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# Report To The Congress

OF THE UNITED STATES

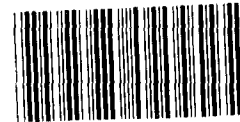
## Natural Gas Incremental Pricing: A Complex Program With Uncertain Results And Impacts

The Natural Gas Policy Act calls for industrial customers of interstate natural gas pipelines to pay a surcharge on their fuel purchases. The legislation provides an incentive for the industrial users—who want to keep their costs low—to pressure their suppliers to obtain natural gas at the lowest possible cost. The ultimate beneficiaries of the lower prices will be residential and small commercial users.

The Federal Energy Regulatory Commission issued regulations for the incremental pricing program as required. However, GAO believes that there may be problems in carrying out the program the Commission has designed. The Commission will lack the basic data it needs to determine whether its regulations will have the intended impact on prices. The Commission also has overlooked the need to assess the administrative costs of the program and to plan procedures for evaluating the benefits and drawbacks of the program.



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COMPTROLLER GENERAL OF THE UNITED STATES  
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To the President of the Senate and the  
Speaker of the House of Representatives

*C.W. 000001*

This report discusses problems that can hamper implementation of natural gas incremental pricing and preclude a meaningful evaluation of whether the program accomplishes its intended purpose. It contains a recommendation to develop an information system that will incorporate key data elements needed to evaluate operation of the program.

We are sending copies of this report to the Director, Office of Management and Budget; the Secretary of Energy; the Chairman, Federal Energy Regulatory Commission; and the Acting Administrator, Energy Information Administration.

*John R. Hill*  
ACTING Comptroller General  
of the United States

*AGC00912  
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D I G E S T

The Natural Gas Policy Act of 1978 requires the Federal Energy Regulatory Commission to implement an incremental pricing program. Under this program, designated industrial users of natural gas pay a surcharge for the gas they buy. The history of the legislation indicated that the purpose of the surcharge is to transfer the higher deregulated prices of natural gas to industrial users, who want to keep their costs low, so they will pressure their suppliers to obtain natural gas at the lowest possible cost. As a result of transferring costs to industrial users, residential and small commercial users are to benefit by paying less for gas than they would if the incremental pricing provisions had not been passed.

The Commission has responsibly handled the difficult task of preparing regulations for the program's operation. It has provided numerous opportunities for those affected by the legislation to discuss problem areas and present supporting documentation; it has changed proposed actions where evidence indicated the original proposal was deficient.

The Commission, however, continues to face problems that can hamper the implementation of incremental pricing and preclude a meaningful evaluation of whether the program accomplishes its intended purpose.

DATA DEFICIENCIES COMPLICATE  
IMPLEMENTATION OF INCREMENTAL  
PRICING

{ Much of the data the Commission needed to assess the impact of different incremental pricing options was not available during the time regulations were being written. } For example, the Commission did not have specific data in areas such as the amount of natural

gas used as industrial boiler fuel; capability of industrial facilities to use an alternate fuel; the particular fuels that could be substituted for natural gas; prices of the alternate fuel; and the expected amount of incremental costs. (The absence of such information hindered the Commission in making assessments of expected results of various courses of action.)

One of the key decisions required of the Commission concerned the appropriate alternate fuel for industrial customers. The legislation provides that each industrial customer's total gas cost--base price plus the incremental surcharge--may not exceed the cost of Number 2 fuel oil. The Act also provides, however, that Number 6 oil (usually lower priced than Number 2) could be designated as the alternate if the Commission determined that industrial customers would switch to another fuel because of higher prices of natural gas. If these customers switched to other fuels, pipelines would have to raise gas rates to recover the cost of operating the pipelines for a fewer number of remaining customers. Because the remaining customers, primarily homeowners and small businesses, would pay higher rates, the results would be contrary to the purpose of the legislation. (See pp. 5 and 6.)

The Commission, then, was tasked with writing regulations that transfer as much of the higher gas costs as possible to industrial users without causing them to switch to an alternate fuel. But the Commission was hampered in its efforts to insure the balance of these requirements because data deficiencies precluded reliable assessments of the effects of alternatives. (See p. 6.)

To minimize the potential for switching, the Commission established three alternate fuel ceilings: one at the price of Number 2 fuel oil; one at the price of high sulfur Number 6 fuel oil (usually the lowest priced alternate); and the third at the price of low sulfur Number 6 fuel oil (usually the medium

priced alternate). Industrial facilities would be incrementally priced only up to the level of the lowest priced fuel oil which they could in fact use. Industrial facilities which do not have the capability to use fuel oil are deemed to have Number 2 as their alternate. (See p. 8.)

Partly because of the difficulty in developing and administering a system to collect and validate data needed for the three-tier system and partly because problems might arise that could be remedied with a phase-in period, the Commission delayed implementation of the three-tier system. Instead, it set the alternate as high sulfur Number 6 fuel oil through October 31, 1981. (See pp. 9 and 10.)

Data deficiencies have also affected the Commission's actions in other areas. One of these involves agricultural exemptions which are allowed only if an alternate fuel is neither economically practicable nor reasonably available as determined by the Commission. Making this determination imposes additional data requirements because a wider range of alternative fuels can be considered than for industrial uses. (See pp. 12 and 13.)

Another area affected by data deficiencies involves sales by interstate pipelines directly to industrial users. The Commission does not regulate these sales. As a result, interstate pipeline companies may increase the rates charged direct customers to a level equal to the cost of the appropriate alternate fuel. The higher rate would limit the amount of surcharge that could then be billed. The Commission recognized that it did not have sufficient data on the direct sales market to determine the potential extent of such a problem. (See pp. 13 and 14.)

COST INFORMATION IS NEEDED  
FOR PROGRAM MANAGEMENT

The intricate and difficult nature of incremental pricing makes proper control extremely important if program objectives are to be achieved in an expeditious manner. An important element in controlling the incremental

pricing program is the need to estimate as closely as possible the implementing and operating expenses of the program. [Cost information is important because it provides managers a basis for choosing from among two or more alternative courses.] Further, cost information is one aspect of judging not only how a program is being managed from year to year but also whether a program should be continued. The expense of the program can be compared with the benefits attributed to the program and the Congress can consider this information in reviewing the program's operation. (See p. 16.)

One of the major costs of the incremental pricing program may be measuring the volume of gas to be priced incrementally. Meters are priced from as little as \$2,000 to as much as \$13,000 and a large industrial complex may need several meters. The six largest customers of one company are estimated to need 300 to 350 meters costing between \$1.5 and \$3.0 million. Installing, maintaining, and reading meters will be an additional expense. (See p. 18.)

Costs of the program will be incurred by various entities. The Federal Government pays expenses involved in implementing and monitoring the program. State and local governmental agencies must fund the costs of reassessing and perhaps restructuring their ratemaking programs to recognize Federal requirements. Interstate pipelines, local distribution companies, owners of industrial facilities, and suppliers of natural gas will incur additional costs in complying with the regulations. (See pp. 16 and 17.)

The problem of measuring quantities of gas used for non-exempt purposes is complicated because some companies have manufacturing facilities that use natural gas for both exempt and non-exempt uses. Further, industry and utility officials are concerned about whether meters installed during the initial phase of the program would be needed if incremental pricing is expanded to cover a



wide range of industrial uses. For these reasons the Commission has delayed enforcement of its metering requirement until November 1, 1981. (See p. 18.)

MONITORING ACTIONS PROVIDE  
ASSESSMENT OF PROGRAM EFFECTS

As a corollary to issuing the regulations, the Commission is responsible for initiating procedures for monitoring the program. These procedures should not only consider pipeline and industrial company compliance with the implementing regulations but should also compare actual program results with legislative objectives. Benefits should be described, quantified, and compared with costs. Further, benefits and costs should be estimated for a reasonably predictable period of time and compared to actual results at predetermined intervals. The monitoring system should also distinguish as much as possible between impacts of incremental pricing and other related programs and actions. It is important for the Commission to know the effect that incremental pricing has on the natural gas industry and consumers in order to recommend changes for improving the program. The monitoring system is the basis for obtaining information to make these recommendations. [Because monitoring procedures have not been established, the Commission will be hampered in its efforts to evaluate the program and to provide Congress with an assessment of whether the program is accomplishing its objectives.] (See pp. 20 and 21.)

One of the areas requiring monitoring concerns the relationship of Federal regulatory requirements with State and local requirements.

Local gas distribution companies, traditionally regulated by State agencies, are also subject to the Federal incremental pricing provisions. Officials of local companies are worried about complying with requirements which may not be consistent between the two regulatory levels. These officials are also concerned that some States may adopt rate

designs which could shift the incremental surcharge from customers in one State to customers in nearby States. To the extent various State requirements differ from each other and from Federal requirements, implementation of incremental pricing may be adversely affected. (See pp. 23 and 24.)

#### RECOMMENDATIONS

To eliminate the uncertainties presently affecting the program and to aid the Commission in its responsibility to manage the incremental pricing program, GAO recommends that the Chairman

--work with the Administrator, Energy Information Administration to develop, by October 1981, an information system incorporating key data elements that will enable the Commission to (1) make analyses necessary for recommending to the Congress whether to continue, revise, or terminate the incremental pricing program and (2) evaluate both the positive and negative aspects of the program's operation.

As part of this effort, the Chairman should

--insure that the information system provides data to substantiate that the designated alternate fuels provide the necessary balance of transferring the greatest amount of incremental costs to industrial users without causing them to switch to an alternate fuel;

--initiate action to incorporate data into the Commission's information system to support determinations that alternate fuels for agricultural uses are reasonably available and economically practicable and that direct sales by interstate pipelines will not adversely affect the incremental pricing program;

--require that costs of implementing, operating, and monitoring the incremental pricing program be identified and compiled;

- work with State regulatory agencies to insure, to the extent possible, that State incremental pricing programs are consistent with the objectives of title II of the Act; and
- report results of the program monitoring effort to cognizant congressional committees at the time amended regulations are proposed for extending incremental pricing beyond industrial boiler fuel use. (See p. 30.)

AGENCY COMMENTS AND  
OUR EVALUATION

A draft copy of this report was submitted to the Commission for review. The Commission did not respond, but GAO did receive comments from its staff. These comments state that (1) the Commission does not have authority to initiate a monitoring program to evaluate incremental pricing, (2) the draft report does not adequately recognize constructive public participation during deliberation of implementing regulations, and (3) the difficulty of identifying and quantifying costs and benefits of the program means such an effort would be of limited value.

GAO does not agree. The keystone of program management is feedback and evaluation of how a program is operating and whether it is accomplishing its objectives. GAO believes that latitude allowed the Commission in designing the program extends to requirements FERC can place on staff to evaluate the program. Additionally, GAO believes its report does recognize both the extensive effort made by the Commission to solicit public participation and the constructive comments received. GAO's concern is that the Commission should not be compelled to rely on ad hoc information but, instead, should develop a data system useful for operational and analytical purposes. Finally, GAO recognizes that quantifying costs and benefits is not easy. However, GAO believes a full description of costs and benefits can be a helpful tool in managing and evaluating the program and should be accomplished with the best possible effort.

The Commission staff made additional specific comments in support of the general comments discussed above. GAO has considered such comments in clarifying and updating the report. (See pp. 30 to 33.)

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ABBREVIATIONS

EIA           Energy Information Administration  
FERC          Federal Energy Regulatory Commission  
Mcf           Thousand cubic feet  
NGPA          Natural Gas Policy Act

## CHAPTER 1

### INTRODUCTION

On November 9, 1978, President Carter approved five acts that together make up the National Energy Act. One of these acts is the Natural Gas Policy Act (P.L. 95-621). This report contains our evaluation of and observations on the implementation of Title II of the Natural Gas Policy Act (NGPA) entitled "Incremental Pricing." We are evaluating implementation of other sections of NGPA and will report on them at a later date.

Title II requires the Federal Energy Regulatory Commission (FERC) to design, implement, and operate a program for incrementally pricing natural gas sold to certain industrial users. As used in the NGPA, the term incremental pricing means that designated industrial users must pay a surcharge for gas they purchase. The cost of the gas, however, may not exceed the price that would have been paid for an appropriate alternate fuel.

#### OBJECTIVES OF INCREMENTAL PRICING

Documentation describing how the incremental pricing concept became a necessary part of natural gas pricing legislation is limited. There is no discussion of this point in either the NGPA or the accompanying Joint Explanatory Statement of the Committee on Conference. Nor do records of discussion in the House and Senate address this point. congressional staff told us that, during the past several years, natural gas pricing legislation bills have always included provisions for incremental pricing. When the President submitted his proposed energy plan, it contained incremental pricing requirements. Both the Senate and House versions of the bill included incremental pricing.

Congress believed incremental pricing would accomplish the results described by the President: residential and small commercial users could be insulated somewhat from higher deregulated prices by transferring these costs to industrial users. Furthermore, congressional debate suggested that transferring costs to industrial users would restrain the willingness of pipeline companies to pay maximum prices for additional gas supplies. The restraining effect was expected because industrial customers, trying hard to keep fuel and raw material costs low, would pressure the pipelines to obtain additional gas supplies at the lowest possible prices. Congressional debate also recognized that

incremental pricing would have conservation value by discouraging, because of its higher price, excessive use of gas by industry. Congress, however, did not intend for incremental pricing to achieve natural gas conservation by forcing industrial users to convert to other fuels. Congress believed that such conversions could impair the protection of residential and small commercial gas consumers from rapid price increases.

One other factor that played an important role in adopting incremental pricing was its political attractiveness. Specifically, opponents of higher gas prices saw incremental pricing as a way to allow higher prices while moving as much of the increased costs as possible away from residential and small commercial users. Proponents of higher prices accepted incremental pricing as a compromise to insure that natural gas deregulation was approved.

#### FERC'S ROLE IN INCREMENTAL PRICING

The NGPA gives FERC responsibility for administering the incremental pricing program. This responsibility includes the following obligations: designing the regulatory framework within which the program will function, monitoring the program's operation, making necessary adjustments to the program's functioning, and taking necessary enforcement actions. These far-ranging obligations require FERC to make a major commitment to the program if it is to be successful.

#### Phased implementation requirements

Under the NGPA, higher costs incurred by interstate pipelines for certain categories of natural gas are to be passed through to purchasers who are industrial users. The law directed FERC (1) to issue regulations applying the passthrough to natural gas used as industrial boiler fuel not later than 12 months after enactment, and (2) to expand the regulations to cover other industrial facilities (facilities engaged primarily in the extraction of raw materials or for processing raw or unfinished materials into another form) not later than 18 months after enactment. The Act further specifies that the surcharge is to be paid by industrial facilities served either directly by an interstate pipeline or indirectly through other interstate pipelines or a local distribution company. Industrial boiler fuel facilities became subject to the surcharge effective January 1, 1980. However, expansion to other industrial facilities is still not finally settled.

In order to meet the first deadline FERC had to determine (1) which method(s) of incremental price pass-through was best, (2) what the appropriate alternate fuel would be, and (3) which industrial boiler fuel users, if any, would be exempted from incremental pricing. Meeting the second deadline



is, at least in part, dependent upon FERC's success in developing, during the initial phase, a program that meets the legal requirements of title II and is also administratively and managerially sound.

#### FERC's approach to implementation

To oversee development and implementation of incremental pricing, a task force of staff members was assembled from various FERC divisions. The Commission and the task force held numerous conferences--in Washington and various regional sites--in which gas industry spokesmen, State regulatory officials, and other interested parties commented on and suggested changes in the design of the incremental pricing program. At the meetings, these spokesmen outlined at least five different plans for implementing the program. As an additional effort, the Commission arranged for a toll-free telephone line for direct communication between FERC staff and persons with questions or comments about incremental pricing.

Another task force was established as a joint effort between FERC and the Energy Information Administration (EIA). The FERC/EIA task force is concerned with obtaining data needed to implement incremental pricing. For example, as part of the determination of an appropriate alternate fuel level, in January 1979, the FERC/EIA task force provided questionnaires to industrial companies to determine their views on the appropriate alternate fuel level as well as to identify the type fuels used in their plants. This same task force assisted in developing a data questionnaire that was sent out in August 1979 to obtain information on the amount of natural gas consumed by industries and the particular purpose for which it is used.

Based on its analysis of the issues discussed during the informal conferences and information obtained from the January questionnaire, FERC had to decide which plan for incremental pricing should be adopted. FERC then put this plan into regulatory language and issued a notice of proposed rulemaking providing an opportunity for oral and written comments from interested parties. After evaluation of the comments, FERC made the changes it believed necessary and then issued the official rulemaking decision for the first phase of the program. In accordance with requirements of the NGPA, these regulations became effective November 1, 1979. Regulations for the second phase, issued May 6, 1980, were subsequently disapproved by the House of Representatives. Because of the outcome of the House vote,

incremental pricing will be limited to natural gas used as industrial boiler fuel. The Act allows FERC to resubmit regulations expanding application of incremental pricing no sooner than 6 months and no later than 2 years after the date of the House disapproval.

#### SCOPE, OBJECTIVES, AND METHODOLOGY

We reviewed legislative history files comprised of bills, amendments, transcripts of House and Senate debates, and committee reports and talked with committee staff to trace the development of the incremental pricing provisions. We examined studies and articles by government and non-government sources to understand the meaning and potential impact of incremental pricing. We attended hearings and studied documents presenting views of interstate pipelines, local distribution companies, industrial consumers, State utility commissions, trade associations and consumer organizations. We talked with representatives of pipelines, local distribution companies, and industrial gas users to acquaint ourselves with various operational aspects of the industry. We studied proposed regulations and the final orders establishing procedures for initiating the program and discussed activities for monitoring the program with FERC officials.

This report addresses FERC's managerial responsibility in implementing incremental pricing. For example, we recognized that data deficiencies have complicated the Commission's effort to implement incremental pricing, but we did not attempt to provide such data. We recognized the need for FERC to know the costs of implementation and administration, but we did not attempt to quantify the amount. We also recognized FERC's need to assess the results of the program, but we did not make such an assessment.

## CHAPTER 2

### IMPLEMENTATION EFFORTS ARE PLAGUED BY

#### UNCERTAINTY OF PROGRAM IMPACTS

Much of the data needed to implement the incremental pricing program was not available to FERC during the time regulations for the program's operation were being prepared. The Commission did not know the amount or the cost of natural gas used in industrial plants for non-exempt boiler fuel or process and feedstock purposes. Nor was there information available about the appropriateness and price of alternate fuel for these purposes. The absence of this data has made it difficult for FERC to designate the appropriate alternate fuel, to determine exemption limitations, and to analyze the effects of other transactions--such as the handling of pipeline companies' direct sales. FERC has established requirements for obtaining data. However, until the information is validated, used, and analyzed, the program may not exhibit the necessary balance between the Act's requirements that, on the one hand, direct higher gas costs to industrial facilities and, on the other hand, limit the amount of the surcharge to the appropriate alternate fuel cost. Because of uncertainty about effects on natural gas markets of higher priced alternates, FERC adopted an interim rule that specifies a lower priced fuel as the alternate.

#### ESTABLISHING THE APPROPRIATE ALTERNATE FUEL PRICE IS CRITICAL

Regulations adopted by FERC designate three types of fuel oil that can be used in calculating natural gas prices. FERC, however, decided to use only the lowest of the three as the alternate through the end of October 1981. Selecting the appropriate alternate fuel price is critical because of its influence on the price of natural gas.

Title II of NGPA provides that an industrial consumer's total gas cost--base price plus the incremental surcharge--may not exceed the cost (on a Btu 1/ equivalent basis) of the fuel oil the consumer would use as an alternate fuel. The appropriate alternate fuel cost, according to title II, shall be the price of Number 2 fuel oil paid by industrial users in specified geographical areas as defined by FERC. FERC may, however, lower the appropriate fuel cost to a point not less than the price paid by industrial users for Number 6

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1/Btu (British thermal unit) is the standard unit for measuring heat energy.

fuel oil. Lowering the alternate fuel designation from Number 2 to Number 6 is permissible if FERC determines that the reduction is necessary to discourage industrial consumers from switching from natural gas to other fuels. If switching occurred, pipelines would raise their rates to recover the cost in operating the pipeline for a fewer number of consumers. Since the remaining consumers would be primarily the residential and small commercial consumers, the rates paid by these consumers would increase.

While the NGPA does allow reducing the alternate fuel level to minimize fuel switching, the objective of incremental pricing has to be kept in focus. Specifically, the legislative history shows that incremental pricing was intended to move to industrial users, to the greatest extent possible, the higher gas costs resulting from price increases granted by NGPA. Therefore, any reduction in the alternate fuel price ceiling below the point necessary to prevent fuel switching would be contrary to that purpose. However, FERC has been severely hampered in being able to insure the balance of these requirements at the outset of the program because data on which to make the decision was not readily available. For example, FERC did not know

- the amount of natural gas used as industrial boiler fuel,
- the amount of natural gas consumed by small industrial boiler fuel facilities which may be exempt from the surcharge,
- the alternate fuel for industrial end uses,
- the prices of the alternate fuel,
- the capability of an industrial facility to use an alternate fuel, or
- the expected amount of incremental cost.

Until a data system is established to compile this and related information, FERC cannot respond to basic questions such as the following:

- What is the direct effect of incremental pricing on amounts paid for natural gas by residential and commercial users and by industrial process, feedstock, and boiler fuel users?

--What is the minimum level of surcharge payments that could lead to revision or termination of the program?

--What is the indirect effect of incremental pricing on other aspects of the economy such as inflation, employment, and energy conservation?

--How are surcharges and incremental costs affected by changes in supply and demand for natural gas?

Much of the data available to FERC in its deliberations on how to implement the program was provided during informal conferences. Conference participants told FERC that the alternate fuel for large boilers was usually Number 6 oil. One group, the American Gas Association, provided survey results showing that using Number 2 as the alternate fuel price would result in losing at least 741 billion cubic feet of industrial sales in 1980. Overall, State utility commissions cautioned FERC that a ceiling set at the Number 2 fuel oil price would result in significant conversions to fuel oil. Also, the North Carolina Utilities Commission and the State of Louisiana both testified that many industrial boiler fuel users in their States use Number 6 fuel oil. More precise quantification of the amount of Number 6 fuel oil used for industrial boiler fuel in these States was not possible because data was not readily available.

In addition to the comments provided by participants in the informal conferences, FERC also obtained data from a questionnaire sent to industrial gas consumers across the country. About 2,700 responses were received from industrial companies in 49 States and the District of Columbia. The questionnaire provided FERC with some data on the alternate fuel capabilities of industrial boiler fuel users, and on the alternate fuel these users believed should be chosen. Although recognized by FERC as not being a statistically valid sample (recipients were not required to respond to the questionnaire), the survey showed that a significant number of boiler fuel facilities in a majority of States was equipped to burn Number 6 fuel oil. Furthermore, the majority of respondents favored a ceiling based on the Number 6 fuel oil price. The survey also showed, however, that some boiler facilities can use only Number 2 fuel oil.

FERC found that a currently required report--EIA form 50--was helpful in providing data on use of alternate fuels by natural gas consumers. FERC's analysis of this information showed that from April 1977 to March 1978, large industrials used Number 5 or Number 6 fuel oil to offset approximately 40 percent of their natural gas curtailments. Number 1 or Number 2 fuel oil was used to offset about 20

percent of natural gas curtailments during the same period. (Propane and coal were used to offset most of the remaining 40 percent of curtailments.)

While this data was useful, and probably the best available, FERC recognized that more data would have been desirable. Nevertheless, FERC concluded that a clear likelihood exists that sizeable shifts from gas to oil could occur if Number 2 fuel oil was designated as the alternate fuel. In general, if industrial consumers which use large quantities of natural gas switch to alternate fuels, high priority users--residential and small commercial consumers--will be detrimentally affected by paying higher rates. The higher rates will occur because pipeline and distribution companies' fixed costs will have to be reallocated to and recovered from residential and commercial customers. Additional natural gas storage would be required and high priority customers would have to pick up these costs, too.

To minimize the potential for switching, FERC has established three alternate fuel cost ceilings: one at the price of Number 2 fuel oil (usually the highest priced alternate); one at the price of high sulfur Number 6 fuel oil (usually the lowest priced alternate); and the third at the price of low sulfur Number 6 fuel oil (usually the medium priced alternate). Industrial facilities would be incrementally priced only up to the level of the lowest priced fuel oil which they could in fact use. Industrial facilities which do not have the capability to use an alternate fuel will be deemed to have Number 2 as their alternate.

Various problems have been cited regarding the three-tier approach. Having three alternate fuel cost ceilings will increase the administrative difficulty both of gathering the periodic data needed to update the alternate fuel cost ceilings and of monitoring certifications stating whether a facility is technically capable and legally permitted to burn either of the Number 6 fuel oils. Also, there will be opportunity for errors in determining which ceiling applies to individual users. Further, comments from industry representatives (pipeline companies and utility commissions) have stated that the three-level approach may cause some industrial users to switch from Number 2 to Number 6 fuel oil if they perceive an economic benefit in so doing. For example, it was suggested that some companies may be willing to invest funds to provide the capability of burning Number 6 fuel oil if the reduction in the surcharge meets a company's investment test (e.g., payback period).

In addition, the NGPA provides that FERC was to establish regions for which alternate fuel price ceilings would

be computed. Designating appropriate geographical regions was a key decision because market conditions vary from one State to another, from one metropolitan area to another, and from a metropolitan area to a rural area. In defining regions, FERC considered the following criteria:

1. The number of regions should be a manageable number from an administrative point of view.
2. Each region should be such that prices charged to end-users will be reasonably close to the average for the region.
3. Each region should include enough oil user to obtain a statistically meaningful sample size.
4. Regions should be rationally related to industrial concentrations and fuel oil marketing areas.
5. The regions should be as consistent with political boundaries as possible.

Participants at the hearings and the task force suggested various approaches they believed would satisfy these characteristics. After considering the alternatives, the Commission decided to establish 79 regions--the 31 metropolitan areas with populations of 1 million or more and the contiguous, 48 States (excluding the metropolitan areas). FERC subsequently issued an interim ruling, effective until October 31, 1981, designating the 48 States as the geographic regions.

Developing, initiating, and operating an information system that provides prices each month from sellers of each alternate fuel for each designated region is a basic requirement of the incremental pricing program. FERC has requested the EIA, the data collection agency of the Department of Energy, to devise the data system. EIA has begun its work: preparing report formats and instructions, designing data files, and establishing data validation procedures. Such a system, however, is neither quickly nor easily set up. EIA has encountered difficulties in putting into place the data collection and analysis system which will be necessary under the three-tier system.

Because of the need to develop and administer an accurate data system for collecting alternate fuel prices on a regional basis, FERC submitted to the Congress a rule providing that surcharges will be based only on the price of high sulfur Number 6 fuel oil through October 31, 1981. The

Commission was concerned that there might be substantial problems with the three-tier approach that would be remedied with a phase-in period. The interim rule was not disapproved by the Congress and, thus, will apply for the first 22 months of the program beginning January 1, 1980.

Establishment of an accurate and complete data system is critical. To the extent that alternate fuel prices in a region vary significantly and that data collection efforts are cumbersome for those who must report regional prices and those who must process and validate the data, implementation of incremental pricing will be adversely affected. The task facing FERC now is to establish a system which will provide data to substantiate that the three-tier approach will provide the necessary balance of transferring the greatest amount of incremental costs to industrial users while minimizing fuel switching so that rates paid by high priority consumers will be as low as possible.

FERC is facing a significant challenge in the effort to measure this balance. Complications are present partly because the price at which fuel switching occurs differs among facilities. For some, switching may take place only after the price of gas has moved well above the price of oil. This extra value for gas can be attributed to the fact that it need not be stored and has fewer pollutants than fuel oil. For some others, the switch could occur before the price of gas is equivalent to fuel oil if curtailments of natural gas are expected and oil is to be purchased to insure a secure source of fuel.

The Commission may want and need to tap resources (analysts and data) at the Department of Energy in establishing an information system that will produce reliable data and allow FERC to reasonably measure whether switching is occurring. If the three-tier approach--or the present single tier approach--cannot be substantiated, then the data system should provide necessary information so the Commission can modify the program to accomplish the necessary balance.

#### DETERMINING EXEMPTION LIMITATIONS IS COMPLICATED

The NGPA permits exemptions from incremental pricing when natural gas is used for

- small existing industrial boilers;
- agriculture;
- schools, hospitals, and certain other facilities; and



--other exemptions as necessary.

FERC has issued guidelines that address these exemption categories and how to obtain the exemption status. The following discussion, outlining problems relating to the lack of information about amounts and types of gas consumed for small industrial boilers and agricultural uses, illustrate some of the difficulties faced by FERC.

Small industrial  
boiler fuel uses

By May 9, 1980, FERC had to develop a rule exempting small industrial boiler fuel facilities from incremental pricing. A small industrial boiler fuel facility was defined as:

"any industrial boiler fuel facility in existence on the date of the enactment of the NGPA that had an average per day use of natural gas as a boiler fuel during the month of peak use during calendar year 1977 which did not exceed the lesser of (a) 300 Mcf; or (b) an average daily rate such that gas used by these facilities does not exceed 5 percent of the total volume of natural gas estimated by FERC to have been used for boiler fuel transported by interstate pipelines and used during calendar year 1977 as a boiler fuel."

This definition requires that FERC make several determinations using specific data which was not available. For example, FERC had to determine the total volume of gas that was transported by interstate pipelines and used as industrial boiler fuel during calendar year 1977. This data was not available and had to be developed so that a threshold level of gas usage could be determined. Having made this determination, FERC developed a method to provide for exemption of boiler fuel users that collectively consumed no more than 5 percent of the gas used as boiler fuel in the interstate market in calendar year 1977. If this amount averaged less than 300 Mcf, the lower figure would become the threshold for determining who could be permanently exempted. FERC computations showed that 300 Mcf was the proper cutoff.

EIA was responsible for obtaining data needed by FERC to establish permanent boiler fuel exemptions. Form EIA-149 was designed to gather the information. 1/ The form was

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1/The purpose of the form was to provide data not only for FERC to implement incremental pricing (including the small boiler exemption) but also for the Economic Regulatory Administration to implement the curtailment priorities provisions in title IV of the NGPA.

sent to selected natural gas suppliers and end-users who were to complete and submit the form to EIA by October 15, 1979. EIA officials stated that an 85-percent response rate was required if the data was to be useful in establishing the level of gas usage for exemption purposes. As of January 1980, the response rate was nearly 90 percent. In followups by EIA, companies gave the following reasons for delays in completing the form: the requested information was not readily available in company documents; instructions were not sufficiently detailed to explain how to fill out the form; the form was long and employees did not have time to work on it.

After the forms were received, EIA made quality checks of the information. This procedure involved inspecting the forms to make sure all questions were answered, reconciling totals, and comparing certain entries to data on the EIA Form 50. Because EIA did not conduct field tests to insure that data on the Form 149 was accurate, analyses made from the information could be perceived as being unreliable. We believe EIA and FERC face a challenge to assure that data was accurate and the exemption procedure selected was fair.

#### Agricultural uses of natural gas

Agricultural use of natural gas is addressed in two parts of the Act. Title II of NGPA required FERC to provide a rule to exempt from incremental pricing those agricultural uses of natural gas for which FERC determined that an alternate fuel or feedstock was not economically practicable or reasonably available. Title IV of NGPA involves the Secretary of Agriculture in identifying essential agricultural uses of natural gas. Specifically, title IV required the Secretary of Energy in consultation with the Secretary of Agriculture, to develop new curtailment priorities for agricultural use of natural gas. As part of this effort, the Secretary of Agriculture certified about 20 different classes of agricultural uses of natural gas as essential in meeting food and fiber production requirements. This certification was the title IV basis for granting these uses a higher curtailment priority than other non-certified uses. However, this higher curtailment priority could not apply if FERC under title II, in consultation with the Secretary of Agriculture, determined that another fuel was economically practicable and reasonably available.

As was apparent, the determinations under title IV and title II were similar in nature, but different in purpose. Due to their similarities, FERC adopted for title II purposes the Title IV certified list of essential agricultural uses of natural gas with additional uses for wood and natural fiber processing and finishing.

The critical determination--establishing an alternative fuel as being economically practicable or reasonably available for agricultural uses--imposes additional data requirements on FERC. Discharging this task may require fact finding proceedings on a case-by-case basis that further complicate implementation of incremental pricing. FERC officials are working to establish data requirements for determining the economic practicability and reasonable availability of alternate fuels for agricultural uses. Setting up this data system will be difficult because the information is needed on a continually current basis and can involve a wider range of alternates than the three fuels prescribed for industrial uses. For example, propane is used for agricultural purposes but lack of data precluded FERC from designating that fuel as being reasonably available for purpose of title IV during the winter heating season of 1979-80. The Commission, however, decides which fuels to consider.

#### ANALYSIS OF THE EFFECT OF DIRECT SALES IS NEEDED

Some interstate pipelines sell gas directly to industrial users. These gas sales are considered non-jurisdictional sales because the price the pipeline charges is not under the control of FERC. Revenues from such sales are not taken into account in developing the jurisdictional rates of interstate pipelines and these revenues make no contribution to the pipelines' jurisdictional cost of service. The lack of FERC control over non-jurisdictional sales has caused a controversy about incremental pricing program regulations.

Gas distributors who purchase gas from interstate pipelines and then resell it to industrial customers (at a regulated price) are concerned that interstate pipelines may increase the rates charged to their direct sale customers to a level equal to the cost of the appropriate alternate fuel. The higher rates would limit the ability of these direct sale customers to accept an incremental surcharge. While this limitation--or perhaps even exclusion--would simplify the pipelines' handling of incremental pricing, it could result in a greater pass through of incremental cost to the distributor company's customers.

Positions on this issue vary depending on whether the facility is an interstate pipeline or a local distributor. Some interstate pipelines insist that FERC has no legal basis to regulate in this area. They believe the amount of incremental cost that should be passed on to their direct customers is the difference in the contract price paid by the direct sale customer and the price of the appropriate alternate fuel. Local distributors maintain that allowing the pipelines to compute the incremental surcharge in this manner would lead to higher contract prices to avoid incremental pricing. The distributors believe that something less than contract price, for example unit cost allocated to non-jurisdictional service, must be used to assure that direct sale customers participate in the incremental pricing process.

In addressing the controversy, the Commission has determined that interstate pipelines will calculate the surcharge for direct sales customers based on the contract price. However, FERC recognizes that it has insufficient data on the direct sales market to determine whether the fears of the local distribution companies are justified. And, even if such fear is justified, the Commission has no data on its potential extent. FERC has stated that it intends to monitor the direct sales market to determine if contracts are being negotiated in an abnormal manner.

#### ASSESSING RESULTS AND RISKS OF INCREMENTAL PRICING IS HINDERED

The data deficiencies described in this chapter significantly affect FERC's rulings. For example, in Phase I the lowest priced fuel was designated as the alternate because of difficulties encountered in putting into place the data collection and analysis system necessary under the three-tier approach and because effects of the higher priced alternatives on industrial boiler fuel use were also unknown. Further, data deficiencies continued to plague the Commission's deliberations for the Phase II ruling which extends incremental pricing to all non-exempt industrial uses of natural gas.

Representatives of industrial companies told the Commission that Phase II could have severe detrimental effects on companies with process and feedstock uses of natural gas because an alternate fuel is not technically feasible. Further, they pointed out that for some sales of fuel oil, the prices in 1980 already exceed the prices that were projected for 1985 during congressional debate on the NGPA. Because of these factors, which can result in significant increases

in natural gas costs, they expect that some business entities will relocate to or improve production facilities in areas where natural gas can be obtained from the intrastate market. Federal incremental pricing rules are not applicable in that market so natural gas prices are expected to be lower for industrial concerns. Also, some companies have very small profit margins which can be significantly eroded by higher natural gas prices, thereby inhibiting the ability of these companies to obtain funding for plant improvements or even to stay in business. In the data system established by FERC, considerations should be given to including information to allow analysis of the implication of incremental pricing on industrial concerns and the related effects on residential and commercial customers.

Several options have been suggested as ways FERC can "buy" time for obtaining the data needed. For example, FERC can limit incremental pricing to industrial boiler fuel facilities and designate high sulfur Number 6 as the alternate fuel. This option, however, gives minimum protection to high priority customers. Or, FERC can expand incremental pricing to include all non-exempt industrial uses of natural gas but designate high sulfur Number 6 oil as the alternate fuel. This action would transfer more incremental costs to industrial users but could still leave a large surcharge absorption capability that is not translated into additional savings to high priority customers. In either of these cases, some mitigating actions could occur. First, public service commissions, tasked with setting rates and familiar with gas markets and economic activity in a State, could adjust rate schedules to minimize charges to residential and small commercial customers if necessary. Second, governmental assistance programs could be changed to provide increased benefits to offset higher utility costs.

If FERC buys time for its data collection efforts by adopting either of the options described above, the natural gas market could be one that is minimally affected by incremental pricing. Analysis should give visibility to the impacts of such a market and indicate whether and how incremental pricing should be expanded.

## CHAPTER 3

### PROGRAM COSTS SHOULD BE IDENTIFIED

The intricate and difficult nature of incremental pricing makes proper control extremely important if program objectives are to be achieved in an expeditious manner. Members of Congress, officials of the Administration, representatives of industry, and the public are becoming increasingly concerned that costs and benefits of regulation be identified. We found that efforts to assess costs of implementing and operating an incremental pricing program have been largely ignored and that preliminary planning for evaluating the effects of costs has been minimal.

### WHY COSTS NEED ATTENTION

An important element in evaluating the incremental pricing program is the need to estimate as closely and completely as possible the operating and administrative expenses of implementing the program. Cost information is important because it provides managers a basis for choosing from among two or more alternative courses.

The Government has long had a policy of choosing the least costly of alternatives if more than one method of accomplishing a task is available. Further, cost information is one aspect of judging how a program is being managed from year to year. Costs are a method of identifying types of and changes in resources needed to accomplish the program. Also, costs are one element used in judging whether a program should be continued. The expense of implementing the program can be compared with the benefits attributed to the program and the Congress can consider this information in reviewing the program. Congress and the Administration have expressed increasing concern about costs of the regulatory process. During debate on the NGPA, members from the House and Senate asked questions about the cost of implementation to better evaluate the net effects of the legislation.

Also, during the FERC hearings, the question of administrative costs was raised because of the complexity of the incremental pricing legislation and because all levels of the gas industry are involved. The Federal Government will incur costs of establishing the regulations; obtaining, classifying, and analyzing data; and auditing and enforcing compliance. State and local governments will incur expenses when their ratemaking actions have to be reassessed and perhaps restructured to accommodate the Federal incremental pricing requirements.

Industrial companies will incur costs to maintain records and make computations either to support an exemption or to provide usage data for both natural gas and alternative fuels. Pipeline and gas distribution companies will incur expenses of accounting for natural gas acquisition costs subject to pass-through, measuring non-exempt uses of natural gas, and allocating and billing surcharges to customers. Suppliers will incur expenses in continuously identifying price and volume of the particular categories of gas subject to incremental pricing which are purchased by the pipeline companies. Marketers of alternate fuels will incur expenses of reporting sales volume and price of Number 2 and Number 6 heating oils by designated geographic area.

FERC officials have stated that because the Act gives the Commission specific deadlines for implementing incremental pricing, the Commission has no choice but to comply with the law as passed by the Congress. This congressional mandate, rather than cost effectiveness, is the central point around which incremental pricing turns. According to FERC spokesmen, limited time and limited resources compel the Commission to direct its efforts to designing the framework to execute the program rather than to determining its cost. Further, the Executive Order on Improving Government Regulations (E.O. 12044), which calls for an estimate of the costs and benefits of alternative means for achieving regulatory objectives is, according to FERC, not applicable because FERC is an independent regulatory agency.

We believe it is not enough merely to assume that the benefits of this regulatory process outweigh the costs. If the administrative costs for implementing the program are about the same as the expected savings of high priority customers, the efficacy of the program could be questioned. One company estimated a "savings" for a typical residential consumer of between \$3.00 and \$7.00 per year; FERC has estimated an average savings of \$25.00 per year. If costs were compiled and compared to these amounts, FERC and the Congress could better judge the program. Additionally, knowledge of the costs of the various alternative proposals for implementing incremental pricing could influence the decision as to which mechanism is ultimately selected for implementation. For example, the original proposal for the pass through mechanism, which called for a billing delay of several months, was substantially changed after some gas companies estimated very high carrying charges. One of the major interstate pipelines stated that interest on unbilled costs would be greater than the surcharges within 24 months after implementation.

COST OF DETERMINING  
NON-EXEMPT VOLUMES OF NATURAL GAS

FERC has stated that the total volume of non-exempt use of natural gas is to be derived from meter readings. The expense of installing meters could be one of the major costs of the incremental pricing program. Meters are priced from as little as \$2,000 to as much as \$13,000 and a large industrial complex may need several meters. One gas utility official said that his six largest customers estimate they will need 300 to 350 meters, costing between \$1.5 and \$3.0 million. Although some industrial companies have meters to monitor energy use, the meters are not necessarily located so as to measure usage in accordance with the NGPA incremental pricing requirements. Further, installing and maintaining meters--including testing and calibrating--will be an additional expense.

Industry and utility officials are concerned about whether meters installed during the initial phase of the program will be needed when incremental pricing is expanded to cover other industrial uses. They fear that their customers are being required to incur costs which may be unnecessary if other types of industrial use are made subject to incremental pricing. At that time, it is anticipated that measurement of some incrementally priced gas uses can be combined and fewer meters will be needed. In recognition of this factor, FERC is allowing companies to delay installation of meters until November 1, 1981.

The problem of measuring quantities of gas used for non-exempt purposes is complicated because some companies may have manufacturing facilities that use natural gas for both exempt and non-exempt uses. For example, a company manufacturing containers for the food industry also makes containers for the chemical industry. Gas used for food processing and food quality maintenance, e.g., cans for food storage, is considered agricultural use and thus is exempt from incremental pricing; other uses would be subject to incremental pricing. Some companies have configurations of facilities whereby boiler fuel usage is not separable from other uses of natural gas. For example, a plant may use a combination of natural gas and a process by-product gas to fuel boilers as well as other processes. The boiler fuel use is to be incrementally priced during Phase I, but the process gas is not. Non-exempt use of natural gas in these examples could not be measured solely by meters.

As an alternative to submetering, pipeline and industry representatives suggest that an estimating procedure be



established by a cooperative effort among State commissions, gas distributors, and industrial customers. FERC now accepts estimates accompanied by affidavits as sufficient proof for assigning curtailment categories to differing end-uses within an industrial facility. Further, some boiler fuel uses of natural gas can be reliably determined without using meters.

The approach beginning to be used in some instances by regulatory agencies is for the agency to set an objective and the regulated entity to devise a way of meeting the objective. FERC has considered such an alternative regarding the determination of non-exempt use of natural gas. That is, the Commission has allowed industries and their gas companies to work out a method for calculating usage. The procedure is to be described in detail and disclosed to FERC for approval. The disclosure would be of additional benefit if it included a narrative explaining why the particular approach--whether based on meters or some other technique--was selected and what the costs of the approach are.

The costs of determining the volume of gas which is used at individual facilities and which is subject to incremental pricing is one of the costs associated with the incremental pricing program. These costs include not only the cost of the meters but the personnel costs involved to install and maintain the meters, to read meters, and to audit and report on accuracy and reliability of the volumetric determinations. We believe that identification and compilation of costs--though difficult--are necessary in order to evaluate and manage the program.

## CHAPTER 4

### ATTENTION NEEDS TO BE GIVEN TO

#### PROGRAM MONITORING

As a corollary to issuing the regulations, FERC is responsible for initiating procedures for monitoring the program. These procedures should not only consider pipeline and industrial company compliance with the implementing regulations but should also compare actual program results with legislative objectives. Benefits should be described, quantified and compared with costs. Further, benefits and costs should be estimated for a reasonably predictable period of time and compared to actual results at predetermined intervals. The system should also distinguish as much as possible between impacts of incremental pricing and other related programs and actions. We found that preliminary planning to identify and monitor both the benefits and the negative aspects of the program has been minimal.

#### PLANNING FOR PROGRAM MONITORING

Sometimes political and economic pressures force actions, based on best available information and analysis at the time, that subsequently may be proven as unacceptable because of changed conditions or availability of better data. Therefore, criteria should be established to demonstrate whether changes in the program--either expanding or limiting--should be made. The significance of this aspect of monitoring is particularly important because of the legislative provisions, not only that incremental pricing requirements be extended beyond the initial application of boiler fuel use to include other industrial uses of natural gas, but also that the Congress review certain actions suggested by FERC in implementing the NGPA.

In two recent reports, we identified weaknesses in the Commission's monitoring of program accomplishments. In one case 1/ we showed that the Commission allowed an experimental production program to continue for about 5 years without knowing whether the program had accomplished the objective of increasing supplies of natural gas to the interstate market.

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1/"The Advance Payment Program: An Uncontrolled Experiment," (EMD-78-47, July 10, 1978).

In the other report <sup>1/</sup> we showed that the Commission allowed special rate treatment for some pipeline companies' natural gas production without setting limits on the costs that could be charged to customers or requiring adequate reporting with the result that the Commission staff had no means to monitor program accomplishments. Our interviews with members of the task force and other FERC officials indicate that planning monitoring procedures for the incremental pricing program has been virtually ignored.

In our opinion, monitoring procedures involve several activities. FERC could work with industry, pipeline, consumer, and DOE officials to identify subject areas that should be addressed. Availability of data to support the analysis should be confirmed. If needed information has not been compiled, then arrangements may have to be made to obtain the data or the subject areas to be analyzed may need to be revised. Reports describing results of the evaluation should be published in accordance with a predetermined schedule, but at least annually. The Commission could also arrange an annual conference to learn from the parties involved their experience and conclusions relating to various aspects of the program.

Establishing a monitoring system which will distinguish as much as possible between the impacts of incremental pricing and other related programs and actions will allow the Congress, the Commission, and others directly and indirectly affected by incremental pricing to better evaluate the extent to which the program is accomplishing its objectives.

#### Effect of other energy legislation and regulatory rulings

Monitoring procedures should consider the effect on natural gas usage of other Federal energy laws and regulatory initiatives, of other parts of the NGPA, and intrastate gas markets. The relationship and multiple objectives of these several areas could be conflicting rather than complementary. For example, the Power Plant and Industrial Fuel Use Act of 1978 (P.L. 95-620) was passed to encourage existing major fuel burning installations consuming natural gas or petroleum to use coal and other alternative fuels. The Public Utility Regulatory Policies Act of 1978 (P.L. 95-617) provides that procedures will be developed to facilitate voluntary conversion from natural gas to heavy petroleum fuel oils. It also provides that DOE will study and report to the Congress

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<sup>1/</sup>"The Special Rate Treatment Allowed Natural Gas Pipeline Production Programs," (EMD-80-10, Oct. 26, 1979).

on gas utility rate design, including incremental pricing. The Energy Tax Act of 1978 (P.L. 95-618) prohibits rapid depreciation for new boilers fueled by oil or gas but provides a special depreciation allowance for retirement or replacement of certain boilers fueled by oil or gas.

Further, the producer pricing provisions of title I of the NGPA--designed to establish maximum prices for various categories of natural gas--may also influence accomplishment of the objectives of the incremental pricing provisions of title II--designed to encourage pipelines to negotiate lower prices. More specifically, it seems inconsistent that interstate pipelines are forced to pass incremental costs to their price-sensitive industrial customers under title II, while at the same time they are required by price escalator clauses in contracts to pay the maximum ceiling prices set out under title I. Further, actions in the intrastate gas market may also influence the degree to which incremental pricing accomplishes its objectives: about 40 percent of domestic natural gas remains in the intrastate market, and much of that is used for industrial purposes.

The monitoring effort should also incorporate corollary rules that are issued by FERC and can affect incremental pricing. For example, FERC adopted a rule authorizing the transportation of certain natural gas for displacement of fuel oil consumption. The policy of displacing fuel oil with natural gas is part of an overall plan to deal with potential shortages of middle distillate fuel, primarily home heating oil and diesel fuel. The use of natural gas to displace fuel is to be accomplished under two approaches. The first approach will be to encourage sales from producers or intrastate pipelines to interstate pipelines and distribution companies. Such sales are expected to increase general system supplies, thereby reducing overall gas curtailments and displacing fuel oil. The second approach is to facilitate transportation of natural gas purchased directly from producers or intrastate pipelines by users capable of substituting gas for oil. The second option, thus, is outside the sales channel whereby gas goes from producer to interstate pipeline to distributor to customer.

The Commission rule states that the first priority is to encourage additions to interstate system supplies. The second priority is to make direct sales to users capable of substituting natural gas for fuel oil. Under the first approach, the gas goes into conventional supply channels and remains subject to incremental pricing mechanisms. However, under the direct sales approach the end-user pays the producer or intrastate pipeline directly. While this will result in the end-user

paying the contract price for gas, it will not assure that the end-user pays up to the alternate fuel price. To the extent the direct purchaser pays less than the appropriate fuel price, incremental pricing objectives have been circumvented.

The Commission's implementing order does not discuss whether these gas sales are subject to incremental pricing. Because this order is effective only through June 1, 1980--that is, during the first five months of the incremental pricing program--we believe the transactions escaping incremental surcharges will be minimal. Our concern, therefore, is that FERC monitoring efforts should review future orders--or extensions, if any, of the present order--and report effects on the incremental pricing program.

#### Effect of State and local rate setting requirements

The NGPA provides that surcharges resulting from the incremental pricing provisions of NGPA must be directly passed through to non-exempt industrial facilities. Officials testifying in FERC hearings pointed out that the legislation does not require States or other local agencies to compel distributors under their jurisdiction to have surcharge mechanisms identical to those authorized by FERC for interstate pipelines. They also suggested that the legislation allows a State-approved mechanism which differs from the FERC-approved mechanism as long as the State mechanism does not preclude the surcharge pass-through. In our opinion, FERC monitoring efforts should include analysis of how well Federal incremental pricing regulations have meshed with the traditional ratemaking functions of State regulatory agencies. Information about types and resolutions of jurisdictional problems is important for determining effectiveness of the incremental pricing program.

Representatives of several distribution companies and State regulatory agencies believe that references throughout title II to interstate pipelines limit FERC's jurisdiction to just those entities and that traditional functions of State agencies regarding local distribution companies are intact. They point out that the Act "does not spell out any specific pass-through technique, any specific accounting procedure, any specific rate design mechanism, or any other requirement" other than the general rules that the surcharge pass-through be provided and that cost allocation methods cannot be modified to offset the surcharge. To the extent FERC injects itself unnecessarily and without specific authorization into a traditional State function, these officials believe there may be confusion and delays in initiating incremental pricing at the end-user level.

In most cases, tariffs and prices cannot be changed unilaterally by the distributor company. Some States have statutes providing that whenever a customer or class of customers has its utility rate increased, a public hearing must be held so that the customer can be heard and can cross examine utility witnesses supporting the increase. All the regulatory, administrative, and due process elements incidental to the public hearing process apply. In some States tariffs must be filed 15 days ahead of billing; in others, 30 days ahead. Also, some States have statutes establishing a specific rate structure for tariffs. For instance, tariffs may be based on traditional cost of service methods or on replacement cost, flat rate, marginal cost, or inverted block rate. Absent some statutory modifications of procedures and regulations, local distribution companies may experience significant delays in recovering surcharges billed them by the pipelines.

Of particular concern to some gas company officials and public utility commissions are rate designs, implemented by some States, which would shift the incremental surcharge from customers in one State to customers in nearby States. For example, California has adopted rate designs which have increased rates to industrials in the State to the alternate fuel level. With this increase, pipelines cannot pass-through incremental costs to these customers. Rather, the incremental cost must be passed through to customers in other States which have not yet reached the alternate fuel price. Industrial customers (e.g., in California), would not benefit because they would still be paying the maximum price. However, customers in the State as a whole would be paying less for gas for two reasons; first, residential and commercial customers probably realized rate reductions when the State increased the prices to industrials; and second, incremental costs under the NGPA will be paid by industrial customers in other States until their alternate fuel price level is reached.

Thus, States may try to revise their rate structure to eliminate absorption capability of industrial users. Whether State utility commissions can or will take action to increase industrial rates depends partly on interpretation of NGPA provisions addressing modification of rates in effect when the NGPA was enacted. Action depends as well on market factors and regulatory policies of the individual States and on the unique economic environment in which local distribution companies operate.

To the extent various State requirements differ from each other and from Federal requirements, implementation of incremental pricing may be adversely affected. In our opinion,

problems in coordinating the FERC incremental pricing regulations with the traditional ratemaking functions of State regulatory agencies should be identified as part of an effective monitoring effort of the NGPA.

#### Effect of other exemptions

FERC has the legislative latitude to extend exemptions, if warranted, to any incrementally priced industrial user not specifically designated in the act. Several types of special exemptions have been suggested to FERC. For example, the Governor of Utah has stated that industrial gas sales in his State perform a vital load-balancing function. He also noted that industrial users in the State would not purchase gas priced at the level of fuel oil, which can cost as much as 100 percent more than gas. Rather, they would convert to coal which, in the Utah area, is already priced competitively with gas. The Governor stated that without these load-balancing industrial customers to purchase gas during the warmer months when residential customers have little need for gas, total system cost would have to be allocated to the rates charged residential customers. Also, without these load-balancing sales to industrials, the distributor may have to invest in storage facilities which would drive residential rates even higher. The Governor noted Congress did not intend that incremental pricing force industrials to switch to alternate fuels and that Utah, therefore, should be exempted from incremental pricing.

FERC has determined that it will not grant generic exemptions for load-balancing sales of natural gas for facilities which have the capability to burn either oil or coal even though some companies may be adversely affected. The Commission believes that granting an exemption to facilities that burn oil would shield the users that Congress intended should bear the incremental surcharges. The Commission also stated that an exemption for load-balancing facilities which burn coal is inappropriate because such an exemption would be contrary to the national energy policy of encouraging the consumption of coal.

On the other hand, FERC has established procedures whereby individual companies can petition for adjustments, exceptions, or exemptions to any of the regulations in cases where there is special hardship, inequity, or unfair distribution of burden. The Commission believes it can handle these petitions in an expeditious and equitable manner.

Load-balancing sales are an integral part of the natural gas industry and some companies have predicted adverse consequences if there is interference with these sales. In our

opinion, the monitoring system of the incremental pricing program should address the reasons for changes in load-balancing sales and the effects of the changes on high priority customers and individual companies. Further, the monitoring effort should address timeliness in handling exemption petitions and consistency in the rulings.

Assessment of the market  
ordering objective

In establishing the incremental pricing program, Congress expected industrial users to influence interstate pipelines to purchase natural gas at the lowest possible price. Members of Congress were concerned that the traditional "rolled-in" pricing mechanism--an average of the lower prices of old gas and the higher prices allowed by the NGPA for new gas--would permit pipelines to pay excessively high prices for natural gas. They concluded that incremental pricing would preclude pipelines from bidding up the price of gas and thereby serve as a market ordering device by transferring the higher gas prices to price-sensitive industrial users.

FERC has identified several factors which can affect the ability of incremental pricing to achieve its market ordering objective. For example, the relationship of natural gas prices to the ceiling prices set by title I of the NGPA and the relationship of the price of deregulated natural gas to alternative fuel oil prices can influence the market. The capability of facilities to use an alternate fuel also can affect the market. Additionally, volumes of gas subject to deregulation, clauses in contracts relating to price adjustments, and the amount of natural gas reserve additions can influence the market. Finally, and importantly, the Commission staff has stated that FERC determined the market ordering purpose could not be achieved within the confines of the statutory framework of the NGPA. Because the legislation reflects a congressional intent that incremental pricing not be responsible for fuel switching, the threat of lower profits resulting from lost sales to the price-sensitive industrial user is not present. An evaluation of the effect of the factors identified by FERC as influencing natural gas markets would aid the Congress in identifying accomplishments of the program, in reviewing future rulings presented by FERC, and in considering whether a legislative change is needed.

We believe it is important for FERC to know the effects that incremental pricing has on the natural gas industry--and its customers--in order to recommend changes for improving the program. The monitoring system is the basis for obtaining



information to make these recommendations. Because monitoring procedures have not been established by FERC, the Commission will be hampered in its efforts to evaluate the program and to provide Congress with an assessment of whether the program is accomplishing its objectives. The longer the delay in establishing a monitoring system, the greater the chance for the incremental pricing program to sustain unacceptable results.

#### PLANNING FOR COMPLIANCE AUDITING

Another responsibility of FERC relating to the incremental pricing program is compliance auditing. This activity involves selecting and testing transactions to determine that companies buying and selling natural gas comply with procedures set out by the Commission in the implementing regulations. FERC's Division of Pipeline and Producer Regulation has been given responsibility for conducting the audits. Eight people from the Division have been assigned for this purpose; 20 additional persons will be asked to assist as needed. The group is expected to have personnel reviewing reports and examining records at pipeline and industrial companies by May 1980. Officials in the group estimate that results of the audit effort--reviewing compliance with accounting and rate reduction requirements and tracing natural gas transactions from "first sale acquisition" through sales for resale to final non-exempt end-use--will take several months. They expect results of the first audits to be available in October 1980.

Until compliance reviews have been completed and difficulties in implementation identified, FERC has no basis for suggesting specific action to resolve compliance problems. Establishing an integrated compliance and monitoring system will not, however, eliminate all uncertainty about the incremental pricing program because the program works in a complex environment of changing circumstances and diverse entities. Therefore, the Commission and its staff must determine where significant adverse affects are most likely to occur and followup in those areas first.

## CHAPTER 5

### CONCLUSIONS, RECOMMENDATIONS,

#### AGENCY COMMENTS AND OUR EVALUATION

The NGPA provides that industrial companies are to pay a surcharge for natural gas used in their plants. The amount of the surcharge is dependent on several elements: the amount of incremental costs incurred by interstate pipelines; the appropriate alternate fuel for each industrial facility; the price of the alternate fuel; the volume of natural gas consumed in non-exempt uses; and the surcharge amount to be paid by other industrial companies. Title II of the Act gives FERC the responsibility to devise a mechanism and related regulations for obtaining and handling data at the interstate pipeline, distributor company, and industrial facility levels to determine these elements. [FERC is hampered in its effort partly because statistical information is not available to support a choice among alternative procedures nor to determine expected results of the procedures.] Discussion in chapter 2 describes factors, including particularly the tests to be met for agricultural exemptions and the determination of effects of direct sales by interstate pipelines, which complicate FERC's task.

[Additionally, FERC has the difficult and continuing responsibility to insure compliance with the regulations, to evaluate whether the program is accomplishing its objectives, to determine its cost, and to disclose positive and negative consequences of the program. Also, individual State rate-making procedures may incorporate an incremental pricing mechanism that can affect results of the Federal incremental pricing program. Because incremental pricing is being implemented in an unstable period when operation of natural gas markets and behavior of alternate fuel markets are changing, the need for evaluation becomes increasingly important. As discussed in chapters 3 and 4, control of the program is essential if its legislative objectives are to be met.

Data deficiencies hindered FERC in its effort to prepare regulations for both the first phase (November 1979) and second phase (May 1980) of the incremental pricing program. Although some information about the program is being reported, there is no assurance it will support the monitoring effort that should be performed by FERC. Areas to be addressed in evaluating the program have not been identified so it is questionable whether the data will support the analyses that should be made. For example, by the end of October 1981, FERC must decide whether the interim ruling designating a single alternative fuel should be extended,

changed, or terminated. The data system may not be developed well enough by that time to provide much assistance to the Commission in analyzing the options.

In our opinion, FERC has responsibly handled a task replete with complexities. It has provided numerous opportunities for those affected by the legislation to discuss problem areas and present supporting documentation. Although the information came from diverse sources in varying degrees of specificity and scope and in an assortment of formats, it did provide the Commission a basis for its decisions.

However, because significant unknown data elements continue to exist, FERC has followed a course of adopting regulations which minimize the risks associated with such unknowns. While this action is reasonable considering the present circumstances, we believe if this course of minimum risk is continued there is a danger that, while program costs will continue at all levels, program benefits may never be realized. For example, if high sulfur Number 6 oil (the lowest priced alternate) continues to be the only designated alternate fuel, the program may have little impact. This result occurs if the price of the Number 6 oil is about the same as the base price for natural gas. We believe FERC must now direct its efforts to developing an information system that provides key data to reduce the number of unknowns, and that will enable FERC to make the necessary analyses for deciding whether to continue, revise, or terminate the program.

We recognize the difficulty of removing uncertainties about future effects of a course of action, particularly in an environment of changing circumstances and diverse entities. However, we believe FERC should establish a data system and a monitoring effort that will significantly reduce not only the questionable areas but also the level of risk. We believe a deadline should be set for no later than the end of October 1981, at which time the interim ruling on alternative fuel pricing expires, when the information system needed to support the monitoring effort should be operating.

In our opinion, regulatory procedures implementing congressional acts should meet criteria relating to timeliness, completeness, and effectiveness. If the established regulations of the incremental pricing program fail to meet these criteria, they should be revised. Or, if the nature of legislative act is such that implementing regulations meeting these criteria are unlikely, then amendments to the legislative act are needed. We believe FERC has opportunities and, indeed, the responsibility to change the program if the monitoring efforts disclose that the program is not working or if the costs of the program exceed the accomplishments.

RECOMMENDATIONS TO THE  
CHAIRMAN, FERC

To eliminate the uncertainties presently affecting the program and to aid FERC in its responsibility to manage the incremental pricing program, we recommend that the Chairman, FERC

- work with the Administrator, EIA to develop, by October 1981, an information system incorporating key data elements that will enable FERC to (1) make analyses necessary for recommending to the Congress whether to continue, revise, or terminate the incremental pricing program and (2) evaluate both the positive and negative aspects of program operation.

As part of this effort, the Chairman, FERC should

- insure that the information system provides data to substantiate that the designated alternate fuels provide the necessary balance of transferring the greatest amount of incremental costs to industrial users without causing them to switch to an alternate fuel;
- initiate action to incorporate data into the FERC information system to support determinations that alternate fuels for agricultural uses are reasonably available and economically practicable and that direct sales by interstate pipelines will not adversely affect the incremental pricing program;
- require that costs of implementing, operating, and monitoring the incremental pricing program be identified and compiled;
- work with State regulatory agencies to insure, to the extent possible, that State incremental pricing programs are consistent with the objectives of title II of the NGPA; and
- report results of the program monitoring effort to cognizant congressional committees at the time amended regulations are proposed for extending incremental pricing beyond industrial boiler fuel use.

AGENCY COMMENTS  
AND OUR EVALUATION

A draft copy of this report was submitted to FERC for review. The Commission did not respond, but we did receive

comments from the Commission's staff (see app. I). These comments were considered and changes were made in our report where appropriate. Pertinent comments and our evaluation are summarized below.

FERC staff stated that the Commission does not have the authority to initiate a monitoring program to evaluate incremental pricing. They also said that the Act limits the Commission's role to designing a workable program which advances the purposes of the legislation and that the Commission should not be admonished for failure to initiate a program to evaluate whether incremental pricing is in the public interest.

We believe the Commission does have both the authority and the responsibility to monitor the program even though the NGPA does not specifically mandate such an activity. The keystone of program management--in FERC, in other Federal agencies, or in private industry--is feedback and evaluation of how a program is operating and whether it is accomplishing its objectives. Further, because the Commission had to make numerous programmatic decisions for Phase I and the proposed Phase II rules (for example, number of tiers or fuels designated as appropriate alternates; number and location of geographic regions and procedures for calculating price of the alternate fuel; time for billing surcharges), we believe the Commission should followup, or monitor compliance with and effects of its various decisions. Also, where the monitoring effort discloses that changes are needed to more efficiently and effectively implement the program, the Commission should consider alternatives and decide how best to make the necessary changes.

During deliberations of the NGPA, the Commission expressed its concern to the Congress that the legislation allow the Commission latitude to design a workable program. We believe this latitude extends to requirements FERC can place on itself to evaluate the program. In our opinion, a program is workable when it has been evaluated to show efficient and effective accomplishments of the objectives established by the Congress. The underlying purpose of FERC is to protect the public interest; therefore, it cannot leave to chance that its programs advance the general welfare.

The Commission staff expressed concern that the report does not adequately recognize the effort of the Commission and its staff in soliciting constructive public participation to offset the absence of hard data. We disagree. The report fully recognizes that FERC made numerous contacts and provided many opportunities for interested parties to submit formal and informal comments--both written and oral; required and voluntary--for its consideration. In fact, we concluded that FERC

did a responsible job with the data it had to work with. However, we are concerned about FERC's future guidance of the program. In our opinion, FERC must obtain the hard data that will be needed to guide the program's direction in the future and to remove, to the extent reasonably possible, the uncertainties of the program which are acknowledged by the FERC staff in its comments. Further, as the relative prices of natural gas and the alternate fuels change, FERC will continually be compelled to rely on ad hoc information supplied by others unless it works with EIA to develop a data system that provides basic data needed for operational and analytical purposes.

The Commission staff did not agree that program costs should be identified. Their comments concentrate on the difficulty of making such analyses. We, too, recognize that quantifying costs and benefits is not easy. However, we believe this is an important aspect of evaluating the program and should be attempted with the best possible effort. Certainly the market-ordering benefits may not be as easily quantified as the price-shield benefits, but both are objectives of the program and both should be quantified to the extent possible. We believe that qualitative description of costs and benefits are valuable and necessary, but it is also important to recognize that quantification is a helpful descriptive tool in evaluating the program. The Commission has shown sensitivity to costs, as evidenced by its delay in requiring installation of meters. However, we cited a number of other items and activities, which are more difficult to measure and may be even more expensive, that should be identified.

The Commission staff made additional specific comments on our recommendations.

- They pointed out that the Commission does not possess authority to develop an information system. This function belongs to EIA. Our recommendation was revised to reflect that comment. FERC must work with EIA because the Commission and its staff will need to identify the data elements needed to support their analysis and evaluation of the incremental pricing program.
- They stated that EIA and the FERC staff meet before publication of alternative fuel prices to discuss prices and assure that they are not so high as to result in fuel switching. We do not question the need for this meeting, but we believe the parties involved should have the benefit of a reliable information system to

substantiate not only retention of industrial load but also transfer of the maximum amount of incremental costs within that constraint.

--They pointed out that the Commission has maintained close liasion with the States and that a proposed rule addresses the relationship between State and Federal incremental pricing programs. The rule, if finalized in a form similar to the one proposed, will give FERC information about State incremental pricing programs when a State applies for exemption. We did not, however, change our recommendation on this point because (a) the rulemaking has not been finalized and (b) it is not clear what information FERC will have about incremental pricing programs in States which do not apply for exemption.

--They noted that our recommendation to report results of the program monitoring effort was not specific. The recommendation was changed and now states that the report should be made when a Phase II rule is presented to the Congress.

The Commission staff stated that any decision to terminate or substantially modify the program is the prerogative of the Congress. Our report does not state otherwise. Our concern is that the incremental pricing program be evaluated and the results of that evaluation be reported to the Congress so that it can make informed decisions about the program. In our opinion, the technical expertise of the Commission and its staff makes FERC the logical agency to be responsible for this effort. In accomplishing this work, FERC may wish to tap resources at other public sector agencies and at private sector entities but that is a decision for the Commission and its staff to make.

Other detailed technical comments made by the Commission staff have been taken into consideration in revising, clarifying, and updating the report.

FEDERAL ENERGY REGULATORY COMMISSION  
WASHINGTON, D. C. 20426

MAY 30 1980

MEMORANDUM TO: J. Dexter Peach, Director  
Energy and Minerals Division  
U.S. General Accounting Office

FROM: William G. McDonald *W. G. McDonald*  
Executive Director

SUBJECT: Draft Report, "Natural Gas Incremental  
Pricing: A Program with Uncertain Results  
and Impacts"

The draft GAO report discusses many of the Commission's achievements in carrying out its incremental pricing responsibilities under the NGPA; however, the report has several serious deficiencies which GAO should correct in its final report. First, the report implies that the Commission had the authority to evaluate incremental pricing. Congress mandated Phase I, and gave the Commission no discretion -- no charter -- to evaluate that phase. For Phase II, the Commission presented Congress an expanded incremental pricing program that, although not mandated by statute, would have committed the Commission to a broad, overall evaluation of the program in 1983. Second, the Commission did have adequate data to implement Phases I and II of the incremental pricing program, and to make intelligent decisions about alternative fuel ceilings. The assertion that the Commission made decisions in the absence of adequate information is erroneous. Third, the report implies that the Commission was not concerned with the costs and benefits of administering the program. On the contrary, attention to costs has been one of the strongest aspects of the FERC's incremental pricing program; the decision to substitute estimating procedures for submetering is a good example of the Commission's diligence in this area.

The major liabilities of the GAO report are discussed in detail below, and specific technical inaccuracies in the report are enumerated in Attachment A. The Commission welcomes the opportunity to work with GAO staff in correcting these deficiencies before the final report is issued.

Evaluation of Incremental Pricing

The GAO would be going against the wishes of the Congress that it serves if it admonishes the Commission for failing to institute a monitoring program designed to evaluate whether the incremental pricing program is still in the public interest or whether it should be terminated. Nowhere within the statutory language of either Title II or the remainder of the NGPA is



discretion provided for the Commission to perform such an evaluation or to make such a recommendation to the Congress. The Commission was neither requested nor authorized to second-guess the social and economic judgments that the Congress made in enacting Title II. The Commission's role under Title II is more limited: It has been instructed to bring its technical expertise to bear on the design of a workable incremental pricing program that can best advance the purposes that were established by the Congress. Congress directed Title II to be implemented in phases. For Phase I, Congress laid down detailed specifications. For Phase II, Congress reserved for itself the decision about whether expansion of the program would be in the public interest. The Commission provided Congress a full evaluation of that choice based on substantial empirical information. GAO's understanding of the Commission's evaluation activities is incorrect because it misinterprets the basic statutory scheme for incremental pricing.

#### Data Sufficiency

It is always easy to suggest, as GAO does in this instance, that the implementation of a new program might have been improved if better data had been available. But in making this suggestion, the GAO report leaves the unfair and mistaken impression that the Commission failed to recognize the need for additional data and failed to conduct a large-scale effort to collect that data. A massive data call, issued as EIA Form 149, was in development even before the Natural Gas Policy Act was signed into law. The purpose of that survey was to help meet many of the informational needs relating to the Natural Gas Policy Act of both this Commission and the Department of Energy. But it should come as no surprise--nor can it be fairly subject to criticism--that this massive data collection effort (which surveyed all major interstate pipelines, all distributors of natural gas, and all large end users of natural gas) should have taken virtually a full year to complete. Under the rigorous timetable imposed by the statute, one year was all the time the Commission had to implement Phase I of the incremental pricing program. The Congress was not unaware that implementing incremental pricing in this time frame would place especially difficult strains upon the Commission. Adherence to a rapid pace for implementation was a conscious choice made by the Congress.

Because of the acknowledged uncertainty about the impacts of the incremental pricing program and a desire to design an incremental pricing program most consistent with the Congressional objectives underlying Title II, the Commission solicited the maximum measure of public participation and assistance in the development of its incremental pricing rules. A series of informal conferences and public hearings was held to discuss virtually every aspect of the incremental pricing program. Through this active informational interchange a great deal of confidence was gained about the design of an incremental pricing program that

would avoid many unanticipated and undesirable effects that might occur under a less carefully crafted program.

In short, the Commission recognized an insufficiency of "hard" data of the type that GAO suggests should guide the design of the incremental pricing program, but substituted for this lack of hard data an unprecedented effort to solicit constructive public participation in its incremental pricing rulemaking assignment. We believe that the absence of major technical or operating defects in the rules that are now effective is attributable to the fact that pipelines and distributors participated constructively in the development of those rules. No amount of hard data alone could have led the Commission through the difficult task of implementing an administratively workable incremental pricing mechanism.

The inadequacy of hard data not only led the Commission to adjust its rulemaking procedures to take maximum advantage of other sources of information but also had an impact on the substantive policy reflected in the Commission's incremental pricing rules. Where the potential impacts of public policy are uncertain, policy itself can and should accommodate that uncertainty. Many individuals who commented on the program alleged that serious adverse consequence would result if the Commission established alternative fuel ceiling prices so high that industry would be driven from the natural gas system to alternative fuels. The result of any such fuel switching, according to many participants in the Commission's incremental pricing proceeding, would be to force remaining higher priority customers to bear a larger share of the fixed transmission and distribution costs of natural gas. Were such fuel switching to occur, the ultimate consequence would be to hurt the very users that incremental pricing is designed to benefit. While there is merit to this argument in principle, the Commission was uncertain as to the exact price level at which fuel switching would occur in sufficient magnitude to have the predicted adverse effect on high priority customers.

Because of the uncertainty as to where the threshold price lies, the Commission determined that it would be most prudent to set the alternative fuel ceiling price somewhat on the low side of observed fuel oil prices in order to maintain the economic attractiveness of gas to most industrial users.

It is most doubtful, however, that the determination of where to set the alternative fuel ceiling price could have been better made if more data had been available to the Commission. The Commission had a substantial quantity of data on actual prices of natural gas and fuel oil to industrial customers. The alternative fuel ceiling issue remained, however, because the price at which fuel switching occurs will differ among individual facilities. For some facilities, fuel switching from gas to oil will occur as soon as the price of gas rises a fraction of a cent

above the equivalent price of oil. In other facilities, the switch from natural gas to fuel oil might occur even before the price of gas rises to equivalence with fuel oil. This might occur, for example, in the case where a user is concerned about natural gas curtailments in the near future so that a secure source of oil is more valuable to him.

Still another legitimate view expressed in the Commission's record is that some industrial users may switch from gas to oil only after the price of gas has moved well above the price of oil. This viewpoint is offered by those who view natural gas as a premium fuel which, because it does not need to be stored and because of its clean burning characteristics, is more valuable than fuel oil. As suggested above, no amount of data could adequately quantify or predict the fuel manager's subjective decision of when and under what circumstances the switch from natural gas to fuel oil should occur in a particular facility. Against this uncertainty -- an uncertainty not rooted fundamentally in an absence of hard data -- the Commission felt compelled to set the alternative fuel ceiling for incremental pricing purposes sufficiently low that most users in most circumstances would not be induced through incremental pricing to convert from natural gas to fuel oil.

#### Costs and Benefits of the Program

The Commission has been sensitive to the costs of administering the incremental pricing program. Procedures for calculating the gas volumes subject to incremental pricing have been established which obviate the need for installing meters, and Order No. 86 extended the use of estimating procedures through October 31, 1981.

The FERC does not agree, however, with the GAO's recommendation to establish a monitoring program to assess the costs and benefits of incremental pricing. These costs and benefits are to be somehow compared in a quantitative manner. From this comparison, the FERC is apparently supposed to draw conclusions concerning the need for and the desirability of the program.

In a strictly technical sense, the incremental pricing program does not lend itself to cost-benefit analysis. The market-ordering benefits of the program will occur, if at all, in 1985. Any attempt to forecast such program benefits would necessarily involve speculative assumptions about world oil prices, new gas discoveries, and the general state of the economy.

The price shielding effect of incremental pricing is somewhat easier to quantify--at least in the near term. But the essential problem remains of what meaning should be attributed to a given level of price shielding. The price shielding goal of incremental pricing reflects a social judgment mandated by

the Congress. There is no meaningful way to compare the costs and benefits in the same terms. The program cannot be reduced to a bottom line net present value.

Finally, any decision to modify substantially or terminate the program based on cost-benefit analysis is clearly the prerogative of the Congress. The Commission lacks the authority to abolish incremental pricing. Certainly a study of the natural gas industry would be valuable to the Congress and the FERC as 1985 approaches. Information is always valuable in any decision-making context. However, the Department of Energy, with its data capability, is probably better equipped to undertake such a study.

## ATTACHMENT A

Specific Comments on Draft Report, "Natural Gas Incremental Pricing: A Program with Uncertain Results and Impacts"

1. (P. i and thereafter) Report must state that GAO's assertions of data deficiencies in incremental pricing program are made on the basis of an analysis of a program that was still evolving at the time that the report was prepared. In the second phase of the incremental pricing program, the Commission was able to obtain and develop a substantial body of data that enabled the Commission, among other things, to discuss the economic impacts that would have occurred in the event that Phase II was approved.

2. (Pp. i, 6) The draft report suggests that the purpose of incremental pricing is to impose higher gas costs upon industrial users. That statement is too simplistic. The Congress indicated that two purposes are to be achieved by incremental pricing. First, the incremental pricing program is intended to shield high priority users from the near term impact of higher gas costs resulting from price increases granted by Title I of the NGPA. Second, the program is intended to serve as a market-ordering device by targeting higher gas prices to price-sensitive industrial users. Congress concluded that, as a group, industrial users could act as a force to restrain pipelines from bidding up the price of gas as deregulation occurs. Unless there is an appreciation of the twofold purpose of incremental pricing, it is unlikely that there can be a meaningful analysis of the Commission's incremental pricing regulations.

3. (P. iii) Draft indicates that the Commission has set the alternate fuel ceiling at the price for high-sulfur No. 6 fuel oil through October 31, 1980. Order No. 81, issued May 7, 1980, extended that date to October 31, 1981. The extension is subject to Congressional review and possible one-House disapproval.

4. (Pp. iii, 18-19) Report suggests that installing meters will impose a financial burden upon industrial gas users subject to incremental pricing. That statement is correct but the picture it paints is incorrect. On December 27, 1979, the FERC issued an interim rule, effective until October 31, 1980, that established procedures for calculating the gas volumes subject to incremental pricing. That action obviated the need for installing meters. In Order No. 86, issued May 8, 1980, the Commission extended the use of the estimating procedures through October 31, 1981.

Also, in reference to the report's discussion of the Commission's allowing industries and their gas companies to work out a method for calculating usage: This is already being done.

5. (p.vi-vii) There are several inaccuracies in the proposed recommendations:

a. The report recommends that the FERC develop an information system and analyze whether to continue, revise, or terminate the program. Under the Department of Energy Organization Act, the Commission does not possess authority to develop an information gathering system--that is a function of the Energy Information Administration (EIA). This is a technical but important point.

b. The report recommends that the Chairman insure that the information system provide data to establish alternative fuel ceilings that will not result in fuel switching. The FERC's Incremental Pricing Task Force has been working with EIA to assure that industrial load loss does not occur as a result of a level of alternative fuel prices that is too high. Commission staff met with EIA prior to publication of the first set of alternative fuel prices and has been meeting since then to discuss alternative fuel prices. It is expected that this procedure will continue.

c. The report also suggests that the FERC meet with the states to insure that State incremental pricing programs are consistent with the Federal program. The FERC, on December 21, 1979, issued a Notice of Proposed Rulemaking which considered, among other things, the relationship between State and Federal incremental pricing programs. The FERC met with interested states to discuss this rulemaking, and a final rule is now being prepared by the Commission.

The Commission has maintained close liaison with the states. The FERC has worked with the appropriate committees of the National Association of Regulatory Utility Commissioners including the Gas Committee and the Ad Hoc Committee on the National Energy Act. State governors, agencies, and regulatory Commissions have participated in the numerous public hearings held by the FERC. Several special meetings were held so that State utility commissions could meet with the task force working on this project. State-FERC interaction has been extensive and productive.

d. Finally, the report recommends that the FERC report its monitoring results to Congressional committees in accordance with a predetermined schedule. It is unclear what schedule is being referred to. There is no statutory schedule established nor has any congressional committee imposed such a schedule on the Commission.

6. (Pp. 3,4) The report should be modified to indicate that the FERC met its second deadline. The FERC submitted its Phase II rule to Congress on May 6, 1980 -- in advance of its May 9 deadline.

7. (p. 2) Definitions of uses and facilities should not be used interchangeably. Delete "-- for the extraction of raw material or for processing raw or unfinished material into another form --". This phrase is part of a definition of industrial facilities and should not be used to describe other industrial gas uses.

8. (p. 6, 7) In response to the basic questions the reports asks the FERC to address:

a. The direct effect of incremental pricing on prices paid for natural gas by residential and commercial users, etc., is strongly influenced by individual State incremental pricing programs and therefore is difficult to quantify.

b. The FERC has no authority to terminate the incremental pricing program.

c. The Commission does not feel that a comprehensive analysis of the indirect effect of incremental pricing on inflation, employment, and energy conservation should preempt its mandated regulatory responsibilities. The results of such an analysis might be of such a speculative nature that its value would be minimal.

9. (p. 9, 10) The report indicates that the three-tier system would not be placed in effect until October 31, 1980. As indicated in Comment 3 above, that date has been extended subject to Congressional review. Also, it should be noted that the single-tier ceiling will be calculated for the 48 contiguous states rather than the 79 regions discussed on page 11. In Order No. 81, referenced above, the Commission adopted a rule that would continue using the 48 states until October 31, 1981.

10. (pp. 10-13) Several of the exemptions discussed are the subject of orders that have already been issued by the Commission. Specifically, a rule has been issued detailing the application of the incremental pricing program to small existing industrial boilers. A second rule pertains to agricultural exemptions from incremental pricing. The Commission has also issued Notices of Proposed Rulemaking regarding other exemptions: new small boilers (those that came into existence after November 9, 1978), expansion of SIC codes, and statewide exemptions to incremental pricing. Finally, in the Phase I rule, the Commission discussed exemptions for schools, hospitals and certain other facilities, and provided definitions for guidance of the parties involved.

11. (p. 11) "Having made this determination, FERC must develop a method. . . ." This was done with EIA Form 149. In addition, the FERC has affidavit procedures and, through audit procedures specifically designed for the incremental pricing program, will statistically sample users on each system. Continuing with this sentence, it must be corrected to read: "exemption of boiler

fuel users that collectively consumed no more than 5 percent of the gas transported in the interstate market in calendar year 1977 as boiler fuel."

12. (p. 12) "We believe FERC faces a challenge to assure that data is accurate and the exemption procedure selected is fair." The FERC has no jurisdictional authority to do this - ERA is responsible for EIA data verification.

13. (p. 13) Discussion of establishing alternate fuel costs is misleading, simplistic, and erroneous. The first sentence should read: "The critical determination -- establishing an alternative fuel or feedstock as being economically practicable or reasonably available for agricultural use -- imposes additional data requirements on the FERC."

It is erroneous to say "Discharging this task may require fact-finding proceedings on a case-by-case basis."

It is misleading to say "Setting up this data system will be difficult because the information is needed on a continually current basis and can involve a wider range of alternates than the three fuels prescribed for industrial uses," because the Commission can decide which fuels to consider and is not bound to look at all fuels.

14. (p. 13-14) Discussion of direct sales: As part of its natural gas pipeline company audits, the FERC is presently reviewing provisions of direct sales contracts to determine if the prices charged are being changed to circumvent the passthrough of incremental pricing surcharges.

15. (p. 14) Discussion under heading, Assessing Results and Risks of Incremental Pricing. . . : The use of the lowest-priced fuel as the alternative fuel price ceiling resulted from the Commission's concern about possible "induced investment" by non-exempt gas users in alternative fuel capability. The Commission conceded that the amount of such induced investment could not be quantified and therefore postponed implementation of the three-tier system of alternative fuel prices. The induced investment issue certainly requires further study. The Commission discussed this need for study when Order No. 51 was issued. Some quantity of data may have to be collected for such a study, but a massive data call would likely generate much superfluous information, at considerable cost. Because industrial facilities differ widely in the types and quantities of fuels that can be burned, a study which attempts to quantify conversion costs and alternative fuel capability investment criteria for all facilities may simply be infeasible. The Commission must balance the potential cost to the economy of unproductive investment with the administrative cost of data collection. The Commission's analysis of this problem has already commenced, and will lead to the proper balance of costs.



16. (p. 16) Discussion of costs: How can costs of State incremental pricing programs and individual gas company costs be measured when each system is different?

17. (pp. v, 20-21) In calling attention to the need for program monitoring, the report fails to recognize the basic thrust of Title II. With regard to the benefits and negative aspects of Phase I, the FERC was given rather specific instructions about applying incremental pricing to boiler fuel users. Congress did not ask the FERC to give it an analysis of whether or not the program was beneficial; rather, Congress made a policy judgment about how it viewed the use of gas by industrial boiler fuel users and instructed the Commission to develop rules to implement this policy judgment.

For Phase II, the FERC discussed both the benefits and negative aspects of the program. Focusing upon the purposes Congress sought to achieve, the FERC determined that the market-ordering purpose sought by Congress could not be achieved within the confines of the statutory framework of Title II of the NGPA. The FERC also discussed the second purpose -- that of price shielding of high-priority users -- and concluded that Phase II of the incremental pricing program would result in a price shielding benefit of approximately \$10 per year for the average household. The Commission included these findings in its Phase II rule and, as directed by the statute, left it to Congress to decide whether to apply incremental pricing to all industrial users not statutorily exempt.

In discussing the need for monitoring the program, the report also fails to recognize that the statutory framework provides mechanisms that are likely to be as effective as any Commission-instituted monitoring program. Under section 502(c), the Commission can entertain individual requests for exemption from the incremental pricing program. In short, 502(c) provides mechanisms for analyzing the program on a micro basis rather than the macro basis apparently envisioned by the report. Moreover, there is also available, through section 206(d) of the NGPA, a method that can and has been used to provide generic exemptions to incremental pricing.

18. (p. 27) Discussion of compliance auditing: The FERC's Division of Pipeline and Producer Regulation has been given the responsibility for conducting compliance audits. In February, 1980, 8 auditors in the Tariff Branch of the Division were assigned to the overall audit effort, including the incremental pricing compliance reviews, and 20 additional technical staff were asked to assist in this task as needed. The audit group is approaching the incremental pricing compliance reviews in two stages. First, after allowing the pipelines four months for start-up time, the auditors review the pipelines' compliance with the accounting and rate reduction requirements of Phase I of the incremental pricing program. Officials in the Tariff Branch estimate this

type of audit effort will take three to four weeks. By August 1980, the incremental pricing compliance audits will be expanded to cover the tracking of natural gas transactions from "first sale acquisitions" through the final sale to a sampling of non-exempt end users." Thus, results of the first phase of the incremental pricing compliance audits will be available in June 1980, and the full-scope review results will be available beginning October 1980.

19. (p. 30) According to EIA, the recommendation to have an operating management information system in place by October 1980 is unrealistic and could produce unreliable data. A thorough analysis of data requirements is needed before development of such a system can begin.

GAO note: Page references in this appendix refer to the page numbers in this final report.

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