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REPORT BY THE

# Comptroller General

OF THE UNITED STATES

## Information On Contracts Between Natural Gas Producers And Pipeline Companies

Under the Natural Gas Policy Act of 1978, price controls are scheduled to expire in 1985 for as much as half of the domestic gas supply. At that time, the provisions of existing natural gas contracts between producers and pipeline companies will determine the price to be paid for natural gas at the wellhead, and therefore by the consumer.

This report discusses

- the characteristics of these contracts,
- how and why certain contract provisions became prevalent,
- the possible impact of contract provisions on the natural gas market under partial or total decontrol, and
- the proposals which have been made to address perceived contract problems.



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COMPTROLLER GENERAL OF THE UNITED STATES  
WASHINGTON D.C. 20548

B-209620

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

Dear Mr. Chairman:

This report, prepared at your request, discusses issues related to natural gas contracts between producers and pipeline companies. There is concern that, once Federal price controls expire for as much as 50 percent of the domestic gas supply in 1985, the provisions of these contracts could escalate the price of decontrolled gas above the level at which it would be competitive with alternate fuels. However, some industry observers have suggested that the contracts will be adjusted to prevent such an increase.

Because the report is not an evaluation of actions by a Federal agency, we did not obtain the official comments of any Federal agency. As arranged with your office, we will send copies of this report to the Secretary of Energy; the Chairman, Federal Energy Regulatory Commission; and other interested parties and will make copies available to others upon request.

Sincerely yours,

A handwritten signature in cursive script that reads "Charles A. Bowsher".

Comptroller General  
of the United States



REPORT BY THE COMPTROLLER  
GENERAL TO THE CHAIRMAN,  
SUBCOMMITTEE ON FOSSIL AND  
SYNTHETIC FUELS, COMMITTEE  
ON ENERGY AND COMMERCE  
HOUSE OF REPRESENTATIVES

INFORMATION ON CONTRACTS  
BETWEEN NATURAL GAS PRO-  
DUCERS AND PIPELINE COMPANIES

D I G E S T

Substantial recent increases in natural gas prices and uncertainty about future prices have focused national attention on natural gas policy. There has been considerable debate within and among the Congress, the administration, and the industry generally about whether the Natural Gas Policy Act of 1978 (NGPA) will provide a smooth transition to price decontrol. There has also been debate about how contracts between producers and pipeline companies will affect natural gas prices. (See pp. 1 and 2.)

Because of the continuing congressional interest in natural gas deregulation, GAO was requested to prepare a report on the issues related to contracts between producers and pipeline companies. This report describes the characteristics of existing contracts, why there is concern over the impact of contract provisions, and the proposals that have been made to address these concerns. In a related report, "An Analysis of Natural Gas Pricing Policy Alternatives," GAO/RCED-83-13, Feb. 3, 1983, GAO examined the energy and economic implications of NGPA and four proposed regulatory alternatives. (See pp. 2, 46, 51, and 52.)

The thousands of existing contracts represent complex and varied agreements negotiated between thousands of producers and more than 100 pipeline companies. These contracts have traditionally been long-term agreements--often extending 20 years or more. In addition, they can vary from company to company depending on when and where the gas was purchased and the relative bargaining leverage between the producer and pipeline company at a given point in time. This bargaining relationship has shifted over the years to adjust to changes in the overall supply and demand for gas, the regulatory environment, and internal policies of producers and pipeline companies. (See pp. 4 to 19.)

GAO/RCED-83-5

Many current contracts provide not only that a new contract price will be determined once Federal price ceilings are lifted (a "deregulation" clause) but also that this new price may be tied to a gas price being paid elsewhere or to the price of some other commodity, with no explicit ceiling (an "indefinite pricing" provision). Such provisions could produce a rapid increase in gas prices, reaching levels higher than would otherwise be the case. (See pp. 20 to 40.)

There is general agreement that provisions of existing contracts create the potential for a contract-induced price increase. However, there is no agreement about how large such an increase would be and what Federal action, if any, is warranted. Proposed remedies include private action by the parties to the contracts, administrative action by the Federal Energy Regulatory Commission (FERC), and new legislation. (See pp. 41 to 66.)

#### WHAT IS KNOWN ABOUT CONTRACT PROVISIONS

Three recent studies by the Energy Information Administration and two by private consulting firms have compiled information about the provisions of existing natural gas contracts. These studies indicate that:

- About 87 percent of the interstate gas to be decontrolled in 1985 is subject to deregulation clauses.
- Most of these deregulation clauses tie the new contract price to prices being paid other producers for a comparable quality and quantity of gas in a specified geographic area (a "most favored nation" clause).
- "Oil reference" clauses are found in a small percentage of interstate contracts with deregulation provisions. These clauses tie the price of the gas to a percentage of the energy equivalent price of a petroleum product.
- Provisions which provide the buyer some recourse against prices established by deregulation clauses (a "buyer out" clause) are found in a small percentage of interstate contracts with deregulation clauses. (See pp. 20 to 40 and 44.)

WHY THERE IS CONCERN ABOUT  
NATURAL GAS CONTRACTS

NGPA established a multitiered pricing structure for gas produced and sold under different geologic and contractual conditions and specified a deregulation schedule for certain categories of natural gas. However, some industry analysts believe that the operation of contracts will prevent a smooth transition under NGPA to decontrol in 1985. Other observers believe that in order to keep from pricing themselves out of the market, producers and pipeline companies will adjust their contracts prior to decontrol. (See p. 41.)

Assuming that contracts operate as written, and are not adjusted, there is concern over the impact of the relatively few contracts under which gas prices would rise to very high levels upon decontrol. Such contracts have all of the following characteristics:

- Provide the producer the opportunity to select a deregulated price based on a percentage of the energy-equivalent price of fuel oil (an "oil reference" clause) or the price of Mexican or Canadian gas (an "imported gas" clause).
- Obligate the pipeline to pay for some or all of the gas under contract even if the pipeline does not have a ready market for the gas (a "take-or-pay" clause).
- Do not provide the pipeline with a buyer protection provision through a "buyer out" clause.

These relatively few contracts could interact with and, thus, trigger the clauses in many other contracts which tie the deregulated contract price to a price being paid to other producers in a geographic producing area. In turn, this could cause high prices to spread rapidly among contracts covering deregulated gas.

An increase in gas prices at the wellhead, because of the operation of contract clauses, will increase a pipeline's average acquisition costs for all of its gas supply and, thus, increase the cost of gas to its customers. As these increased acquisition costs plus normal charges for transportation and distribution

push the retail price of gas to where it approaches or exceeds the price of residual (No. 6) fuel oil, price sensitive industrial and electric utility customers could switch to this alternative fuel. Such a drop in industrial and electric utility demand for natural gas and subsequent loss of pipeline load could in turn lead to further increases in residential prices. (See pp. 41 to 51.)

If total decontrol were to be legislated and price controls are also lifted on "old" low cost gas (which would not be deregulated under NGPA), any contract induced increase in prices is likely to be more widespread since a greater volume of gas would be affected. (See pp. 51 to 53.)

#### WHERE DO WE GO FROM HERE?

Given the characteristics of existing contracts, there is the potential for a contract-induced increase in natural gas prices in 1985. This is because the contracts themselves do not generally contain mechanisms which allow them to be automatically changed to respond to fluctuating market conditions. Thus, the contracts controversy centers around whether and how contracts may be adjusted to prevent a sharp price increase from occurring.

Three major options have been proposed for resolving these contract problems. There are arguments, pro and con, on the merits of each option. First, private parties could work any problems out themselves and adjust their contracts through renegotiation or the use of "buyer out" provisions. Time-consuming litigation might also be utilized. (See pp. 54 to 57.)

Second, if either producers or pipelines lack the capability or incentive to adjust their contracts, FERC could take administrative action to prevent potential disruptions to the national natural gas market. Because it is not clear what remedies would be warranted or what legal authority FERC possesses to address contract problems, FERC has requested formal public comments and suggestions for possible administrative remedies. The Commission Chairman has stated, however, that FERC's ability to deal with contract problems is limited and that congressional action is preferable. (See pp. 57 and 58.)



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Third, the Congress could take legislative action. A number of legislative proposals have been made to mitigate or nullify the impact of deregulation clauses and take-or-pay provisions in a partial or total decontrol environment. In addition, a proposal has been made to provide pipelines with automatic buyer protection provisions in their contracts.

Moreover, NGPA provides that either the President or the Congress could reimpose price controls beginning 6 months after ceilings are lifted on January 1, 1985. This would serve to postpone but not prevent the operation of deregulation clauses. (See pp. 59 to 65.)

### CONCLUSIONS

Numerous actions have been proposed to deal with potentially troublesome contract provisions. However, GAO believes that there is no easy solution because of the difficulty in predicting the future behavior of the contracting parties and the continual changes in the supply and demand for natural gas. (See pp. 65 and 66.)

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Because the report is not an evaluation of any agency's performance, GAO did not seek any agency's official comments.



## ABBREVIATIONS

Bcf	billion cubic feet
Btu	British thermal unit
DOE	Department of Energy
EIA	Energy Information Administration
FERC	Federal Energy Regulatory Commission
FPC	Federal Power Commission
GAO	General Accounting Office
Mcf	thousand cubic feet
MMBtu	million British thermal units
NGA	Natural Gas Act
NGPA	Natural Gas Policy Act
PGA	purchased gas adjustment
Tcf	trillion cubic feet



## GLOSSARY

### Abandonment

The termination of a producer-pipeline contract requires Commission abandonment authorization. This applies to "old" interstate gas which remains subject to NGA regulation (primarily section 102(d), 104, and 106(a) gas).

### Buyer out clause

This contract provision provides the pipeline with an option to reduce the price below the contractually established price. There are two general types of buyer out clauses--FERC out clauses and market out clauses. A FERC out clause allows the pipeline to lower the contract price if it is disallowed by FERC in a ratemaking decision. Normally the price will fall to a price the pipeline is allowed to recover. A market out clause allows, under certain stipulated conditions, the pipeline to offer the producer a lower contract price than the contractually established price.

Examples of market out clauses are:

- The pipeline may elect not to pay the contractually established price because it exceeds prices in other contracts. The producer may then cancel the contract or agree to lower the contract price.
- If the parties cannot agree on a negotiated price within 90 days after deregulation, the contract may be canceled.
- If the pipeline, at its sole discretion, determines that the gas is not marketable at the contractually established price, it can offer the producer a lower price. The producer can either accept the new price, cancel the contract, or solicit third-party offers if the contract provides "buyer right of first refusal."

### Buyer right of first refusal

In contracts with market out clauses, which allow the pipeline to refuse to pay the contractually established price, the producer will often have the option of soliciting third-party bids for the gas. This contract clause gives the

pipeline the right to match any higher third-party offer for the gas.

Certificate of public convenience and necessity

The commencement of gas deliveries under a producer-pipeline contract may require a certificate of public convenience and necessity. This currently applies only to gas subject to NGA regulation.

Commodity clause

This type of indefinite price escalator clause ties the contract price to the price of commodities other than natural gas. This includes any provision which ties the contract price to oil or an oil product, coal, copper, or any other commodity.

Definite (or fixed) price escalator clause

This contract clause provides that the contract price will increase by a defined amount at specified intervals in the future.

Deregulation clause

This contract clause establishes an entire process for determining a new contract price in the event that the gas is no longer subject to Federal pricing regulation.

Favored nation clause

This type of indefinite price escalator clause ties the contract price to the prices paid in other contracts. The contract normally specifies the geographic area to be taken into consideration. The area can vary from a county, State, or other political boundary to a field, basin, or other geologic boundary. Most contracts mention that only contracts, for a like quality and quantity of gas, can be taken into consideration. Most of the contracts are three-party favored nation clauses, i.e., any price paid by any pipeline in an area can be used. Others are two-party favored nation clauses, i.e., the pipeline limits the contracts to be considered to contracts it alone has written.

The following types of favored nation clauses are often found in deregulation clauses:

--Top contract price paid by the purchasing pipeline from a specified producing area (two-party favored nation).

--Top contract price paid by any pipeline from a specified producing area (three-party favored nation).



--Average of the three top contracts from a producing area (three-party favored nation).

Fly-up (or price spike)

This term is used to describe a sudden increase in natural gas prices in 1985 when a large percentage of the gas supply is deregulated under NGPA. As used in this report, a market-induced fly-up refers to an expected price increase, following deregulation, to reflect the market value of gas at an oil parity level. A contract-induced fly-up refers to a price increase above the level at which gas is competitive with alternative fuels resulting from the operation of the pricing provisions of deregulation clauses.

Gas cushion

This term is used to describe the difference between the market value of wellhead gas (often calculated by comparing with the Btu-equivalent price of alternative fuels) and the federally regulated wellhead price of gas. It can generally be measured as the percentage of a pipeline's gas supply composed of either "old" low priced interstate gas (section 104 and 106(a)) or "old" intrastate gas (section 105 and 106(b)). Different pipelines have different endowments of this "old" gas.

Highest regulated rate (or area rate) clause

This type of indefinite escalator clause provides the contractual authority to collect higher rates if such rates are established by the Commission, the Congress, or the President. These clauses are found in most interstate and some intrastate contracts.

Imported gas clause

This type of indefinite price escalator clause ties the deregulated contract price to the price of imported Mexican or Canadian gas.

Indefinite price escalator clause

This contract clause provides that the contract price will increase by a variable amount at specified intervals in the future. Examples of this clause include (1) redetermination clauses, (2) favored nation clauses, (3) oil reference clauses, (4) commodity clauses, and (5) highest regulated rate (or area rate) clauses.

Makeup period                    This contract clause specifies the time allowed the pipeline to take quantities of gas paid for but not taken. Contracts subject to NGA regulation are required by the Commission to provide a 5-year makeup period. See 18 CFR 154.103.

Maximum price                    This refers to the highest allowable contract price.

Minimum price                    This refers to the lowest allowable contract price.

Oil reference clause            This type of indefinite price escalator clause ties the contract price to a percentage of the Btu-equivalent of crude oil, No. 2 fuel oil, or No. 6 fuel oil.

Redetermination clause        This type of indefinite price escalator clause provides that the new contract price will be bargained by the contracting parties at stated intervals--anywhere from 1 to 5 years. It often provides that if the buyer and seller cannot agree on a new contract price, the price is fixed by binding arbitration. However, the arbitrators are often required to take the average of the two or three highest prices being paid by pipeline companies in the field or area as the basis of the renegotiated price (three-party favored nation clause). These clauses commonly were found in the pre-NGPA intrastate market and were strictly regulated in the pre-NGPA interstate market to allow for redetermination, at most every 5 years.

Rolled-in pricing                Under this method of pipeline gas pricing, all acquisition costs of gas are averaged and recovered uniformly from a pipeline company's customers. Thus, the price each customer pays for a unit of gas is the average price paid by the pipeline to its suppliers, plus a charge for transportation, storage, and distribution.

Take-or-pay clause             This clause specifies daily, monthly, or annual purchase obligations. There are two major types of take-or-pay clauses: (a) guaranteed take based on estimated reserves and (b) guaranteed take based on the well's capacity.

Warranty contract

This type of contract provides for delivery of a specified volume of gas, regardless of source. A few large warranty contracts were signed in the 1960s, but the practice never became widespread. Only a small percentage of total gas production is now covered by such contracts.



## CHAPTER 1

### INTRODUCTION

Natural gas accounts for about 27 percent of the energy consumed in the United States. In 1981, natural gas use totaled almost 20 Tcf (trillion cubic feet), 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.

Recent increases in natural gas wellhead prices, combined with the initiation of proposals to accelerate the decontrol of these prices ahead of the schedule mandated by the Natural Gas Policy Act of 1978 (NGPA), 2/ have served once again to focus attention on natural gas issues. As a result, much discussion has taken place within the administration, the Congress, and the natural gas industry over what the national policy toward natural gas should be--should NGPA be allowed to continue unaltered with a gradual transition to the partial decontrol of wellhead pricing in 1985 or should total decontrol be legislated?

As prices are central to any debate on natural gas policy, contracts between producer and pipeline companies (hereafter referred to as producers and pipelines) have emerged as a major issue. Once Federal price ceilings expire, the pricing provisions of existing contracts, many signed prior to the passage of NGPA, will determine the price to be paid for natural gas at the wellhead, and therefore by the consumer. Some industry analysts believe that indefinite pricing provisions, contained in the deregulation clauses of a majority of contracts, could escalate the price of decontrolled gas above the level at which it could be sold competitively in the marketplace. However, others contend that contract provisions will be adjusted to the realities of the marketplace prior to decontrol to prevent gas from becoming noncompetitive with alternate fuels.

There has been an increased recognition by the parties involved in the present natural gas policy debate of the importance of contract provisions to determining the possible consequences of partial or total decontrol. 3/ Thus, a number of studies,

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1/Natural gas is often sold on the basis of volume. Frequently used measures include thousand cubic feet (Mcf), billion cubic feet (Bcf), and trillion cubic feet (Tcf).

2/15 U.S.C. 3301.

3/In a 1975 report, we pointed out that as long as the natural gas deregulation issue confronts the Congress, current contract data should be maintained so that it is readily available to the Congress and others for decisionmaking. See "Reliable Contract Sales Data Needed for Projecting the Amounts of Natural Gas That Could Be Deregulated," RED-76-11, Sept. 8, 1975.

which will be discussed in detail later in the report, have been completed to provide data on existing contracts.

### OBJECTIVES, SCOPE, AND METHODOLOGY

The Subcommittee on Fossil and Synthetic Fuels, House Committee on Energy and Commerce, requested that we prepare a report on the issues related to contracts between producers and pipeline companies. This report presents an overview of these issues, describes what is known about the characteristics of existing contracts, identifies the major concerns over the future impact of contract provisions, and examines the proposals that have been made to address these concerns. Background information is also presented on the overall structure of the natural gas industry, the two-tiered market structure under which gas is sold, and changes over time in market conditions and the regulatory environment in order to facilitate an understanding of how contracts developed as a major natural gas issue.

In a related report, "An Analysis of Natural Gas Pricing Policy Alternatives," GAO/RCED-83-13, Feb. 3, 1983, we examined the energy and economic implications of NGPA and four proposed regulatory alternatives. The impact of contract provisions on natural gas prices was one factor which was analyzed.

This report is based mostly on the work of other analysts with expertise in the area of producer-pipeline contracts. We did not conduct a sample of contracts ourselves because of time and resource constraints and because very few post-NGPA onshore contracts are on file at FERC. Most of the data on the characteristics of contracts were obtained from five sources: (1) Analysis of Natural Gas Producer/Interstate Pipeline Contracts, prepared for the American Gas Association by Decision Analysis Corporation, July 1, 1981; (2) Intrastate and Interstate Supply Market Under the Natural Gas Policy Act, Energy Information Administration (EIA), October 1981; (3) Natural Gas Pipeline/Producer Contracts: A Preliminary Analysis, Energy Information Administration, December 1981; (4) Pricing Provisions for Natural Gas Sales Contracts, prepared for the Natural Gas Supply Association by Foster Associates, March 1982; and (5) Natural Gas Producer/Purchaser Contracts and Their Potential Impacts on the Natural Gas Market: An Analysis of the Natural Gas Policy Act and Several Alternatives, Part II, Energy Information Administration, June 1982. While we did not independently verify the data presented in these reports, they confirmed the findings of each other in many, but not all areas, regarding the characteristics of producer-pipeline contracts. These reports were based on different sampling methodologies; a discussion of the methodology used by each report is found in appendix I. Not all of the reports were based on a random sample, and their results should be treated accordingly.

In addition, we reviewed Federal Energy Regulatory Commission (FERC) and judicial rulings, legislative histories, prior GAO

reports; <sup>1</sup>/ studies prepared by Government agencies and congressional committees, and the available literature on natural gas price regulation and industry practices to obtain a historical perspective on producer-pipeline contracts.

Our work regarding contract issues and the proposals made to address them was based on congressional testimony, position papers, and interviews with individuals and groups having expertise in the area of natural gas. These individuals and groups included private attorneys representing producer and pipeline interests, private consultants, present and former FERC officials, Department of Energy (DOE) officials, trade association officials, and representatives of 10 major producer and pipeline companies. For the most part, they have a vested interest in the outcome of the present policy debate. We also reviewed the proposed legislation which would affect producer-pipeline contracts. A list of this legislation is provided in appendix II.

However, our work did not involve an examination of FERC's authority or ability to handle any problems which may arise from the operation of certain contract clauses. Accordingly, we do not address the question of whether or not FERC can or should take a specific course of action to resolve any of the contract issues identified in this report.

Our review was conducted in accordance with generally accepted government audit standards. It was performed during the period from June 1981 through December 1982. New information became available throughout this period, and we have updated this report to reflect such information.

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<sup>1</sup>/"Reliable Contract Sales Data Needed for Projecting the Amounts of Natural Gas That Could Be Deregulated," RED-76-11, Sept. 8, 1975; "Implications of Deregulating the Price of Natural Gas," OSP-76-11, Jan. 14, 1976; "Guidance Needed on Use of Natural Gas Price Escalator Clauses," EMD-80-53, July 25, 1980; "Natural Gas Plan Needed to Provide Greater Protection for High-Priority and Critical Uses," EMD-81-27, Mar. 23, 1981.

## CHAPTER 2

### PRODUCER-PIPELINE CONTRACTS:

#### AN OVERVIEW

Contracts for the purchase of gas at the wellhead define the long-term relationship between the producers of gas and the purchasers--primarily pipeline companies--and in large part determine the cost of gas to distributors and end-users. In order to understand how contracts developed as a major natural gas issue, one must view them in the context of the structure of the industry itself, the two-tiered market system in which gas is sold, and the regulatory environment and overall market conditions existing during the period in which they were executed.

#### STRUCTURE OF THE NATURAL GAS INDUSTRY

Most aspects of the production, transportation, and marketing of natural gas are regulated directly and indirectly by Federal, State, and local agencies. The industry is comprised of three sectors--production, transmission, and distribution--which are physically interconnected by a network of over 1 million miles of pipelines and mains throughout the United States.

At one end of the network are thousands of large, medium, and small companies which explore for, drill for, and produce gas and oil. 1/ In 1980, approximately 60 percent of their gas production was sold in interstate commerce and has been subject to Federal price regulation since 1954. The remaining production is sold in intrastate commerce and has been subject to Federal price regulation only since the enactment of the Natural Gas Policy Act of 1978. 2/ At the other end of the network are almost 1,600 distribution companies, usually local public utilities, serving their own market areas and under the jurisdiction of State or local regulatory bodies. As of December 31, 1980, the connecting transmission network includes 129 interstate pipeline companies operating under the jurisdiction of the Federal Energy Regulatory Commission,

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1/Natural gas, formed from the decomposition of organic materials, seeps upward through porous rock until it encounters a layer of non-porous rock where it accumulates in "traps" or "pockets." A field of natural gas consists of a group of these pockets that occur near each other or in layers above and below each other. Natural gas found in the same trap with oil is called "dissolved gas" when it is in solution with the oil, or "associated gas" when it occurs in a layer above the heavier oil. When gas is found alone it is called "non-associated gas." For the past 20 years, most natural gas reserves have been non-associated.

2/Production may also be subject to regulation at the State level.



9 intrastate companies regulated by FERC, 1/ and many other intrastate pipelines which are generally regulated under State laws.

Producers explore for new reserves of natural gas, develop them to determine their size, and extract the gas from the reserves. 2/ Once the producer has determined that a reserve is large enough to warrant marketing, he will usually negotiate to sell the gas to a pipeline company. Pipeline companies generally purchase this gas from producers in the field, transport it to market, and sell it either to distribution companies or directly to large industrial and electric utility end-users. 3/

Distributors purchase gas from pipeline companies and resell it to residential, commercial, or industrial customers. Prices paid by a distributor to a pipeline (known as wholesale or "city-gate" prices) depend on (1) field prices which are negotiated by the pipelines within regulatory limits and passed through to the customer and (2) delivery charges for transportation of the gas from the wellhead to the distributor. 4/ Distributors then

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1/Successor to the Federal Power Commission. Established by the Department of Energy Organization Act of 1977, 42 U.S.C. 7107. This report refers to the Federal Power Commission (FPC) when an event occurred under the jurisdiction of FPC and to the Federal Energy Regulatory Commission (FERC) if an event or activity took place under its jurisdiction. The term Commission is used when both FPC and FERC carried out an activity.

2/Exploration is essentially a process of gathering information about the location of reserves and involves geological and geophysical surveys, aerial surveys, and the drilling of exploratory wells.

Development involves the drilling of "step-out" wells over the expected reservoir in order to define its limits and reach a better estimate of "reserves in place" and the cost of extraction.

Extraction is the process of moving gas from the reservoir into a pipeline or processing plant. Producers bring gas to the surface through their wells, remove saleable liquid by-products, and deliver the "dry" gas into the buyer's gathering lines.

3/Pipeline companies may produce some gas themselves and purchase gas from and resell to other pipelines. Some pipelines also provide a transportation service for customers who have their own gas supply.

4/Markup prices for interstate pipelines are generally determined by the historical average cost of transmission and by the transportation profit margins allowed under FERC regulation.

deliver gas to the final consumer and charge a markup over their wholesale purchase price for their delivery services.

In addition to the fact that the three sectors of the natural gas industry are physically linked with one another, companies within these sectors can also be connected through common corporate structures. For example, some companies engage in production, transportation, and distribution activities and virtually all of the largest interstate natural gas pipeline companies are involved in natural gas production either directly or through corporate affiliates. Some distribution companies are also involved in the gas producing business, while others are integrated with pipeline companies.

#### Contract structure of the industry: producer-pipeline contracts

Producer-pipeline contracts have been characterized as being as "complicated as a Rubik cube and as difficult to figure." <sup>1/</sup> They represent a "myriad of detailed, complex, and infinitely varied agreements" <sup>2/</sup> negotiated between thousands of producers and more than 100 pipeline companies. Contracts vary from company to company depending on when (contract vintage) and where the gas was purchased and the relative bargaining leverage between the producer and pipeline company at a given time. This bargaining relationship has shifted over the years to adjust to changes in the overall supply and demand for gas, the regulatory environment, and internal producer and pipeline corporate policies.

#### Large universe of contracts

The universe of contracts to be considered in piecing together the contract puzzle is quite large. There are an estimated 20,000 mostly pre-NGPA interstate contracts currently on file at FERC. <sup>3/</sup> Although FERC no longer requires most producers to file

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<sup>1/</sup>"Step on the Gas," Editorial in the Wall Street Journal, Aug. 21, 1981.

<sup>2/</sup>Statement of Robert A. Hefner III, representing GHK Companies and others, at Hearings before the Senate Committee on Energy and Natural Resources, Nov. 6, 1981.

<sup>3/</sup>In general, small producer contracts, intrastate contracts, and contracts for onshore gas executed after the enactment of the NGPA are not on file at FERC. Some post-NGPA contracts for new offshore gas are on file at FERC. See Decision Analysis Corporation, Analysis of Natural Gas Producer/Interstate Pipeline Contracts, July 1, 1981, p. 2.

contracts, the Commission estimates between 9,000 and 10,000 contracts have been executed since the enactment of the NGPA, covering new gas sales. 1/

At any time, an individual pipeline may have hundreds or thousands of contracts with gas producers. In discussions with representatives of several major pipeline companies, we found that a pipeline may have as many as 5,000 contracts. Further complicating this situation is the fact that a pipeline will often have several different gas contracts with an individual producer. For example, our examination of data submitted to FERC revealed that a major interstate pipeline had over 800 contracts with over 300 individual producers, including 40 contracts with 1 producer, 16 contracts with another producer, and 15 contracts with a third producer.

#### Bargaining strength of producers and pipelines

Contracts reflect the relative bargaining leverage of producers and pipeline companies at a given time. This bargaining relationship has shifted over the years to adjust to changes in the overall supply and demand for gas both nationally and in specific regional markets, the regulatory environment, and internal producer and pipeline corporate policies. Since pipelines may have more than one contract with a producer, a specific producer/pipeline contractual relationship can be viewed in the context of a web of existing and prospective contracts.

Natural gas contracts--like other contracts--represent a compromise between the conflicting bargaining positions of the seller (the producer) and the buyer (the pipeline). The producer has certain objectives in negotiating a contract, as does the pipeline company. The producer tries to obtain, among other things, the highest possible contract price and large daily pipeline gas purchase obligations (a high contract price provides little revenue if the pipeline purchases only a small daily volume). In contrast, the pipeline desires large gas reserves under long-term contracts at a lower price and minimum daily purchase obligations. This allows the pipeline to provide its customers a secure, stable supply of gas.

Contracting practices appear to be responsive to changes in the overall market for gas. For example, in the early years of the industry when gas supplies were abundant, the demand for gas was limited because there was not yet a well developed pipeline system to bring the gas from the field to urban markets. As a

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1/Based on well determinations filed with FERC since Dec. 1, 1978. This estimate appears in a Nov. 20, 1981, letter to Philip R. Sharp, Chairman, Subcommittee on Fossil and Synthetic Fuels, House Committee on Energy and Commerce, from C.M. Butler III, Chairman, Federal Energy Regulatory Commission.

result, contracts generally reflected the strong bargaining position of the pipeline. They were often long-term contracts, with low prices and low daily purchase obligations. However, in later years, especially in the early 1970s, with the increased demand for gas and a limited supply of new reserves, the relative bargaining strength shifted to producers. Producers were able to incorporate into their contracts higher purchase obligations, prices at maximum allowed levels, indefinite price escalators, and more frequent price redeterminations.

With the current abundance of gas supplies, one pipeline official has noted that "the pendulum has swung somewhat toward a buyer's market although pipelines still have a need for long-term reserves which dictates, to some extent, the type of contractual provisions which must be included in contracts." 1/ Pipelines have now been able to incorporate lower purchase obligations, market out provisions, and more favorable price escalation terms into contracts.

Other factors that affect the bargaining relationship are (1) the number of pipelines competing for gas in a specific producing area and (2) the size of the reserve. For example, producers have strong bargaining strength in the Gulf Coast area (onshore and offshore) because of intense pipeline competition for reserves. However, producers have less bargaining strength in an area, such as the San Juan basin in New Mexico, where there is less pipeline competition for reserves. Moreover, the larger the reserve, the stronger the producer's bargaining strength in negotiating a contract. For example, pipeline companies indicated to us the desirability of obtaining a large supply of gas under one contract.

In addition, differing corporate perceptions of the future gas market and regulatory environment affect contracting practices. For example, a pipeline in the early 1970s may have been optimistic about future supplies of gas and may not have aggressively contracted for new reserves, while a less optimistic pipeline was busily acquiring reserves. On the other hand, a producer in the early 1970s which believed that gas could be deregulated may have bargained more vigorously for a deregulation clause 2/ than another producer which believed that gas would be forever regulated. Our discussions with producers and pipelines confirmed their differing perceptions of the future.

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1/Statement of G.L. Morrow, President of Natural Gas Pipeline Company of America, before the Subcommittee on Fossil and Synthetic Fuels, House Committee on Energy and Commerce, Sept. 17, 1982.

2/As will be discussed in chapter 3, this clause generally provides for the redetermination of the contract price in the event the gas ceases to be subject to Federal price regulation.

TWO-TIER MARKET STRUCTURE:  
INTERSTATE AND INTRASTATE MARKETS

A major characteristic of the natural gas industry is that gas is sold in two markets--both the interstate and intrastate markets. This two-tier market structure was established by the Natural Gas Act of 1938 (NGA) 1/ when it authorized the Federal Power Commission to regulate the prices charged by interstate pipeline companies transporting gas across State lines for resale. Although wellhead pricing for the interstate market came under FPC's jurisdiction as a result of the 1954 Supreme Court decision in Phillips Petroleum Company v. Wisconsin, 2/ it was not until NGPA in 1978 that natural gas in the intrastate market came under Federal jurisdiction.

The interstate market is comprised of gas involved in interstate commerce. This market represents about 60 percent of annual gas consumption. Major gas consuming States in declining order of magnitude include California, Illinois, Ohio, Michigan, Pennsylvania, and New York.

In contrast, the intrastate market is generally comprised of gas which is produced, transported, and consumed within State boundaries. This market represents over one-third of annual gas consumption and is primarily found within the major producing States--Texas, Louisiana, and Oklahoma (in descending order).

The composition of demand varies significantly between these two markets. In the interstate market, residential and commercial gas consumption represents a relatively large percentage of total consumption while electric utility consumption is fairly small. However, in the intrastate market the converse is true.

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1/15 U.S.C. 717.

2/347 U.S. 672 (1954).

As shown in table 1, the residential and commercial sectors accounted for only 7 to 19 percent of gas consumption in the top three gas-producing States, but 53 percent in the rest of the Nation. The industrial and electric utility sectors accounted for 81 to 93 percent of gas consumption in the three producing States but 47 percent in the rest of the Nation.

Table 1  
Percentage Consumption of Gas by Sector,  
for Selected States, 1980 (note a)

<u>State</u>	<u>Resi-</u> <u>dential</u>	<u>Com-</u> <u>mmercial</u>	<u>Indus-</u> <u>trial</u>	<u>Electric</u> <u>utilities</u>	<u>Other</u>	<u>Total</u>
	(percent)					
Texas	7	4	47	41	1	100
Louisiana	5	2	65	28	1	100
Oklahoma	12	7	29	52	0	100
Rest of U.S.	35	18	35	12	1	100

a/Figures may not add due to rounding.

Source: EIA, Natural Gas Annual 1980, Feb. 1982.

These two markets also differ in their short-term response to gas price increases. First, industrial and electric utility price sensitivity varies between these two markets. In the interstate market, many large industrial and electric utility users have dual-fired capability, which means that they can quickly switch to an oil product if the price of natural gas increases. However, in the intrastate market, a smaller percentage of the larger industrial and electric utility users is now capable of using oil. Consequently, their short-term demand for gas is less price sensitive. Moreover, residential and commercial demand, in both markets, is also less price sensitive because these end-users do not possess the capability to quickly switch to alternative fuels if gas prices increase. Consequently, the interstate market is likely to be more price-sensitive than the intrastate market.

EFFECT OF REGULATORY ENVIRONMENT  
AND MARKET CONDITIONS ON  
CONTRACT TERMS

In order to understand how various contracting practices evolved, it is necessary to view contracts in the context of the regulatory environment and the overall natural gas market conditions during the period in which they were executed. Changes in

contracting practices reflect the adjustments of producers and pipeline companies to changing regulatory environments and market conditions. It was the result of a change in market conditions, from a period of abundant supply of natural gas to a period of shortages and curtailments, that caused the purpose of wellhead price regulation to shift from protecting consumers from higher prices to protecting consumers from natural gas shortages by allowing higher prices. This section describes the different periods of wellhead pricing regulation and the market conditions which existed during each period.

#### Natural Gas Act--Independent producers not regulated (1938-54)

The interstate pipeline system became subject to Federal regulation with the enactment of the Natural Gas Act of 1938. The NGA was designed to ensure that consumers paid "just and reasonable" rates for gas sold by what was deemed to be a natural monopoly, the interstate pipeline industry. A series of Federal Trade Commission reports during the late 1920s and early 1930s had documented numerous abuses by natural gas companies, including monopoly control over consumer prices and recommended Federal regulation of interstate natural gas prices. At that time, wellhead prices were extremely low because of the depression, and a single pipeline buyer was able to dictate field prices in many producing areas.

The era of Federal regulation of wellhead prices began in 1954, with the Supreme Court decision in the Phillips case. The Court held that the Federal Power Commission's "jurisdiction over the rates of all wholesales of natural gas in interstate commerce" required FPC to regulate natural gas sales by producers to interstate pipeline companies. This decision was based on the premise that wellhead gas prices have a direct and substantial effect on prices paid by the ultimate customer.

As a result of this decision, producers of gas for the interstate market became subject to the provisions of NGA. Like interstate pipelines, they were required to apply for certificates of public convenience and necessity in order to commence gas deliveries; file rate schedules (the producer-pipeline contracts); and obtain permission from FPC before terminating (or abandoning) sales even if the contract under which the sale was made expired. In contrast, intrastate producers remained unregulated at the Federal level; however, they were subject to certain State regulations.

#### Individual producer cost-of-service regulation (1954-60)

FPC, with no guidance from the Court on how to carry out its new duty, began to set producer wellhead prices using the type of utility cost-of-service regulation already being applied to

interstate pipelines under NGA. <sup>1/</sup> This approach required FPC to study in detail the operating costs for each producer and add a reasonable rate of return to calculate the individual cost-based wellhead price.

However, the workload from these procedures soon overwhelmed FPC, and it concluded in its 1963 opinion in Phillips Petroleum Company (Phillips II) that cost-of-service regulation was "not a sensible, or even a workable method of fixing the rates of independent producers of natural gas." <sup>2/</sup> From 1954 through 1960 the Commission had accumulated some 11,091 rate schedules and 33,231 supplements to these schedules from 3,372 independent producers. It estimated that it would not finish its 1960 caseload until the year 2043.

Prior to and during this period, the gas market grew rapidly as the technology became available to allow the economical transmission of natural gas by pipeline over long distances. Natural gas changed from being an essentially local fuel and a by-product of oil production, that might be flared off, to a premium fuel in great demand. By 1955, natural gas was used by about 65 percent of U.S. households.

The increasing consumption of gas reflected itself in an increase in the relative bargaining strength of producers. Producers, wanting to obtain the highest possible regulated rate for their gas, increasingly bargained for contracts which would provide for greater price flexibility. This pricing flexibility was obtained through the use of "indefinite price escalator" clauses in contracts which allowed the contract price to increase by an unknown amount at specified intervals in the future. Pipelines contended that they permitted these provisions to be included in contracts because of the growing competition for gas reserves and the resulting increase in producer bargaining strength.

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<sup>1/</sup>FPC initially anticipated congressional action to amend NGA to exclude authority over independent producers. An amendment to this effect, the Harris-Fulbright bill, was passed by the Congress in 1956 but was vetoed by President Eisenhower, who supported the principles of the legislation but vetoed it because of the "arrogant lobbying" for its passage and allegations of producer vote buying. Although other attempts were made to remove producer regulation from FPC, none reached the floor of either House of Congress again until 1975.

<sup>2/</sup>24 F.P.C. 537, 542, aff'd, Wisconsin v. F.P.C., 373 U.S. 294 (1963).



As one pipeline executive testified in 1955,

"Generally speaking \* \* \* the reason those favored-nation clauses were included in the contract was because we could not get the gas without them. In other words, they have come to be within the last 6 or 7 years a requirement of every producer when he is selling gas \* \* \*." 1/

#### Area rate pricing regulation (1960-74)

In 1960, FPC abandoned the concept of individual producer regulation and turned to a new regulatory approach--area rate price regulation. Under this concept, FPC set producer prices for an entire geographic region based on that region's average production and investment costs and its average rate of return. In essence, this was simply the ordinary cost-of-service methodology applied to the production of gas from each of the seven major U.S. producing areas.

To implement the new approach, FPC first placed temporary ceilings on regional prices and initiated a series of hearings to establish just and reasonable rates for the major production areas. The first hearing for the Permian Basin Area was held in 1961 and culminated in the FPC ruling in 1965, which established a maximum area rate of 16.5 cents per mcf (later appealed) 2/ for gas produced from the Permian Basin. Other area rates were subsequently set, and during the late 1960s and early 1970s rates for gas from new wells in the various areas were increased.

During the time it was attempting to implement area rate regulation and to enforce the temporary price ceilings set in 1960, FPC issued a series of orders relating to contract provisions. The increased consumption of gas and the uncertainty and backlog of pending cases created by FPC's efforts to regulate producer rates had further encouraged the development of indefinite price escalator clauses within contracts to provide the contractual authority to collect the highest regulated price. These clauses were usually drafted to permit upward price adjustments on the occurrence of some specified event, such as the payment of a higher price by the purchaser to another producer in the same geographic area.

By Orders 232 and 232-A in 1961, FPC prohibited the operation of all such indefinite price escalation clauses except limited

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1/Cited by Edward J. Neuner, The Natural Gas Industry, University of Oklahoma Press, 1960, from Senate hearings in 1955.

2/FPC ruling affirmed by U.S. Supreme Court in Permian Basin Area Rate Cases, 390 U.S. 747 (1968).

price redetermination provisions in contracts executed after April 3, 1961. These clauses were deemed to be contrary to cost-of-service regulation and the public interest since they permitted price increases based on events having no relevance to the economics of the particular sale of gas. This prohibition was enforced through Order 242, issued in 1962, which disallowed the filing with FPC of any new contracts containing these impermissible clauses.

In 1966, in conjunction with the setting of area rates, FPC issued Order 329 to further increase contract price flexibility. The order permitted another type of indefinite price escalator clause--area rate clauses--in producer-pipeline contracts. This type of clause allowed a contract price to escalate to the just and reasonable area rate ceiling subsequently established by FPC in an area rate proceeding for gas of the same quality.

However, despite increases in the allowable area rates, FPC was faced with a growing imbalance between the supply and demand for gas. Although the consumption of gas continued to grow through the 1960s, the reported gas reserves underpinning this growth were beginning to shrink. In 1968, the American Gas Association's reserve data showed for the first time that annual consumption was larger than the additions to reserves. By 1971, FPC "had gone to great lengths" to document this shortage situation brought about by declining exploratory drilling and growing consumption. 1/

The first obvious effects of the gas shortage at the consumer level became evident in November 1970 when three major interstate pipeline companies and two smaller ones started to curtail firm customers and were unable to meet their contractual obligations to deliver gas. Curtailments by interstate pipelines continued even as natural gas production was increasing to its peak level in 1973.

At the same time that the interstate market was experiencing supply shortages, the intrastate system was able to maintain and even expand service to its customers. Because natural gas prices in the intrastate market rose faster than the federally approved rates for the interstate market, it became more lucrative for producers to sell their natural gas reserves in the intrastate market. Thus, the amount of uncommitted reserves and those dedicated to the intrastate market remained fairly constant during this time.

#### National rate regulation (1974-78)

In 1974, FPC abandoned the area rate concept of wellhead pricing in favor of a national price for new reserves of natural gas. The national rate followed the same general cost-of-service

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1/Robert B. Helms, Natural Gas Regulation, American Enterprise Institute for Public Policy Research, Washington, D.C., 1974.

pricing methodology used in individual and area rate pricing regulation, except that it was applied at the national level (excluding Alaska). However, in setting these new rates, FPC increasingly began to consider non-cost-of-service factors such as (1) market value and (2) the price of alternative fuels in establishing the new rates.

FPC adopted the national rate concept because it was increasingly aware of the need for quick regulatory action in a rapidly changing gas market. There was a growing perception that the formal adjudicatory procedures followed in area rate cases took an inordinate amount of time and effort. For example, including all court review, it took 8 years to settle Permian I area rates, 13 years for Southern Louisiana area rates, and 9 years for Hugoton-Anadarko area rates. These long delays and pricing uncertainty put the interstate market at a distinct competitive disadvantage with the federally unregulated intrastate market in competing for new reserves.

FPC hoped that the rapidly established and significantly higher national rates would remedy the growing disparity between the two markets. In Opinion 699-H FPC stated:

"The present gas shortage and the need for vastly expanded exploration and development programs to meet future demand dictates that the establishment of rates for 'wellhead sales' of natural gas in interstate commerce not be unduly delayed and that administrative procedures, such as rulemaking be utilized to prevent the prescribed rates from becoming stale before they are effective. Moreover, the continually increasing competition from the unregulated intrastate market demands that the interstate market have the ability to respond as may be necessary to assure the maintenance of adequate natural gas service to the customers of the interstate pipelines."

In June 1974, FPC issued Opinion 699 which set a new national ceiling price of \$0.42 per Mcf for gas from wells commenced on or after January 1, 1973. This was followed by Opinion 770 in July 1976 which set a new and much higher national rate of \$1.42 per Mcf for new gas developed after January 1, 1975.

Although the national rate was designed to provide a quick regulatory response to a rapidly changing market, it proved unsuccessful in bridging the price gap between the interstate and intrastate markets. During this period, interstate pipelines were in curtailment and, thus, were not able to meet contractual commitments to their customers based on their existing reserves.

These interstate gas shortages were partially masked by the 1974-75 economic recession, warmer than normal winters, and various Government programs. However, an unusually cold winter in 1976-77 brought on a crisis which focused renewed attention on natural gas supplies. In February 1977, an estimated 1.2 million

workers were idled, and service to the residential sector was threatened due to serious gas shortages. 1/

As a result of these shortages, natural gas policy became a high priority issue with the Congress. Thus, FPC suspended the 1977-78 biennium national rate hearings while it awaited the outcome of legislative efforts at natural gas regulatory reform.

#### NGPA: Phased transition to deregulation

The Natural Gas Policy Act of 1978 (NGPA) mandated a new legislative framework for the regulation of natural gas. Cost-based methodology, which was FPC's historical basis for setting natural gas wellhead prices in the interstate market, was replaced with a complex series of maximum statutory ceiling prices for first sales of natural gas.

#### NGPA title I pricing provisions

Title I of the NGPA created more than 20 categories and corresponding ceiling prices for natural gas. In order to stimulate production, gas from "old" interstate and intrastate wells generally remains federally regulated, while gas from most "new" wells has high price ceilings and is eventually to be deregulated. Eligibility to collect a "new" gas price depends upon several characteristics of the specific well including (1) the date that the well was drilled, (2) the depth of the well, (3) the proximity to other wells, and (4) the geologic characteristics of the producing formation.

The NGPA gas categories can be collected into four groups, with the following general characteristics:

- (1) Old (pre-1977) interstate gas is composed of NGPA section 104 and 106(a) gas. The gas ceiling price remains limited to the just and reasonable rates under NGA, adjusted for inflation. Consequently, this gas is often characterized as "low cost" gas since it is sold at a price substantially below the average price of all gas. This gas is never to be deregulated, although production is anticipated to decline as the reserves are depleted. This gas often sold in 1981 at prices ranging from \$0.20 to \$2.75 per million Btus (MMBtu) (including taxes, gathering, and other charges).
- (2) Old (pre-1977) intrastate gas is composed of NGPA section 105 and 106(b) gas. This gas was formerly sold in the unregulated pre-NGPA intrastate market at prices established in the market rather than by cost-of-service regulation. As a result, the price of this gas is substantially higher than

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1/See "Natural Gas Plan Needed to Provide Greater Protection for High-Priority and Critical Uses," EMD-81-27, Mar. 23, 1981.

"old" interstate gas. EIA estimates that about 37 to 53 percent of this gas will be deregulated by 1985. This gas often sold in 1978 at prices ranging from less than \$0.25 to more than \$2.25 per MMBtu.

- (3) New (post-1977) incentive priced gas is composed of NGPA section 102, 103, and 108 gas. The NGPA incentive prices established for this gas were designed to stimulate new production. Much of this gas is to be deregulated in 1985. This gas often sold in 1981 at prices ranging from \$2.25 to \$3.75 per MMBtu (including taxes, gathering, and other charges).
- (4) High cost gas is composed of NGPA section 107 gas. Most of this gas is already deregulated and often sold in 1981 at prices ranging from \$3.50 to \$8.50 per MMBtu (including taxes, gathering, and other charges), although higher prices have been reported.

Table 2 on page 18, based on EIA data, shows the estimated volumes and corresponding average prices in 1985 for the four general NGPA categories of gas. As the table indicates, about one-half of the total gas will be deregulated by 1985. Furthermore, "old" intrastate gas will be priced much higher than "old" interstate gas since about 40 percent of this "old" intrastate gas will be deregulated. Further, according to EIA projections, overall gas production will continually decline through 1985. However, production will increase in the new gas and high cost gas categories.

## CONCLUSIONS

The natural gas industry is heavily regulated in terms of its structure and the price which can be paid for gas at the wellhead. A major characteristic of the industry is that gas has been traditionally sold in two separate markets--interstate and intrastate--and it was only in 1978, with the enactment of the NGPA, that wellhead pricing in the intrastate market came under Federal jurisdiction.

The three sectors of the natural gas industry are linked physically by an extensive pipeline network and economically by thousands of contracts for the purchase of gas at the wellhead. These contracts vary from company to company, depending on when and where the gas was purchased and the relative bargaining leverage between the producer and pipeline company at a given time. They also reflect the adjustments of the contracting parties to changes in market conditions.

In addition, Federal price regulation has evolved over time in response to changing market conditions. When natural gas was in abundant supply, the purposes of regulation were to ensure that rates were just and reasonable and to protect consumers from high prices by applying a cost-based methodology. As supply disparities developed between the interstate and intrastate markets in the late 1960s and early 1970s, the purpose of regulation shifted

Table 2

Estimated Wellhead Prices and Volumes of NGPA Gas  
by 1985 (note a)

<u>Category of gas</u>	<u>Actual production in 1980 (tcf)</u>	<u>EIA estimated production in 1985 (tcf)</u>	<u>EIA-estimated percent deregulated in 1985</u>	<u>EIA-estimated average wellhead price in 1985 (1980 dollars per MMBtu)</u>
Old interstate gas	7.0	4.0	-	\$1.00
Old intrastate gas	5.2	2.9	42	3.50
New gas	7.0	8.6	70	4.50
High-cost gas	<u>0.7</u>	<u>1.6</u>	<u>100</u>	<u>5.50</u>
Total	<u>19.8</u>	<u>17.2</u>	b/ <u>52</u>	b/ <u>\$3.62</u>

a/Figures may not add due to rounding.

b/Figures represent weighted averages.

Source: EIA, The Current State of the Natural Gas Market: An Analysis  
of the Natural Gas Policy Act and Several Alternatives, Part I,  
Dec. 1981.

to protecting consumers from supply shortages by allowing higher prices as an incentive to increased production. A result of successive schemes for setting maximum wellhead prices is a large number of categories of gas and a wide range of ceiling prices.

## CHAPTER 3

### CHARACTERISTICS OF PRODUCER-

#### PIPELINE CONTRACTS

The producer-pipeline contract specifies the terms and conditions of the gas sale. Among other things, the contract generally stipulates (1) the duration of the purchase agreement; (2) the price including initial rate and price escalation provisions, the treatment of taxes, royalty payments, and deregulation clauses, if any; (3) the delivery rate--daily, monthly, and annual purchase obligations and any makeup provisions; (4) the reserves committed by acreage and depth <sup>1/</sup>; (5) the gathering, processing, and delivery of the gas; and (6) the quality and measurement of the gas.

This chapter will discuss the characteristics of contracts first in the interstate and then in the intrastate market and will focus on contract terms relating primarily to contract duration, price, and delivery rates. The information presented in this chapter reflects the data which were available from the work of the Energy Information Administration, Decision Analysis Corporation, and Foster Associates. (See appendix I for a discussion of the sampling methodologies.)

In addition, because the studies' data were derived from a sample of contracts, some of the studies present information on the extent to which the results may be subject to sampling variability. However, for ease of presentation, we did not include such information (called "confidence intervals").

#### CHARACTERISTICS OF CONTRACTS IN THE INTERSTATE MARKET

Pipeline competition for new gas reserves has centered around the terms and conditions of the producer-pipeline contract. The long-term nature of these contracts fostered producer efforts to increase pricing flexibility within the limits of Federal pricing regulation. When supply shortages and curtailments began to appear in the interstate market in the early 1970s, interstate pipelines increasingly used certain contract provisions, primarily the

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<sup>1/</sup>It is not possible to precisely determine the volume of gas several thousand feet underground. Consequently, producers normally contract to sell estimated reserves by acreage and depth. However, a warranty contract provides for delivery of a specified volume of gas, regardless of source. Some warranty contracts were signed in the 1960s; however, only a small percentage of total gas production is now covered by such contracts.



provisions of deregulation clauses and take-or-pay clauses, to compete with each other and intrastate pipelines for new reserves.

Contract duration--long-term nature

The producer-pipeline contract has traditionally been a long-term contract, often extending 20 years or longer, for several related reasons. These include: (1) to comply with the statutory and the regulatory requirements deriving from NGA and NGPA; (2) to meet the concerns of prospective bondholders who would finance pipeline construction programs; and (3) to encourage the growth of demand for gas by providing residential, commercial, industrial, and electric utility end-users a long-term supply of gas.

NGA section 7(c) requires the pipeline to obtain Commission approval if it seeks a major expansion to the pipeline system to either serve new markets or obtain gas from new producing areas. However, the Commission requires evidence that there are adequate reserves under long-term contract to justify the proposed expansion so that these costs can be included in the pipeline's rate base and passed through to consumers.

In addition, Commission regulations deriving from NGA have also encouraged long-term contracts in another manner. Although NGA does not stipulate a minimum contract duration, it does require that the producer obtain from the Commission both a certificate of public convenience and necessity to initiate gas deliveries and abandonment authority to terminate gas deliveries under the contract. 1/ Once gas deliveries have commenced under the contract, the specific reserves are committed to the pipeline purchaser. When the term of the contract expires, the producer is not free to sell the gas to another purchaser until abandonment authority has been obtained from the Commission. However, abandonment authority has not normally been granted when the term of the contract expires. As a result, the producer and the pipeline are often tied together into a long-term contractual relationship. 2/

Certain provisions of NGPA may also affect contract duration. NGPA section 315(a) provides FERC with the authority to specify minimum contract duration of new contracts for most

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1/Certain gas still remains subject to this NGA regulation, primarily section 102(d), 104, and 106(a) gas.

2/As a practical matter, interstate contracts for "old" gas normally are long-term contracts. Short-term contracts are typically renegotiated when the contract expires. An advantage resulting from a short-term contract is the opportunity for the producer to more frequently renegotiate contract terms. FPC and FERC have generally encouraged long-term contracts rather than a succession of short-term contracts.

"new" incentive priced gas. To date, FERC has not done so. However, NGPA section 315(a)(3) instructed FERC to prescribe minimum contract duration for certain Outer Continental Shelf gas. In response, FERC ordered that the duration of these contracts must be at least 15 years or, if less, the commercially producible life of the reservoir. 1/

Furthermore, NGPA section 315(b) acts indirectly to affect contract duration for most "new" incentive priced gas. This statute requires the producer, upon contract expiration or termination, to provide the pipeline purchaser a right of first refusal. In other words, the pipeline has the right to match any new price offered by another prospective purchaser.

EIA analyzed contract trends in both interstate and intrastate contracts. 2/ They concluded that there has been a trend towards shorter duration contracts in both markets. They state:

"In the interstate market, contracts were historically written for 20 years or more \* \* \*. Current trends in both the interstate and intrastate markets are toward shorter contracts (most frequently 15 years)."

This trend may be the result of the current abundance of natural gas supplies and producer/pipeline uncertainty over the future market for gas.

#### Contract prices--the development of pricing flexibility

The long-term nature of producer-pipeline contracts posed a problem for both producers and pipelines--how to project the price of gas far into the future. Noting the rapid growth in demand for gas following World War II, producers became increasingly unwilling to commit themselves to a long-term contract at a fixed price. As pipelines began to compete with each other for producer reserves, producers began to bargain for price escalation clauses which would provide price flexibility and insurance against inflation.

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1/Order No. 40 (Aug. 2, 1979). 18 CFR 277.101.

2/EIA, Natural Gas Producer/Purchaser Contracts and Their Potential Impacts on the Natural Gas Market: An Analysis of the Natural Gas Policy Act and Several Alternatives, Part II, (DOE/EIA-0330), June 1982. Hereafter referred to as the EIA June 1982 study. The study primarily analyzed data for contracts which include post-NGPA interstate and intrastate wells. In addition, the report estimates a range of price increases under different scenarios resulting from the operation of deregulation clauses following partial deregulation in 1985.

According to a Decision Analysis Corporation study, nearly all producer-pipeline contracts contain price escalation clauses. <sup>1/</sup> There are two major types of price escalation clauses found in producer-pipeline contracts--definite and indefinite price escalator clauses. Many contracts contain both these types of clauses. (See chart on p. 24.)

A definite or fixed rate escalator clause generally provides that the price paid under the contract will be increased by a defined amount at specified intervals in the future. These clauses typically specify either (1) a fixed quantity escalator provision, such as 1 cent per mcf per year; (2) a fixed price escalation schedule, such as 2 cents per mcf from 1970-75 and 3 cents per mcf from 1975-80; or (3) a fixed percentage escalation provision, such as 1 percent per month. An example of a contract containing a definite price escalator clause is one which specifies an initial rate of 23 cents per mcf for an initial term of 5 years and an increase of 1 cent per mcf every year thereafter. Although these clauses provide the producer some price flexibility, they do not provide the mechanism to respond to unanticipated changes in the regulatory environment, the demand for gas, or inflation.

Most contracts contain definite price escalator clauses but usually only in conjunction with other price escalator provisions. The EIA June 1982 study reported that 8 percent of the sampled pre-NGPA interstate contract volumes and 10 percent of the sampled contract volumes covering post-NGPA interstate wells contained only definite price escalator clauses. <sup>1/</sup> In other words, 92 percent of the sampled pre-NGPA contract volumes and 90 percent of the contract volumes covering post-NGPA wells contained an indefinite price escalator clause either alone or in conjunction with a

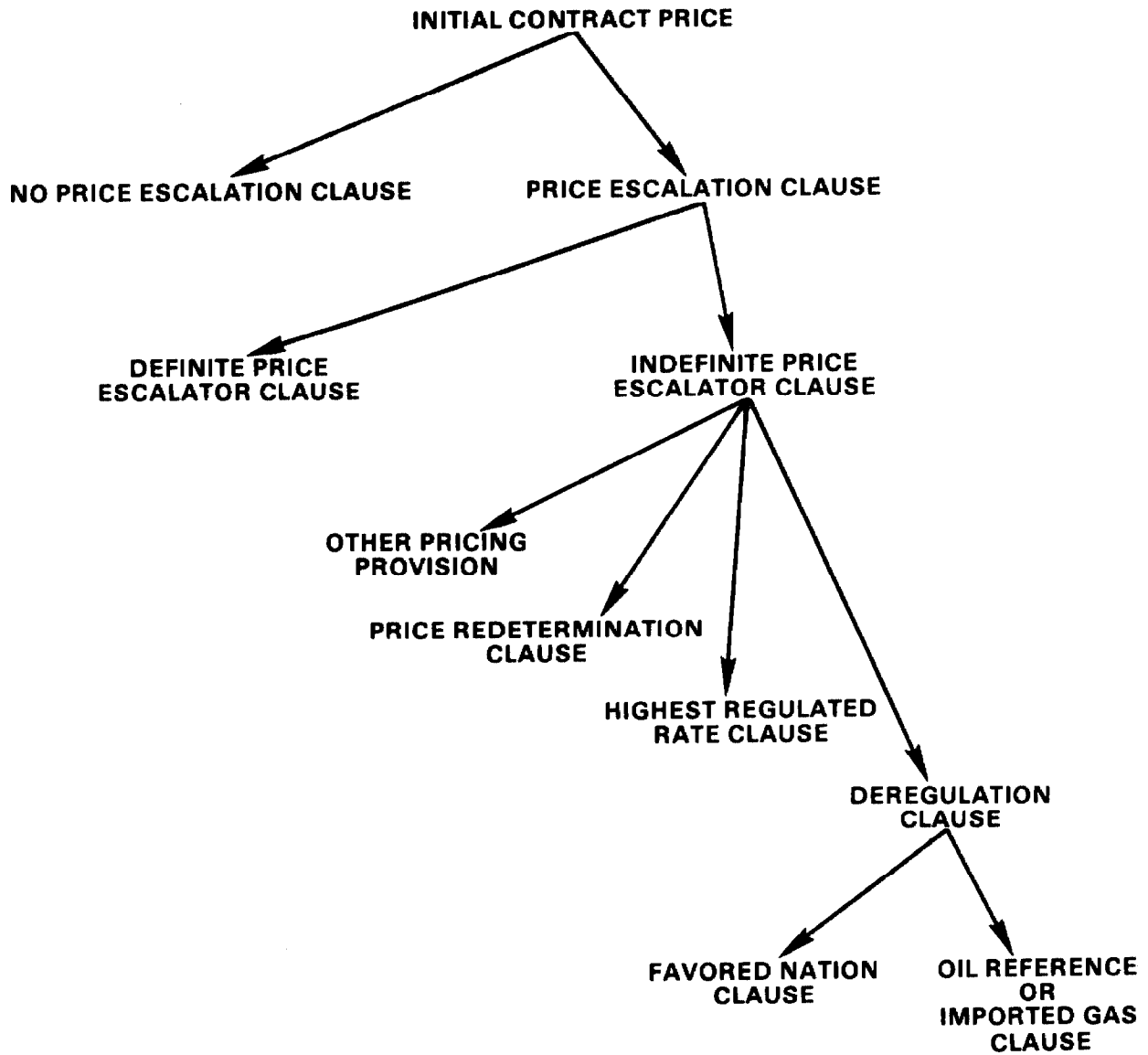
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<sup>1/</sup>Decision Analysis Corporation, Analysis of Natural Gas Producer/ Interstate Pipeline Contracts, July 1, 1981. They reported that it was extremely rare to find a contract without any price escalation provisions. Subsequent to this report, the authors retabulated their data to provide a basis for comparison with a later EIA study on pre-NGPA interstate contracts. Statistics from this report, Comparison of AGA/DAC Results with DOE/EIA Results--Analysis of Natural Gas Pipeline/Producer Contract Provisions (Agreement No. 96-81) will be cited rather than those of the original report. All statistics cited from this report are the percentage of sampled large producer contracts which contain a certain type of contract clause. Hereafter referred to as the Decision Analysis study.

<sup>2/</sup>The EIA June 1982 study found that about two-thirds of 1980 total production from post-NGPA wells was included in pre-NGPA contracts. Consequently, the available data do not permit a clear distinction between pre- and post-NGPA interstate contracting trends. (Aggregate data by contract date are presented in this report, but they do not distinguish between interstate and intrastate contracts.)

FIGURE I

CONTRACT PRICING PROVISIONS



definite price escalator clause. A Foster Associates study had comparable results. It reported that about 13 percent of the total sampled pre- and post-NGPA interstate contract volumes produced in 1980 contained only a definite price escalator clause. 1/

An indefinite price escalator clause, on the other hand, generally provides that the price paid under the contract will escalate by an unknown amount in the future. The following major indefinite price escalator clauses are now found in interstate contracts:

- (1) Redetermination clauses.
- (2) Highest regulated rate clauses.
- (3) Deregulation clauses.

#### Redetermination clauses

A redetermination clause provides that the contract price may be redetermined by the contracting parties at stated intervals. In the pre-NGPA interstate market, regulations permitted price redetermination as frequently as once every 5 years. 2/ These clauses often provided that if the contracting parties were unable to redetermine a new contract price at or below FPC established rates, the new contract price would be established in binding arbitration.

The price redetermination clause was permitted by FPC in interstate contracts to provide an incentive for long-term contracts. FPC had originally prohibited the operation of all indefinite price escalator clauses (except tax increase clauses) in interstate contracts because they were generally inconsistent with the concept of cost-based regulation (see ch. 2). However, FPC soon realized that this acted as a disincentive to long-term contracts because the producer, seeking price flexibility, could begin to negotiate for shorter term contracts. When the short-term contract expired, the producer would try to negotiate a higher contract price.

FPC, recognizing the need for some price flexibility to encourage long-term contracts, stated in Order 232-A in 1961:

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1/Foster Associates, Inc., Pricing Provisions for Natural Gas Sales Contracts, March 1982. All statistics cited from this report are the percentage of sampled large contract volumes produced in 1980 which contain a certain type of contract clause. Hereafter referred to as the Foster Associates study.

2/FPC Order 232-A (Mar. 31, 1961). 18 CFR 154.93.

"We reaffirm our earlier findings that the use of long-term contracts for the sale of natural gas by producers to pipelines or to others is desirable and appropriate in the public interest but that indefinite escalation provisions are, in general, contrary to the public interest. However, it also appears that elimination of all indefinite escalation provisions would be too restrictive to enable the industry adequately to cope with possible changing economic conditions over the span of long term contracts. Therefore, to permit pricing flexibility and to provide an incentive for long term contracts, we should permit future contracts to contain limited price-redetermination provisions \* \* \*."

There have not been any studies on the frequency of these clauses in pre-NGPA interstate contracts. Instead, attention has focused on deregulation clauses. However, in discussions with representatives of interstate pipeline companies, we learned that a redetermination clause can theoretically act just like a deregulation clause. Since the contract price is redetermined, at most, every 5 years the process continues unaltered, even in the deregulated environment.

#### Highest regulated rate clauses

In 1966, FPC expanded the categories of indefinite price escalator clauses which would be permitted in interstate contracts. These highest regulated rate clauses generally allow the producer to collect a contract price equal to the highest regulated rate allowed by a Federal regulatory or governing authority having jurisdiction. 1/

Originally, these clauses (also known as area rate clauses) provided the producer with the contractual authority to collect FPC established ceiling prices. Later, these clauses provided the general contractual authority to collect other price ceilings that were established--flowing gas, nationwide rates, and NGPA rates. The Decision Analysis study found that highest regulated rate clauses were the indefinite price escalators most frequently found in interstate contracts--contained in almost 90 percent of the sampled contracts.

One issue arising from the enactment of NGPA was whether an area rate clause in a specific contract provided the contractual authority to allow collection of NGPA maximum lawful price. The debate focused on the specific authority cited in the area rate clause. The Decision Analysis study found that earlier contracts with area rate clauses tend to refer to only those rates

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1/FPC Order 329 (Dec. 1, 1966). 18 CFR 154.93.

established by FPC, whereas later contract clauses tend to refer to the ceiling rates established by FPC or a successor agency.

However, there was a question whether under the contract the Congress was equivalent to a successor agency to FPC. Some groups argued that contracts with area rate clauses that cite the rates established either by FPC or a successor agency should not be permitted to collect congressionally established NGPA rates. FERC ruled that area rate clauses provide authority to charge and collect the NGPA rate to the extent that the parties to the contract intended such clauses to permit collection of NGPA rates. 1/

### Deregulation clauses

Deregulation clauses generally specify a process for determining a new contract price in the event that the gas ceases to be subject to Federal price regulation. FERC does not forbid deregulation clauses in interstate contracts. FERC has stated:

"Moreover, the Commission has never considered [Section] 154.93 to bar deregulation clauses since such clauses take effect, if at all, at a time after Commission jurisdiction ceases." 2/

Deregulation clauses may be relatively simple or quite complex, limited only by the relative bargaining position and imagination of the contracting parties. Consequently, the specific provisions of deregulation clauses vary from contract to contract. The following simplified example illustrates the complexity of a single deregulation clause which could be found in a contract:

(1) Following the effective date of deregulation, the producer and pipeline will determine a new contract price within 90 days. The new contract price will be retroactive to the date of deregulation.

(2) The new contract price will be selected by the producer from the following "menu" of alternative prices:

- (a) Average of the three highest prices being paid any producer in the south Louisiana area of comparable quality and quantity of gas (this is an example of a three-party "favored nation" clause);

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1/FERC Order 23 (Mar. 13, 1979) and 18 CFR 270.205(a)(2). Also see GAO report "Guidance Needed on Use of Natural Gas Price Escalator Clauses," EMD-80-53, July 25, 1980.

2/FERC, Order on Rehearing and Appeal. Exxon Corporation et al; Docket Nos. CI79-178 et al., Nov. 6, 1980.

- (b) 110 percent of the cost per MMBtu of No. 2 fuel oil landed at New York harbor as listed in Platt's Oilgram (this is an example of an "oil reference" clause); or
- (c) the price existing on the last day prior to deregulation escalated at 3 percent per quarter (this is an example of a "definite price escalator" clause).

(3) Redetermination of the contract price will occur annually, upon producer request. If the parties are unable to reach agreement on the new contract price within 90 days, the new contract price will be determined in binding arbitration.

(4) If the pipeline, in its sole discretion, decides it cannot market the gas at the contractually established price, it may offer the producer a lower price and may possibly terminate the contract (this is an example of a "market out" clause).

(5) If the producer negotiates a new contract with a second potential buyer at a higher price, the original buyer must be given an opportunity to match the contract price (this clause provides for "buyer right of first refusal").

Deregulation clauses first began to appear in interstate contracts in the early 1970s. Because deregulation clauses were not prohibited under FPC regulations, they became a means of "non-price" <sup>1/</sup> competition by interstate pipeline companies for increasingly scarce reserves in the interstate market. In 1975, we reported,

"Recent trends in long-term contracting by gas producers seem to be toward including deregulation clauses in contracts. Over half the long-term contracts filed with FPC in recent months contained such clauses, presumably anticipating some form of gas deregulation by the Congress." <sup>2/</sup>

Pipelines may have also been willing to sign these contracts with deregulation clauses because they could have assumed that if

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<sup>1/</sup>Because Federal price ceilings limit current payments per unit of gas, pipelines began to compete on the basis of other, so called "non-price," factors. "Non-price" is technically a misnomer. Such clauses do not relate to current prices, but they do relate to prices that might be paid at some future time (after deregulation), minimum purchase obligations, and so forth.

<sup>2/</sup>"Reliable Contract Sales Data Needed for Projecting Amounts of Natural Gas That Could Be Deregulated," RED-76-11, Sept. 8, 1975.



deregulation actually occurred, only new gas supplies would be deregulated. In other words, they may have assumed that they would always have a "cushion" of old NGA price-regulated gas to help offset the potential deregulated price of new gas supplies.

### Analysis of deregulation clauses

Several studies analyzed deregulation clauses in pre-NGPA interstate contracts. We present a comparison of the results of these studies below. However, comparing the results of these studies sometimes proved difficult because the studies used differing methodological approaches in obtaining their contract data and also presented their results in varying formats.

Three studies analyzed these clauses. The Decision Analysis study, the first public report analyzing these contracts, reported that about 58 percent of the sampled large producer, interstate, and pre-NGPA contracts contained deregulation clauses. Later studies generally confirmed this result. The EIA December 1981 study found that 66 percent of the pre-NGPA interstate gas volumes produced in 1977 was subject to deregulation clauses. <sup>1/</sup> In addition, the Foster Associates study reported that 65 percent of the sampled large volume pre-NGPA contracts contained deregulation clauses.

Deregulation clauses in post-NGPA interstate contracts were analyzed in two studies, with somewhat less consistent results. The Foster Associates study reported that 94 percent of the sampled large volume post-NGPA interstate contracts contained deregulation clauses. In contrast, the EIA June 1982 study reported that 77 percent of the sampled post-NGPA interstate wells were in contracts with deregulation clauses.

The discrepancy may be partially explained by the different sampling processes used in these two studies. The Foster Associates sample was primarily derived from the producers' largest contracts, while the EIA sample was derived from post-NGPA wells covered by both large and small volume contracts. Large volume contracts tend to have better pricing provisions for producers. In addition, because about two-thirds of the 1980 production from post-NGPA wells are included in pre-NGPA contracts, an analysis of post-NGPA contracts, as opposed to contract data for post-NGPA wells, may overstate the percentage of contracts containing deregulation clauses.

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<sup>1/</sup>EIA, Natural Gas Pipeline/Producer Contracts: A Preliminary Analysis, DOE/EIA-0312, Dec. 1981. All statistics cited from this report are the percentage of sampled large producers' contract volumes produced in 1977 which contain a certain type of contract clause. Hereafter referred to as the EIA December 1981 study.

The following table summarizes and provides a comparison of the pricing provisions of interstate contracts.

Table 3

Comparison of Contract Studies: Pricing Provisions of Interstate Contracts (note a)

	<u>Type of pricing provision</u>		
	<u>Definite only</u>	<u>Highest regulated rate with no deregulation clause</u>	<u>Deregulation clause</u>
	<u>(percent)</u>		
<u>Pre-NGPA contract data</u>			
Decision Analysis	15	28	58
EIA June 1982 study	8	26	66
Foster Associates	(d)	(d)	65
<u>Post-NGPA well or contract data</u>			
EIA June 1982 study (note b)	10	13	77
Foster Associates (note c)	(d)	(d)	94

a/Figures may not add due to rounding.

b/Percentage of post-NGPA well volumes under contract.

c/Percentage of post-NGPA large contract volumes.

d/Data were not available.

The Decision Analysis, EIA, and Foster Associates studies further analyzed specific provisions of deregulation clauses to help assess what could happen to gas prices following partial or total deregulation. They focused specifically on clauses which (1) establish how prices would be determined upon deregulation and (2) provide the buyer some recourse against these prices.

Pricing provisions of deregulation clauses

The analysis of the pricing provisions of deregulation clauses focused on three aspects:

--What was the process for selecting a contract price?

--What were the actual pricing provisions?

--Were any minimum or maximum prices specified?

The EIA December 1981 study distinguished between two different processes for establishing a deregulated contract price. One

process, the predetermined or preestablished pricing method, locks the pipeline into a predetermined pricing formula for calculating a new contract price. In essence, the contract states, "The new price will be the highest price established through use of the indefinite price escalator provisions specified in the deregulation clause." This method of determining a new contract price was found in 78 percent of the pre-NGPA contract volumes with deregulation clauses and 82 percent of the post-NGPA offshore contracts. <sup>1/</sup> Thus, it appears that deregulation clauses continue to specify this process for determining a new contract price.

The second process, a renegotiated pricing method, provides the pipeline bargaining room because it states that alternative prices--prices established through the use of an indefinite price escalator clause--will only be considered in the open-ended renegotiation of a new contract price. In other words, the contract states, "The prices established through use of the indefinite price escalator provisions specified in the deregulation clause will only be considered--but will not be binding--in establishing a new contract price." This method of determining a new contract price was found in 22 percent of the pre-NGPA contract volumes with deregulation clauses and 18 percent of the post-NGPA offshore contracts.

The analysis of the pricing provisions of deregulation clauses in these studies yielded consistent results. All of the studies found that the  favored nation  clause was the most common pricing provision of deregulation clauses. A favored-nation clause generally ties the new contract price to prices being paid other producers in a specified geographic area. For example, a favored nation clause may specify that the producer will obtain a new contract price equal to the average of the three highest prices being paid other producers for a comparable quality and quantity of gas in south Louisiana.

These clauses can be categorized into either two- or three-party favored nation clauses. A two-party favored nation clause ties a purchasing pipeline's new contract price to the price it pays to other producers. The prices paid by the purchasing pipeline are not affected by other pipelines' prices; hence, the purchasing pipeline retains some control over the deregulated contract price. In contrast, a three-party favored nation clause ties the new contract price to the price paid other producers by any pipeline in the specified geographic area. The EIA studies noted that nearly all favored nation clauses found in their analyses were three-party favored nation clauses.

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<sup>1/</sup>The EIA December 1981 study was limited to an analysis of only those contracts on file at FERC. EIA examined contracts from a non-representative universe of post-NGPA offshore contracts that are sometimes filed at FERC; post-NGPA onshore contracts are rarely filed. Offshore contract provisions are usually more favorable to the producer.

Oil reference clauses were found by every study in some sampled contracts. An oil reference or parity clause ties the price of the deregulated gas to a percentage of the Btu equivalent of crude oil or a petroleum product--usually No. 2 (distillate) or No. 6 (residual) fuel oil. While the EIA June 1982 study found these clauses in 12 percent of the sampled pre-NGPA contract volumes produced in 1977, it found these clauses in 28 percent of the contract volumes produced in 1980 covering the sampled post-NGPA wells. These oil reference clauses are more prevalent in contracts executed after 1977, especially in the 7-month period prior to the enactment of NGPA. As noted in the EIA June 1982 study, post-NGPA contracts with an oil reference clause have increasingly provided the purchaser some sort of buyer protection against high contract prices.

An imported gas clause ties the price of deregulated gas to the border price of imported Mexican or Canadian gas. 1/ Foster Associates found imported gas clauses in 10 percent of the total sampled post-NGPA data. 2/ EIA did not tabulate these data in any of its studies. These clauses were not found in any pre-NGPA contracts in the Foster Associates study, which suggests that such clauses are of recent origin.

Finally, the reports noted that there may be some time lag between the date of deregulation and the increase in contract prices. Consequently, following deregulation, gas prices will not increase overnight. The original Decision Analysis study, for example, stated that the contract price was usually to be redetermined 30 to 180 days following deregulation. Thereafter, the contract price would usually be redetermined every 1 to 5 years at the request of the producer.

The following table summarizes and compares the results of these studies.

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1/Since April 1, 1981, and as of November 1982, imported Mexican gas sold at the border for \$4.94 per MMBtu as did imported Canadian gas.

2/Also see Foster Associates, Foster Bulletin on Deregulated Natural Gas, a monthly publication containing the deregulation clauses from selected contracts. Imported gas clauses have been cited in this publication.

Table 4

Comparison of Contract Studies: Pricing Provisions of Interstate Contracts with Deregulation Clauses

	<u>Type of price escalator clause (note a)</u>		
	<u>Favored nation</u>	<u>Oil reference</u>	<u>Imported gas</u>
	----- (percent) -----		
<u>Pre-NGPA contract data</u>			
Decision Analysis	77	9	(e)
EIA June 1982 study	92	12	(e)
Foster Associates (note b)	(e)	22	-
<u>Post-NGPA well or contract data</u>			
EIA June 1982 study (note c)	87	28	(e)
Foster Associates (notes b & d)	(e)	36	10

a/More than one type of price escalator clause can be included in a given contract.

b/These figures represent the percentage of all sampled contract volumes containing these clauses rather than an analysis of pricing provisions of contracts containing deregulation clauses.

c/Percentage of post-NGPA well volumes under contract.

d/Percentage of post-NGPA contracts by volume.

e/Data were not available.

Buyer out provisions

The studies also analyzed the types of clauses which could provide some recourse to the buyer against prices established by deregulation clauses. A buyer out clause is a general term used to describe any option which permits the pipeline to offer the producer, under specified circumstances, a lower price than the contractually established price. If they are unable to agree on a new contract price, the contract may be terminated. Consequently, the buyer out clause can protect the pipeline from a high contract price established through the pricing provisions of a deregulation clause.

There are two types of buyer out clauses--market out and FERC out clauses. A market out clause often provides that under certain circumstances, the pipeline can offer the producer a lower

contract price if the pipeline finds that the gas cannot be marketed at the contractually established price. <sup>1/</sup> A FERC out clause allows the pipeline to offer the producer a lower price if FERC disallows the contractually established price for ratemaking purposes. Under these circumstances, the contract price would normally fall to the price which FERC would allow for ratemaking purposes.

The results of the studies tend to confirm one another. They found that neither of these provisions was normally found in the sampled pre-NGPA contracts. However, the studies did find that buyer out clauses were more prevalent in post-NGPA contracts. This suggests that purchasers are increasingly successful in inserting these contract clauses in post-NGPA contracts.

In addition, the studies examined the prevalence of maximum price clauses. The maximum price specified in the contract varies by contract. The maximum price can be very specific, such as the energy equivalent price of No. 2 fuel oil, or it can be vague, such as the estimated "commodity value" of the gas. Maximum price clauses were found in only a small percentage of either pre- or post-NGPA contracts.

The studies also examined the prevalence of minimum price clauses which ensure that the contract rate does not fall below a certain price, often the area rate previously in effect or an earlier contract rate. These clauses do not provide financial protection to purchasers. In fact, they act to limit or prohibit downward price flexibility.

The EIA June 1982 report stated that minimum price clauses were found in 50 percent of the pre-NGPA contract volumes with deregulation clauses and about 38 percent of the corresponding contracts covering post-NGPA wells. This suggests that purchasers have been a little more successful in excluding these clauses from contracts.

The following table summarizes and compares buyer protection clauses in interstate contracts:

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<sup>1/</sup>These clauses generally specify the circumstances under which they may be invoked. Some market out clauses state that the pipeline may offer the producer a lower contract price if the pipeline finds, in its sole discretion, that the gas cannot be marketed at the contractually established price. Other market out clauses may be more specific and provide the pipeline less discretion in exercising the option. For example, in some contracts, the market out clauses may only be exercised if the contract, price exceeds the Btu equivalent of No. 2 fuel oil.

Table 5

Comparison of Contract Studies: Buyer  
Protection Clauses of Interstate  
Contracts With Deregulation Clauses (note a)

	<u>Type of buyer out clause</u>	<u>Maximum</u>	<u>Minimum</u>	
	<u>Market out</u>	<u>price</u>	<u>price</u>	
	<u>FERC out</u>		<u>(note b)</u>	
	(percent)			
<u>Pre-NGPA contract data</u>				
Decision Analysis	1	11	(f)	(f)
EIA June 1982 study	6	14	8	50
Foster Associates (note c)	17		(f)	(f)
<u>Post-NGPA well or contract data</u>				
EIA June 1982 study (note d)	19	23	8	38
Foster Associates (notes c & e)	29		26	(f)

a/More than one type of buyer protection clause can be included in a given contract.

b/As noted, a minimum price clause does not provide any buyer protection.

c/The report did not distinguish between market out and FERC out clauses. These figures may be understated because they represent the percentage of all sampled contract volumes containing these clauses rather than an analysis of the pricing provisions of contracts containing deregulation clauses.

d/Percentage of post-NGPA well volumes under contract.

e/Percentage of post-NGPA contracts by volume.

f/Data were not available.

Delivery rates--pipeline purchase obligations

Producer-pipeline contracts specify the daily, monthly, or annual volumes of non-associated gas that the pipelines will purchase. 1/ There are several different types of delivery rate

1/Nearly all contracts specify that 100 percent of associated or casinghead gas (gas produced from an oil well) will be taken daily.

(or take-or-pay) clauses specified in contracts. Typically, they require the pipeline to take and pay for the gas or to pay for the gas even if it is not taken. The major types are (1) guaranteed take based on estimated reserves and (2) guaranteed take, based on the well's capacity. 1/

Clauses providing guaranteed take based on estimated reserves generally reflect the relative bargaining strength of pipelines which sought to take the gas over a prolonged period of time. They were commonly found in contracts executed during the 1960s. A typical contract might state that the pipeline would purchase a certain percentage of the estimated reserves daily (the daily contract quantity)--perhaps 1/8,000 of the estimated reserve. To accommodate the pipeline's seasonal demand for gas--extra gas in the winter months and less gas in the summer months--the contract may contain a daily "swing" provision which would allow the pipeline to take a certain percentage above and below the daily contract quantity. To accommodate the producer's need for an adequate cash flow, the pipeline would be obligated to pay for the daily contract quantity even if it did not take the gas. However, the contract would usually provide that the pipeline could take the prepaid gas at a later date (a "makeup provision"). 2/

Clauses providing guaranteed take based on the well's capacity reflect the increasing relative bargaining strength of the producer. This type of provision began to be found in contracts by the 1970s as pipelines increasingly competed on "non-price" contract provisions. A producer would tend to favor this type of clause over the take clause, based on reserves, for two major reasons. First, this type of clause allows the producer to produce the reserve more quickly, which improves cash flow. Second, rapid production from the reserve helps avoid drainage of the gas under the producer's lease by producers on adjacent property.

During the 1970s, as interstate pipelines scrambled for reserves, "non-price" competition among pipelines increased because prices were federally regulated. Contracts were signed or amended to provide for higher take obligations as one means of overcoming binding Federal price ceilings in the interstate market. Many new contracts began to specify increasingly high daily contract quantity obligations, some exceeding 90 percent of a well's deliverability capacity. With such high daily take obligations, it becomes increasingly difficult for the pipeline to make up the

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1/A third type of clause is a ratable take clause. It is often found when different producers have wells in the same reservoir. It provides that all producers are guaranteed proportionate production from the same reservoir.

2/Federal regulations require a 5-year makeup period for gas subject to NGA regulation. See 18 CFR 154.103.



purchased gas within the 5-year period required by FERC regulations. In some cases, FERC has intervened to require that the contract provide more favorable makeup provisions.

The EIA June 1982 study found that take-or-pay clauses have varied in interstate and intrastate contracts based on contract vintage. Contracts signed prior to 1973 had average take obligations of 78 percent. <sup>1/</sup> This increased in succeeding years to an average of approximately 90 percent for new contracts (probably as a result of "non-price" interstate competition for scarce reserves). Following enactment of NGPA, average take clauses in new contracts declined to about 79 percent for new contracts signed in 1980.

Contracts with high take clauses can create a problem for the buyer because they are not very responsive to changes in demand. When demand declines due to conservation, fuel switching, or an economic downturn, the pipeline is still obligated to pay for the gas. Eventually, the gas must be taken. To dispose of this surplus gas, some interstate pipelines with potential take-or-pay problems have requested FERC permission to sell the surplus gas in "off system" sales to purchasers which they are not required to supply.

#### COMPARISON WITH CONTRACTS IN THE INTRASTATE MARKET

The intrastate producer-pipeline contract has the same general composition as an interstate contract in that it specifies contract duration, prices, and delivery rates. There appear to be significant differences in contracting practices between the interstate and the intrastate markets. Based on the available data, observations can be made in regard to (1) the percentage of "old" intrastate gas which will be deregulated in 1985 and (2) types of indefinite price escalator clauses found in intrastate contracts.

As found in an EIA report, <sup>2/</sup> direct sales contracts by producers to refineries, large industrial users, and electric utility end-users are often found in the intrastate market (representing about 35 percent of total estimated 1978 intrastate sales volumes).

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<sup>1/</sup>EIA classified take-or-pay provisions not related to well deliverability or capacity as 100 percent of a contract quantity. Therefore, the percentage for take obligations for pre-1973 contracts is probably overstated.

<sup>2/</sup>EIA, Intrastate and Interstate Supply Markets under the Natural Gas Policy Act, Oct. 1981. The report was designed to estimate the percentage of NGPA section 105 and 106(b) gas which would be deregulated in 1985. The report was not designed to provide insight into possible "problem" contracts. Hereafter referred to as the EIA intrastate study.

They generally tend to be older contracts negotiated prior to 1970. In fact, EIA estimates that at least 53 percent of the direct sale contracts in effect in 1978 will expire prior to 1985. Contracts between producers and pipelines represent about 65 percent of total intrastate sales and generally tend to be long-term contracts. EIA estimates that only about 20 percent of those contracts in effect in 1978 will expire by 1985. Thus, EIA concludes that interstate pipelines will be afforded more protection from price increases under NGPA relative to direct sales purchasers which face the possibility of large price increases due to the renegotiation of rolled over contracts.

As a result of this analysis, EIA estimates that about 37 to 53 percent of "old" intrastate gas will be deregulated in 1985. (In addition, section 102 and most of section 103 gas will also be deregulated in 1985 regardless of contract expiration date.) All "old" intrastate gas under contracts that expire prior to 1985 will probably be deregulated as a result of the complex pricing provisions of NGPA. However, "old" intrastate gas under contracts which expire in 1985 or later may or may not be deregulated. EIA does not provide a more precise estimate of section 105 and 106(b) gas to be deregulated since certain legal issues relating to the simultaneous presence of definite and indefinite price escalator clauses in contracts have yet to be resolved. 1/

The EIA June 1982 study notes that there are significant differences in contract pricing provisions between the interstate and the intrastate markets. The study states

"Further, the distribution of escalator clauses in the two markets is quite different. For both pre- and post-NGPA gas, the interstate purchasers have considerably more gas priced under indefinite escalator clauses such as most-favored-nation and oil parity clauses, and considerably less buyer protection such as 'market-out' and 'maximum price' than have intrastate purchasers."

The following table provides a comparison between the pricing provisions of pre- and post-NGPA interstate and intrastate contracts. It suggests that (1) definite price escalator clauses

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1/According to NGPA, intrastate gas is decontrolled if, on December 31, 1984, the following conditions are met (1) the contract price exceeds \$1.00 per MMBtu and (2) the gas is not sold at a price established through use of an indefinite price escalator clause. About 16 percent of the contracts contained both a definite and an indefinite price escalator clause in which use of the definite price escalator clause established a contract price greater than \$1.00 per MMBtu. It is not clear whether the mere presence of an indefinite price escalator clause in these contracts precludes deregulation.

are much more common in pre- and post-NGPA intrastate contracts than interstate contracts and (2) deregulation clauses may not be widespread in post-NGPA intrastate contracts.

Table 6

EIA Data on Pre- and Post-NGPA Pricing Provisions in Interstate and Intrastate Contract Volumes

	<u>Type of pricing provision (note a)</u>		
	<u>Definite only</u>	<u>Highest regulated rate with no deregulation clause</u>	<u>Deregulation clause or price redetermination clause</u>
<u>(percent)</u>			
<u>Pre-NGPA</u>			
Interstate	8	26	66
Intrastate	<u>b/40</u>	6	<u>c/54</u>
<u>Post-NGPA</u>			
Interstate	10	13	77
Intrastate	33	31	36

Source: From EIA June 1982 Study (Table 20).

a/More than one type of pricing provision can be included in a given contract.

b/This reflects the large number of direct sales contracts at fixed rates between producers and end-users.

c/Pre-NGPA intrastate contracts did not contain deregulation clauses since the market was not price regulated. The contracts usually contained price redetermination clauses or their equivalent.

The EIA June 1982 study further analyzed the pricing provisions of deregulation clauses in intrastate contracts. The study reported that favored nation clauses are commonly found in intrastate contracts but that oil reference clauses are found rarely in either pre- or post-NGPA intrastate contracts. The study also noted that both pre- and post-NGPA intrastate contracts generally tend to provide more buyer protection than corresponding interstate contracts.

CONCLUSIONS

This chapter focused on three aspects of producer-pipeline contracts--duration, prices, and purchase obligations. As a result of the long-term nature of these contracts, the producer has sought pricing flexibility. For many years, Federal price ceilings did not significantly affect contracting practices. However,

in the 1960s, the market value of the gas in the unregulated intrastate market began to exceed Federal price ceilings in the interstate market. Since interstate pipelines were not able to compete for new reserves on the basis of price, they began to compete on the basis of "non-price" terms. This "non-price" competition manifests itself in several ways, including the provision of deregulation clauses and purchase obligations (take-or-pay clauses). This has helped form the basis for the current contracts controversy.

Several major studies have examined the provisions of deregulation clauses in interstate and intrastate contracts. The results of these studies are consistent in many ways. The favored nation clause is the pricing provision found in most contracts. Oil reference clauses and imported gas clauses are found in a much smaller percentage of contracts. Buyer out protection is generally lacking, particularly in pre-NGPA interstate contracts, but is increasingly found in post-NGPA contracts.

There is some indication that contracting practices have changed since enactment of the NGPA. Contracts increasingly are of shorter duration, have deregulation clauses providing buyer protection, and have lower purchase obligations. This suggests that contracting practices in these markets are adapting to changes in the supply and demand for gas.

## CHAPTER 4

### THE CONTRACTS CONTROVERSY

Contracts between producers and pipeline companies will be a major issue for the natural gas industry whether the Natural Gas Policy Act is allowed to play itself out or total decontrol is legislated--the main difference being in the amount of gas that will be decontrolled and, therefore, subject to the operation of indefinite pricing provisions within contracts. Some industry analysts believe that these provisions will escalate the price of decontrolled gas above the level at which it is competitive with alternative fuels and this, "may greatly intensify the price, economic, and political disruption attendant to decontrol." 1/ In contrast, other observers contend that contract provisions will be adjusted to the realities of the marketplace prior to decontrol. They argue that "neither a producer nor a reseller of natural gas will find it to be in its self interest to price itself out of the market." 2/

However, concern over the impact of contract clauses on natural gas prices is not unique to the present debate on natural gas policy. The 1954 Phillips decision, which required FPC to regulate wellhead pricing, was triggered by a dispute over an indefinite price escalation clause. In arguing the case for wellhead regulation, Senator Paul H. Douglas of Illinois stated in 1956 that indefinite price escalation clauses "place onerous burdens upon pipeline companies and effectively limit and impede competition among buyers and sellers." 3/ In the early 1960s, FPC found that such clauses were incompatible with the public interest and banned their operation on the premise that they "cause price increases \* \* \* to occur without reference to the circumstances or economics of the particular operation, but solely because of what happens under another contract." 4/ These clauses later appeared in the 1970s as part of deregulation clauses and their anticipated operation under partial or total deregulation is largely the cause of the current contracts controversy.

This chapter describes the origins of the present contracts controversy and identifies the issues which have been raised about

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1/Walter W. Schroeder, "The Outlook for Natural-Gas Prices as Decontrol Approaches," Oil & Gas Journal, Nov. 30, 1981.

2/Letter dated Jan. 8, 1982, from John M. O'Connor, Natural Gas Supply Association, to James A. McClure, Chairman, Senate Committee on Energy and Natural Resources.

3/The Honorable Paul H. Douglas, "The Case for the Consumer of Natural Gas," Georgetown Law Journal, Vol. 44 (June 1956), p. 594.

4/Permian Basin Area Rate Cases, 34 F.P.C. 159, 373, cited in, 390 U.S. 747, 782 (1968).

the impact of contract provisions on the natural gas market if NGPA remains unaltered or if total decontrol is legislated.

ORIGINS OF THE PRESENT  
CONTRACTS CONTROVERSY

The present contracts controversy has its roots in three basic characteristics of the natural gas industry:

- The long-term nature of producer-pipeline contracts.
- The two-tiered market structure under which gas was sold until 1978.
- The limited ability of interstate pipeline companies in the 1970s to compete for gas reserves on the basis of near-term prices.

The long-term nature of producer-pipeline contracts fostered the development of indefinite pricing provisions in the late 1940s and early 1950s to provide some degree of price flexibility for producers who were committing themselves to supply gas reserves to pipeline companies far into the future. Although the operation of many of these provisions was subsequently prohibited by FPC in the early 1960s, they later reappeared in the 1970s as part of deregulation clauses. These deregulation clauses became a means of "non-price" competition for gas reserves since current prices in the interstate market were strictly regulated.

The need for such "non-price" competition was in turn the result of the supply disparity which developed between the interstate and intrastate markets in the late 1960s and early 1970s. Because natural gas prices in the unregulated intrastate market rose faster than the regulated rates for the interstate market, it became more lucrative for producers to sell their discoveries of gas reserves in the intrastate market. Thus, at the same time the intrastate market was maintaining and increasing its reserves position, shortages began to appear in the interstate market, resulting in the curtailments of the early and mid-1970s.

Because interstate pipelines could not compete against intrastate pipelines and against each other on the basis of current prices, competition for gas reserves increasingly centered on "non-price" terms. These "non-price" terms included provisions governing: (1) how prices would be set if Federal price regulations ended (deregulation clauses) and (2) how much of the production covered by a given contract would be purchased regularly (take-or-pay clauses). Pipelines may have assumed that their large endowments of low-cost gas would shelter them from the impact of future high prices.

Interstate pipelines emerged from the curtailments of the early and mid-1970s eager to rebuild their gas reserves in order to fulfill their contractual obligations to their customers.

Thus, they continued to give more attention to immediate supply than future price. One industry analyst observed that

"\* \* \* less than a year after passage of the NGPA, pipelines began committing to contracts calling for prices [upon deregulation] as high as 110 or 120% of the equivalent price of No. 2 fuel oil. Even those pipelines that recognized the emerging marketability problems paid these high prices on the theory that if they did not some other pipeline would." 1/

#### CONTRACT ISSUES UNDER NGPA

Industry analysts now question whether NGPA will lead to a smooth transition to the partial decontrol of natural gas prices in 1985. Two basically independent sets of forces will largely determine whether the transition is smooth: first, a large gap in 1985 between oil and gas prices could lead to a "market-induced" increase in gas prices, and secondly, the operation of indefinite price escalator clauses could lead to a "contract-induced" price increase.

#### Market-induced fly-up of prices

NGPA established a multitiered pricing structure for gas produced and sold under different geologic and contractual conditions and specified a deregulation schedule for certain categories of natural gas. NGPA's pricing structure was based on escalation rates designed to adjust wellhead prices of new supplies up to market-clearing levels pegged to world oil prices. At the time NGPA was enacted in 1978, it was assumed that the price of crude oil in 1985 would increase from \$12 a barrel in 1978 to \$15 a barrel in 1985 (in 1977 dollars). However, world oil prices soon more than doubled--a much sharper increase than had been anticipated.

Assuming a world oil price of \$35 a barrel in 1985 (1980 dollars), the Department of Energy (DOE) concluded in a 1981 study 2/ that NGPA is likely to leave a large price gap between 1984 controlled prices and 1985 partially decontrolled prices. DOE projected that average wellhead prices would increase 70 percent above the rate of inflation between 1984 and 1985, while residential prices would increase 36 percent above the rate of inflation.

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1/Walter W. Schroeder, "The Outlook for Natural-Gas Prices as Decontrol Approaches," Oil & Gas Journal, Nov. 30, 1981.

2/DOE, A Study of Alternatives to the Natural Gas Policy Act of 1978, Nov. 1981.

However, some industry analysts question whether this market-induced price increase (also known as a fly-up or price spike) will actually be a problem in 1985. They contend, first, that the softening of world oil markets will lead to lower oil prices in 1985 than DOE assumed, and moreover, that natural gas prices are likely to be higher in 1984 than the DOE study estimated because of the movement of gas from lower priced to higher priced categories under NGPA. In addition, there has been considerable debate over the likely future relationship between market-clearing levels for average gas prices at the wellhead and crude oil prices--e.g., at what point will end-users switch from gas to oil. 1/

### Contract-induced fly-up of prices

Some observers believe that it will be the operation of contracts, rather than market forces, that will prevent the smooth transition to partial decontrol under NGPA. They contend that indefinite pricing provisions, contained in the deregulation clauses of a majority of contracts, will cause a massive fly-up of gas prices after January 1, 1985. At that time, approximately 50 percent of the total domestically produced gas supply will be deregulated. 2/

In order for a contract-induced fly-up of prices to occur, a number of conditions must be met. First, the gas which is decontrolled in 1985 must be covered by a contract containing a deregulation clause to provide the contractual authority to collect a new contract price. The EIA June 1982 study found that about 87 percent of the gas to be decontrolled in the interstate market and 39 percent in the intrastate market was subject to deregulation clauses. Secondly, it must be assumed that contracts will operate as written with no disputes over wording or interpretation. However, contracting parties may dispute, for example, what constitutes a "comparable quantity and quality" of gas for the purpose of triggering a most favored nation clause.

Finally, such predictions are based on the premise that the contracting parties will not adjust their contracts prior

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1/We have independently reviewed the market-induced fly-up issue and issued a report on this subject entitled, "An Analysis of Natural Gas Pricing Policy Alternatives," GAO/RCED-83-13, Feb. 3, 1983. Hereafter referred to as our companion report.

2/See Energy Information Administration, The Current State of the Natural Gas Market, Dec. 1981. In the EIA June 1982 study, it was reported that approximately 30 percent of 1980 gas quantities will be decontrolled in 1985. We understand from an EIA official that these estimates are being refined and that the amount of gas to be decontrolled in 1985 will probably fall within the 30- to 50-percent range.



to decontrol in order to avoid or mitigate disruptions to the natural gas market after 1985. However, it has been reported in the press that--within the last few months--certain pipelines have invoked their market out clauses to reduce prices in their contracts for section 107 gas and that they are also cutting back on their gas purchases in response to the current abundance of gas and the weakening of demand. In addition, it is possible that market out clauses could be a significant factor in mitigating a contract-induced fly-up in prices in 1985. The EIA June 1982 study found that market out clauses cover approximately 25 percent of interstate gas subject to deregulation in 1985 and over half of all gas placed under contract in 1980 (no later data are available).

Assuming that contracts operate as written and are not adjusted prior to decontrol, there is concern over the impact of the relatively few contracts under which gas prices would rise to very high levels upon decontrol. Such contracts have all of the following characteristics:

- Provide the producer the opportunity to select a deregulated price based on a percentage of the energy equivalent price of fuel oil (oil reference clause) or the price of Mexican or Canadian gas, (imported gas clause).
- Obligate the pipeline to pay for some or all of the gas under contract even if the pipeline does not have a ready market for the gas (take-or-pay clause).
- Do not provide the pipeline with a buyer protection provision (market out or FERC-out clause).

These relatively few contracts could interact with and trigger many other contracts whose favored nation clauses tie the deregulated contract price to a price being paid to other producers in a geographic producing area. In turn, this could cause high prices to spread rapidly among contracts covering deregulated gas.

According to the June 1982 EIA contract study, less than 1 percent of the total contract quantities and approximately 3 percent of the interstate contract quantities scheduled for decontrol in 1985 have oil reference clauses with no market out provisions. However, the effect of the oil reference clauses could be much greater than their number would suggest because of the prevalence of favored nation clauses. EIA found that, of the interstate contract quantities with deregulation clauses for gas to be decontrolled in 1985, about 7 percent are tied to oil prices, but 84 percent have most favored nation clauses. Less than 1 percent of the intrastate contract quantities have oil reference clauses, but 42 percent have most favored nation clauses.

If a fly-up of prices does occur in 1985 because of the interaction of contract clauses, EIA estimates in its June 1982 study that prices would increase by approximately \$0.44 per MMBtu,

with a range of \$0.21 to \$0.84 per MMBtu, in 1980 dollars. In the intrastate market, the price would increase by about \$0.42 per MMBtu, with a range of \$0.16 to \$1.49 per MMBtu, in 1980 dollars.

In our companion report, we estimate that contracts may have no appreciable effect on the price of gas after partial decontrol under NGPA or could instead increase interstate gas prices \$0.30 or \$0.80 per MMBtu over market-clearing levels in 1985 (estimated to be \$2.85 per MMBtu in 1980 dollars) depending on the assumptions made about contract renegotiation and market out clauses.

However, in order for gas to remain marketable after partial decontrol, the price of gas at the burner tip must remain competitive with alternate fuels. 1/ Many industrial and electric utility end-users have fuel-switching capability and their alternate fuel is generally No. 6 (residual) fuel oil.

However, it is possible that significant amounts of a given pipeline's gas will escalate to a price level pegged to 110 percent of the Btu-equivalent of No. 2 fuel oil, which greatly exceeds the price of No. 6 fuel oil. (In October 1982, No. 2 fuel oil was selling in the spot market for about \$42 per barrel as compared to about \$30 per barrel for No. 6 fuel oil.) Thus, as the burner tip price of gas approaches or exceeds the price of No. 6 fuel oil because of (1) a fly-up of prices at the wellhead which would increase a pipeline's average acquisition costs and (2) the addition of normal charges for transportation and distribution, it is expected that price sensitive industrial and electric utility customers will switch to this alternate fuel. This drop in industrial and electric utility demand and subsequent loss of pipeline load could in turn lead to increases in residential prices. 2/

While a fly-up of natural gas prices in 1985 would have a substantial effect on the overall natural gas market, it appears that any such fly-up will affect pipelines differently--the impact will be unevenly distributed among interstate pipelines and between interstate and intrastate pipelines.

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1/In their sales to distributors, pipelines use the concept of rolled-in pricing, whereby a pipeline averages all its gas acquisition costs and passes them equally through to its distribution customers. Thus, the price each end-user pays for a unit of gas at the burner tip generally reflects the average price paid by the pipeline to its suppliers plus a charge for transportation, storage, and distribution. (According to the DOE study, A Study of Alternatives to the Natural Gas Policy Act of 1978, transmission, storage, and distribution costs average over \$1.00 per Mcf).

2/In the short run, residential end-users usually do not possess the capability to readily switch to alternate fuels.

Impact of the fly-up  
on interstate pipelines

Although the national average wellhead price is estimated to increase substantially in 1985, some pipelines will experience greater increases--perhaps losing major portions of their market to competing fuels, while others will experience smaller price increases and perhaps be better able to weather the impact of the fly-up. The impact of a fly-up of natural gas prices would vary among interstate pipelines because of differences in such factors as (1) their mix of contracts and their resulting endowments of price-regulated gas and (2) the composition of their end-users. Other factors include the economic strength of the area served by a given pipeline and the cost and availability of alternate fuels--such as residual fuel oil, coal, and hydropower--which are not equally available in all regions.

Differences in contract "mix" and  
endowments of gas to remain under  
price controls

Since pipeline companies average, or roll-in, their total acquisition costs for gas, the price for gas to consumers depends not only on Federal ceilings for wellhead prices, but also on the prices paid for gas by the particular pipeline(s) serving a consuming area. These prices are basically determined by the particular pipeline's mix of contracts.

Contract prices, which are determined by NGPA classification of the gas and the date of the contract, can vary greatly among pipelines because of the different rates at which they purchased new gas supplies. Pipelines which bought larger quantities of newer and higher priced gas have greater average acquisition costs than pipelines with a larger supply of gas reserves that predated NGPA. Thus, because pipelines differ in the mix of contracts under which they obtain gas, the average acquisition price for one pipeline may be more than twice as great as the average price for another. Pipelines with higher average acquisition costs may be less able to weather a fly-up in prices without losing portions of their markets to competing fuels.

In the interstate market, approximately 57 percent of the gas supply will remain under price controls in 1985 until it is depleted. <sup>1/</sup> However, because of differences in their mix of contracts, there is currently a wide variation among individual pipelines' endowments of this "old" gas. Some pipelines will have a relatively small percentage of their gas volume deregulated, while others will have a substantially greater percentage of their gas supply deregulated.

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<sup>1/</sup>This is based on our analysis of data contained in the EIA report The Current State of the Natural Gas Market, Dec. 1981 (see tables 11 and 12). Our analysis assumes that the interstate market consumes 60 percent of total production in 1985.

To demonstrate this point, we obtained data on 20 major interstate pipelines from FERC and EIA. 1/ As the data in table 7 illustrate, there are currently large differences among pipelines in the amount of gas to remain regulated until it is depleted. These large differences are likely to continue through 1985 primarily because most of this regulated gas remains committed to the pipeline under NGA regulation. 2/ However, the relative ranking of individual pipelines could change between now and 1985 largely because of the differing rates at which such gas is depleted.

As the table indicates, the pipeline with the largest percentage of gas likely to remain under price controls in 1985--Texas Eastern Transmission Corporation--has twice as high a proportion of "old" gas as the pipeline with the least--Columbia Gas Transmission Corporation. Differences in endowments of this price-regulated gas are also reflected in average acquisition costs of gas for individual pipelines. Texas Eastern, with a large endowment of post-1985 regulated gas, obtains its gas for about one-half the price that Columbia pays.

Thus, in 1985 those pipelines with relatively small percentages of price-controlled gas will have higher percentages of deregulated gas. The average acquisition price of their total gas supply will increase correspondingly. 3/ Those pipelines that have a large percentage of regulated gas will experience smaller average price increases. Ultimately, the results of partial decontrol will be felt unevenly.

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1/FERC and EIA, NGPA Category Study of 20 Interstate Natural Gas Pipelines, Jan. 22, 1982. This study was prepared by FERC, with EIA assistance, at our request for a report to Senator Howard M. Metzenbaum, "Pipeline Purchases of High-Cost Natural Gas: Extent and Contested Issues," EMD-82-53, Apr. 6, 1982. It is based on data submitted by pipelines to FERC in its purchased gas adjustment (PGA) filings. A PGA filing is a pipeline's request to change its tariff rates to reflect purchased gas costs. Most major interstate pipelines (56 of 61) file a PGA application every 6 months, while the remainder file on an annual basis. PGA filings are subject to FERC review and approval.

2/NGA section 7(b) requires FERC approval for a producer to abandon service to a pipeline, even if a contract expires.

3/There is not a complete correlation between the percentage of gas volumes likely to remain price regulated and the average acquisition price of gas. This is because (1) the pipeline may contract for large volumes of high-cost section 107 gas, which appreciably increases the average acquisition price of its gas and (2) there are considerable variations in prices for contracts covering "old" pre-NGPA gas. It should also be noted that the pipelines' relative standing in 1981 will not necessarily remain unchanged through 1985 or thereafter.

Table 7

Post-1985 Regulated Gas (NGPA sections 104, 106, 108, and 109) as a Percentage of Total Gas Purchases of Major Interstate Pipelines (note a)

<u>Pipeline</u>	Post-1985 regulated gas (percent)	Average acquisition price (note b) (per MMBtu)
Texas Eastern Transmission Corp.	80	\$1.30
Kansas-Nebraska Natural Gas Co.	78	\$1.62
Natural Gas Pipeline Co.	75	\$1.80
Tennessee Gas Pipeline Co.	72	\$2.04
Texas Gas Transmission Corp.	70	\$2.17
Northern Natural Gas Co. (note c)	70	\$1.56
Florida Gas Transmission Co.	68	\$1.88
Trunkline Gas Company	68	\$2.53
Panhandle Eastern Pipeline Co.	66	\$1.63
Michigan-Wisconsin Pipeline Co.	66	\$2.21
Northwest Pipeline Co.	63	\$1.81
El Paso Natural Gas Co.	60	\$2.28
Consolidated Gas Supply Corp.	58	\$2.00
Southern Natural Gas Co.	57	\$2.67
Transwestern Pipeline Co.	54	\$1.96
Cities Service Gas Co.	51	\$1.98
Colorado Interstate Gas Co.	50	\$2.65
United Gas Pipeline Co.	46	\$2.58
Transcontinental Gas Pipeline Co.	44	\$2.76
Columbia Gas Transmission Corp.	40	\$2.74

a/The data in this table were obtained from a study prepared by FERC in January 1982, with EIA assistance, at our request. The data are based on pipeline companies' PGA filings with FERC in late 1981. (See footnote on p. 48.) It should be noted that section 102(d) gas and some section 103 gas will also remain regulated after January 1, 1985, but data for these two categories were not available for inclusion in this table. In addition, because this table reflects only pipeline purchases of gas from producers, the percentages of post-1985 regulated gas for individual pipelines will vary due to a number of factors not reflected in this table. For example, a pipeline may purchase substantial quantities of gas from other pipelines, such as Consolidated. A pipeline may produce its own gas at low regulated rates, such as El Paso, or have significant volumes of section 102(d) gas, such as Columbia.

b/Includes taxes, gathering, and other charges for all gas.

c/Late 1980 data.

As a result, regional markets served by different pipelines may pay significantly different prices for natural gas in 1985. Since most gas distribution companies in the interstate market are constrained to buy from one or at most a few pipelines, they are highly sensitive to the prices paid by these pipelines. Therefore, the price a gas customer will pay for gas in 1985 depends largely on the mix of contracts the pipeline serving a given market has negotiated with many producers and the pipeline's resulting relative endowment of price-controlled gas.

#### Differences in composition of end-users

The pipeline's success in passing increased acquisition costs through to consumers over the long-term will depend in large part upon the composition of demand for its gas. Pipelines which primarily serve residential end-users will be more able to pass major price increases through to their customers--to the point that the burner tip price equals the price of competing energy sources, usually No. 2 fuel oil or electricity. Residential customers also do not generally possess the capability to readily switch to alternate fuels.

On the other hand, pipelines with heavy price-sensitive industrial loads may be less able to pass the same price increase through to their customers because many industrial and electric utility customers have the capability to switch to No. 6 fuel oil. Thus, pipelines' ability to withstand a fly-up of prices at the wellhead--without losing customers--also depends on the composition of their end-users.

#### Impact of the fly-up on intrastate pipelines

We analyzed EIA data and found that approximately 65 percent of the gas supply in the intrastate market will be decontrolled by 1985 compared to about 43 percent in the interstate market. <sup>1/</sup> Because the intrastate market was not subject to Federal price regulation prior to NGPA, that intrastate gas remaining under price controls will have a higher price than the price-controlled interstate gas. Intrastate pipelines on the whole will have higher average gas costs than interstate pipelines.

Thus, some industry analysts believe that under partial decontrol, many intrastate pipelines may be disadvantaged relative to their interstate counterparts in their ability to compete for new supplies of deregulated gas. They are expected to have a lesser ability to roll-in or average their acquisition costs by "cushioning" the effects of high-priced decontrolled gas with cheaper older gas.

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<sup>1/</sup>This is based on our analysis of data contained in the EIA report, The Current State of the Natural Gas Market, Dec. 1981 (see tables II and 12). Our analysis assumes that the interstate market consumes 60 percent of total production in 1985.

However, three factors could serve to lessen the advantages of interstate pipelines. First, intrastate pipeline companies are generally closer to their suppliers and customers and have lower transportation costs. Moreover, whatever bidding advantage interstate pipelines possess is not likely to continue indefinitely. Finally, the American Gas Association contends that

"the combination of 'category creep' [the reclassification of lower priced old gas into higher priced categories or subcategories under NGPA] and declining production curves for old gas fields assures that any cushion will be largely gone by the late 1980's." 1/

#### CONTRACT ISSUES UNDER TOTAL DECONTROL

If total decontrol is legislated and price controls are also lifted on "old" low-cost gas, the previously described contract-induced fly-up of prices is predicted to be more widespread. Under total decontrol, the terms of contracts--rather than Federal regulations--will determine the price of all gas at the wellhead. According to the EIA June 1982 study, approximately one-third of all pre-NGPA interstate contracts contain fixed-price escalator and/or highest regulated (area) rate clauses with no deregulation provisions which could serve to maintain prices at previously regulated levels upon total decontrol and the remaining two-thirds contain deregulation clauses which allow price increases. Of the pre-NGPA interstate contracts containing deregulation clauses, the EIA June 1982 study found that 92 percent of estimated 1980 volumes had most favored nation clauses and 12 percent had oil reference clauses. Only 6 percent had market out provisions.

Thus, the anticipated fly-up of prices could be more extensive and widely felt by pipelines and their customers under total decontrol than under partial decontrol since the interaction between most favored nation clauses and oil reference clauses would affect a greater volume of gas. It is believed that a few--perhaps even one--contract that permits the price of gas at the wellhead to escalate to the price of No. 2 fuel oil could trigger a "national" price for gas throughout the producing States because of the overlapping geographic areas included in the most favored nation clauses. Again, take-or-pay provisions, guaranteeing payment for gas whether or not it is taken, could exacerbate the impact of the price fly-up.

In our companion report, we estimated that a contract-induced fly-up, if all gas prices were decontrolled in 1983, could range

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1/Written statement of the American Gas Association before Hearings of the Senate Committee on Energy and Natural Resources on Well-head Deregulation of Natural Gas, Mar. 23, 1982.

anywhere from no appreciable change to as high as 80 percent above the 1983 market-clearing price (estimated to be \$2.44 per MMBtu in 1980 dollars), with the more plausible increase being about 60 percent.

### Magnitude of fly-up

The magnitude of the fly-up could be moderated, however, by a number of factors. This is because uncertainty exists over (1) how the parties involved will adjust to the prospects of total decontrol, (2) how large the price fly-up will actually be, and (3) whether area rate clauses could cause some contract prices to actually decrease.

As was the case with partial decontrol, it is not known how the parties involved will adjust to a total decontrol environment. Again, it is possible that a massive fly-up of prices could be avoided or mitigated through the renegotiation of contracts, litigation, or the use of buyer out provisions. It has also been pointed out that the redetermination of prices upon total decontrol will not happen overnight, and this could give the parties involved time to work things out.

Further, it is not clear how large the price fly-up will actually be if price ceilings were lifted on all gas. EIA has pointed out that quantities of old interstate gas will decline over time as reservoirs are depleted, and that the magnitude of the fly-up in price in the event of deregulation will be reduced as the volumes of old gas diminish. <sup>1/</sup> In addition, the escalation of gas prices to 110 percent of the Btu-equivalent of No. 2 fuel oil could cause a large fly-up based on current world oil prices. However, if world oil prices decline because of a world oil glut and recession, the fly-up could be lower.

A third factor which could mitigate the impact of the fly-up is the possible decrease in prices for those contracts containing an area rate (highest regulated rate) but no deregulation clause. Many pre-1973 contracts specify a contract price equal to the higher of a fixed rate or an FPC area rate. Under total decontrol, there will no longer be Federal regulation of wellhead prices, and hence, no "FPC" area rate. Consequently, producers are concerned that some gas could revert back to a fixed rate written into a contract 10 to 15 years ago.

EIA reported that 26 percent of the estimated interstate 1980 gas volumes covered by pre-NGPA contracts had area rate clauses but no deregulation provisions. However, some of these contracts may also contain provisions which prevent a price decrease (minimum

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1/EIA, The Current State of the Natural Gas Market: An Analysis of the Natural Gas Policy Act and Several Alternatives, Part I, Dec. 1981, p. 82.



price clauses) or provisions which would provide for a price increase at a specified future date (price redetermination clauses). Either of these clauses can act to offset price decreases.

### Impact of fly-up on pipelines

On a pipeline-by-pipeline basis, it appears that the effects of total decontrol will be more widespread. Because all gas will be deregulated, pipelines will no longer have endowments of price-controlled gas to shelter or cushion them from major price increases. However, although total decontrol can serve to put all pipelines--both interstate and intrastate--on a more equal footing, it will not erase all the differences among pipelines.

An August 1981 Foster Associates report <sup>1/</sup> indicates that some pipelines have a higher percentage of pre-NGPA (Section 104 gas) contracts containing deregulation clauses than others. For example, 63 percent of the Transcontinental Gas Pipe Line Company's pre-NGPA contract volumes contain deregulation clauses as compared to about 45 percent for the Tennessee Gas Pipeline Company. In addition, pipelines will vary in their number of old fixed-rate contracts which will be unaffected by decontrol. Thus, differences in the impact of total decontrol on pipelines will be based on a pipeline's mix of contracts rather than simply on its endowment of price-regulated gas.

### CONCLUSIONS

There is considerable controversy over whether the pricing provisions of producer-pipeline contracts will escalate the price of decontrolled gas to noncompetitive levels. Some industry analysts contend that contract provisions will be adjusted to the realities of the marketplace prior to decontrol. Others argue that indefinite price escalator clauses will cause a major fly-up of prices under partial or total decontrol, a subsequent loss of industrial customers to alternate fuels, and an increase in residential prices.

If a fly-up of prices does occur under the NGPA's decontrol schedule, it will probably affect pipelines differently depending on such factors as each pipeline's (1) mix of existing contracts, (2) endowment of gas to remain price controlled in 1985, and (3) composition of end-user consumption.

On the other hand, it appears that the effects of total decontrol will be more widespread. Although pipelines will no longer have endowments of price-controlled gas to shelter or cushion them from major price increases, not all differences between pipelines would be erased.

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<sup>1/</sup>Foster Associates, Inc. An Analysis of NGPA Section 104 Contracts, prepared for The Petrochemical Energy Group, Aug. 1981.

## CHAPTER 5

### WHERE DO WE GO FROM HERE?

Given the characteristics of existing contracts and assuming that contracts will operate as written, there is the potential for a contract-induced fly-up of natural gas prices in 1985. The contracts controversy, therefore, centers around whether and how contracts may be adjusted to prevent such a fly-up from occurring.

Some industry observers believe that private parties could work any problems out themselves and adjust their contracts to a partial or total decontrol environment through renegotiation or the use of "buyer out" provisions. Time-consuming litigation may also be undertaken to clarify contract terms. However, if these private actions do not resolve contract problems, administrative action by FERC or congressional legislation might be tried to prevent potential disruptions to the national natural gas market. It is also possible that a resolution to contract problems could involve a combination of voluntary, administrative, and legislative actions or that nothing will be done at all.

This chapter will discuss the remedies proposed under the three major options for resolving contract problems: (1) private action, (2) administrative action, and (3) legislative action. It will also discuss the possible difficulties involved in implementing them.

In considering a course of action to deal with possible contract problems, it should be noted that contracting practices are related to many other aspects of producer-pipeline behavior. It may be difficult, therefore, to address contract problems without also addressing other issues related to natural gas markets and regulation.

#### PRIVATE ACTION

Deregulation clauses usually provide 30 to 180 days for a new contract price to be redetermined upon decontrol. Thus, the parties involved may have sufficient time to work contract problems out themselves during this price redetermination period. However, if contracts are not voluntarily renegotiated, then buyer out provisions could be invoked or differences could be litigated. Such an approach would avoid Government involvement in disputes between private parties.

#### Contract renegotiation

Officials of a trade association representing gas producers have stated that producers have "no interest in ruining the gas"

"market" 1/ and that

"Neither a producer nor a reseller of natural gas will find it to be in its self interest to price itself out of the market. \* \* \* Reasonable buyers and sellers would opt to renegotiate their contracts in order to remain in business." 2/

Although most attention has focused on the detrimental impact of indefinite pricing provisions on pipelines and distributors, producers also have contracts with terms that they consider unfavorable. Such contracts include warranty contracts and those with fixed-rate escalator provisions or area rate clauses tied to an FPC rate. The desire to upgrade these relatively old contracts, some with prices as low as 25 to 40 cents per Mcf, to market conditions that will exist in 1985 could induce producers to renegotiate a package of high- and low-priced contracts with a given pipeline company.

However, relying on voluntary renegotiation as a remedy may not be practical because of the large number of contracts involved. As we stated earlier, a major pipeline company can have as many as 5,000 contracts. An examination of data submitted to FERC revealed that one major pipeline company alone had over 800 contracts with over 300 individual producers.

In addition, it is not clear if an adequate incentive exists for the renegotiation process to take place. The willingness to renegotiate may depend on a given producer's or pipeline's distribution of high- and low-priced contracts, and it may be difficult to get someone to begin the process. As a pipeline association has pointed out, "A given producer when asked to renegotiate would quite legitimately ask whether other producers are doing the same." 3/ In addition, royalty owners and stockholders of producers could exert pressure against the giving up of contractual rights to higher price levels than what could be renegotiated.

Thus, it appears that a number of obstacles would need to be overcome for the simultaneous renegotiation of thousands of

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1/"A Gas Lobbyist Frets While Time Slips Away" (interview with David Foster, then President of the Natural Gas Supply Association), The Energy Daily, Nov. 2, 1981.

2/Letter to James A. McClure, Chairman, Senate Committee on Energy and Natural Resources, from John M. O'Connor, Natural Gas Supply Association, Jan. 8, 1982.

3/Supplemental Statement on Behalf of the Interstate Natural Gas Association of America before the Senate Committee on Energy and Natural Resources on Implementation of Title I of the NGPA, Dec. 7, 1981.

producer-pipeline contracts to be a feasible remedy. In the meantime, a large degree of price uncertainty could result from what may be a lengthy renegotiation transition period. On the other hand, the continued softness of the natural gas market could provide the impetus for expeditious contract renegotiation to take place.

### Buyer out provisions

It is also possible that buyer out provisions (market out and FERC out clauses) could serve to mitigate the impact of a contract-induced fly-up of prices in the event of partial or total decontrol--especially if the current soft gas market continues. Under certain circumstances, 1/ these provisions allow pipelines to offer the producer a lower price than that established by the contract. If the producer refuses the lower price, the pipeline can "escape" from the contract, and the producer can market the gas elsewhere.

It has been reported that since May 1982, a number of pipelines, including Transcontinental, United, and Michigan-Wisconsin, have invoked market out clauses to reduce the prices in their contracts for NGPA section 107 (deep) gas. One industry observer believes that the current use of these market out clauses will provide the incentive for widespread contract reevaluations and adjustments to reflect the realities of the marketplace prior to 1985.

While market out provisions will be helpful in negotiating post-deregulation prices in existing contracts, it has been pointed out that the operation of these provisions is not without challenge and delay. In addition, according to the EIA June 1982 report, buyer out provisions are found in only about 25 percent of the contracts for gas in the interstate market that will be decontrolled in 1985 and that contain deregulation clauses. Moreover, these provisions have become prevalent only in the last 2 to 3 years.

### Litigation

Some industry observers believe that disputes over contract provisions can be best handled through the courts. For example, one area of possible legal challenge is in determining what constitutes a "comparable quantity and quality" of gas for the purpose of triggering a most favored nation clause.

It is also argued that because many gas contracts do not make economic sense, within a few years buyers of gas will be refusing to take or pay for contracted gas and challenging the seller to sue them. Thus, the "price of gas \* \* \* will determine which contracts will be honored, which will be renegotiated, and"

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1/See chapter 3, p. 33.

"which will be repudiated with impunity." 1/ It has also been observed that many producers now believe that pipelines have the capability to use force majeure clauses, 2/ included in the vast majority of existing contracts, as an ultimate way to extricate themselves from uneconomic contracts.

However, although using litigation as a means to resolve contract disagreements avoids Government intervention, it is likely to be a time-consuming process which, like renegotiation, could create a lengthy period of price uncertainty. Because pipeline companies require a steady gas supply to stay in business, it is not clear whether they would be willing to alienate a given producer and perhaps jeopardize their ability to secure future gas reserves.

#### ADMINISTRATIVE ACTION

In March 1982, Chairman Butler stated that FERC may be compelled to take remedial action if it appears that contract provisions pose a "serious risk" of producing a sharp price increase in 1985. 3/ However, he further indicated that he believed that FERC's ability to deal with contract problems was limited and that congressional action was preferable.

A group of industrial consumers has already petitioned FERC to take a number of administrative actions to address potential contract problems prior to 1985. The proposed actions include: 4/

--Permitting producers to receive higher ceiling prices on old gas in exchange for renegotiating deregulation clauses in existing contracts covering equivalent volumes of new gas.

--Restricting a pipeline's future recovery of take-or-pay expenses through its rates when its take-or-pay commitments exceed certain acceptable levels prescribed by FERC.

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1/Arlon R. Tussing and Connie C. Barlow, "The Rise and Fall of Regulation in the Natural Gas Industry," Institute of Social and Economic Research, University of Alaska and ARTA, Inc., Nov. 13, 1981.

2/A clause to protect the parties in the event that part of the contract cannot be performed due to causes which are outside of the parties' control and could not be avoided by the exercise of due care.

3/Statement before the Senate Committee on Energy and Natural Resources, Mar. 22, 1982.

4/Petition of Process Gas Consumers, et al., to Investigate and Establish Rules Mitigating Market Distortions under the NGPA, Docket No. RM 82-17, filed Mar. 1, 1982.

--Defining limits on a pipeline's ability to pass through gas costs based on contracts containing price escalator clauses that drive the price of gas to noncompetitive levels.

It is not clear what administrative remedies would be warranted to respond to a contract-induced price fly-up or what legal authority FERC possesses to address contract problems. In August 1982, FERC issued a Notice of Inquiry 1/ inviting public comments on potential administrative responses (in addition to and including the above) to problems that could arise from the operation of price escalation clauses and take-or-pay contract requirements. The Notice of Inquiry indicated that the Commission may consider whether it has any authority under NGA or NGPA to address contract problems.

In December 1982, FERC issued a policy statement 2/ regarding prepayments for natural gas (contracted for but not taken) under take-or-pay provisions in natural gas purchase contracts and amendments between producers and interstate pipelines which become effective on or after the effective date of the Statement of Policy. FERC stated that it intends to apply a "rebuttable presumption" 3/ in general rate cases that prepayments for gas made under take-or-pay requirements above 75 percent of annual deliverability "are inappropriate and should not be given rate base treatment."

FERC also stated in its policy statement that it

"\* \* \* has not come to any final conclusions as to whether it has authority to modify the operation of existing take or pay provisions or to affect the passthrough of costs associated with these contract provisions. Furthermore, the Commission has not determined whether any action would be appropriate, assuming such authority exists."

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1/47 Fed. Reg, 19,157 (1982).

2/47 Fed. Reg, 57,268 (1982).

3/FERC points out in its policy statement that such a statement does not have "\* \* \* the force of and effect of law. Rather, it is an articulation of the Commission's tentative intentions which will be followed unless circumstances demonstrate the policy to be inappropriate. In particular cases, both the underlying validity of the policy and its application to particular facts may be challenged and are subject to further consideration."

## LEGISLATIVE ACTION

A legislative solution may result if the parties to the contracts are unable to resolve potential problems themselves or if FERC does not take administrative action to address these problems. A number of legislative actions have already been proposed to mitigate or nullify the impact of deregulation clauses and take-or-pay provisions. <sup>1/</sup> Proposals have also been made to remedy an issue of concern to producers--the decontrolled price of gas in contracts containing an area rate clause but no deregulation clause. In addition, a proposal has been made to provide pipelines with automatic market out clauses in their contracts. Moreover, the Congress could reimpose price controls under the NGPA in order to postpone the operation of deregulation clauses.

However, some industry observers contend that legislative proposals to abrogate contract provisions, freely entered into, are unfair because they allow pipelines to keep their gas but to be relieved of commitments made in good faith. It is also argued that any legislative action short of complete decontrol, to one degree or another, will constitute an indirect continuation of price controls. This is because such action will limit prices which would otherwise have occurred if no legislation was enacted.

Although none of the legislative proposals pertaining to natural gas contracts was reported out of committee in the 97th Congress, the Senate passed a resolution (S. Res. 515) in December 1982, relating to the need for FERC, and producers and pipelines to take action to provide relief to consumers from rapidly increasing natural gas prices.

This section discusses legislative proposals in generic terms only and does not refer to specific proposals (except for S. Res. 515). A list of legislative proposals introduced in the 97th Congress is included in appendix II.

### Deregulation clauses

As we discussed in chapter 4, there is concern that the indefinite pricing provisions, contained in the deregulation clauses of a majority of contracts, will cause a fly-up of gas prices under partial or total control. Thus, four broad legislative approaches have been proposed to address the potential impact of deregulation clauses. These are

- declare deregulation clauses null and void,
- permit oil reference or similar clauses to operate in the contracts in which they are found but limit their impact on the favored nation clauses of other contracts,

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<sup>1/</sup>This report does not examine what, if any, legal questions may arise in connection with any of these legislative proposals.

--limit the operation of oil reference clauses by imposing a price cap, and

--provide FERC with the authority to deny pipelines the pass-through of costs for contracts containing deregulation clauses.

The first general approach is to declare deregulation clauses and similar indefinite price escalator provisions in producer-pipeline contracts null and void. Legislation has been introduced which would abrogate these clauses in both existing and future contracts.

The proponents of this approach tend to be the major distributor groups. They are concerned about major market losses in the industrial sector if the average gas price established through deregulation clauses exceeds the price of alternate fuels. The United Distribution Companies group 1/ has also proposed that, rather than use deregulation clauses to adjust long-term contractual prices, NGPA be amended to give producers and pipelines the right to require, at stated periods, that the deregulated price for the gas in existing and future contracts be renegotiated by the parties to reflect the market value of the gas.

A second approach is to permit oil reference clauses (or other similar clauses) to operate to establish a new contract price in those existing contracts in which they are found but limit their impact on the favored nation clauses of other contracts. Thus, an existing contract with an oil reference clause priced at the Btu equivalent of 110 percent of No. 2 fuel oil would be allowed to operate on its own terms, but would be treated as if it were priced at 70 percent of the Btu-equivalent price of crude oil (excluding severance taxes) 2/ in affecting any other contract. No limitations would be placed on new gas contracts signed after the date of decontrol.

The third general approach is to limit the normal operation of oil reference clauses by imposing a price cap. The Interstate Natural Gas Association of America 3/ has suggested that a price cap pegged to 70 percent of the Btu equivalent of crude oil be imposed on all contracts containing deregulation clauses negotiated

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1/This group is composed of 30 investor-owned distributors.

2/However, there is some concern as to whether a wellhead price cap tied to 70 percent Btu parity with crude oil is an appropriate standard. The American Gas Association believes that wellhead prices at this level, plus transmission and distribution costs, would equal end-user prices that are noncompetitive with residual fuel oil prices in key industrial markets.

3/This group represents major interstate pipeline companies.



prior to enactment of the legislation establishing the price cap. All new, rollover, or renegotiated contracts with deregulation clauses signed after the enactment of such legislation would be subject to the pricing provisions of the deregulation clause.

In addition, decontrol legislation has been proposed which would tie the price cap to the average price being paid for new gas in a given region rather than to a specified percentage of Btu parity with crude oil. Another proposal would establish a ceiling price effective between January 1, 1985, and January 1, 1988, for all natural gas covered by contracts in effect before enactment of the proposed legislation and which have not since been renegotiated. The ceiling price would be set by the Secretary of Energy according to the average price of natural gas sold under post-1984 contracts in specified areas during the second and third preceding quarters. The ceiling price would affect only those contracts which would otherwise require payment of higher prices but could serve as a reference price for contracts with area rate clauses.

The fourth approach gives FERC the authority to deny the pass-through of costs by pipelines for contracts containing deregulation clauses. A key aspect of FERC's regulation of interstate pipelines is the setting of tariffs, or rates, that may be charged. <sup>1/</sup> Pipelines are generally allowed to charge their customers a rate which enables them to recover direct expenditures--such as the natural gas they buy from producers--and to earn a fair and reasonable rate of return on their pipelines and other investments.

In order for a pipeline to pass through purchased gas costs to its customers, such costs must be just and reasonable. Section 601(b) of NGPA generally provides that producer-pipeline wellhead transactions are considered to be just and reasonable if the price does not exceed the maximum price authorized by Title I or if

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<sup>1/</sup>Pipeline tariff rates are established at least every 3 years based on a cost-of-service review. One aspect of a cost-of-service review is a determination of the cost of gas purchased by the pipeline for resale. Recognizing that purchased gas costs would likely change more frequently than every 3 years, pipelines were allowed, beginning in 1972, to adjust their rates in the intervening period. This action was taken to save pipelines the interest costs associated with financing higher costs for purchased gas, costs which would eventually be passed on to consumers as part of the companies' cost-of-service ratemaking.

A pipeline's request to change its base tariff rates to reflect purchased gas costs is known as a purchased gas adjustment (PGA) filing. Most interstate pipelines (56 of 61) file a PGA application every 6 months, while the remainder file on an annual basis. PGA filings are subject to FERC review and approval.

there is no ceiling for that category. Under Section 601(c) of NGPA, interstate pipelines may pass through costs of natural gas purchases if the price, deemed "just and reasonable" under section 601(b), is not excessive due to "fraud, abuse, or similar grounds."

The meaning of this "fraud and abuse standard" is highly controversial and affects pipelines' authority to pass through hundreds of millions or even billions of dollars. In a February 1982, policy statement, FERC said that it intended to limit the fraud standard to consideration of whether the price paid by an interstate pipeline was excessive due to misrepresentation, including a positive statement of fact or an omission of a material fact. 1/ It stated that the fraud standard is not a market-ordering device and that there is nothing within the 1978 act nor its legislative history enabling it to disallow passthrough of prices due to imprudence. FERC concluded that the fraud standard does not include imprudent business judgment about how much a pipeline should pay for gas. More recently, FERC indicated that it may consider questions of prudence of pipeline purchases. 2/

Proposed legislation would expand the interpretation of the fraud and abuse standard of section 601(b) of the act to include imprudence on the part of the pipeline company and any producer-pipeline contract which materially prevents the pipeline from responding to changes in customer demand or other market forces. Under these proposals, a "rebuttable presumption" arises that a contract materially prevents a pipeline from responding to changes in customer demand and other market forces if deregulation clauses--oil or commodity reference clauses and most favored nation clauses--are found in a producer-pipeline contract.

#### Take-or-pay clauses

There has been considerable congressional concern over the impact of take-or-pay provisions on the natural gas market. The major distributor groups and consumer groups contend that such provisions obligate pipelines to take or pay for large quantities of gas at prices which impair the retail marketability of the gas. It has been reported that pipelines have been reducing purchases of low-priced "old" gas with low take obligations in order to meet the requirements to purchase expensive "new" gas with high take obligations. This practice is a factor in increasing gas prices at a time when an oversupply of gas exists. 3/

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1/47 Fed. Reg, 6,253 (1982).

2/In connection with a purchased gas adjustment filing of Tennessee Gas Pipeline (TA82-2-9), the Commission stated that it may consider questions of prudence as part of a pipeline's cost-of-service review.

3/See the GAO report, "Natural Gas Price Increases: A Preliminary Analysis," GAO/RCED-83-76, Dec. 9, 1982.

Four general approaches have been proposed to address issues related to take-or-pay provisions. These are

- abrogate take-or-pay provisions,
- provide new contracts with automatic volume adjustment options,
- provide FERC with the authority to modify or annul contracts that contain take-or-pay provisions, and
- provide FERC with the authority to deny the passthrough of costs by pipelines for contracts containing take-or-pay clauses.

The first approach is to abrogate take-or-pay provisions by declaring them against public policy and unenforceable. Most of the proposals would cover clauses either in contracts executed after the proposed legislation abrogating take-or-pay provisions was enacted or in contracts executed after the enactment of NGPA. One proposal would abrogate take-or-pay clauses if the purchaser so elects in accordance with rules to be prescribed by FERC.

The second approach provides contracts executed after the enactment of the proposed legislation with automatic volume adjustment options. Under a volume adjustment option, a purchaser may elect to refuse to take delivery of any volume of natural gas without being obligated to pay any fee or charge for the natural gas not delivered.

The third approach provides FERC with the authority to modify or annul contracts that contain take-or-pay provisions. Under this proposal, FERC may take such action whenever it determines that a contract contains a provision that prevents the purchaser from responding to the demands of customers or other market forces by requiring the purchaser to pay for a minimum contract quantity of gas whether or not such gas is taken.

The fourth approach gives FERC the authority to deny the passthrough of costs by pipelines for contracts containing take-or-pay clauses. As in the case of deregulation clauses, proposed legislation would expand the fraud and abuse standard under section 601(c) of NGPA to include contracts which contain take-or-pay clauses. In three recent legislative proposals, abuse is defined as a take-or-pay clause which

- requires payment for natural gas not taken,
- commits the purchaser to pay for a minimum daily contract quantity of gas greater than 70 percent on an annual basis whether or not such gas is taken, or
- commits the purchaser of gas (from a producer which is not an affiliate of the pipeline) to pay for a minimum daily contract quantity of gas greater than 50 percent on an annual basis whether or not such gas is taken.

### Area rate clauses

Producers are concerned that total deregulation could have an adverse effect on prices in those contracts containing an area rate clause but no deregulation clause. EIA reported that 26 percent of the interstate gas produced in 1980, covered by pre-NGPA contracts, had these provisions. Many of the pre-1973 contracts specify a contract price equal to the higher of (1) a fixed rate or (2) an FPC area rate. Under total deregulation, there would no longer be Federal regulation of wellhead prices, and thus, no FPC area rate. As a result, some gas prices could theoretically revert back to a fixed rate written into the contract 10 to 15 years ago.

Legislative proposals have been made to prevent such a price rollback. They are usually found within the context of an accelerated decontrol bill. One proposal would allow the producer to unilaterally transform the area rate clause into a "statutory most favored nation clause." <sup>1/</sup> Another proposal would allow contracts with these clauses to collect a contract price based on a pricing formula tied to crude oil or fuel oil prices.

### Market out clauses

As we have discussed earlier, market out clauses (buyer out provisions) have become prevalent only in the last 2 or 3 years. According to the EIA June 1982 study, buyer out provisions are found in only about 25 percent of the contracts for gas in the interstate market that will be decontrolled in 1985 and contain deregulation clauses.

Legislation has been proposed to address this issue. Under one proposal, any contract is automatically deemed to include a limited market out clause. This would provide a pipeline with the legal ability to reduce its purchases of high-priced natural gas to 50 percent of contract volume whenever the pipeline is unable to market its total gas supply. A pipeline would be required to exercise this market out option first against its highest price source of gas and any contracts it may have for supplies with producing companies affiliated with the pipeline.

In addition, several legislative proposals expand the definition of abuse under section 601(c) of NGPA to include contracts that lack market out clauses, which allow a purchaser to escape the contract or negotiate a new lower price if the natural gas is not marketable at the contract price.

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<sup>1/</sup>Defined in one piece of proposed legislation as the average of the three highest prices being paid by each of three different pipelines for comparable quantities and qualities of gas in the same area.

## Reimposition of price controls under NGPA

The Congress also has the option of reimposing price controls under section 122 of NGPA. <sup>1/</sup> This would serve to postpone the operation of deregulation clauses. However, NGPA limits these price controls to an 18-month period, and they cannot become effective until after 6 months following deregulation, which would be July 1, 1985. In addition, such action would not solve possible contract problems, only delay them.

## Senate Resolution 515

On December 14, 1982, the Senate passed a resolution relating to the need to provide relief to consumers from rapidly increasing natural gas prices. The resolution calls for FERC to use its statutory authority to review those administrative actions that could result in the modification of certain provisions of natural gas contracts, such as take-or-pay, indefinite price escalation, and most favored nation clauses, and calls for producers and pipelines to jointly and immediately renegotiate such provisions.

## CONCLUSIONS

Given the characteristics of existing contracts and assuming that they will operate as written, there is the potential for a contract-induced fly-up of natural gas prices in 1985. The contracts controversy, therefore, centers around whether and how contracts may be adjusted to prevent such a fly-up from occurring.

Although numerous remedies have been proposed to deal with the potential dilemma contracts pose for the natural gas industry, we believe that there is no easy solution. Contracts represent a maze of complicated and varied agreements negotiated between thousands of producers and over a hundred pipeline companies. In addition, because the interstate market has had little experience with unregulated prices, the behavior of contracting parties cannot be easily predicted. Moreover, the supply and demand for natural gas are continually changing.

Key uncertainties relate to whether contracts will be adjusted prior to 1985 to dampen the potential fly-up of natural gas prices, whether private parties will be able to handle contract disputes themselves or whether FERC and/or congressional intervention will result, and how high world oil prices will be in 1985. The answer to these questions will obviously greatly influence the natural gas market in 1985 and beyond.

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<sup>1/</sup>The President also has authority to reimpose price controls under section 122 of NGPA.

In considering a course of action to deal with possible contract problems, it should also be noted that contracting practices are related to many other aspects of producer-pipeline behavior. These include companies' financial condition and obligations to lenders and their obligations to purchase imported natural gas. It may be difficult, therefore, to address contract problems without also addressing other issues related to natural gas markets and regulation.

REPORT METHODOLOGIES

Most of the data on the characteristics of producer-pipeline natural gas contracts were obtained from five sources. This appendix discusses the methodologies used by the five reports.

1. Decision Analysis Corporation. Analysis of Natural Gas Producer/Interstate Pipeline Contracts. July 1, 1981.

The American Gas Association commissioned this first major report of the present decontrol debate that analyzed the pricing provisions of interstate contracts. The report's objective was to provide some insight into the types and relative frequency of price-escalator clauses found in interstate producer-pipeline contracts, with special emphasis on deregulation clauses.

The methodological approach used in this study was to examine deregulation clauses in selected pre- and post-NGPA interstate contracts on file at FERC. The pre-NGPA contracts on file at FERC are generally representative of the universe of pre-NGPA contracts. <sup>1/</sup> However, the post-NGPA contracts on file at FERC are not representative of the universe of post-NGPA contracts since most such contracts are not filed at FERC. <sup>2/</sup> Thus, any conclusions based on a sample of these post-NGPA contracts must be carefully drawn.

The sampling of these contracts was performed by a FERC official who selected those contracts which, in his judgment, reflected pre- and post-NGPA contracts. The sample of 200 contracts was non-randomly selected from the estimated 20,000 contracts on file at FERC. Of these, 158 were pre-NGPA interstate contracts and 42 were post-NGPA interstate contracts.

The sample was structured to select contracts filed during four periods of time, contracts from both large and small producers, and contracts from both onshore and offshore wells. This helped to analyze changes in contracting practices over time, provide some insight into relative bargaining strength, and determine if there were any contract differences between onshore and offshore contracts.

While the results of this study compare favorably with a later EIA study, which we also discuss in this appendix, two points should be made. First, the sample was not designed to collect volumetric data--that is data based on the volume of

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<sup>1/</sup>Small producer contracts were not normally filed at FERC.

<sup>2/</sup>Most post-NGPA contracts filed at FERC are new contracts from old offshore leases issued before Apr. 20, 1977.

gas covered by each contract. Therefore, the study discusses the percentage of contracts containing specific pricing provisions but does not discuss the volume of gas subject to these clauses. Second, the sample was not designed to cross-tabulate data to test for the joint presence of key contract provisions. For example, the study did not test for contracts that could be unfavorable to pipelines following partial or total deregulation. As discussed in the text, such contracts could have the following combination of features: (1) a deregulation clause specifying a pre-established pricing method of calculating the new contract price, (2) an oil reference clause, and (3) no buyer out provision.

2. Energy Information Administration. Natural Gas Pipeline/Producer Contracts: A Preliminary Analysis. (DOE/EIA-0312). December 1981.

The primary purpose of this report was to determine whether the potential exists for the price of natural gas to increase "above market clearing levels" (to noncompetitive levels) following total deregulation of gas prices. To achieve this objective, EIA used a different approach than that followed in the Decision Analysis study. For example, they obtained volumetric data to help assess the magnitude of price movements following total decontrol. In addition, they cross-tabulated contract data to determine whether there were possible "problem" contracts.

The methodological approach used in this study was to examine pricing clauses in selected pre- and post-NGPA contracts on file at FERC. As in the Decision Analysis study, the sample universe was limited to only those contracts on file at FERC.

The sample of pre-NGPA contracts was selected based on the data submitted to FERC by large producers on FERC Form 108 for 1977. This year was selected because it was considered to be the best available representation of volumes of NGPA section 104 and 106(a) "old" interstate gas. The Form 108 contains a listing of sales volumes, revenues, and contract rate schedule numbers. Data from the FERC Form 108 were sorted in descending order of contract volume. They selected all of the 136 available large volume contracts with annual sales per contract greater than 11.0 Bcf. In addition, EIA selected a stratified sample of 140 smaller volume contracts. Of the 276 contracts selected for the sample, data were found and recorded for 247 pre-NGPA contracts, representing about 27 percent of interstate gas production in 1977.

Also selected were 87 post-NGPA contracts on file at FERC, but they were unable to collect corresponding volumetric data. These included 56 offshore contracts (section 102 gas) and 31 onshore contracts. As noted earlier, post-NGPA contracts are not



normally filed at FERC. Thus, these contracts may not be representative of the post-NGPA contract universe and any resulting conclusions should be carefully drawn.

The sampled contracts were then analyzed and tabulated by staff from FERC's Office of Regulatory Analysis; DOE's Office of Policy, Planning, and Analysis; and EIA. Their results were later checked by a second team who verified the data collected in the original data collection effort.

3. Energy Information Administration. Intrastate and Interstate Supply Markets Under The Natural Gas Policy Act. (DOE/EIA-0309). October 1981.

One objective of this report was to estimate the percentage of intrastate gas which would be deregulated by NGPA in 1985. EIA concluded that about 37 to 53 percent of intrastate gas will be deregulated.

The EIA analysis was based on information provided to FERC by pipelines and producers. FERC Form 123 was a required one-time listing of existing intrastate contracts by producers or pipelines for the month of December 1978. The pipeline normally filed the form if it was the purchaser of the gas; otherwise the producer filed. 1/

The Form 123 filing included the following information: identification of the purchaser or seller; date of the contract; contract duration; contract price on November 9, 1978; average Btu content; contract volumes; and a brief description of the price escalator clauses in each contract. Other contract provisions, such as buyer-out clauses or take-or-pay clauses, were not required in the FERC Form 123 filing.

EIA obtained 27,341 intrastate contract data records from the Form 123 filing. Approximately 40 percent of the records were excluded from the sample because they were: (1) contracts that expired or rolled over before 1985 and (2) contracts with an invalid price escalator clause entry on the form.

A stratified random sample of 301 records was obtained from the remaining 16,167 eligible records. This stratified random sample was composed of (1) 151 of the largest volume records, and (2) 150 randomly selected records from the remaining records.

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1/Exemptions to the filing requirement included (a) State governments, (b) persons selling less than 10 Bcf to a purchaser other than a pipeline in the preceding year, and (c) small volume direct sales.

These 301 records were then examined by analysts from EIA and DOE's Office of Policy, Planning, and Analysis to determine the types of price escalator clauses contained in the contract summaries.

4. Foster Associates, Inc. Pricing Provisions for Natural Gas Sales Contracts. March 1982.

The Natural Gas Supply Association commissioned this report to analyze the pricing provisions of pre- and post-NGPA interstate and intrastate contracts. To achieve this objective, Foster Associates examined pricing provisions of contracts to determine the percentage and corresponding volume of gas produced in 1980 subject to specific pricing clauses.

The methodological approach used in this study required Foster Associates to obtain the cooperation of 16 natural gas companies (both large and small producers). The large producers were asked to supply several of their largest contracts (as measured in terms of volumes sold in 1980) and several large producers were also asked to provide a representative sample of small contracts. Small producers were asked to supply their largest contracts. Both large and small producers were also asked to supply contracts negotiated since January 1, 1981. The total sample consisted of 456 first sales contracts. They contained 334 large volume contracts (representing about 17.5 percent of total production in the continental United States in 1980), 90 small volume contracts, and 32 contracts negotiated after January 1, 1981.

The large volume contracts provided wide geographic coverage; about 76 percent covered interstate sales and 24 percent covered intrastate sales. This is fairly consistent with their relative share of total sales. In addition, the sample volumes were composed of about 75 percent "old" gas (section 104, 105, 106, 108, and 109) and about 25 percent "new" gas (section 102, 103, and 107). These figures also roughly correspond with their relative shares of total sales.

Because the Foster Associates sample was primarily derived from the producers' largest contracts, the results may overstate the percentage of contracts containing deregulation clauses because large-volume contracts tend to have pricing provisions more favorable to producers.

5. Energy Information Administration. Natural Gas Producer/Purchaser Contracts and Their Potential Impacts on the Natural Gas Market: An Analysis of the Natural Gas Policy Act and Several Alternatives, Part II. (DOE/EIA-0330). June 1982.

A major objective of this study was to assess the influence that the operation of deregulation clauses in contracts would have

on the wellhead price of gas if the NGPA continues unaltered through 1985. The study presents the results of a survey of natural gas producers and pipeline companies in both the interstate and intrastate markets. The survey form, EIA-758, "Natural Gas Producer/Pipeline Contract Report," was sent to approximately 400 companies in order to obtain data on post-NGPA contracting practices and pre-NGPA intrastate contracts. Data for pre-NGPA interstate contracts had been previously collected for the EIA report, Natural Gas Pipeline/Producer Contracts: A Preliminary Analysis, December 1981.

During the course of its work for its December report, EIA decided that a formal data collection program would be required to assess the impact of contract provisions on natural gas supply and prices in the event of decontrol under NGPA. The Form EIA-758 was designed to collect data on contracts which are not readily available at FERC. Since the enactment of NGPA, onshore natural gas contracts are not required to be filed at FERC unless a specific request is made by FERC. In addition, FERC has little or no information on intrastate sales contracts other than the very general type of information submitted in reports required by FERC after NGPA.

The Form EIA-758 survey effort was based on two separate random samples. One was a sample of post-NGPA wells which were selected using the Form FERC-121, "Application for Determination of the Maximum Lawful Price Under the Natural Gas Policy Act (NGPA)". This form is required to be filed by all producers who want to receive well certification for certain categories of NGPA gas and includes information on the contract date and purchaser(s) of the gas. Using this information, a sample of 615 wells was selected. The survey form was sent to both the producer and the purchaser of the gas associated with the selected well.

The other sample included 84 pre-NGPA intrastate contracts. These were selected from the data base provided by Form FERC-123, "Initial Report of First Sales of Natural Gas Under Section 105 of NGPA." This form was filed in 1978 for the first sale of natural gas (including direct sales to industrial users) and included contract volumes for December 1978.

This report provides the most comprehensive analysis of post-NGPA contracting practices since EIA had access to data which was not previously available.

PROPOSED NATURAL GAS LEGISLATION

This appendix lists legislation, introduced in the 97th Congress, which contain provisions that relate to producer-pipeline natural gas contracts. The legislation is listed in reverse chronological order.

1. S. Res. 515: Relating to the need to provide the Nation's natural gas consumers with immediate and long-term relief from rapidly increasing natural gas prices, by taking a number of actions to reduce or restrain such price increases, and by providing financial assistance to low-income consumers of natural gas. Passed on December 15, 1982.
2. UP Amendment No. 1444: Unprinted amendment to the Surface Transportation Assistance Act of 1982 to amend the Natural Gas Policy Act of 1982. Introduced by Senator Nancy L. Kassebaum and tabled by the Senate on December 14, 1982.
3. H.R. 7412: Natural Gas Price Relief and Market Correction Act. Introduced by Representative E. Thomas Coleman on December 13, 1982.
4. H.R. 7408: To amend the Natural Gas Policy Act of 1978 to define abuse for purposes of determining whether passthroughs of amounts paid to interstate pipelines for natural gas should be denied, and to deny passthroughs to interstate pipelines for actions which are imprudent. Introduced by Representative Harold L. Volkmer on December 10, 1982.
5. S. 3088: To create competitive conditions in natural gas pricing by prohibiting certain anticompetitive clauses in natural gas contracts. Introduced by Senator John H. Chaffee on December 8, 1982.
6. S. 3076 and H.R. 7373: Temporary Natural Gas Market Correction Act of 1982. Introduced by Senator Aden Specter and Representative James L. Oberstar on December 6, 1982.
7. H.R. 7358: Natural Gas Marketing Act of 1982. Introduced by Representative Beverly B. Byron on December 3, 1982.
8. S. 3070: Natural Gas Competition Act of 1982. Introduced by Senator John C. Danforth on December 2, 1982.
9. S. 3054: To amend the Natural Gas Policy Act of 1978, and for other purposes. Introduced by Senator Nancy L. Kassebaum on November 30, 1982.

10. H.R. 7312: To amend the Natural Gas Policy Act of 1978 to limit the use of "take or pay" clauses and to impose a prudence test. Introduced by Representative Dan R. Glickman on November 29, 1982.
11. H.R. 7251: Natural Gas Consumer Protection Act of 1982. Introduced by Thomas J. Tauke on September 30, 1982.
12. H.R. 7122: Natural Gas Marketing Improvements Act of 1982. Introduced by Representative Clarence J. Brown on September 16, 1982.
13. S. 2892: To clarify the definition of abuse in the Natural Gas Policy Act. Introduced by Senator Roger W. Jepsen on September 10, 1982.
14. H.R. 5954: To amend the Natural Gas Policy Act of 1978 to eliminate certain provisions for the decontrol of natural gas prices. Introduced by Representative Ronald M. Mottl on March 24, 1982.
15. H.R. 5866: Natural Gas Production, Utilization, and Conservation Act. Introduced by Representative Phil Gramm on March 17, 1982.
16. H.R. 5645: To amend the Natural Gas Policy Act of 1978 to prohibit take-or-pay clauses or similar minimum purchase requirements under natural gas supply contracts. Introduced by Representative Dennis M. Hertel on March 1, 1982.
17. H.R. 5646: To amend the Natural Gas Policy Act of 1978 to prohibit indefinite price escalator clauses in natural gas supply contracts. Introduced by Representative Hertel on March 1, 1982.
18. S. 2074: Natural Gas Production and Market Adjustment Act of 1982. Introduced by Senator J. Bennett Johnston on February 8, 1982.
19. H.R. 4885: Natural Gas Market Transition Act of 1981. Introduced by Representative James M. Collins on November 4, 1981.
20. H.R. 3246: To amend the Natural Gas Policy Act of 1978 to remove the price controls on certain natural gas produced after April 1981. Introduced by Representative Collins on April 27, 1981.
21. H.R. 2019: Natural Gas Decontrol Act of 1981. Introduced by Representative William E. Dannemeyer on February 24, 1981.

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