gas is virtually an uncontrollable portion of the retail price of natural gas.

All of the companies we visited had some sort of PGA clause in their tariffs, but they called it by different names. For example, Delmarva Power and Light in Delaware had a Purchased Gas Adjustment clause for customers on "interruptible" service and a Gas Production Cost Adjustment for those on "firm" service. Southern California Gas had a Consolidated Adjustment Mechanism comprised of a purchased gas adjustment mechanism and a supply adjustment mechanism. Philadelphia Electric had a Gas Cost Rate, and Public Service Electric and Gas in New Jersey had a Levelized Raw Material Adjustment Clause in their respective tariffs.

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[1] Interstate pipelines are also permitted to recover purchased gas costs through a purchased gas adjustment filing subject to FERC review and approval. (See p. 6.)

In about half of the States we visited, State commissions permitted distributors to file for a PGA monthly, although some States allowed quarterly, semi-annual, or annual filings. Some distributors, such as Central Illinois Public Service, were allowed to make a PGA filing whenever their pipeline suppliers' rates changed. Northern Indiana Public Service, served by five pipelines, usually makes from 13 to 15 PGA filings in a year. These filings reflect the interstate pipelines' own semiannual PGA filings with FERC, as well as settlements on pipeline rate cases and purchases from other suppliers, storage agreements, and other expenses.

Typically, the PGA filing is based on historical volumes for the past 12 months that are priced at the new higher rates, but can also include future cost projections. The Pennsylvania Public Utility Commission allowed a portion of projected increased costs to be added into its PGA--the Gas Cost Rate--if the distributor can show that such an addition would not initially produce an excessive recovery. In New Jersey, the Board of Public Utilities allowed Public Service Electric and Gas and other companies to project their purchased gas costs a year in advance. The commission tracks the actual costs and makes adjustments the following year.

There are various ways to recover purchased gas costs in relation to a distributor's other expenses. For example, distributors in Pennsylvania are required each year to incorporate at least 90 percent of their experienced gas costs into the base rate. Thus, they maintain a fixed charge each month and add increased gas costs to its PGA clause. The Ohio commission separates gas costs from a distributor's other costs of providing service and bases a company's rates only on the cost of service.

In addition to the recovery of purchased gas costs, the majority of the States we visited permitted inclusion of other specifically identified expenses that are directly related to the cost of gas. Examples of such costs, which were allowable in one or more States, are the costs of liquefied natural gas and synthetic gas to meet "peak" demand on the coldest days, storage, transportation, franchise taxes, and gross receipt taxes. These other costs tended to be relatively small in comparison to the cost of purchased gas.

Some States had standardized allowable expenses that may be included in the PGA. For example, distributors under the Illinois Commerce Commission's jurisdiction previously had included expenses other than purchased gas in their PGA filings but, in September 1982, the commission standardized the allowable costs in the PGA. In addition to purchased gas costs, the uniform PGA now includes storage expenses and gas for peak use. The New York Public Service Commission has similar rules and regulations on permissible expenses in the gas cost adjustment.

EXTENT OF STATE REVIEW OF PGA FILINGS

The State commissions review or audit PGA filings for arithmetic accuracy and submission of required reports and documents such as tariff schedules and invoices. In addition, the commission staff performed an annual audit or reconciliation to correct a distributor's under- or over-collection of purchased gas costs.

At least 10 of the State commissions we contacted routinely approve PGA filings without hearings. The other State commissions conduct hearings, typically on an annual basis. The hearings usually focus on the annual reconciliation and the necessity for additional charges or refunds to customers. Most State commissions we surveyed have regulations to remedy a distributor's under- or over-collection of purchased gas costs.

For example, for Philadelphia Electric, actual purchased gas costs are compared with estimated costs at the end of each year. If the company recovered insufficient funds to meet purchased gas expenses, it could collect the balance from customers with no interest charge. If the company received monies in excess of its purchased gas costs, it must return the over-collection to its customers with interest equal to the Pennsylvania residential mortgage rate. Consolidated Edison of New York must refund to its customers over-collections with interest. The interest rate was set at 11 percent in April 1983.

The Delaware Public Service Commission required Delmarva Power and Light to refund over-collections in purchased gas adjustments with two separate interest rates. Over-collections not exceeding 4.5 percent of the company's claimed expenses are to accrue interest at the company's current authorized rate-of-return; over-collections in excess of 4.5 percent, at 15 percent. Similarly, the New Jersey commission levies a penalty on over-collections equal to a company's allowed rate-of-return. No interest is permitted to be charged to customers on any under-collections.

Some State commissions examined the purchases claimed in the PGA filing. For example, the Illinois Commerce Commission in August 1982 directed distributors in its jurisdiction to show cause why certain high-cost gas should be automatically passed through in the PGA filings.

In Pennsylvania, the PGA-type mechanism allowed for recovery of purchased gas costs for a 12-month period, from September to August. However, in September 1982, the Pennsylvania Public Utility Commission permitted distributors to recover the then current FERC-approved rates and the projected rates for the next 2 months. The commission temporarily suspended the distributors'

recovery of future increases in costs from pipeline suppliers for the remaining 10 months. The Pennsylvania commission has conducted hearings on the appropriateness of the PGA-type mechanism.

The State legislature has barred Boston Gas from collecting a portion of its purchased gas costs pending completion of hearings into the causes of a gas shortage in the winter of 1980-81. As a result of allegations that mismanagement by distribution companies and their pipeline suppliers contributed to the shortage, the Massachusetts Department of Public Utilities initiated an investigation in May 1981. In August 1981, the Department approved PGA filings by Boston Gas and other companies. Boston Gas was awarded a $46.5-million adjustment with the provision that the utility would refund the monies if the investigation proved the company was negligent. The company had collected about $7 million when, in December 1981, the Governor signed into law legislation barring Boston Gas from collecting the balance of the $46.5 million until the Department of Public Utilities completed its investigation. In October 1982, the Supreme Judicial Court upheld the legislation. The Department's probe was still underway as of April 12, 1983.

CONSUMER AND LEGISLATIVE ACTIVITY DIRECTED AT THE PGA MECHANISM

Because purchased gas has become an increasingly large cost element for gas distributors, the PGA clause has drawn increasing public attention. The Indiana Public Service Commission has decided to conduct hearings on automatic adjustments of purchased gas, according to an official. Similarly, the Pennsylvania Public Utility Commission has conducted hearings on the appropriateness of its PGA-type mechanism, as well as the reasonableness of the price of certain purchased natural gas.

The Michigan State legislature passed a law in October 1982 immediately prohibiting gas and electric utilities from automatically passing increased fuel costs on to end-users unless the Michigan Public Service Commission holds a public hearing. The law also provides that a distributor must provide (1) a plan describing expected sources and volumes of its gas supply and anticipated changes in the cost of gas over the next 12 months and (2) a forecast of gas requirements for its customers, anticipated sources of supply, and projections of gas costs over the next 5 years. In addition, the law requires certain utilities to contribute money to fund public intervention during the hearings.

In addition to the new law, Michigan voters approved two public referendums--Proposal D and Proposal H--in November 1982. Each treats the PGA clause differently. Proposal D abolishes the current mechanism of a separate purchased gas adjustment clause, prohibits rate increases and the recovery of purchased gas costs

without a full and complete hearing, and prohibits simultaneous rate increase cases and hearings for a utility. Thus if a distributor has already filed a general rate case and has to pay increased costs to its pipeline supplier, the increased costs cannot be recovered unless and until the State commission includes such costs in establishing rates in the first case. Proposal H permits the State commission to approve a separate PGA clause--the gas cost recovery clause--only with notice and a full and complete hearing and to hold a separate and concurrent hearing on the cost of purchased gas with a general rate case.

A court issued a temporary restraining order determining that Proposals D and H were in conflict in certain respects. As of April 13, 1983, the issue of which proposal takes precedence was before the Michigan Supreme Court. Representatives of two of the State's major distributors--Michigan Consolidated and Consumers Power--attribute in part a reduction in their credit ratings to the confusion over Proposals D and H.[2]

SUMMARY

All of the distributors we visited had a PGA-type mechanism allowing them to recover purchased gas costs on a periodic basis. The PGA is called by different names and administered differently from State to State. In most States, the PGA is filed monthly, although some States allow more frequent or less frequent filings. The PGA is typically based on historical volumes priced at current rates. Sometimes other identified expenses directly related to the cost of gas are included in the PGA, such as storage expenses or gas needed for peak use.

The extent of State review varies. State commissions generally review PGA filings for arithmetic accuracy and documentation and have regulations regarding under- and over-collection of purchased gas costs. Some State commissions examine the gas purchases claimed in the PGA.

Some consumer and legislative activity has been directed at the PGA clause. Some State commissions have conducted hearings on the appropriateness of the PGA clause. In Michigan, a State law and two public referendums modifying the recovery clause have been approved.

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[2]Both companies had been placed on Standard and Poor's "Credit Watch," which is a list of companies whose credit ratings may change.

CHAPTER 4

RATES CHARGED TO DISTRIBUTORS' CUSTOMERS

State commissions are responsible for setting the retail rates for natural gas that are fair to both the customer and the distributor. At a rate hearing, the State commission generally determines a distributor's rate base, operating expenses, allowable rate-of-return on the rate base, and finally, its total revenue requirements, or the total amount the distributor needs to collect from its customers in return for the service it is providing. The State commission then decides how to allocate the costs of service among the distributor's various classes of customers and devises a rate structure or rate design.

This chapter discusses a distributor's classes of customers, types of service, allocation of costs, and rate structure. It also discusses what some distributors are doing to maintain their sales to industrial customers, which in some cases are switching to another fuel, because of higher gas prices.

CUSTOMER CLASSES AND RATES

Distributors usually group their customers into three classes: residential, commercial, and industrial. There are basically two types of gas service available to these customer classes. "Firm" service provides assured availability and is usually used by residential customers. "Interruptible" service is made available under agreements that permit curtailment of deliveries. This reduced service occurs when gas is needed for firm service, usually during peak use in winter. Interruptible service is usually offered to large volume commercial and industrial users at a lower rate than firm service. Most interruptible customers have dual capability: that is, they are equipped to use more than one type of fuel.

There are, however, exceptions to the service usually offered. For example, two distributors--Boston Gas and Brooklyn Union Gas--had interruptible service to residential customers residing in apartment buildings. Brooklyn Union Gas offered an interruptible residential rate to small apartment complexes ranging from about 50 units with the provision that their service was interruptible when the temperature dropped below 20 degrees Fahrenheit. Also, several distributors, such as Gulf State Utilities in Louisiana and East Ohio Gas, provided gas to industrial customers only on firm service.

In the State of California, distributors were required to place customers under a priority system, whereby all classes were

subject to curtailment. Residential customers were assigned first priority, followed by commercial and industrial customers.

The costs of serving each class differ. Because residential customers generally are widely dispersed, use relatively small amounts of gas, but need peak amounts on extremely cold days, serving them is usually more costly per unit of gas than serving industrial users, which have a relatively stable demand for gas and take it in large quantities.

The rates for residential and industrial customers usually reflect the different costs in serving them. For all of the distributors we visited except those in California, residential rates on average were higher than industrial rates. For example, Consolidated Edison of New York collected an average of $7.16 per Mcf in 1982 from its residential users and an average of $6.38 from its firm commercial and industrial users. Indiana Gas, serving north central, central, and southern Indiana, collected an average $5.86 per Mcf from its residential customers and an average of $4.99 and $5.57 per Mcf from its firm industrial and commercial customers, respectively, in January 1983.

A State commission may shift a part of the costs normally carried by the residential class to the commercial and industrial classes. In California, the three largest gas distributors collect less per Mcf from residential users on average than from commercial and industrial users. For example, Pacific Gas and Electric received an average of $4.32 per Mcf in January 1983 from residential users; $5.64 from commercial users; and $5.49 from industrial users. (App. III shows the average revenue per Mcf from each customer class received by distributors in our survey.)

Setting of rates within a class of customers is typically based on the amount of natural gas used. As usage increases, the cost per unit may decrease, increase, or remain the same. A declining block rate is composed of a series of increasing levels of consumption priced at successively lower rates; a flat rate structure is one that prices all consumption at the same price per unit; and an inverted or increasing block rate structure increases the unit price as consumption increases. Many of the companies we interviewed had an increasing or declining block rate structure for their customers, usually a declining block rate. There may be other considerations in the setting of rates, such as location or seasonal variation. Sometimes a distributor may add a service charge to cover certain fixed costs.

Sometimes State law may specify a certain rate structure. In California, distributors are required to have an inverted rate structure to encourage energy conservation and to establish a

lifeline rate. The lifeline rate applies to the first or lowest block of the increasing block rate. Under this program, distributors charge a relatively low price for minimum quantities of energy--gas and electricity--for basic residential uses such as space heating and cooling, water heating, cooking, refrigeration, and lighting. The initial quantity of gas may vary according to climate and/or season. For example, in 1982 San Diego Gas and Electric provided 2.6 Mcf a month in the lifeline or first tier during the warmer months and 8.1 Mcf a month during the colder months for customers with space heating. Customers without space heating received 2.6 Mcf a month all year around.

The lifeline tier is priced below the system's average cost of gas. For example, for part of 1982 until new rates were ratified in December, the California commission set the Southern California Gas Company's residential lifeline rate approximately equal to 80 percent of the average cost of gas. The second tier was set at a rate considering the price of alternate fuels and highest cost gas paid by the distributor; the third tier was set at $1.00 per MmBtu above the marginal rate. The company told us that 70 to 75 percent of its residential sales at that time were at the residential lifeline rate of about $4.00 per MmBtu. However, the system's average cost of gas was about $4.20 per MmBtu. Table 2 shows the residential rate structure of the California distributors we surveyed.

Table 2

Residential Rates in California, By Distributor

	Pacific Gas and Electric (note a)	San Diego Gas and Electric (note b)	Southern California Gas (note b)
Tier I (note c)	$ 4.00	$ 4.48	$ 4.04
Tier II	6.50	6.75	5.73
Tier III	7.90	8.64	6.73

[a]Rates effective from May through December 1982.

[b]Rates effective from October through December 1982.

[c]Quantities in each tier vary according to climate and season.

The lifeline program was recently amended to continue as an energy baseline program. As amended by Chapter 1541 of the California Statutes of 1982, the law provides for a "baseline quantity" of natural gas for residential customers set at from 60 to 70 percent of average residential consumption during the winter heating season. The baseline rate applies to the first block of an increasing block rate structure and is set from 15 to 25 percent below the system average rate. The California commission may establish a rate less than 15 percent below the system average to ensure that a distributor's revenue requirements are met and to prevent increases in rates for low priority users which may switch to other fuels. The commission will implement these provisions at the first general rate proceeding decided on or after January 1, 1983, with an effective date not earlier than January 1, 1984. Until that time, the current lifeline allowance will continue.

APPLICATION OF INCREMENTAL PRICING

Federal legislation may affect distribution companies' rate structures. Title II of the Natural Gas Policy Act of 1978 requires FERC to implement an "incremental pricing" program, whereby certain industrial users of interstate pipelines and distributors served by interstate pipelines pay a surcharge for the gas they buy. An objective of the program is to shield residential and other high priority users of natural gas from the full impact of the higher prices authorized by NGPA. As a result of transferring costs to industrial users, residential and small commercial users were to pay less for gas than they would if the incremental pricing provisions had not been passed. Incremental pricing is applied to boiler fuel users burning more than 300 Mcf per day. The law exempts agricultural users of natural gas as well as schools, hospitals, electric utilities, and certain other facilities.

The legislation provides that the surcharge operates to increase each industrial customer's total gas cost--base price plus the incremental surcharge--until the price paid is equal to the Btu-equivalent cost of an alternate fuel. The law provides that the price paid by industrial users for distillate (No. 2) fuel oil is the alternative fuel cost, unless FERC determines otherwise. FERC was authorized to set the alternate fuel cost at a lower level--high sulfur residual (No. 6) fuel oil--if it determined that this reduction was necessary to transfer as much of the higher gas costs as possible to industrial users without causing them to switch to an alternate fuel. FERC designated residual (No. 6) fuel oil as the alternative fuel cost in 1981.

State regulatory agencies initiated incremental pricing at the end-user level. The legislation calls for the distribution companies to provide a surcharge passthrough, but it did not mention a specific passthrough technique. As a result, the States and distributors implemented incremental pricing differently. However, in the States we visited the distributors typically administer incremental pricing and the State commission oversees their operation. For example, in Georgia, the distribution companies report their sales, prices, and revenues for natural gas sold to non-exempt users. The Georgia Public Service Commission reviews the passthrough charge by auditing the companies' records. The surcharge from incremental pricing is calculated in the reconciliation of the purchased gas adjustment clause.

In Pennsylvania, the public utility commission has ordered certain gas distributors to use incremental pricing surcharges to fund energy conservation programs. The commission advised the distributors to give first priority to an Audit Supplement Program, conducted in conjunction with the Residential Conservation Service. Under this program, the owner or renter of a gas heated home may have the auditor--the individual who recommends energy conservation measures--instruct the participant how to make basic weatherization improvements. For low-income participants, the utility is to provide additional low-cost weatherization materials and waive the fee for the audit. The commission also recommended that distributors offer to arrange for and underwrite loans to owners and renters of gas heated homes for more expensive weatherization improvements. The commission order was on appeal before the Commonwealth and Supreme Courts of Pennsylvania, as of April 15, 1983.

Because the incremental pricing provision was designed to increase the industrial user's gas costs to the level of the alternate fuel oil, once the user's costs reach that level, the impact of the program is reduced. In areas where natural gas prices have approached or exceeded certain oil prices, little or no monies are collected from the surcharge. Many distributors in our survey said that they collect very little revenue from a surcharge on natural gas bought by boiler fuel users.

Examples of some companies that collected relatively little or no revenue under incremental pricing are shown in table 3. For example, Illinois Power, serving cities such as Bloomington and Decatur, collected $890,000, or 0.2 percent of its revenue from total sales, in 1982. Atlanta Gas Light of Georgia reported that revenue collected under the surcharge decreased by over 75 percent, from $7.7 million in 1981 to $1.8 million in 1982. The revenue for total sales in those years was about $885 million and $990 million, respectively. A company official stated that the decrease was primarily due to natural gas prices reaching parity with alternative fuels and the increasing number of exempt customers.

Table 3

Revenue Collected Under "Incremental Pricing"
by Selected Distribution Companies, 1982

State and Distributor	Revenue from surcharge (in thousands)	Revenue from surcharge as a percent of total sales (note a)	Revenue from industrial sales (in thousands)	Industrial sales as a percent of total sales
Delaware				
Delmarva Power and Light	$ 6	b/	$ 30,901	42
Georgia				
Atlanta Gas Light	1,845	0.2	389,518	39
Illinois				
Illinois Power	890	0.2	150,962	36
Indiana				
Northern Indiana Public Service	301	0.1	533,699	56
Michigan				
Consumers Power Company	657	b/	222,591	19
Ohio				
Columbia Gas of Ohio	681	0.4	451,978	30
Pennsylvania				
UGI	-	-	160,800	48
Texas				
Lone Star Gas	-	-	621,245	29
Wisconsin				
Wisconsin Gas Company	-	-	252,890	42

a/ Total sales include residential, commercial, and industrial.

b/ Less than 0.05.

Several distributors no longer apply the incremental pricing surcharge because it is no longer warranted. UGI Corporation--serving the cities of Harrisburg, Lancaster, Lehigh, and Reading, Pennsylvania--collected no revenue under the incremental pricing surcharge in 1981 and 1982. Consumers Power Company in Michigan had not collected any monies from its 40 non-exempt customers since April 1982. Similarly, Consolidated Edison of New York had only one customer subject to incremental pricing, which paid the surcharge for only 1 month in 1981.

NATURAL GAS COMPETITION WITH OTHER FUELS

Natural gas faces competition with other fuels, depending on the area and prices. In many markets, residual oil, usually high sulfur oil, is the alternate fuel, but sometimes coal, propane, and electricity are also alternatives. In most areas, natural gas prices were approaching the prices of these alternate fuels when we conducted our interviews, generally in the latter half of 1982. Since then crude oil and refined products prices have declined. For example, the New York spot market price for residual fuel oil was $30.35 for the week of October 8, 1982, and $26.00 for the week of April 8, 1983.[1]

Most distribution companies have some customers, usually large industrial users, which have dual capability and can switch quickly from natural gas to an alternate fuel, primarily residual oil. Many distributor representatives told us that they are concerned that users with dual capability will switch from natural gas to an alternate fuel. Some companies have already experienced industrial load loss. If these industrial customers are lost, the remaining customers must carry a greater share of the distributor's fixed operating costs.

Several distribution companies reported that natural gas prices in their service area were approaching or have exceeded prices for alternate fuels, usually residual fuel oil. National Fuel Gas Distribution Corporation stated that in the Buffalo area the natural gas price for certain industrial users equaled the price for residual oil in April 1982. As of March 1983, the lowest large volume average gas rate was $6.03, compared to $4.14 for residual oil on an MmBtu basis. Similarly, Illinois Power Company's industrial rate for natural gas was $4.44 in late January 1983, compared to $4.17 for residual fuel oil on an MmBtu basis.

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[1]See Energy Information Administration, Weekly Petroleum Status Report, April 15, 1983, DOE/EIA-0208 (83/15), p. 21.

Some distributors stated that, although natural gas prices are at parity with residual fuel oil, customers with dual capability are willing to pay a premium for gas; among other reasons, it is relatively cleaner than residual oil and the equipment requires less maintenance. For these reasons, Consumers Power Company and Brooklyn Union Gas stated that natural gas can be priced to sell at a 10- to 15-percent premimum over some alternate fuels. Consolidated Edison of New York also mentioned that firm industrial users currently without dual capability are unlikely to convert because of the necessary capital needed for conversion.

Most of the distribution company officials we interviewed said that they have lost some sales in the last 3 years due to industrial customers switching to less expensive alternate fuels and/or economic conditions. For example, over the last 3 years Madison Gas and Electric in Wisconsin lost about 3.5 Bcf in annual sales because of customers switching to coal. The South Jersey Gas Company in 1982 lost 1.8 Bcf annually, about 20 percent of its interruptible sales, because of switching to propane, residual fuel oil, and coal.

Several distributors are projecting significant load losses if natural gas ceases to be a preferred fuel. Lone Star Gas Company in Texas calculated that it would lose 20 percent of its industrial sales if the price of natural gas reached 110 percent of the price of residual oil. The UGI Corporation projected that over the course of the next year, it would lose 9 to 13 Bcf in sales because of customers switching to residual oil. In 1982, the UGI Corporation sold a total of 60 Bcf.

PROPOSALS TO RESTRUCTURE RETAIL RATES

To maintain price competitiveness with alternate fuels and to discourage users with dual capability from switching, State public utility commissions have approved some distributors' proposals to set industrial rates comparable to alternate fuel rates. Many companies are considering such a rate design and several have made such proposals before their State commissions.

The California Public Utilities Commission has considered marginal rates for certain customers that reflect the cost of alternative fuels and the cost of gas above its minimum contract purchase obligations. Rates to industrial and commercial users with dual capability are set approximately equal to residual fuel oil; rates to commercial and industrial users without an alternate fuel capability are somewhat higher than the price of residual fuel oil. The Southern California Gas Company proposed in

February 1983 a rate design for certain industrial users--electric generating customers--to index their base rate to fuel oil prices, adjustable every 2 weeks. The California commission granted this request February 24, 1983.

Pacific Gas and Electric, serving northern California, proposed in December 1982 a rate indexed to residual fuel oil for certain industrial customers which have the ability to burn residual fuel oil. Their service would be curtailed when the price of natural gas is more expensive. As of April 18, 1983, the California commission had not reached a decision on the proposed rate.

The Niagara Mohawk Power Corporation in New York, effective October 1982, instituted a flexible gas price that is keyed to 95 percent of the equivalent residual fuel oil price for its large-volume interruptible users. Commonwealth Gas Company's rates for interruptible service are keyed to the price of oil that would otherwise be burned by those customers with dual fuel capability.

Finally, Entex, Inc., filed with the Texas Railroad Commission in September 1982 a statement of intent to change rates to an industrial customer. Entex had available from one of its interstate pipeline suppliers an interruptible supply of gas; because it was fully interruptible by the supplier, it was priced below the price for firm supply. Entex proposed to sell this gas to an industrial or large volume customer which can be served on an interruptible basis and is located where this supply can be made available. The Texas Railroad Commission approved this type of sale in March 1983.

SUMMARY

Distributors generally have three classes of customers: residential, commercial, and industrial. The cost of serving each class differs. Serving residential customers is generally more costly per unit of natural gas than serving industrial customers, and the rates charged usually reflect the different costs in serving them. However, State law may specify a certain rate structure. For example, in California, a State-mandated lifeline program provides for minimum quantities of gas for basic residential uses priced below the distributor's average unit cost of gas.

Federal legislation may also affect a distributor's rate. Title II of the NGPA provides for an "incremental pricing" program whereby certain large industrial users pay a surcharge that increases their total gas cost to the Btu-equivalent cost of an alternative fuel--residual fuel oil. However, because the price of natural gas has reached, or in some cases exceeded, the price

of the alternate fuel, the impact of the incremental pricing program has been reduced.

Many distributors have lost industrial users to alternate fuels. To maintain their current industrial market, some distributors have implemented or proposed rates to make natural gas prices more competitive. These new rates are usually flexible and are keyed to the price of distillate or residual oil.

CHAPTER 5

DISTRIBUTORS' EFFORTS TO MAINTAIN OR EXPAND SALES

Distributors try to even out or minimize peak demand in order to improve their efficiency. Therefore, they try to control their sales, but there are many factors that affect gas consumption. Gas consumption is extremely seasonal; gas utility sales in 1981 were half as much in September as in January.

Other factors affecting gas consumption include government rules and regulations--such as air quality standards and energy efficient home and appliance energy standards, economic conditions, conservation activities, and increasing natural gas prices. This chapter discusses these factors as well as distribution companies' actions to maintain or expand their markets.

FACTORS AFFECTING GAS CONSUMPTION

Many of the distribution companies we interviewed reported that they had experienced decreased natural gas sales over the past 3 years. Distributors named conservation, slow economic activity, relatively warm weather, more efficient home appliances and industrial equipment, and increasing natural gas prices as factors affecting gas consumption. For example, Wisconsin Gas--which serves Milwaukee and other communities--said that residential heating customers decreased their consumption 25 percent between 1975 and mid-1982 due to conservation efforts, and industrial customers reduced their usage 15 percent due to conservation as well as a poor local economy and fuel switching. Overall, the company is projecting lower sales in 1983 than in 1981. Gulf State Utilities in Louisiana lost almost 1 Bcf in annual sales due to conservation.

Northern Indiana Public Service reported that, during its 1981-82 heating season, residential customers used an average of 15 cubic feet per heating degree day.[1] This average daily consumption was about one third less than the 22 cubic feet during the 1974-75 season. In addition, one of the company's industrial customers said that its natural gas requirement per ton of steel was reduced by 16 percent over 6 years due to improved equipment efficiency.

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[1]A heating degree day is a measure of the coldness of the weather experienced based on the extent to which the daily mean temperature falls below 65 degrees Fahrenheit. For example, on a day when the mean temperature is 35 degrees Fahrenheit there would be 30 degree days experienced.

Lone Star Gas--which serves southern Oklahoma and north-central Texas, including the Dallas and Fort Worth areas--said that increased gas prices and the economic recession had reduced consumption. In addition, Lone Star officials said that special promotional electric heating rates offered by area electric utilities, along with a marketing campaign for electric heat pumps, eroded both the residential and commercial gas space heating markets.

Most of the distributor officials we spoke to cited government laws and regulations at both the State and the local level as a factor affecting consumption. These laws generally require certain insulation standards, more efficient equipment and appliances, and residential energy conservation programs. These laws and regulations would tend to reduce gas consumption. On the other hand, air quality restrictions in California had helped to maintain the consumption level of gas. Although natural gas prices in California are nearing or surpassing energy equivalent prices for residual fuel oil, some industrial customers are not switching because of restrictions on burning such oil to preserve air quality.

STATUS OF MORATORIA ON NEW HOOK-UPS

In the mid-1970's when gas supplies in the interstate market were inadequate, many distributors curtailed existing service and placed moratoria on new service hook-ups. Most of the distributors we spoke to had such a moratorium at one time and cited supply unavailability as the primary reason for instituting it.

Most distributors have now lifted their moratoria, although some distribution companies still restricted new service, mostly for large industrial and commercial users. Minnesota Gas offered firm service only to customers using less than 60 Mcf per day. Madison Gas and Electric needed approval of the Wisconsin Public Service Commission to provide service to customers using over 10,000 Mcf per year. South Jersey Gas at its discretion provided firm service for new boiler fuel customers using less than 300 Mcf per day. Customers using over 300 Mcf per day were required to have alternate fuel capability.

All of the distributor officials we interviewed said that there was no difference in rates between existing and new customers. However, several companies reported that the free allowance for main or pipeline extensions was being limited or phased out entirely. National Fuel, serving western New York and northeastern Pennsylvania, requires new customers to pay for portions of the service line.

EFFORTS TO EVEN OUT SEASONAL FLUCTUATIONS

Overall gas consumption is extremely seasonal, and residential and commercial use fluctuates more than industrial use. In the first quarter of 1981 distribution company sales to residential customers nationally reached over 2,000 Bcf; in the third quarter, sales dropped to around 390 Bcf. In contrast, industrial sales, including sales for electric generation, remained near 2,000 Bcf per quarter throughout the year.

The cost of providing service for peak demand on the coldest days can be much higher than on other days. To meet peak demand when the primary source of gas is inadequate, distributors usually supply gas from other sources, usually at a higher cost. Nearly two thirds of the distributors we interviewed have "peak shaving" capacity, whereby gas manufacturing and/or storage facilities produce gas on extremely cold days to supplement deliveries from pipeline suppliers. However, the price of supplemental gas--such as liquefied or synthetic natural gas or propane--is usually more expensive than firm gas. For example, the commodity cost for the Minnesota Gas Company was about $3.65 per Mcf in September 1982. In contrast, underground storage gas and liquefied natural gas cost about $4.00 and $4.40 per Mcf, respectively, and propane cost about $5.50 per Mcf. Also, Brooklyn Union Gas paid about $6.00 per Mcf for liquefied natural gas and in excess of $10.00 per Mcf for synthetic natural gas in September 1982.

The more widespread use of electric heat pumps in homes may exacerbate winter peak consumption. According to the American Gas Association, the number of heat pumps is increasing due to (1) moratoria on new gas service, which existed during recent years, (2) the increased number of single family homes completed with a heat pump, and (3) a strong marketing effort by the electric industry. The heat pump may be almost twice as efficient as a conventional electric heating system depending on the climate. However, as the outside temperature becomes colder, the heat pump works less efficiently. For this reason, homes with a heat pump usually have a backup heating system, some recently with natural gas. This backup use of natural gas only on the coldest days adds to a distribution company's peak demand.

So that other customers do not pay a greater share of the cost of service when heat pump use adds to the more expensive peak volume, Atlanta Gas Light provides this service if the customer pays a "capacity charge" based on the capacity of the heat pump equipment in place. According to a company official, this charge may add about $190 a year to the gas bill of a customer with a heat pump. While other companies have proposed a surcharge, we found no company of the ones we contacted that has

had such a charge approved. Columbia Gas of Ohio in 1981 proposed a surcharge for customers using a heat pump, but withdrew the proposal because of proposed State legislation which would have prohibited the surcharge.

Because of the seasonal demand for natural gas, distributors generally try to balance their load--the amount of gas delivered or required in the system--in order to maximize the use of the system on a year round basis. To do this, distributors may try to secure off-peak or interruptible markets. During peak consumption, the distributor can shut off interruptible service and thus reduce its peak demand. For example, although Philadelphia Electric lifted its hook-up moratorium in 1979, large industrial users are offered only interruptible service because of the winter peak usage. In another example, Louisiana Gas Service, serving primarily the New Orleans area, offered a $0.30 per Mcf discount to consumers using natural gas for air conditioning from May through October to encourage use of natural gas during a period of relatively low residential consumption.

MARKET EXPANSION

To offset reduced consumption, many distribution companies told us that they are seeking to expand their current markets or to stimulate new markets for natural gas. Many said that they would like to expand but are unable to do so because of economic conditions and other factors.

For example, Brooklyn Union Gas was encouraging residential and small commercial users to convert from oil to gas, and Minnesota Gas was selling gas ranges and water heaters and other gas appliances. Another option is developing new applications for natural gas. Several companies told us that they are promoting the use of compressed natural gas for vehicles. Wisconsin Gas calculated that, in its service area, a fleet vehicle used about 70 Mcf per year or almost as much natural gas as is needed to heat a house for a year. The company had converted about one-fifth of its fleet and served over 40 other vehicles, including school buses and municipal police cars.

SUMMARY

Many of the distributors we spoke to had experienced lower sales of natural gas due to conservation, slow economic activity, relatively warm weather, and increasing natural gas prices. Gas consumption is extremely seasonal, and residential and commercial use fluctuates more than industrial use. Consequently, distributors were trying to secure off-peak and interruptible service to balance their seasonal demand and to expand their markets to offset decreased sales, but with only limited success.

In addition, government laws and regulations may affect consumption. The hook-up moratoria, which were widely in effect in the mid-1970's when gas supplies were inadequate, have for the most part been lifted. Air quality standards can work to increase gas sales, while energy efficient home and appliance standards and residential conservation programs can work to decrease gas sales.

APPENDIX I

U.S. HOUSE OF REPRESENTATIVES
SUBCOMMITTEE ON FOSSIL AND
SYNTHETIC FUELS
COMMITTEE ON ENERGY AND COMMERCE
WASHINGTON, D.C. 20515

July 8, 1982

The Honorable Charles A. Bowsher
Comptroller General of the United States
441 G Street, N.W.
Washington, D.C. 20548

Dear Mr. Bowsher:

Natural gas prices and supplies have received considerable attention during the 97th Congress and promise to remain a top priority in the 98th Congress. Much attention to date has focused on natural gas producers and pipelines, but as the debate continues I believe that increased emphasis will be placed on distribution companies and the state and local public utility commissions that regulate them.

To help the Subcommittee in considering natural gas legislation in the 98th Congress, I hereby request that you conduct a survey of state public utility commissions to determine how they are reacting to, and dealing with, sharply increased natural gas prices. Although the distribution companies are subject to limited federal regulation, the companies, as well as the state commissions that regulate most of their operations, are greatly affected by federal regulation of producers and pipelines. One of the bills that has been introduced in the 97th Congress on natural gas issues would restrict the authority of the state commissions to take action inconsistent with decisions at the Federal level. In order to assess suggested solutions such as this one, I believe we need to have an understanding of how such actions would impact on the traditional activities of the state commissions.

For your efforts to be most useful to the Subcommittee, we must have the results of your survey by the end of this calendar year. We anticipate that legislation on this issue will be introduced early in the 98th Congress.

Should your staff have any questions about our needs, please have them call Nancy Williams, Subcommittee Counsel, at 226-2500.

Sincerely,

Philip R. Sharp
Chairman

PRS:nw

APPENDIX II

LIST OF DISTRIBUTION COMPANIES, STATE PUBLIC UTILITY COMMISSIONS, AND CONSUMER INTEREST GROUPS VISITED, BY STATE

We contacted the following organizations in our survey. They are presented in the following order: distribution companies, State public utility commissions, and public advocates and/or consumer groups.

CALIFORNIA:

Pacific Gas and Electric Company
San Diego Gas and Electric Company
Southern California Gas Company

California Public Utilities Commission

State of California, Department of Consumer Affairs

DELAWARE:

Delmarva Power and Light Company

Delaware Public Service Commission

Office of the Public Advocate

GEORGIA:

Atlanta Gas Light Company

Georgia Public Service Commission

Office of the Consumers' Utility Counsel of Georgia

ILLINOIS:

Central Illinois Public Service Company
Illinois Power Company
The Peoples Gas Light and Coke Company

Illinois Commerce Commission

Illinois Public Action Council
Labor Coalition on Public Utilities
State of Illinois Office of Consumer Services

INDIANA:

Citizens Gas and Coke Utility
Indiana Gas Company
North Indiana Public Service Company

Indiana Public Service Commission

Citizens Action Coalition
State of Indiana, Office of the Utility Consumer Counselor

LOUISIANA:

Gulf State Utilities
Louisiana Gas Service Company
Trans Louisiana Gas Company

Louisiana Public Service Commission

Public Law Utility Group

MASSACHUSETTS:

Boston Gas Company
Commonwealth Gas Company

Massachusetts Department of Public Utilities

State of Massachusetts, Department of the Attorney General,
Public Protection Bureau

MICHIGAN:

Consumers Power Company
Michigan Consolidated Gas Company

Michigan Public Service Commission

State of Michigan, Department of the Attorney General,
Special Litigation Division
Michigan Citizens Lobby

MINNESOTA:

Minnesota Gas Company
Northern States Power Company

Minnesota Public Utilities Commission

State of Minnesota, Office of Consumer Services

APPENDIX II

NEW JERSEY:

Public Service Electric and Gas Company
South Jersey Gas Company

New Jersey Board of Public Utilities

State of New Jersey, Department of the Public Advocate

NEW YORK:

Brooklyn Union Gas Company
Consolidated Edison of New York
National Fuel Gas Distribution Company
Niagara Mohawk Power Corporation

New York Public Service Commission

State of New York, Consumer Protection Board

OHIO:

Columbia Gas of Ohio
East Ohio Gas Company

Public Utilities Commission of Ohio

The Office of the Consumers Counsel

PENNSYLVANIA:

Philadelphia Electric Company
UGI Corporation

Pennsylvania Public Utility Commission

State of Pennsylvania, Office of the Consumer Advocate

TEXAS:

Entex Incorporated
Lone Star Gas Company
Southern Union Gas Company

Texas Railroad Commission

Association of Community Organizations for Reform Now

WISCONSIN:

Madison Gas and Electric Company
Wisconsin Gas Company
Wisconsin Natural Gas Company
Wisconsin Power and Light Company

Wisconsin Public Service Commission

Citizens' Utility Board of Wisconsin

APPENDIX III

Average Revenue From End-User By Distributor and Type of Service, January 1983

State and Company	Residential	Industrial		Commercial	
	Firm	Firm	Interruptible	Firm	Interruptible
	[Average Revenue per Mcf (in $)]				
California (note a):					
Pacific Gas and Electric	4.32	-	5.49	-	5.64
San Diego Gas and Electric	5.39	-	6.78	-	6.78
Southern California Gas (note d)	5.23	6.31	5.96	6.43	5.88
Delaware:					
Delmarva Power and Light	6.05	5.05	4.76	5.90	-
Georgia:					
Atlanta Gas Light	5.80	5.57	b/4.65	5.70	b/4.69
Illinois:					
Central Illinois Public Service	5.37	5.00	4.45	5.25	4.98
Illinois Power	5.17	4.46	4.52	4.87	-
Peoples Gas, Light and Coke	5.61	5.33	4.48	5.33	-
Indiana:					
Citizens Gas and Coke Utility	4.93	4.69	4.44	4.61	4.44
Indiana Gas	5.86	4.99	4.84	5.57	4.90
Northern Indiana Public Service	4.87	4.19	-	5.12	-
Louisiana:					
Gulf State Utilities	5.93	5.53	-	5.58	-
Louisiana Gas Service	6.88	5.30	-	7.21	-
Trans Louisiana (note d)	5.65	5.21	-	5.46	-
Massachusetts:					
Boston Gas	c/8.50	8.06	4.40	8.06	4.40
Commonwealth Gas	7.80	6.77	4.53	7.71	4.92
Michigan:					
Consumers Power	4.47	4.56	4.19	4.31	4.07
Michigan Consolidated	5.31	5.19	5.00	5.33	-

a/All customers are placed on a priority system whereby service can be interrupted. Residential users are given first priority, followed by commercial and industrial users.

b/Rates include some firm customers.

c/An interruptible residential rate, equaling the interruptible industrial rate, is available.

d/Annualized rates for 1982.

APPENDIX III

Average Revenue From End-User By Distributor and Type of Service, January 1983

State and Company	Residential	Industrial		Commercial	
	Firm	Firm	Interruptible	Firm	Interruptible
	[Average Revenue per Mcf (in $)]				
Minnesota:					
Minnesota Gas	5.53	5.39	4.96	4.88	4.96
Northern States Power	6.03	5.67	4.55	5.89	4.56
New Jersey:					
Public Service Electric and Gas	7.42	6.59	5.15	7.06	5.08
South Jersey Gas	6.75	5.57	5.12	6.42	6.25
New York:					
Brooklyn Union Gas	c/8.88	7.87	4.85	7.87	4.85
Consolidated Edison (note d)	7.16	6.38	4.86	6.38	4.86
National Fuel Gas Distribution	6.68	6.12	-	6.37	-
Niagara-Mohawk Power	6.30	5.32	4.33	5.91	4.31
Ohio:					
Columbia Gas of Ohio	6.25	5.43	5.43	6.01	-
East Ohio Gas	5.33	4.78	-	5.09	-
Pennsylvania:					
Philadelphia Electric	7.00	5.70	4.90	6.51	4.90
UGI (note d)	6.29	5.14	4.96	5.74	4.98
Texas:					
Entex (note d)	6.26	4.53	-	5.55	-
Lone Star Gas (note d)	5.02	-	3.75	4.67	-
Southern Union Gas	5.41	4.95	-	4.44	-
Wisconsin:					
Madison Gas and Electric	6.56	6.15	5.09	6.12	4.99
Wisconsin Gas	6.34	5.66	4.73	5.70	4.73
Wisconsin Natural Gas	6.25	5.42	4.57	5.44	4.57
Wisconsin Power and Light	5.81	5.23	4.34	5.20	4.34

a/All customers are placed on a priority system whereby service can be interrupted. Residential users are given first priority, followed by commercial and industrial users.

b/Rates include some firm customers.

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