NATURAL GAS REGULATION

Pipeline Transportation Under FERC Order 436
June 9, 1987

The Honorable Bill Richardson
House of Representatives

Dear Mr. Richardson:

Your April 28, 1986, letter requested that we examine how the Federal Energy Regulatory Commission (FERC) is implementing its Order 436, which was approved on October 9, 1985. FERC is responsible for regulating various aspects of the natural gas industry, including authorizing services provided by interstate natural gas pipelines and approving rates they charge their customers. In establishing Order 436, FERC sought to better adapt its regulation of the natural gas industry to changed economic conditions wherein markets for the purchase and sale of natural gas had become generally competitive, but the network for transporting gas remained partly monopolistic. Order 436 addressed this situation by establishing a voluntary program for the transportation of natural gas under which pipelines may transport gas without prior FERC approval if the transportation services are provided on a nondiscriminatory basis. Among other things, FERC believed the Order would improve the ability of pipeline customers—especially small local distribution companies serving residential and commercial customers—to obtain access to competitively priced supplies of natural gas.

As you requested, in addition to discussing the factors leading to FERC's issuance of Order 436 and the Order's goal and major provisions, this briefing report presents information on (1) the number of pipelines that have applied to participate in the Order 436 voluntary transportation program, (2) the way FERC is implementing major provisions relating to the transportation program established in the Order, and (3) the extent to which FERC is allowing pipelines to provide transportation services other than those offered under the voluntary program established by Order 436.
In summary, we found the following:

-- As of May 1, 1987, 26 of the 45 major interstate natural gas pipelines have applied to participate in the Order 436 transportation program. Collectively, the 26 pipelines applying to participate in the program accounted for 78 percent of the operating revenues received by the major interstate pipelines in 1985. (See section 3.)

-- FERC has implemented the Order 436 program largely through its processing of pipeline applications to participate in the program. In processing the applications, FERC has had to deal with several issues that could affect the extent to which the Order accomplishes FERC's objectives. FERC's goal is to adjust its regulation of natural gas to make it more responsive to current and future market conditions. These include issues relating to the methods pipelines can use for allowing customers to obtain access to transportation services, and whether certain groups of customers may be given priority over others in obtaining access. (See section 4.)

-- FERC has allowed interstate pipelines, under certain conditions, to continue to transport gas without having to comply with the provisions established in the Order 436 transportation program. This includes continuing to authorize pipelines to provide transportation services under procedures used prior to the establishment of the Order 436 program. However, FERC has required pipelines to file statements on their policies for providing such services. (See section 5.)

To obtain the requested information, we reviewed FERC's documents relating to its development and implementation of Order 436, pertinent laws and regulations and studies on

---

1Essentially, pipelines may apply to participate in the Order 436 transportation program by filing a schedule of their proposed rates for transporting gas under the program or by requesting a certificate to provide service under the program in accordance with the provisions of section 7 of the Natural Gas Act.
the structure, operations, and regulation of the natural gas industry. We also reviewed comments filed with the Commission by pipelines, producers, local distribution companies and other interested parties relating to Order 436 and held discussions with FERC officials on the material.

We obtained the views of FERC officials on the contents of this briefing report and have included these views as appropriate. As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this briefing report until 10 days from its publication date. At that time we will provide copies of this briefing report to FERC and make copies available to others upon request. If you have any questions regarding this briefing report, please call me at (202) 275-8545. Major contributors to this briefing report are listed in appendix I.

Sincerely yours,

Flora H. Milans
Associate Director
## Contents

<table>
<thead>
<tr>
<th>SECTION</th>
<th>THE NATURAL GAS INDUSTRY</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Background</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Industry structure</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Interstate natural gas pipelines</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Factors leading to Order 436</td>
<td>13</td>
</tr>
<tr>
<td>2</td>
<td>GOAL AND ELEMENTS OF ORDER 436</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Goal of Order 436</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Transportation</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Optional expedited certificates</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>PIPELINE PARTICIPATION IN ORDER 436</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Pipeline participation</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>Interstate pipelines applying to participate</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>FERC's approval of pipeline applications</td>
<td>27</td>
</tr>
<tr>
<td>4</td>
<td>FERC'S HANDLING OF ISSUES RELATING TO PIPELINE IMPLEMENTATION OF ORDER 436</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>Implementation of Order 436</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>Capacity allocation</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>Contract demand reduction/conversion provisions</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>Operational penalties</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>Rate provisions</td>
<td>42</td>
</tr>
<tr>
<td>5</td>
<td>TRANSPORTATION OF NATURAL GAS UNDER OTHER PROGRAMS</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>Other transportation programs</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>Grandfathered programs</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>New transportation under section 311</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>Use of traditional certification procedures</td>
<td>51</td>
</tr>
</tbody>
</table>

### APPENDIX

<table>
<thead>
<tr>
<th>FIGURE</th>
<th>MAJOR CONTRIBUTORS TO THIS BRIEFING REPORT</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Consumption of natural gas in 1985</td>
<td>9</td>
</tr>
<tr>
<td>1.2</td>
<td>Distribution of total operating revenues for the 20 largest interstate natural gas pipelines (1985)</td>
<td>11</td>
</tr>
<tr>
<td>1.3</td>
<td>Distribution of volumes of natural gas transported for others by 19 of the 20 largest interstate pipelines in 1985</td>
<td>12</td>
</tr>
</tbody>
</table>
3.1 Participation by major interstate pipelines in the Order 436 transportation program as of May 1, 1987 26

TABLE

1.1 Concentration in wholesale (distribution) markets for natural gas sales 14

3.1 FERC's processing of applications from major and nonmajor interstate pipelines that applied for Order 436 as of May 1, 1987 27

3.2 Status of applications from the 20 largest interstate pipeline companies to participate in Order 436 as of May 1, 1987 28

4.1 Contract demand reduction/conversion schedule 37

ABBREVIATIONS

EIA Energy Information Administration

FERC Federal Energy Regulatory Commission

NGA Natural Gas Act

NGPA Natural Gas Policy Act of 1978
SECTION 1

THE NATURAL GAS INDUSTRY
BACKGROUND

THE NATURAL GAS INDUSTRY IS COMPOSED OF THREE SECTORS: PRODUCTION, TRANSMISSION, AND DISTRIBUTION.

THERE ARE 139 INTERSTATE NATURAL GAS PIPELINES OF WHICH 45 ARE CONSIDERED MAJOR PIPELINES.

THE PRINCIPAL BUSINESS OF INTERSTATE PIPELINES IS PURCHASING GAS FROM PRODUCERS, THEN TRANSPORTING AND SELLING IT TO DISTRIBUTORS, WHO, IN TURN, SELL IT TO END-USERS.

PIPELINES ALSO PROVIDE OTHER SERVICES INCLUDING TRANSPORTING GAS THAT HAS BEEN PURCHASED BY END-USERS OR OTHERS.

FACTORS LEADING TO ORDER 436

FERC BELIEVED FUNDAMENTAL CHANGES HAD TAKEN PLACE IN THE NATURAL GAS INDUSTRY

-- THE MARKETS FOR PURCHASES AND SALES OF NATURAL GAS HAD BECOME GENERALLY COMPETITIVE BUT

-- THE NETWORK FOR TRANSPORTING NATURAL GAS WAS HIGHLY MONOPOLISTIC IN SOME MARKETS AND COMPETITIVE IN OTHERS.

CHANGES IN THE INDUSTRIEs HAD CREATED VARIOUS PROBLEMS

-- GAS WELLS WERE BEING "SHUT IN,"

-- PURCHASERS WERE SEEKING TO BUY CHEAPER GAS IN THE FIELD AND HAVE IT TRANSPORTED, AND

-- PIPELINES WERE RELUCTANT TO PROVIDE TRANSPORTATION SERVICES TO EXISTING SALES CUSTOMERS ON A NONDISCRIMINATORY BASIS.
Natural gas is a major energy resource in the United States. In 1985, according to Energy Information Administration (EIA) data, about 17.3 trillion cubic feet of natural gas was consumed. This accounted for over 24 percent of energy consumed in the United States. As shown in figure 1.1, the industrial, residential, and commercial sectors collectively accounted for about 74 percent of gas consumed in 1985.

Figure 1.1: Consumption of Natural Gas in 1985

Source: EIA data.
INDUSTRY STRUCTURE

The natural gas industry is composed of three major segments—production, transmission, and distribution—each of which is regulated by federal, state, and/or local authorities. The production segment is made up of natural gas producers who explore for and extract gas from the ground. In 1985 approximately 19.5 trillion cubic feet of natural gas was produced in the United States.

The transmission sector consists of pipelines, or transmission companies, that purchase natural gas from producers or other suppliers, deliver it, and then sell it to other pipelines, distributors, or customers. In addition, pipelines also provide transportation services (i.e., delivery of gas for customers who have purchased their own gas supply). Pipelines may transport gas within the boundaries of a single state (intrastate) or between states (interstate). Operations of interstate natural gas pipelines are discussed in more detail below.

The distribution sector consists of local distributors, primarily local public utilities, that purchase natural gas from pipelines. These distributors then resell the gas to end-users, such as residential, commercial, or industrial customers. Approximately 1,500 local distribution companies are operating in the United States.

INTERSTATE NATURAL GAS PIPELINES

At the end of 1985, there were 139 interstate natural gas pipeline companies in the United States. FERC classified 45 of these as major natural gas pipeline companies. Collectively, the major pipeline companies accounted for over 85 percent of natural gas sales by all interstate natural gas pipeline companies under FERC's jurisdiction. The 20 largest (in terms of operating

---

1 In addition to producers, a supplier of natural gas can be a pipeline or a local distribution company that provides natural gas to an interstate pipeline company, local distribution company, or end-user. Shippers of gas can include producers, pipelines, or other entities.

2 FERC defines major natural gas companies as those whose combined gas sold for resale (i.e., gas that pipelines purchase, deliver, and sell to distributors who then resell it to end-users) and gas transported or stored for a fee exceeds 50 billion cubic feet at 14.73 pounds per square inch and 60 degrees Fahrenheit in each of the three previous calendar years.
revenues) accounted for about 82 percent of the almost $49 billion in operating revenues received by major companies in 1985.3

**Pipeline activities**

The principal business of interstate pipelines involves purchasing gas from producers, then delivering it and selling it to distribution companies, that, in turn, sell it to end-users. However, pipelines also may sell gas directly to end-users, such as industrial customers. As shown in figure 1.2, approximately 93 percent of revenues received by the 20 largest interstate pipelines in 1985 came from natural gas sales.

**Figure 1.2: Distribution of Total Operating Revenues for the 20 Largest Interstate Natural Gas Pipelines (1985)**

3% Total Transportation Revenues

4% All Other Revenues

93% Total Sales Revenues

Source: EIA data.

---

3In section 3 we discuss FERC's handling of applications submitted by these 20 companies to participate in the transportation program established by FERC Order 436.
In addition, pipelines offer transportation (or contract carriage) services in which they transport gas purchased by others, including end-users, local distribution companies, and other pipelines. As shown in figure 1.2, transportation services accounted for only 3 percent of the total operating revenues received by the 20 largest interstate pipelines in 1985. However, transportation services play a larger role in pipeline operations in terms of volumes delivered. An EIA analysis of 20 major interstate pipelines showed that they sold 11.3 trillion cubic feet of gas in 1985 and transported 8.9 trillion cubic feet, although much of the transportation was undertaken over short distances for other major pipelines.

As shown in figure 1.3, over half the gas transported in 1985 by 19 of the 20 largest pipelines that we analyzed was transported on behalf of intrastate and other interstate pipelines. About 18 percent was transported for distribution companies, and the remainder transported for end-users and others.

Figure 1.3: Distribution of Volumes of Natural Gas Transported for Others by 19 of the 20 Largest Interstate Pipelines in 1985

Data for distribution by customer type for AER (one of the 20 largest pipelines) was not developed by EIA, Department of Energy; therefore, volume figures for AER are not included in figure 1.3.

Other deliveries include deliveries for producers, natural gas marketers, end-users, and miscellaneous clients.

Source: EIA data.
FACTORS LEADING TO ORDER 436

Order 436 grew out of attempts by FERC to adjust its regulation of interstate natural gas transportation so that it could be better adapted to changes that had taken place in the natural gas industry. In FERC's view, changes in the industry had led to a fundamental difference between economic conditions relating to (1) natural gas as a commodity and (2) the transmission of natural gas.

Gas as a commodity vs. gas transmission

FERC recognized that gas was no longer a by-product of oil production. Instead, advanced exploratory knowledge and techniques had made it possible for gas producers to explore for gas separately from oil. FERC also pointed out a series of changes that had taken place since 1978, when the Natural Gas Policy Act was passed:

-- The Natural Gas Policy Act set in motion a transition to a regulatory system in which prices for gas at the wellhead and burner tip were increasingly set by market forces.

-- Rapid changes in natural gas supply and demand had occurred which led to the appearance of a substantial surplus of gas beginning in 1982.

-- Economic forces, in the form of declining oil prices and improvements in electricity-using technologies, created competition for end-uses of natural gas in many markets that it previously dominated.

FERC also recognized that changes had taken place in natural gas transmission.

-- Over the past 50 years the natural gas transmission industry had developed from a series of individual, separated systems into an extensive nationwide integrated grid.

-- While pipeline capacity continued to be fairly fully utilized during the peak operating periods (e.g., during

---

Order 436 was also FERC's response to a mandate issued by the U.S. Court of Appeals in Maryland People's Counsel v. FERC, 761 F. 2d 768 and 780 (D.C. Cir. 1985) overturning programs FERC had established that allowed pipelines to transport gas to certain customers without requiring them to furnish the same service to other customers on a nondiscriminatory basis.
winter), there had been a significant increase in capacity available outside of the periods of peak demand.

Pipeline-to-pipeline competition had developed in many markets, although some areas were still served by a single pipeline supplier.

In an April 1986 report, An Analysis of Federal Energy Regulatory Commission (FERC) Order 436, (RNGD-86-02), EIA also analyzed the extent to which pipeline-to-pipeline competition exists for sales of natural gas. As shown in table 1.1, according to EIA's report, about 876 or 59 percent of wholesale (distribution) markets were served by a single pipeline while 599 or 41 percent were served by 2 or more pipelines. However, the markets served by a single pipeline collectively accounted for only about 14 percent of the total volume of gas sold. Further, where markets were served by more than one pipeline, one pipeline generally had a market share for gas sales of 50 percent or higher. EIA noted that because many gas sales are transported over the same physical pipeline system, the concentration of gas transportation service would be even higher.

Table 1.1: Concentration in Wholesale (Distribution) Markets for Natural Gas Sales

<table>
<thead>
<tr>
<th>Number of markets</th>
<th>Number of sellers</th>
<th>Total volume sold (in billion cubic feet)</th>
<th>Market share of largest seller</th>
<th>Market share of second largest seller (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>876</td>
<td>1</td>
<td>2.1</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>350</td>
<td>2</td>
<td>1.3</td>
<td>94</td>
<td>6</td>
</tr>
<tr>
<td>106</td>
<td>3</td>
<td>2.2</td>
<td>89</td>
<td>10</td>
</tr>
<tr>
<td>56</td>
<td>4</td>
<td>2.5</td>
<td>71</td>
<td>19</td>
</tr>
<tr>
<td>36</td>
<td>5</td>
<td>1.9</td>
<td>76</td>
<td>17</td>
</tr>
<tr>
<td>19</td>
<td>6</td>
<td>1.3</td>
<td>61</td>
<td>24</td>
</tr>
<tr>
<td>10</td>
<td>7</td>
<td>1.0</td>
<td>66</td>
<td>18</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>0.6</td>
<td>52</td>
<td>31</td>
</tr>
<tr>
<td>5</td>
<td>9</td>
<td>0.7</td>
<td>49</td>
<td>27</td>
</tr>
<tr>
<td>9</td>
<td>10</td>
<td>1.6</td>
<td>66</td>
<td>15</td>
</tr>
</tbody>
</table>

Total 1,475 15.2

Source: EIA data.

5 The report was prepared at the request of the Chairman, House Committee on Energy and Commerce.

6 The EIA report considers a local distribution company to be a distribution market.
Problems in the industry

FERC also recognized that the changes that had taken place in the natural gas industry had created several problems including:

-- The surplus of gas had resulted in many gas wells being "shut-in." In response, natural gas producers were seeking access to pipeline transportation services to sell gas directly to end-users, as an alternative to selling the gas to the pipelines for resale.

-- Purchasers of natural gas were seeking to purchase cheaper gas in the field and have it transported rather than buying the gas from pipelines in cases where the pipelines were locked into purchasing high-priced gas under long-term contracts with producers.

-- Pipelines were generally reluctant to provide transportation services to their existing sales customers on a nondiscriminatory basis. Among other things, pipelines were concerned that volumes of gas transported could replace gas the pipeline would otherwise have sold to such customers. Pipelines were concerned that under "take-or-pay" contracts they would have to forfeit amounts they paid in advance for gas supplies that they were no longer able to sell because the supplies had been replaced by gas they were transporting to their sales customers.
SECTION 2

GOAL AND ELEMENTS OF ORDER 436
GOAL AND ELEMENTS OF ORDER 436

FERC'S GOAL IN ORDER 436 WAS TO BETTER ADAPT ITS REGULATION OF NATURAL GAS TO CHANGED ECONOMIC CONDITIONS BY

-- RETAINING AND REVISING ITS REGULATION OF NATURAL GAS TRANSPORTATION AND

-- ALLOWING THE COMMODITY MARKET FOR NATURAL GAS TO DEVELOP IN A COMPETITIVE FASHION.

THE MAJOR ELEMENTS OF ORDER 436 ADDRESSED FERC'S

-- REGULATION OF PIPELINE TRANSPORTATION SERVICES AND

-- HANDLING OF CERTIFICATES ALLOWING PIPELINES TO CONSTRUCT FACILITIES AND PROVIDE SERVICES.
GOAL OF ORDER 436

The overriding goal of FERC Order 436 was to adjust FERC's regulatory framework for natural gas by (1) retaining and revising utility-type regulation over the interstate natural gas transportation function and (2) allowing the commodity market for natural gas to continue to develop in a competitive fashion.

In Order 436 FERC primarily addressed two aspects of its regulation of natural gas pipelines:

-- its regulation of pipeline transportation services and

-- its handling of certificates under which pipelines are allowed to construct facilities and provide services.¹

TRANSPORTATION

Order 436 established a voluntary transportation program under which pipelines choosing to participate must transport gas on a nondiscriminatory basis. Under the Order, interstate pipelines are allowed to transport natural gas without prior Commission approval (self-implementing transportation) on behalf of interstate pipelines, local distribution companies, or end-users. A pipeline choosing to participate in the transportation program is subject to

¹In its May 30, 1985, Notice of Proposed Rulemaking leading to Order 436, FERC also proposed revisions in its policies with respect to pipelines' billing for gas purchases. However, it decided to issue a separate document to obtain additional comments on pipeline billing policies. FERC has subsequently initiated a separate Notice of Proposed Rulemaking on the billing issue. In the Notice of Proposed Rulemaking, FERC also proposed to establish a rule to assist pipelines to deal with take-or-pay obligations if they were willing to offer nondiscriminatory access to transportation service. Under the proposed rule, pipelines making certain one-time payments to extinguish all minimum payment or purchase obligations under a qualifying contract were to be presumed to have acted prudently, subject to rebuttal. FERC decided, however, not to adopt the proposed change. Instead, FERC reaffirmed a policy endorsing a mechanism that natural gas pipelines and producers used to renegotiate the take-or-pay provisions of their contracts. The policy provided that it was lawful for producers to receive lump sum payments as a condition for the renegotiation of the take-or-pay provisions of their contracts. It also provided that FERC would expeditiously grant abandonment authorizations or certificate amendments necessary to effectuate service modifications that arise from pipeline buy-outs of their take-or-pay obligations.
conditions and requirements established in Order 436. These include:

-- Pipelines must offer both firm and interruptible transportation services.\(^2\)

-- Pipelines may impose reasonable operating conditions on transportation activities, but they may not deny transportation for any reason other than lack of capacity.

-- Pipeline sales customers must be allowed to modify existing service agreements with pipelines in order to reduce their commitment to purchase gas from the pipeline. Sales customers are also allowed to convert firm sales to firm transportation service. Under such an arrangement, the sales customer would be able to purchase gas from a source other than the pipeline and the pipeline would still be obligated to transport the gas purchased to the customer.

-- Other sales and transportation options that had been traditionally offered by pipelines would remain available.

-- Rates for transportation should reflect "material variation" in the costs of service to different customers. Rates may vary within a range designed to permit pipelines the flexibility to respond to varying market conditions, while preventing subsidization of one group of customers by another.

-- Capacity will be allocated on a first-come, first-served basis. The customer's right to capacity will be determined by its date of request for services.

Pipeline participation in the Order 436 transportation program and FERC's handling of applications filed by pipelines in response to Order 436 is discussed in sections 3 and 4.

**OPTIONAL EXPEDITED CERTIFICATES**

Order 436 also established optional expedited certification procedures under section 7 of the NGA for new services, facilities, and operations for pipelines that were willing to assume the full risk of such ventures. These procedures were intended to allow pipelines and other eligible applicants to obtain section 7 certification more quickly and easily than normal when offering new services.

\(^2\)Firm service is service offered to customers under schedules or contracts that anticipate no interruptions. Interruptible service is low priority service offered to customers under schedules or contracts that anticipate and permit interruption on short notice, generally in peak-load seasons.
services in which they would sell or transport natural gas and construct, acquire, and operate facilities necessary to provide the services. To obtain the optional certificates, pipelines had to agree, however, to assume all of the financial risk associated with the ventures. For example, pipelines were prohibited from using other services to subsidize the new services or from recovering losses in future rate cases.
SECTION 3

PIPELINE PARTICIPATION IN ORDER 436
PIPELINE PARTICIPATION

PIPELINES CAN APPLY TO PARTICIPATE IN THE ORDER 436 TRANSPORTATION PROGRAM BY FILING A RATE SCHEDULE WITH FERC OR APPLYING FOR A BLANKET CERTIFICATE.


COLLECTIVELY, THE 26 MAJOR PIPELINES APPLYING TO PARTICIPATE ACCOUNTED FOR 78 PERCENT OF MAJOR PIPELINE OPERATING REVENUES IN 1985.


TWENTY-ONE OF THE 94 NONMAJOR INTERSTATE PIPELINES (22 PERCENT) HAVE ALSO APPLIED TO PARTICIPATE AS OF MAY 1.

REASONS GIVEN BY 3 OF THE 20 LARGEST INTERSTATE PIPELINES FOR NOT APPLYING TO PARTICIPATE INCLUDE THE FOLLOWING:

--- THE PROGRAM WOULD NOT BE BENEFICIAL TO THEM OR THEIR CUSTOMERS AND

--- THE ORDER DOES NOT FIT IN WITH THE PIPELINES' OPERATIONS.
PIPELINE PARTICIPATION

A pipeline can apply to participate in the Order 436 transportation program by filing a tariff (rate schedule) with FERC, or by applying for a blanket certificate. In the tariff filing the pipeline provides its proposed rates, terms, and conditions for open access transportation under Order 436. FERC's approval of the filing permits the pipeline to transport gas to intrastate pipelines and local distribution companies as authorized by section 311 of the NGPA. A pipeline must also obtain approval of a blanket certificate application to transport gas under the Order 436 program to other interstate pipelines and end-users.1

INTERSTATE PIPELINES APPLYING TO PARTICIPATE

As of May 1, 1987, 26 (58 percent) of the 45 major interstate pipelines have elected to participate in the Order 436 transportation program. As shown in figure 3.1, 16 (36 percent) of the 45 have filed both a tariff schedule and an application for a blanket certificate, 6 (13 percent) have filed only a tariff schedule and 4 (9 percent) have applied only for a blanket certificate. The pipelines that have applied to participate collectively accounted for 78 percent of the major interstate natural gas pipelines' operating revenues in 1985. Of the nonmajor interstate pipelines, 22 percent (21 of 94 companies) have elected to participate in the Order 436 transportation program.

---

1Section 311 of the NGPA permits interstate natural gas pipelines to offer transportation services on a self-implementing basis (i.e., without having to obtain FERC's approval to provide specific transportation services on a case-by-case basis) on behalf of intrastate pipelines or local distribution companies. However, pipelines must obtain certificates under section 7 of the NGA to transport natural gas for other customers (such as end-users.) A blanket certificate authorizes a pipeline to transport natural gas for any customer on a self-implementing basis.
Figure 3.1: Participation by Major Interstate Pipelines in the Order 436 Transportation Program as of May 1, 1987

Number of Pipelines
(45 pipelines)

- 9% Applied for Blanket Certificate
- 13% Filed Tariff
- 19% Did not apply
- 36% Applied for Blanket Certificate and Filed Tariff

Pipeline revenues (1985)
($49.1 billion)

- 3% $1.4 billion - Applied for Blanket Certificate
- 14% $7.0 billion - Filed Tariff
- 22% $10.7 billion - Did not apply
- 61% $30.1 billion - Applied for Blanket Certificate and Filed Tariff

*Note: Figures do not add due to rounding.
FERC's APPROVAL OF PIPELINE APPLICATIONS

As shown in table 3.1, as of May 1, 1987, FERC has issued orders approving the blanket certificate applications filed by 10 major and 14 nonmajor interstate pipelines and the tariff filings submitted by 8 major and 7 nonmajor pipelines. FERC has stated that its processing of Order 436 filings is taking longer than it anticipated because of the great number of filings, the number of intervenors, the many complex issues, and its regulations which require it to give an adequate notice to interested persons.

Table 3.1: FERC's Processing of Applications from Major and Non-Major Interstate Pipelines That Applied for Order 436 as of May 1, 1987

<table>
<thead>
<tr>
<th></th>
<th>Blanket certificate applications</th>
<th>Tariff filings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Approved orders Applied</td>
<td>issued</td>
</tr>
<tr>
<td>Major pipelines</td>
<td>20</td>
<td>10(^a)</td>
</tr>
<tr>
<td>Nonmajor pipelines</td>
<td>17</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>37</td>
<td>24</td>
</tr>
</tbody>
</table>

\(^a\)One pipeline rejected the order.

\(^b\)The two other applications for a blanket certificate were rejected by FERC.

As previously mentioned, 20 of the 45 major pipelines are the largest in terms of operating revenues. The 20 largest pipelines accounted for about 82 percent of total operating revenue received by major companies in 1985. Table 3.2 shows that of the 16 tariff filings that have been submitted by the 20 largest pipelines, FERC has issued orders approving 7.\(^2\) Nine were still pending as of May 1, 1987. Seven of the 15 blanket certificate applications submitted by the pipelines are pending, and one of these was rejected by FERC.

\(^2\)FERC has also allowed some interstate pipelines that have filed tariffs to transport gas under the Order 436 transportation program on an interim basis pending actual approval of the tariff filing.
<table>
<thead>
<tr>
<th>Pipeline company</th>
<th>Tariffs filed</th>
<th>Settlements Order date</th>
<th>Blanket certificate date</th>
<th>Order date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. El Paso Natural Gas</td>
<td>1/31/86</td>
<td>6/27/86</td>
<td>8/1/86</td>
<td>1/12/87</td>
</tr>
<tr>
<td>2. Columbia Gas Transmission</td>
<td>10/31/85</td>
<td>12/13/85</td>
<td>2/28/86</td>
<td></td>
</tr>
<tr>
<td>3. Natural Gas P/L Co. of America</td>
<td>11/14/86</td>
<td>6/23/86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Texas Eastern Transmission</td>
<td>3/13/86</td>
<td>12/19/86</td>
<td>3/13/86</td>
<td>12/19/86</td>
</tr>
<tr>
<td>5. Transco Inc.</td>
<td>5/13/86</td>
<td>2/20/87</td>
<td>3/28/86</td>
<td>2/20/87</td>
</tr>
<tr>
<td>6. Tenneco Inc.</td>
<td>12/6/86</td>
<td>12/6/86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Northern Natural Gas Co.</td>
<td>9/26/85</td>
<td>12/22/86</td>
<td>4/11/86</td>
<td>12/22/86</td>
</tr>
<tr>
<td>8. ANR Pipeline Co.</td>
<td>9/30/86</td>
<td>(e)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Consolidated Gas Supply Co.</td>
<td>2/10/86</td>
<td>2/13/87</td>
<td>2/10/86</td>
<td>2/13/87</td>
</tr>
<tr>
<td>10. Michigan Consolidated Gas</td>
<td>(d)</td>
<td>(e)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Southern Natural Gas Co.</td>
<td>(d)</td>
<td>(e)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Panhandle Eastern Pipeline</td>
<td>9/15/86</td>
<td>6/24/86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. United Gas Pipeline Co.</td>
<td>9/3/86</td>
<td>5/30/86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Enserch</td>
<td>(d)</td>
<td>(e)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Northwest Pipeline Co.</td>
<td>5/30/86</td>
<td>2/4/87</td>
<td>6/20/86</td>
<td></td>
</tr>
<tr>
<td>17. Trunkline Gas Co.</td>
<td>9/15/86</td>
<td>6/24/86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. Pacific Gas Transmission</td>
<td>(d)</td>
<td>1/13/87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. AER</td>
<td>6/2/86</td>
<td>(e)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Northwest Central Pipeline</td>
<td>12/15/85</td>
<td>2/20/87</td>
<td>7/18/86</td>
<td>2/20/87</td>
</tr>
</tbody>
</table>

*aCompanies listed by size in terms of natural gas operating revenues.

*bAfter a tariff is filed, intervenors may contest certain issues in the tariff. FERC may hold a settlement conference to resolve the issues. Once the issues are resolved a settlement agreement is prepared by the pipeline. The agreement is reviewed by FERC and if it is acceptable FERC approves it.

*cIf no date is given an order was not issued by FERC approving the tariff or blanket certificate.

*dDid not file a tariff.

*eDid not apply for a blanket certificate.

*fTransco Inc., rejected the blanket certificate.

*gPanhandle Eastern's application for a blanket certificate was rejected by FERC.
Three out of the 20 largest pipelines did not apply for a blanket certificate or file a tariff for Order 436 participation. Representatives from two of the pipelines said that they have not applied for Order 436 because participation in it would not be beneficial to them or their customers at the present time. An official of the third pipeline said that it does not plan to apply for Order 436 participation because the Order does not fit in with the pipeline company's operations. However, he said the pipeline's utility division sent a letter to FERC stating that it would follow the open access provisions of the Order.
SECTION 4

FERC'S HANDLING OF ISSUES RELATING TO
PIPELINE IMPLEMENTATION OF ORDER 436
IMPLEMENTATION OF ORDER 436

WHETHER ORDER 436 ACHIEVES ITS OBJECTIVES IS LIKELY TO DEPEND ON HOW IT IS IMPLEMENTED.

IN PROCESSING APPLICATIONS FROM PIPELINES TO PARTICIPATE IN ORDER 436, FERC HAS HAD TO DEAL WITH A NUMBER OF ISSUES, INCLUDING

-- HOW AVAILABLE PIPELINE CAPACITY SHOULD BE ALLOCATED,

-- WHETHER PROVISIONS ALLOWING PIPELINE CUSTOMERS TO REDUCE COMMITMENTS TO PURCHASE GAS CAN BE DELAYED OR ELIMINATED,

-- WHETHER PIPELINES CAN IMPOSE SUBSTANTIAL PENALTIES FOR SMALL DEVIATIONS FROM TRANSPORTATION AGREEMENTS, AND

-- HOW RATES FOR TRANSPORTATION SERVICES SHOULD BE ESTABLISHED.
IMPLEMENTATION OF ORDER 436

The extent to which FERC achieves its objectives in Order 436 may depend not only on how many pipelines participate in the new transportation program the Order establishes, but also the actions FERC takes to resolve issues relating to pipelines' applications to participate in the transportation program. In its April 1986 analysis of Order 436, EIA stated that FERC's actions in implementing Order 436 were likely to play a major role in determining the Order's effects. According to EIA among the key issues facing FERC in its handling of pipeline applications to participate in the Order 436 transportation program are the following:

-- How available capacity on pipelines should be allocated and whether selected groups of customers may be given priority over others wishing to obtain transportation services.

-- Whether the contract demand reduction/conversion provisions of the Order can be delayed or eliminated.

-- Whether pipelines can impose substantial penalties for relatively small deviations from a transportation agreement.

-- How pipelines are allowed to establish rates for providing transportation services, for example, the conditions under which they may offer discounts to selected customers.

FERC's handling of these issues in orders that it had issued as of January 1, 1987, in response to settlement proposals received from the 20 largest pipelines is discussed below. The orders that we analyzed relate to settlements submitted by El Paso Natural Gas Company (June 27, 1986), Texas Eastern Transmission Corporation (December 19, 1986), and Northern Natural Gas Company (December 22, 1986).

Contract demand reduction/conversion provisions of Order 436 allow pipelines' firm sales customers the option to reduce their firm sales entitlements over a 5-year period or to convert them to commitments for firm transportation.

The settlement proposals reflect efforts by the pipelines to resolve issues relating to the rates and conditions under which they will provide self-implementing transportation services under Order 436.

FERC had also issued orders approving a settlement offer and an application for a blanket certificate filed by another of the 20 largest pipelines—Columbia Gas. We did not analyze these orders because, according to FERC, the settlement only applied to the capacity available to Columbia, and FERC is currently considering a new settlement proposal from Columbia.
CAPACITY ALLOCATION

If the demand for transportation service exceeds a pipeline's capacity, Order 436 provided that the capacity should be allocated among parties wishing to obtain service on a first-come, first-served basis. According to FERC, the first-come, first-served allocation method ensures that pipeline capacity will be allocated on a nondiscriminatory basis.

Key elements of the first-come, first-served provisions include the following:

-- Pipelines would only be required to provide transportation where capacity is available.

-- Firm sales and transportation customers would have priority over interruptible sales and transportation customers, but within these categories customers' entitlement to capacity would have to be based on the date on which their request for service was made.

-- Existing firm sales customers may convert the remainder of a firm sales agreement to firm transportation through payment of appropriate reservation fees if the pipeline chooses to impose them. (See the following section on contract demand reduction/conversion.) This allows existing firm sales customers to obtain capacity outside the first-come, first-served rule, because they are considered as having already booked the capacity in connection with their sales service agreements.

Issues arising in settlements

In its decisions prior to January 1, 1987, on settlements submitted by pipelines implementing Order 436, FERC clarified and extended the capacity allocation provisions of the Order. Among the issues it considered in approving the settlements were

-- what priorities should be given to new versus existing pipeline customers regarding access to pipeline capacity,

-- how to prevent possible abuse of the capacity allocation procedures,

-- whether changing the points at which the gas enters or leaves the pipeline would affect priorities, and

-- what mechanisms pipelines could use to reduce customer access to capacity in curtailment situations.
Priority to be given new versus existing customers

In two settlements FERC reiterated its intention that existing customers at the time Order 436 was issued will have priority over new customers in the allocation of capacity within one class of service (i.e., firm or interruptible). If capacity is inadequate to serve all existing customers, FERC said the pipeline can use whatever contractual methods of allocation have already been agreed to by the parties involved. However, allocation among new customers must be according to the date on which the customer first requested the service.

In the Texas Eastern settlement, the pipeline proposed to give priority among its interruptible transportation customers to those that would receive new service under traditional certification procedures authorized under section 7(c) of the NGA relative to those that would receive service on a self-implementing basis, even if the latter had requested service earlier. FERC required Texas Eastern to revise its settlement to reflect the policy that firm and interruptible transportation offered on a self-implementing basis would not receive a lower priority than firm or interruptible transportation service offered in the traditional manner. This would keep customers receiving service under traditional section 7 procedures from preempting customers that purchase transportation service under the self-implementing procedures.

Potential abuses of the capacity allocation procedure

In two of the settlement orders, FERC acknowledged the potential for abuse of the capacity allocation mechanism by interruptible customers making requests for service that are not based on specific transactions. For example, FERC said a shipper could submit a request for capacity but fail to provide gas for transportation when the service was scheduled to begin. This could allow the shipper to claim priority over other shippers that requested service later but began using the service (i.e., provided gas to be transported) earlier. In addition, the shipper could deliberately overbook capacity in order to sell the right to the capacity to other shippers, or act as a broker of the capacity.

As discussed in section 5, FERC allows pipelines to provide transportation services under traditional section 7(c) certificates as well as on a self-implementing basis under the new transportation program established in Order 436.
In response to these problems, FERC required several remedies in the settlements. The shippers will be required to certify that they will have title to the gas and have all necessary transportation arrangements in place prior to beginning transportation by the interstate pipeline. To prevent overbooking for the purpose of brokering a fee for the capacity to waiting end-users, FERC required that each shipper identify the corporate entities ultimately receiving gas in the contract. Thus, if the shipper tries to serve an additional end-user, it would constitute a new transaction, with a different priority for capacity.

FERC stated that while it believed the remedies it was requiring would go far toward addressing the capacity brokering problem, it acknowledged that they may not be completely effective in preventing all such activity by interruptible shippers. FERC contemplated a potential solution to the problem—a "use it or lose it" requirement, which would reduce the maximum daily volume entitlement of the shipper to the level actually used. However, FERC deferred a final decision on this possible solution until it further studied the legal, policy, and technical issues relating to it.

Receipt and delivery point flexibility

In two of the settlements, some shippers argued that they should not lose the priority they had established by their original request if they subsequently decided to change the receipt point (where gas enters the pipeline) or delivery point (where gas leaves the pipeline) for a given volume of service. FERC noted that such switches are allowed by Order 436. However, with regard to the allocation of capacity, FERC saw delivery point flexibility as inconsistent with its requirement that the shipper identify the ultimate recipient of the gas, as discussed in the section above. On the other hand, FERC judged receipt point flexibility to be important to achieving the goals of Order 436 because it can enable shippers to "shop around" among suppliers to find the best deal on their gas purchases.

Curtailment priority

Questions arose in all three settlements over which mechanisms would be used to allocate curtailment of service if capacity was insufficient. FERC reiterated that Order 436 establishes no requirements with regard to curtailment, other than the general requirement that it not be unduly discriminatory. Thus, FERC said different mechanisms of allocating curtailment proposed by the pipelines, such as pro rata or last-on first-off, are all consistent with the Order.

However, FERC also identified some mechanisms that are not consistent with the Order because they discriminate among customers. In the Texas Eastern settlement, for example, FERC
required modifications to ensure that interruptible transportation customers were not given lower priority during curtailment than interruptible sales customers. FERC based this on the requirement in Order 436 that self-implementing transportation service should have the same priority in the allocation of capacity as service authorized in the traditional manner. FERC also disallowed a proposal in the Texas Eastern settlement that would have had the effect of giving the self-implementing transportation customers the lowest curtailment priority among interruptible transportation customers.

In addition, FERC clarified that curtailment of interruptible transportation service when the pipeline finds another customer willing to pay a higher rate is allowed under the Order, as long as the original customer was not already paying the maximum rate.

**CONTRACT DEMAND REDUCTION/CONVERSION PROVISIONS**

The contract demand reduction/conversion provisions of Order 436 give pipeline firm sales customers the right to reduce their firm sales entitlements (or contract demand) under eligible firm sales agreements or to convert the firm sales entitlements to an equivalent amount of firm transportation. Order 436 establishes a 5-year schedule for exercising these rights which begins when the pipeline is accepted by FERC as an Order 436 transporter. This schedule is shown in table 4.1.

<table>
<thead>
<tr>
<th>Year</th>
<th>Annual changes</th>
<th>Cumulative reduction/conversion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>2</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>3</td>
<td>20</td>
<td>50</td>
</tr>
<tr>
<td>4</td>
<td>25</td>
<td>75</td>
</tr>
<tr>
<td>5</td>
<td>25</td>
<td>100</td>
</tr>
</tbody>
</table>

Under the Order customers can, therefore, reduce or convert their firm sales entitlements by 100 percent over a 5-year period. Further, the Order allows customers that do not exercise their rights during a given year to exercise them during subsequent years. For example, customers that did not exercise rights during the first 2 years could reduce or convert up to 50 percent of their firm sales entitlements during the third year. However, the right to convert or reduce applies only to a pipeline customer's firm entitlement under service agreements in effect prior to the pipeline becoming a transporter under Order 436.
A major goal of the contract demand reduction/conversion provisions is to enable customers to reduce commitments to buy gas from a pipeline in order to purchase gas from other suppliers. In Order 436, FERC noted that the provisions were essential if the goal of nondiscriminatory access to transportation is to be achieved when pipelines operate under the new transportation rules. With the option, it stated, customers who depend on a single pipeline to provide all their natural gas supplies (full-restrictions customers)--especially small local distribution companies that primarily serve residential and commercial end-users--would have access to competitively priced supplies of natural gas. FERC also believed that the provisions could increase availability of pipeline capacity for new shippers.

Issues arising in settlements

Issues relating to the implementation of contract demand reduction/conversion provisions arose in connection with applications submitted by Northern Natural and Texas Eastern. The issues related to (1) a proposed modification in the timetable established in Order 436 for allowing customers to exercise contract demand reduction/conversion rights and (2) whether the provisions should apply to sales contracts entered into after the pipeline became an open access transporter.

Modification of reduction/conversion rights

In its order on the Northern Natural settlement, FERC approved a minor modification in the contract demand reduction/conversion provisions established in Order 436. Northern Natural's settlement proposed to increase first-year conversion rights by allowing a Northern sales customer to combine its first 2-years' conversion rights into the first year (30-percent conversion in the first year). However, the accelerated right did not apply to reductions. Any conversion rights not exercised by a sales customer during the first year would be permitted during the second year. Thus, the settlement allowed the full 30-percent conversion contemplated by Order 436 within the first 2 years. FERC held that the proposed schedule was consistent with the purpose of the contract demand reduction/conversion provisions of Order 436.

Applicability of the provisions to new sales agreements

In approving Texas Eastern's settlement, FERC permitted Texas Eastern, after receiving a blanket certificate from FERC, to execute new sales agreements with its customers that do not provide the same contract demand reduction/conversion rights as required in "eligible firm sales agreements" covered by Order 436. Instead, customers would receive rights provided by the new sales agreements, which were likely to differ substantially from the rights provided under agreements covered by Order 436.
In its settlement proposal, Texas Eastern called upon FERC to make a finding that sales agreements it planned to enter into with customers after receiving a blanket certificate would not be considered eligible firm sales agreements and, thus would not be required to incorporate the Order 436 contract demand reduction/conversion provisions. The new sales agreements that Texas Eastern planned to enter into differed from the Order 436 provisions in that they did not provide customers with any rights to reduce firm sales entitlements and only allowed customers to convert 50 percent rather than 100 percent of their firm sales entitlement under the agreements to firm transportation.

In evaluating Texas Eastern's settlement proposal, FERC considered arguments from four parties who contended that (1) Texas Eastern had required its firm sales customers to agree to a virtual complete abdication of their contract reduction rights as a condition precedent to Texas Eastern's becoming an open-access transporter and (2) the absence of a firm sales reduction provision meant that no capacity would be made available for firm transportation during the 10-year term of the agreements.

FERC believed that these arguments raised several valid concerns. Nevertheless, it declined to reject the new sales agreements or condition its approval of them as requested. FERC noted its approval of the new sales agreements did not mean that capacity would be made unavailable for firm transportation. It said many of Texas Eastern's firm sales customers had not agreed to execute the new sales agreements and they would therefore have the right that Order 436 gives them to reduce their firm sales entitlements. If they exercise this right and reduce their firm sales entitlements, FERC said capacity would be made available for firm transportation. FERC noted that firm sales entitlements of these customers comprise approximately 10 percent of the total firm sales entitlement to Texas Eastern's capacity.

These four commenters also asserted that Texas Eastern had coerced its firm sales customers to "abdicate" their Order 436 rights as a condition precedent to Texas Eastern becoming an open-access transporter. However, FERC believed the notion that Texas Eastern had coerced the customers into executing the new sales agreements was at best implausible because it did not believe Texas Eastern had the power to do so. FERC stated that the contracts of 6 of the 12 customers that had agreed to execute new sales agreements had already expired and the contracts of the other 6 would expire between April 1, 1987, and November 1, 1989. Assuming that Texas Eastern became an open-access transporter on January 1, 1987, FERC said each of these customers would be able to change its relationship with Texas Eastern before the end of the 5-year phase-in of Order 436 simply by terminating its existing contract. FERC also noted that these companies had substantial power and numerous alternative suppliers. Thus, FERC said it found it difficult to
conceive how Texas Eastern could coerce these customers into accepting the new sales agreements against their will.

OPERATIONAL PENALTIES

In certain situations, pipelines may establish penalties to deter actions by shippers such as their injecting into the pipeline's system more gas than they take out, or taking more gas out of the system than they inject. These actions can cause an imbalance in the pipeline system (i.e., causing too much or too little gas to be in the system) and, thus, cause harm to the pipeline and to others. A pipeline's facilities and operations are such that they can handle gas imbalances within a certain tolerance. However, beyond a certain point the pipeline will have to act to eliminate the imbalance to protect the integrity of the system. Where a shipper's actions cause the pipeline to have too much or too little gas in its system, the pipeline can ask the shipper to adjust injections or takes. However, if the shipper does not honor the request, the pipeline will have to take action on its own. Generally, it will direct suppliers under its control, that is, its own production or the producers or pipelines from whom it buys gas, either to increase or reduce injections. This means that the pipeline will have to deviate from its plans to purchase gas for its sales customers at the lowest reasonable costs and any resulting increase in the pipeline's gas costs will ultimately be flowed through to consumers.

To avoid these results FERC found it reasonable to allow pipelines to impose penalties on shippers to deter this type of behavior. However, FERC also noted that excessively harsh penalties could act as a barrier to entry to open-access transportation.

Issues arising in settlements

In evaluating the settlement offers submitted by El Paso, Northern Natural and Texas Eastern, FERC considered two major issues regarding the reasonableness of the penalty provisions the pipelines proposed: (1) the size of the proposed penalties and (2) the application of penalties. Questions relating to the size of the penalties proposed included whether

-- penalties relating to transportation services should be equivalent to those for sales services,

-- the amounts proposed were excessive, and

-- penalties had to be cost-based.

Questions relating to the application of penalties included whether
-- penalties must apply to all shippers,
-- pipelines can waive penalties for certain customers, and
-- penalty provisions must apply to interruptible as well as
  firm transportation.5

Size of penalties

Issues relating to the size of proposed penalties arose in
connection with FERC's consideration of the settlements submitted
by each of the pipelines. In the Texas Eastern settlement, FERC
addressed the issue of whether pipelines should be able to impose
overrun penalties (i.e., penalties on customers who take more gas
than that to which they are entitled) for transportation services
that are the same as those that apply to sales customers. FERC
decided that Texas Eastern's overrun penalty for transportation
should be less than that for sales.

FERC's decision was based on both the potential harm resulting
from overruns and its concern about high penalties deterring
customers from using transportation services. FERC noted that
overrun penalties for sales service which often range between $10
to $25 per million cubic feet of gas were generally approved during
the gas shortage era of the 1970's when the need to deter overruns
was great (for example, overruns could potentially lead to
termination of service to schools, hospitals, and homes). While
FERC recognized that overruns for transportation service could also
cause harm, it believed the harm was of a lesser magnitude. FERC
also stated that because the open-access transportation program it
was establishing is new, it was unable to determine precisely what
size penalty was needed to meet its objectives of deterring harmful
conduct while not deterring shippers from engaging in beneficial
conduct—the use of transportation services.

Because of this uncertainty FERC decided the best course of
action was to establish a low overrun penalty that could be
increased later, if necessary. Along these lines, FERC took action
to reduce the size of penalties proposed by both Texas Eastern and
Northern Natural to bring them in line with penalty provisions it
had approved in El Paso's settlement proposal. Essentially, El
Paso's penalty provisions include penalties for overtakes and

5Other issues FERC addressed included how much notice customers
should receive before penalties are imposed; how long shippers
should have to correct imbalances; and whether penalties should be
imposed where under-deliveries are caused by operational problems
on the system of the entity delivering gas to the pipeline.
over- and under-deliveries exceeding a tolerance of 10 percent or 50 dekatherms,\(^6\) whichever is greater.\(^7\)

FERC decided, however, that pipelines should not be required to limit the size of penalties to costs incurred by the pipeline as a result of over- or under-deliveries as some commenters suggested. In this regard, FERC, in its decisions on the Northern Natural and El Paso settlements, stated that penalties are not intended to compensate a pipeline for costs incurred, but rather they are designed to deter conduct that could have an adverse effect on the efficient operation of the pipeline's system.

**Application of penalties**

FERC also considered issues relating to how pipelines proposed to apply penalties to different services and customer groups. In considering Texas Eastern's settlement proposal, FERC took issue with an overrun penalty that would apply only to some shippers. Instead, FERC required that, consistent with the nondiscriminatory access provisions of Order 436, the penalty be applied to all shippers if it applied to any. Similarly, in its decision on the El Paso settlement, FERC required that if El Paso waived a penalty for one shipper, it must also waive penalty provisions for other shippers on a nondiscriminatory basis.

In its Order approving the Texas Eastern settlement, FERC also required that the pipeline's overrun penalty apply to both firm and interruptible transportation service. In this regard, FERC stated that it could perceive no basis for excusing interruptible shippers from overrun penalties since, with respect to overruns, firm and interruptible service are the same (for example, an overrun by an interruptible shipper will cause harm just as an overrun by a firm shipper does).

**RATE PROVISIONS**

In Order 436 FERC intended that the rate provisions would (along with the access provisions it was requiring) help ensure nondiscriminatory access to transportation services. In this regard, FERC stated that if it designed the rate conditions properly, there should no longer be any real incentive for

---

\(^6\) A dekatherm is equal to 1 million British Thermal Units. A British Thermal Unit is the quantity of heat that must be added to 1 pound of water to raise its temperature 1 degree Fahrenheit from 58.5 to 59.5 degrees Fahrenheit under standard pressure of 30 inches of mercury.

\(^7\) El Paso's overrun penalty allows it to retain excess gas at no cost.
pipelines operating under the new rules it was establishing to deny access to transportation.

Among the rate provisions established by FERC in Order 436 were the following:

-- Costs will be allocated to self-implementing transportation and rates to recover the costs will be based on a projection by the pipeline of the likely volume of gas to be transported. Pipelines are at risk in the event of erroneous forecasts of volume levels.

-- The rates for self-implementing transportation must be volumetric, or tied to the volume of gas actually transported by the customer. The only exception to this requirement is that pipelines are allowed to charge a reservation charge to firm transportation customers.

-- Pipelines are prohibited from requiring a minimum bill or minimum take amount in their contracts for firm service.8

-- Pipelines are allowed to offer discounts to selected customers, as long as the rates are not discriminatory. FERC emphasized in the Order that lost revenue resulting from any discounting offered to one customer or set of customers cannot be recovered through an increase of other customers' rates.

Issues arising in settlements

Various issues were raised in settlements regarding the rate provisions of Order 436. These included issues relating to

-- selective discounting,
-- volume discounts,
-- postage-stamp pricing, and
-- rates for new versus existing customers.

Selective discounting

Commenters in two of the three settlements FERC has approved argued that the selective discounting contemplated in proposed orders should not be allowed. Some commenters also argued that the

8A minimum bill provides that the charge for a prescribed period shall not be less than a specified amount. A minimum take requires that a portion of the contracted amount of gas be taken or paid for, even if not taken.
discounts should not be available to pipeline affiliates without being available to all similarly situated parties.

FERC responded that it had addressed this issue in Order 436 and that it did not see merit in the commenters arguments as to why selective discounting should not be allowed in these settlements. FERC recognized pipelines could abuse the flexibility of discounting selectively to grant a preference to affiliates (which is prohibited), rather than using discounts as a way to beat competition from other suppliers. However, FERC noted that it required pipelines to notify it in the event that they offer a discount to any of their customers, and affected parties should therefore be able to raise objections at that time. FERC also noted that the notification requirements for offering discounts include identifying any corporate relationship between the pipeline and the shipper receiving the discount.

**Volume discounts**

Northern Natural had proposed to give a volume discount to its customers in order to stimulate sales. A commenter objected because the volume at which the discount would take effect was different for customers with minimum bill provisions in their contracts than for other customers. FERC agreed with the commenters that this differentiation was not justified. Since Northern had not yet received authorization to provide this type of service, FERC simply eliminated the rates from the tariff filing.

**Postage-stamp pricing**

In all three settlements, FERC agreed to continue or modify conditions that divided the pipelines' market area into zones, within which the rates would be uniform (i.e., the rates would not vary according to the distance the gas was shipped within the zone). Such a system is referred to as postage-stamp pricing.

In each settlement, commenters objected to this provision, noting that rates should reasonably reflect cost differences under Order 436. FERC responded that costs are not necessarily directly related to mileage within these zones and that a zone-based system adequately meets the standards of Order 436. In addition, FERC noted in the El Paso settlement that calculating mileage-based rates would be impractical for El Paso's system due to the large number of sources within a given area.

In the Northern Natural settlement, however, one FERC Commissioner objected to the use of postage-stamp pricing on the grounds that transportation costs are related to distance within the zones and that FERC had not adequately analyzed the connection. He argued that this meant the settlement discriminated against Canadian producers in favor of Northern Natural's own domestic production, as well as against pipelines that carry Canadian gas.
Rates for existing versus new customers

In the Texas Eastern settlement, commenters challenged the pipeline's proposal to offer some of its existing interruptible customers lower transportation rates than other customers. FERC decided that Texas Eastern had not demonstrated any impacts that this rate differential would have on other customers. To give Texas Eastern an opportunity to do so, FERC remanded the issue to an Administrative Law Judge.
SECTION 5

TRANSPORTATION OF NATURAL GAS UNDER OTHER PROGRAMS
OTHER TRANSPORTATION PROGRAMS

FERC HAS ALLOWED PIPELINES TO TRANSPORT GAS, UNDER CERTAIN CONDITIONS, WITHOUT HAVING TO MEET ALL REQUIREMENTS PERTAINING TO THE ORDER 436 TRANSPORTATION PROGRAM.

THESE TRANSPORTATION ARRANGEMENTS INCLUDE

-- CONTINUING CERTAIN EXISTING TRANSPORTATION PROGRAMS ON A GRANDFATHERED BASIS,

-- OFFERING SERVICES UNDER SECTION 311 OF THE NATURAL GAS POLICY ACT WITHOUT ALLOWING CUSTOMERS TO REDUCE COMMITMENTS TO PURCHASE GAS, AND

-- ALLOWING PIPELINES TO TRANSPORT GAS UNDER TRADITIONAL CERTIFICATION PROCEDURES.

IN ALLOWING THE ARRANGEMENTS FERC HAS HAD TO BALANCE OBJECTIVES OF ENSURING NONDISCRIMINATORY ACCESS TO TRANSPORTATION WHILE NOT DISRUPTING OTHER ARRANGEMENTS THAT ARE CONSISTENT WITH THE PUBLIC CONVENIENCE AND NECESSITY.
OTHER TRANSPORTATION PROGRAMS

FERC has allowed interstate pipelines, under certain conditions, to continue to transport gas without being subject to requirements pertaining to Order 436. In allowing these alternative transportation arrangements, FERC has had to balance objectives of ensuring that producers and end-users have access to pipeline transportation services on a nondiscriminatory basis while at the same time not disrupting transportation arrangements which, while not fully consistent with Order 436 provisions, may be consistent with the public convenience and necessity.

GRANDFATHERED PROGRAMS

In its October 9, 1985, Final Rule on Order 436, FERC established a November 1, 1985, effective date for the nondiscriminatory transportation program that it was establishing. However, FERC also established a transition period during which pipelines could provide services under certain existing transportation programs on a grandfathered basis. The grandfathered-in transactions are not subject to the equal access requirements or the contract reduction/conversion provisions of Order 436.

For example Order 436, as amended, provides that interstate natural gas pipelines that had offered self-implementing transportation services, under section 311 of the NGPA prior to October 9, 1985, could continue that transportation until the earlier of (1) the expiration of the original term of the transportation agreement as it was in effect on the issuance date of the Order, or (2) October 5, 1987.

NEW TRANSPORTATION UNDER SECTION 311

As part of its transition arrangements, FERC has delayed on two occasions the date when the contract demand reduction/conversion provisions established in Order 436 were to apply to new transportation arrangements under section 311 of the NGPA. FERC also subsequently granted waivers to 15 pipelines that further extended their ability to provide new services under section 311 without having to comply with the reduction/conversion provisions. These extensions have allowed the pipelines to provide transportation services under section 311 for 18 months beyond the Order's effective date, without having to comply with its requirements. FERC primarily granted the extensions because the processing of Order 436 applications has taken longer than originally anticipated.

In Order 436 FERC required that as a condition of accepting a blanket certificate or commencing self-implementing transportation
under section 311 after December 15, 1985, interstate pipelines must offer their firm sales customers the opportunity to reduce or convert firm sales entitlements to firm transportation, as called for in the Order. However, in Order 436-A issued on December 12, 1985, FERC extended the effective date for applying the contract demand reduction/conversion provisions to the new section 311 transportation arrangements to February 15, 1986. FERC granted the extension to allow pipelines additional time to adjust their commercial relationships with suppliers and customers so that they could take advantage of opportunities under Order 436, without disrupting transportation of gas during the winter heating season. FERC did not, however, change any of the other Order 436 conditions applicable to services under section 311.

On February 14, 1986, one day before the reduction/conversion provisions were to take effect, FERC issued Order 436-B which extended the effective date until June 30, 1986. The extension was granted to allow pipelines still further time to adjust commercial relationships. In the Order FERC noted that some pipelines had decided to participate in Order 436 transportation and many others were meeting with their customers to determine whether to participate. FERC believed the additional time would allow the pipelines to consider and resolve issues that needed to be addressed for pipelines to decide whether to participate and to file the necessary authorizations. FERC also noted that even though the effective date for the contract demand reduction/conversion provisions was being postponed, new transportation under section 311 was required to be carried out on a nondiscriminatory basis.

While FERC did not extend the effective date for the contract demand reduction/conversion provisions beyond June 30, 1986, it granted waivers to 15 pipelines allowing them to commence or continue services under section 311 without having to comply with the contract demand reduction/conversion provisions. In June 1986, FERC granted waivers to 10 pipelines allowing them to continue offering services under section 311. These services could continue until the earlier of January 1, 1987, or 30 days after the Commission issues an order on the interstate pipeline's rate case settlement or blanket certificate application under Order 436, without having to comply with the reduction/conversion provisions. The waivers were granted so that the pipelines could continue to offer section 311 services while working out arrangements to...

1The 10 pipelines that were granted waivers were Texas Eastern Transmission Corporation, United Gas Pipe Line Company, Transwestern Pipeline Company, Panhandle Eastern Pipe Line Company, Trunkline Gas Company, Texas Gas Transmission Company, Northwest Pipeline Corporation, ANR Pipeline Company, Colorado Interstate Gas Company, and Consolidated Gas Transmission Company.
participate under Order 436. Subsequently, FERC granted waivers to five additional pipelines. In an order issued on December 8, 1986, FERC extended the waivers for the 15 companies to the earlier of May 1, 1987, or 10 days after the Commission issues an order on the individual pipeline’s pending Order 436 settlement or blanket certificate application. On April 17, 1987, FERC further extended the waivers until 30 days after it issues the first order on rehearing on the merits of the individual pipeline’s pending Order 436 settlement or blanket certificate application.

USE OF TRADITIONAL CERTIFICATION PROCEDURES

A major issue facing FERC in approving Order 436 is whether and under what conditions it should allow interstate pipelines to provide transportation services under traditional section 7 certification procedures— as opposed to providing services under the new nondiscriminatory program that it was establishing in Order 436. According to EIA's April 1986 analysis of Order 436, allowing pipelines to offer services under traditional section 7(c) certificates could result in them circumventing the nondiscriminatory provisions of Order 436. However, on the other hand, if FERC unduly restricted the ability of pipelines to provide services under section 7(c) certificates, its new Order 436 transportation program may not truly be viewed as voluntary.

In its May 1985 Notice of Proposed Rulemaking which led to Order 436, FERC asked for public comment on whether it should require all transportation services provided under section 7 of the NGA to be offered on a nondiscriminatory basis. FERC decided, however, not to extend the nondiscriminatory access provisions that it was establishing in the Order to all section 7 transportation certificates. Instead, FERC held that when pipelines chose to transport gas on a self-implementing basis, the services must be provided on a nondiscriminatory basis but that pipelines were also free to seek authorization under its traditional section 7(c) certification for other transportation programs that would not be subject to the nondiscriminatory access conditions established in Order 436.

Following the issuance of Order 436 on October 9, 1985, FERC continued to be confronted with questions regarding the policies it should follow in authorizing transportation services proposed by pipelines applying for certificates under section 7(c). These questions arose in connection with applications submitted by Texas 2Northwest Central Pipeline Corporation, Natural Gas Pipeline Company of America, Northern Natural Gas Company, Transcontinental Gas Pipe Line Corporation, Inc., and MIGC, Inc.
Gas Transmission Corporation (Texas Gas) to provide service to a large number of end-users and Southern Natural Gas Company (Southern Natural) to provide self-implementing transportation service.

Undue discrimination in traditional certificates

Shortly after FERC's issuance of Order 436, Texas Gas filed an application with FERC seeking authority under section 7(c) to provide service to 52 end-users that had previously received service pursuant to either a pipeline special marketing program or a blanket certificate program established under FERC. Effective October 31, 1985, the blanket certificate and special marketing programs were terminated following an order by the U.S. Court of Appeals which found them to be unduly discriminatory.\(^3\) Thus, FERC was called on to decide whether allowing Texas Gas to continue to provide the services would perpetuate the type of discrimination that the court had found to be objectionable and undermine FERC's attempts in Order 436 to eliminate discrimination that existed under programs it had previously authorized.

While FERC recognized the potential for undue discrimination to result if Texas Gas' application was granted, it nevertheless decided to approve the application for a 1-year period. In approving the application, FERC emphasized its view that undue discrimination was not to be considered any more acceptable under individual section 7(c) certificates than under self-implementing transportation programs. However, it noted that no parties had objected to the proposed application even though the proposed certificates continued, virtually in tact, transportation arrangements performed under programs found by the court to be unduly discriminatory. Further, FERC noted that Texas Gas had stated it would not refuse access to other customers who requested service and no allegations of discrimination had been made by Texas Gas customers. Thus, FERC decided to grant the application for 1 year, but stated it would review the services provided by Texas Gas at the end of that period to determine whether Texas Gas had been acting in an unduly discriminatory or anticompetitive manner.\(^4\)

On March 16, 1987, FERC denied an application filed by Texas Gas to transport gas on an interruptible basis for 106 shippers

\(^3\)Maryland People's Counsel v. FERC, 761 F.2d 768 and 780 (D.C. Cir. 1985). See section 1.

\(^4\)FERC also conditioned its approval of the application in several areas such as limiting its request for flexibility in adding delivery and receipt points.
under section 7(c) of the NGA. FERC stated that Texas Gas had not shown that the shippers had actual sources of supply and did not identify all the terms and conditions of service. Thus, FERC believed there was significant potential for unduly discriminatory practices and preferential treatment.

Undue discrimination in blanket certificates

Prior to FERC's issuance of Order 436, Southern Natural had filed an application with FERC to obtain blanket authority to provide self-implementing transportation service to sales customers and other end-users. On March 31, 1986, FERC dismissed the application on the grounds that it was inconsistent with Order 436. In the March 31, 1986, Order FERC reiterated that while pipelines were allowed to file applications for individual certificates under section 7 without having to adhere to provisions established in Order 436, blanket certificate programs were required to meet the conditions and requirements of the Order.

As a result of FERC's Order dismissing its blanket certificate application, Southern Natural filed several applications for individual section 7(c) certificates to provide transportation services. Because of its concern that the applications, when taken together, might indicate that Southern Natural was unduly discriminating in providing customers access to its pipeline system, FERC decided initially to approve the applications for only 90 days while it held a technical conference on issues relating to them.

On September 11, 1986, following the technical conference, FERC extended the certificates for the full duration requested by Southern Natural. While FERC determined that Southern Natural's policy for providing transportation services did not, on its face, appear to be unduly discriminatory, FERC believed that the policy, which was based on "rule of reason" lacked definite standards and could allow Southern Natural to unreasonably discriminate among shippers.

To help ensure that undue discrimination did not result from Southern Natural's transportation policy and its implementation, FERC required Southern Natural to (1) submit to FERC a detailed statement of its policy on providing transportation service and the conditions under which it would provide access to services and (2) maintain a log of requests for service it received and its disposition of them. The log was to be made available to the public at Southern Natural's place of business and submitted in summary form with future applications for transportation authority under section 7(c). FERC stated that requiring the policy statement and the log would help provide it a foundation for subsequent reviews relating to undue discrimination and could be considered in other proceedings addressing the pipeline's
transportation services. In addition, FERC determined that it would no longer generally approve flexibility of delivery and receipt points in a series of section 7(c) certificates in a system-wide program, because such flexibility could increase the potential for competitive abuses. Rather, it said such flexibility in the future would only be available generally under an Order 436 blanket certificate.

Other pipelines

FERC has also required that other pipelines applying for certificates under section 7(c) submit statements of their policy on providing transportation services and maintain logs of requests for transportation service under section 7(c). As of February 1, 1987, nine pipelines (including Southern Natural and Texas Gas) had filed policy statements with FERC. A senior FERC official responsible for issuance of section 7(c) certificates told us that FERC was using the policy statements in connection with its review of applications from the pipelines to provide services under section 7(c).
MAJOR CONTRIBUTORS TO THIS BRIEFING REPORT

Resources, Community, and Economic Development Division,
Washington, D.C.

John W. Sprague, Associate Director
Gerald H. Elsken, Group Director
Richard A. Hale, Assignment Manager
Frank J. Gross, Evaluator-in-Charge
Gerald C. Allen, Evaluator
Thomas E. Clifford, Economist
Delores A. Hemsley, Secretary
Requests for copies of GAO reports should be sent to:

U.S. General Accounting Office
Post Office Box 6015
Gaithersburg, Maryland 20877

Telephone 202-275-6241

The first five copies of each report are free. Additional copies are $2.00 each.

There is a 25% discount on orders for 100 or more copies mailed to a single address.

Orders must be prepaid by cash or by check or money order made out to the Superintendent of Documents.