



# **Deregulating Natural Gas:**

## **The Effect on Tennessee's Gas Systems**

**Kimberly J. Bandy**  
**Senior Research Analyst**

Ethel R. Detch, Director  
Office of Research  
1360 Andrew Jackson Bldg.  
Nashville, Tennessee 37243-0268  
615/532-1111

W. R. Snodgrass  
Comptroller of the Treasury

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## Executive Summary

Tennessee local government-owned gas distribution companies have been significantly affected by Order 636 issued on April 18, 1992, by the Federal Regulatory Commission (FERC) deregulating the sale of natural gas. In this study, staff examines how Order 636 has changed the companies and whether Tennessee's gas companies would benefit by purchasing aggregate gas supplies either through interlocal agreements or through the establishment of state or regional gas authorities.

FERC Order 636, which deregulates much of the natural gas industry, will allow greater competition for local utilities and force the breakup of a monopoly of interstate pipelines. The order required many interstate pipeline companies to offer their customers transportation, storage, and other services separately as part of a "bundled" package by the 1993 winter heating season.

Leading lawmakers of both parties in Congress, unhappy with FERC's cost analysis of the rule, wanted to know how much Order 636 would actually cost or save and the methods of calculation. The congressmen wanted to check the accuracy of an analysis released in May 1992 by FERC's Office of Economic Policy estimating fiscal benefits of up to \$40 billion from implementation of the order. The General Accounting Office was called in to independently analyze the rule. Their report, *Natural Gas: Costs, Benefits, and Concerns related to FERC's Order 636*, was released in November 1993. (See pp. 25-26.)

The most important provision of Order 636 requires "unbundling" or the separation of U.S. gas pipeline sales and transportation services. The principal purpose of Order 636 is to place the pipeline merchant service on a comparable basis with any other supply services available from producers and marketing companies. The rule was designed to foster broad competition in gas supply from a host of potential new suppliers, marketers, and transporters.

With unbundling the options and choices for gas services have multiplied. Consequently, the basic provisions in FERC Order 636 have dramatically affected operations and increased costs for the small public-owned local distribution companies (LDCs). Small LDCs now have the option to purchase gas directly from producers or continue purchasing from the pipeline, whichever they determine is in their best interest. The LDC must notify the pipeline during the restructuring proceedings if it wishes to retain, reduce, or terminate its contract with the pipeline.

Because of the restructuring mandated in Order 636, it is possible that Tennessee could benefit either from a gas authority similar to those established in other states or from other types of joint-purchase agreements.

The goal of gas authorities is to provide local governments with a low cost, reliable source of natural gas and assist them with gas system operations.

The report contains the following conclusions:

**1. Order 636 requires pipelines to restructure existing contracts with customers. The long-term service agreements have been replaced by private contracts with gas suppliers and producers.** Before FERC Order 636, Tennessee cities, under single service contracts, bought their gas and had it transported by the pipeline. However, as of May 18, 1992, the effective date of the order, these long-term bundled contracts are subject to restructuring. The pipelines have essentially been taken out of the merchant or sales business. The cities now have to execute two separate contracts, one with a gas supplier and another with the pipeline for transportation. However, most Tennessee cities are captive—only one pipeline serves the area—meaning they really have no choice of suppliers. As a result, Tennessee’s smaller cities will be competing in the open market with the larger cities and industries for the more economical contracts or paying the prices the pipelines will charge for continued reliable service. In this new open market environment, it is unlikely that the small cities with access to one pipeline will enjoy the benefits of comparability. (See pp. 7-8.)

**2. Order 636 will dramatically increase costs for small public-owned gas systems.** There will be considerable cost increases when the LDCs restructure their existing bundled contracts to unbundled separate contracts. The order allows pipelines to recover 100 percent of the transition costs including unrecovered purchased gas costs, costs of altering supply contracts, and the physical costs to change and improve their systems to meet the demands of Order 636. It is estimated these costs will be passed down to the consumers which will sharply and unfairly increase costs for residential and small business consumers in every part of the country. (See pp. 18-24.)

**3. Under Order 636, small public systems will be responsible for all of the gas purchasing and transportation decisions for their cities that the pipelines performed for them in the past.** A large majority of Tennessee public-owned gas systems lack the administrative and marketing personnel to handle the new management responsibilities of FERC 636. In the past, the pipelines managed gas purchasing and transportation decisions for the cities. Now these responsibilities will shift to the cities. However, the small LDCs lack the expert personnel to negotiate rates and services with the major players in the industry. This is especially detrimental considering the small LDCs have no direct access to the natural gas market. (See pp. 16-18.)

**4. FERC Order 636 has a number of provisions relating to supply reliability—such as curtailment, capacity releasing, pregranted abandonment, and storage facilities—that will immediately affect small public gas system operations.** The small gas systems that are customarily referred to as low load users because of their seasonal usage will be especially vulnerable to the questions of economical supply in this new deregulated environment. Small gas systems will be faced with the prospect of entering into long-term non-competitively priced contracts to secure the constant supply they require. (See pp. 8-16.)

## Recommendations

Policymakers in Tennessee should consider developing one or more authorities or joint action cooperatives that would benefit the small public-owned gas systems who will experience substantial cost increases in this new open market environment. As a result of the restructuring mandated in Order 636, Tennessee might benefit from a gas authority similar to those established in Georgia, Florida, Louisiana, and Illinois. Currently, the LDCs receive no reward for taking risk and lowering gas cost. However, the goal of these authorities is to provide the cities a low cost, reliable source of natural gas and assist the cities with gas system operations. The authorities centrally purchase gas, using tax-exempt revenue bonds or the dues from their member cities, to aggregately purchase gas supplies for member cities at a lower rate than if purchased by the individual local governments. As a result, the authorities, as large load purchasers, are much stronger players in the market than the individual cities. Several Tennessee state statutes already give cities the authority to issue tax-exempt bonds and jointly purchase gas. (See pp. 32-34 and 38-40.)

Interlocal agreements could provide similar advantages. The primary purpose for the formation of the joint purchasing authorities is to offer cities a firm, reliable source of natural gas at economical prices. These authorities provide total gas management for their cities by simplifying the contract agreements. They also have the expert personnel to negotiate the contracts and handle the administrative burdens that have shifted to the LDCs as a result of the “unbundling of services.” The authorities individually package the services for the cities so they will not have to pay exorbitant prices for each “unbundled” service. The local governments then have one contract with the authority for gas and transportation. Officials of other states, interviewed for this report, saw that the small public-owned gas systems because of their relative size and volatile usage pattern were particularly vulnerable to the potential cost escalations in the new deregulated environment.



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# Introduction

## Purpose

In Tennessee there are 125 public-owned and 113 private-owned local distribution gas companies that provide customers with natural gas.<sup>1</sup> (See Appendices 2,3, and 4.) Staff examined the impact of Order 636 on Tennessee public-owned gas distribution systems and consumers to help policymakers determine whether Tennessee needs to establish a gas authority and to determine any problems with its plan or implementation.

## Methodology

The conclusions reached in this report are based on the following:

1. A review of documents obtained from the American Public Gas Association (APGA) May 1992 seminar on the *Federal Energy Regulatory Commission's* (FERC) Order 636.
2. Interviews with persons having expertise in the natural gas industry. (See Appendix 5).
3. A review of the Code of Federal Regulations, Part 284.
4. A review of the statutes establishing the creation of the Georgia Municipal Gas Authority.
5. A review of Georgia Municipal Gas Authority's annual reports.
6. A review of magazine and journal articles about Order 636.
7. A review of *pipeline* service obligations under Order 636.
8. A review of a Costs and Benefit analysis completed by FERC's Office of Economic Policy.
9. A review of preliminary planning procedures completed by the General Accounting Office (GAO) to examine the impact of Order 636.
10. Information received from news reports and newspaper clippings.
11. A review of state statutes pertaining to the local government's authority to purchase gas.
12. Interviews with several consumer groups.
13. A review of the Municipal Gas Authority of Florida's *service agreements* and bylaws.
14. A review of the Illinois Municipal Gas Agency's gas sales contract.
15. A review of the General Accounting Office (GAO) report on the costs of Order 636.

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<sup>1</sup> The term "public-owned" in this report collectively refers to gas systems that are owned by local governments and operated by a city, county, municipality, or utility district.

## Background

Understanding the issues surrounding the Federal Energy Regulatory Commission's (FERC) Order 636 requires a basic knowledge of the natural gas industry. The gas industry has three primary segments: production, pipeline delivery, and local distribution. *Producers* gather gas at the *wellhead* (the point at which natural gas comes out of the ground to be sold to pipelines), and sell it under contract to the pipelines, which deliver gas to various markets. A pipeline may sell the gas directly to a large end-user (such as an industry) or to a *local distribution company (LDC)*, which in turn delivers it to an end-user (typically a residential or commercial customer).<sup>2</sup>

Historically, pipelines served as gas merchants buying gas at the wellhead and selling it at the *city gate* (the point at which the pipeline's connection meets the city's) to LDCs. *Transportation* and merchant functions became completely intertwined, at least partly because of regulatory decision. This bundled sales service was reliable and little competition existed among the gas suppliers.

Non-pipeline gas merchants argued that the transportation of their gas supplies was not comparable to the pipelines' sales and/or transportation *bundled services*—particularly during *peak periods*. These merchants could not buy at one place and one time the transportation service needed to replace the service embedded in the pipelines' bundled sales service. This hindered their ability to sell on a long-term basis.

Pipelines argued that they could not improve existing transportation services because pervasive federal regulations had locked them into almost permanent sales obligations. As a result, pipelines couldn't offer long-term contracts for *firm* gas at competitive prices, and without access to equal firm transportation neither could non-pipeline merchants.

LDCs argued they could not convert existing sales service to transportation because that transportation may not be as reliable as existing pipeline bundled sales service during peak periods. In addition, LDCs have been concerned that they would lose transportation *capacity* (i.e., reserved space) at the end of their contract with the pipeline if they convert from firm (guaranteed) sales to firm transportation.<sup>3</sup>

A gas consumer cannot easily bargain directly with a producer without first arranging a transportation agreement with a pipeline. This is

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<sup>2</sup>Ronald R. Brauetigam, "Deregulation of Natural Gas" in *Case Studies in Regulation: Revolution and Reform*, ed. Leonard Weiss and Michael W. Klass. (Boston: Little, Brown & Company, 1981), pp. 144-45.

<sup>3</sup>*Pipeline Service Obligations and Revisions to Regulation Governing Self-Implementing Transportation; and Regulation of Natural Gas Pipelines after Partial Wellhead Decontrol*, Order No. 636, 18 CFR Part 284, Federal Register, Vol. 57, No. 74 (April 16, 1992) p. 13269.

partly because of the natural logistical advantage pipelines have in arranging gas sales since most producing fields are connected to only one pipeline. In addition, pipelines generally own the gas they ship and, as a result, are not considered “common carriers” such as airlines or trucks.

The commission is attempting to address these issues with Order 636 by equalizing the transportation of gas sold by pipelines and other gas sellers. In addition, the commission is providing a means to recover all of the costs of restructuring existing gas supply contracts. Finally, the commission is providing for a “*no-notice*” transportation service in response to those who have expressed concern about reliability during peak periods.

The commission believes that to improve the competitive structure of the gas industry and provide reliable service it is important to give all gas purchasers (LDCs and end-users such as industries and gas-fired electric generators) the ability to make market-driven choices about the price of gas as a commodity and about the cost of delivering the gas.<sup>4</sup> A background of the deregulation of the natural gas industry from 1928 to 1992 is shown in the following exhibit.

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## **Background of the Deregulation of the Natural Gas Industry 1928-1993**

- 1928** Congress directed the Federal Trade Commission (FTC) to investigate electric and gas utilities. Until now, state and local regulators had no power to control the prices local distributors paid for gas imported from other states.
- 1935** The FTC issued the Federal Power Act declaring “that the business of transporting and selling natural gas for ultimate distribution to the public is affected with public interest, and that Federal regulation in these matters ...is necessary in the public interest.”
- 1938** Congress enacted the ***Natural Gas Act*** (NGA) as a result of the FTC report because it “considered that the natural gas industry was heavily concentrated and that monopolistic forces were distorting the market price for natural gas.” The NGA brought the interstate transmission of natural gas and its sale under the authority of the Federal Power Commission (FPC).  
The two central features of the NGA-regulated natural gas industry were commission-determined just and reasonable prices;

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<sup>4</sup>Ibid., p. 13269.

and interstate pipeline sales of gas for resale to LDCs at prices which bundled into one package the pipelines' gas supply and transmission costs. The theory was that government could control the consumer price by regulating the interstate pipeline companies and the prices at which they sold gas to the local distribution companies (LDCs).

**1954**

FPC began to regulate gas producer prices as a result of the famous case, *Phillips Petroleum Company v. Wisconsin et al.* Phillips, at the time, was the largest of the independent gas producers. After Phillips raised the price of its natural gas, the State of Wisconsin along with several other large cities complained to the FPC. Wisconsin consumers felt Phillips had monopoly power in the market for gas sales to pipelines, and were concerned this power led to excessively high gas prices at the wellhead and in turn for the consumer. The Supreme Court ruled the Phillips' sales to pipelines intending resale fell under the NGA. The *Phillips* case required Federal regulation of interstate wellhead prices. This allowed the FPC to determine the reasonableness of prices for gas sold by Phillips. In making this decision the Court noted that the protection of consumers from exploitation by natural gas companies was the primary aim of the NGA.

**1978**

Congress enacted the **Natural Gas Policy Act** (NGPA). This legislation marked the culmination of an extended debate over wellhead price regulation. The control of wellhead price regulation was transferred to the Federal Energy Regulatory Commission of the Department of Energy with the signing of the Department of Energy Reorganization Act of 1977. The NGPA changed the rates established by the commission to allow a more competitive wellhead market and to provide investors with adequate incentives to develop new sources of supply. This began the decontrolling of wellhead prices of natural gas.

**1985**

FERC adopted Order 436. This order instituted **open access transportation** to permit LDCs and industries to buy gas directly from gas merchants in the production area and to ship that gas on the pipeline. The primary purpose of open access regulation was to promote competition for interstate pipeline sales and to create conditions under which gas customers could purchase gas at the lowest cost available in the marketplace. This order also provided an alternative to buying gas from the pipelines' bundled sales service. Customers were able to buy gas on the **spot market** from other suppliers at cheaper rates and transport it on the pipelines.

This resulted in pipelines and gas merchants becoming direct competitors in the sale of gas to LDCs and industries.

- 1989** Congress enacted the Decontrol Act to repeal any remaining price controls on sales of natural gas in order to obtain more abundant gas supplies at lower prices. However, this bill did not deregulate interstate natural gas pipelines. The pipeline's obligation to serve its customers arises out of the NGA and is not affected by the decontrol of gas sales under the NGPA.
- 1992** FERC issued Order 636, known as the Restructuring Rule, requiring interstate natural gas pipelines to "unbundle" or separate their transportation services from sales services to clear the way for greater competition in the natural gas industry.
- 1993** Pipelines to be in compliance in time for the 1993-94 winter heating season.
- Sources:** Federal Register, Rules and Regulations, Vol. 57 No. 74, April 16, 1992.  
Ronald R. Brauetigam, "Deregulation of Natural Gas" in *Case Studies in Regulation: Revolution and Reform*, ed. Leonard Weiss and Michael W. Klass. (Boston: Little, Brown & Company, 1981), pp. 141-187.
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## Federal Energy Regulatory Commission (FERC)

The Federal Energy Regulatory Commission (FERC) is located within the U.S. Department of Energy in Washington, D.C. It sets rates and charges for the transportation and sale of natural gas. The commission is headed by five presidential appointees.<sup>5</sup> On July 31, 1991, FERC issued *MEGA-Notice of Proposed Rulemaking (NOPR): Pipeline Service Obligations and Revisions to Regulations* calling for the complete restructuring of interstate natural gas pipelines.<sup>6</sup> The notice was the result of a public conference held on May 10, 1991, where members of the natural gas industry discussed the role of the natural gas pipelines in the natural gas market with the commission. On April 8, 1992, the commission issued a final rule on restructuring—Order 636, adopting specific regulations to implement the pipeline restructuring identified in the *MEGA-NOPR*.<sup>7</sup> FERC's Order 636 became effective in the fall of 1993.<sup>8</sup>

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<sup>5</sup> Lesko, Matthew, ed., *Information U.S.A.*, Viking Penguin Inc., 1986, p. 550.

<sup>6</sup> *Pipeline Service Obligations and Revisions to Regulations Governing Self-Implementing Transportation Under Part 284 of the Commission's Regulations*, Docket No. RM91-11-000.

<sup>7</sup> *Pipeline Service Obligations and Revisions to Regulations Governing Self-Implementing Transportation Under Part 284 of the Commission's Regulations*, Order 636, April 8, 1992.

<sup>8</sup> *Ibid*, p. 207.

Order 636, also known as the restructuring rule, makes significant changes to the structure of the services provided by the interstate natural gas pipelines. The changes are intended to ensure that pipelines provide transportation service that is equal in quality for all gas suppliers, whether the customer purchases the gas from the pipeline or from another supplier.<sup>9</sup> The commission's primary aim is to improve the competitive structure of the natural gas industry and, at the same time, maintain an adequate and reliable service at a reasonable price. In brief, the order requires pipelines to “unbundle” or separate their sales services from their transportation services.

### **Basic Components of FERC Order 636**

The commission concluded that the previous form of bundled pipeline services was discriminatory and anticompetitive. Order 636 attempts to remedy this discrimination by providing all gas sellers with the same opportunity to compete for gas purchasers. The most important provisions of Order 636 require sales *unbundling*—pipelines must separate sales from transportation customers including those who buy from the pipeline. The rule also requires transportation unbundling—pipelines must split transportation service into component parts as far as practicable. For example, services such as gathering, processing, transportation, *storage*, and *load* balancing are to be made available as individual services to customers.

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<sup>9</sup> Information obtained from a *Fact Sheet* summarizing Order 636 issued by the Division of Public and Intergovernmental Affairs of the Federal Energy Regulatory Commission (FERC); hereafter referred to as *Order 636 Fact Sheet*.

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## Analysis and Conclusions

Before Order 636, Tennessee LDCs purchased gas in a “bundled” form. Under bundled service, a customer, such as a small town or its LDC, was able to sign a single contract with a pipeline for gas and transportation. All costs for the purchase of the gas and the transportation were included in this single contract. This usually meant that the LDCs were locked into existing long-term contracts with the pipelines. Bundled service is now prohibited, and towns or their LDCs will have to sign separate contracts for each service they want. This is a radical change from the past, when many LDCs relied entirely on the pipelines to supply all the gas that was needed.

(To simplify the discussion, local distribution companies (LDCs) will be the global term used to describe anyone who buys gas from a gas producer or a pipeline and sells the gas locally to residential or commercial users. An LDC can be either government or private investor-owned. A public-owned LDC is a nonprofit entity, such as the First Utility District of Tipton County in Covington, Tennessee. A private-owned LDC is owned by stockholders who have a profit motive that the public-owned suppliers do not.)

### Restructured Contracts

As of May 18, 1992, the effective date of the rule, all existing contracts LDCs had with the pipelines became subject to renegotiation. The long-term single service agreements had to be replaced with private contracts with gas suppliers and pipelines. LDCs had to alter and restructure contractual relationships that took years to establish.<sup>10</sup>

Before deregulation, Tennessee cities relied on the pipeline to provide gas supplies. Gas delivery was simple: the cities contacted the pipeline, the pipeline bought the gas, and the customer paid the bill. Now the cities must negotiate two separate contracts; one with the pipeline for transportation and the other with the producers for supply. Bob Cave, APGA Executive Director, describes a large majority of the small towns in Tennessee as “captive”—meaning only one pipeline serves the area. According to Cave, some pipelines will continue to offer bundled sales services, but it will be costly.

Some LDCs have chosen to assign their rights to the pipelines to continue purchasing their gas supplies. FERC has suggested that LDCs concerned about the security of supply negotiate “evergreen” or roll-over contract clauses with their suppliers. These clauses permit an LDC to extend contract terms at its option thereby continuing the pipeline’s service

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<sup>10</sup> Everett S. Gibbs, “U.S. Independents Face New Age for Gas Under FERC Order 636,” *Oil & Gas Journal*, Oct 19, 1992, p. 58.

obligation. According to Jim Choukas-Bradley, attorney for the APGA, the pipeline is in a superior position to the LDCs, because most cities have no easily accessible alternatives for gas supplies. “The LDCs are not gaining anything with these evergreen or rollover clauses,” he stated. “It is a right that is granted to them by the pipelines at their discretion.”

The explicit purpose of FERC Order 636 was to create “a regulatory environment whereby gas purchasers and gas sellers can structure their relationships as much as possible by private commercial contracts after the initial transition.” In other words, regulation will no longer dominate business relationships in the natural gas industry. This fundamental change is a serious concern for LDCs with public service obligations.<sup>11</sup>

### **Pregranted Abandonment**

Order 636 also provides automatic *pregranted abandonment* of expired sales, and *interruptible* and short-term firm transportation contracts.<sup>12</sup> In other words, the pipeline will have no obligation to continue sales or short-term transportation at the end of the contract.<sup>13</sup> Interruptible service is typically offered to industrial or commercial users who choose to pay lower rates for less secure service and who may have alternative sources of energy. This type of service may be interrupted regardless of contracts between the buyers and the sellers or may be reduced if there is an unexpected change in temperature and additional supply is needed for residential customers. Firm service refers to service typically given to residential customers who need a constant reliable service for essential heating and cooking needs.

The pregranted provision is designed to allow pipelines to abandon non-transportation responsibilities upon expiration of the contractual term or upon termination of individual sales agreements without seeking approval from the commission on a case-by-case basis.<sup>14</sup> There was a large outcry from LDCs, consumer advocates and others, but FERC did not change its stance. The commission explained that a “continuing service obligation is no longer necessary to ensure LDC access to gas supply.”<sup>15</sup> It comes down to a

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<sup>11</sup>John P. Gregg, “Get Your Mind Right! Gas Supply Contracting Without a Safety Net” (includes related articles on gas supply contract clauses), *Public Utilities Fortnightly*, October 1, 1992.

<sup>12</sup> Gibbs, p. 59.

<sup>13</sup>The Office of Economic Policy within FERC released “*Costs and Benefits of the Final Restructuring*” (Order 636) in Spring 1992.

<sup>14</sup>*Order 636 Fact Sheet*, p. 2.

<sup>15</sup> The information was obtained from Section 4 of an American Public Gas Association (APGA) Order 636 Conference Notebook. The APGA presented a seminar on May 11-12, 1992, in Nashville, Tennessee entitled, “FERC’s Final Rule Order 636: The Future of Unbundled Pipeline Service: LDC’s in the Gas Supply Marketplace.” This notebook contained a copy of the *FERC Order No. 636 Final Rule, Docket No. RM91-11-000, 57 Federal Register, April 16, 1992* and a summary of each major section within 18 Code of

question of whether public convenience and necessity require continuation of pipeline service obligations.

### **Gas Producer Contracts**

FERC also requires the pipelines to terminate or restructure their contracts with the producers to achieve market-based rates.<sup>16</sup> Basically, producers will be reimbursed for cancellation of contracts and contract revisions as a result of pipelines having to reform or terminate existing supply contracts.<sup>17</sup> It is logical to assume these costs will be passed down from the pipeline to LDCs and eventually to residential customers. Choukas-Bradley believes that the producers are the real winners under Order 636 because this new order has given them access to a previously closed market. Producers are now allowed to contract directly with LDCs or end-users in this open marketplace.<sup>18</sup>

### **Pipeline Sales and Open Access Transportation**

The commission has stated that with the unbundling of services, customers can now make more informed choices among various transportation services and the costs associated with them.

Order 636 states that pipeline sales will be unregulated. The price of gas sold by the pipeline will be negotiated by the pipeline and its various customers. Pipeline transportation services will continue to be regulated. The order requires pipelines to provide open access transportation services of equal quality for all gas supplies whether purchased from the pipeline or elsewhere.<sup>19</sup> In addition, Order 636 requires pipelines to provide access to firm and interruptible storage on an open-access contract basis.

FERC requires pipelines to restructure existing *sales contracts*. Under Order 636, pipelines' bundled sales services obligations will be converted to firm transportation obligations. Pipelines will primarily be common contract carriers with a large variety of customers.<sup>20</sup> Some, however, will continue to offer sales service separate from distinct transportation service. FERC promulgated new regulations requiring pipelines not to give themselves or their marketing affiliates any preferences, although now pipelines will be competing directly with other sellers. As

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Federal Regulations Part 284. This reference hereafter will be referred to as *APGA Order 636 Conference Notebook*.

<sup>16</sup>*APGA Order 636 Conference Notebook*, Section 3 "Transition Costs," p. 2.

<sup>17</sup>Gibbs, p. 62.

<sup>18</sup> Telephone Interview with Mr. Jim Choukas-Bradley, with the law firm Miller, Balis, & O'Neil, P.C., October 10, 1992. His firm represents the American Public Gas Association (APGA). He also represents Clarksville, Tennessee, at FERC proceedings.

<sup>19</sup> FERC Order No. 636 "Final Rule," Docket No. RM91-11-000, 57 Federal Register, April 16, 1992, p. 13282.

<sup>20</sup> Telephone Interview with Joe Ramsey, Tenneco (Tennessee Pipeline), Houston, Texas, November 4, 1992.

merchants in this new environment, pipelines will be the functional equivalent of marketing affiliates.<sup>21</sup>

Pipelines now have flexibility in changing customers. According to Tom Mulkey, President and General Manager of the Georgia Municipal Gas Authority, under Order 636 pipelines can sell to anyone—not just former contractual customers—at market-based prices. They will be governed by new “blanket certificates” rather than individual certificates. This will allow them to offer unbundled firm and interruptible sales service at market-based rates. Existing sales certificates will be converted to new blanket certificates. This form of regulation will enable the pipelines to compete directly with other gas sellers on the same terms at prices determined in a competitive market. The unbundled sales service is subject to pregranted abandonment, meaning that there is no obligation to continue services at the end of the contract.<sup>22</sup>

The open access requirement ensures producers and marketers that they will be provided with sufficient pipeline access so that consumer choices are not impacted by the pipeline’s facility and service infrastructure.<sup>23</sup> With open access transportation, LDCs can choose among alternative suppliers, including the pipeline, to meet future gas requirements.

Order 636 amended the commission’s regulations to define transportation as including storage. This means the pipelines must offer their customers firm and interruptible storage on an open-access, contract basis. Before Order 636, pipelines reserved most of their storage to meet the demands from their sales customers. As sales dropped, pipelines tended not to use their storage efficiently and customers could not use storage to ensure reliability. With unbundling, storage must be offered as a separate service giving customers access to more alternatives.

Order 636 also requires pipelines to provide timely and equal access to all information necessary for buyers and sellers to arrange for capacity reallocation and also requires that this information be posted on an *electronic bulletin board* accessible to all users.<sup>24</sup> They must keep daily back-up records of the information displayed for at least three years and must permit users to review those records. Stephen Brown, Chief of the Iowa Utilities Board, states, “It’s just like letting one person cut the cake while others choose which piece they want.”<sup>25</sup>

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<sup>21</sup> FERC Order No. 636 “Final Rule,” Docket No. RM91-11-000, 57 Federal Register, April 16, 1992, p. 13296.

<sup>22</sup> Ibid., p. 13295.

<sup>23</sup> Gibbs, p. 1.

<sup>24</sup> Docket No. RM91-11-002, p. 67.

<sup>25</sup> Stephen Brown’s remarks were contained in his article, “The Sine Qua Non of Order 636: Cooperative Competition, Information Flow, and Rate Design,” *Public Utilities Fortnightly*, September 15, 1992, p. 19.

## No-Notice Service

FERC regulations state that pipelines must provide no-notice service to LDCs enabling customers to receive previously unrequested gas amounts to meet unexpected demand caused by weather changes.<sup>26</sup> According to Joe Ramsey with Tenneco Pipeline, no-notice service was an afterthought of FERC because the LDCs had expressed concern about service reliability during peak winter months. He added that FERC provided no guidance as to how the pipelines could perform this service. Several pipelines have asked FERC to clarify the nature and definition of no-notice transportation because the commission has not adopted provisions providing for the necessary gas supply.

Historically, most pipelines have served peak customer demand by drawing gas out of the system storage. Under Order 636 pipelines would no longer have system gas supplies, so no-notice gas would have to be provided through other arrangements. FERC would allow pipelines to borrow gas from customer storage or retain some storage for spare gas to cover shortages without notice.<sup>27</sup>

No-notice service is a *transportation* service, not a *supply* service, although the concept is “gas on demand.” This gas can be purchased from the pipeline or from any other gas seller. FERC has left it up to each pipeline and its customers to figure out where the gas and the capacity will actually come from when a customer uses no-notice service. Pipelines and their customers must determine whether any transportation penalties will apply to no-notice service and, if any, which ones.<sup>28</sup>

Pipelines are required to offer no-notice transportation service only to customers that were entitled to receive no-notice firm sales service on May 18, 1992.<sup>29</sup> Pipelines that did not provide such service before that date are strongly encouraged by the commission to offer it on a nondiscriminatory basis. The pipeline’s sales customers must inform the pipeline in the restructuring proceedings what form of transportation service they want.<sup>30</sup>

Byron Kelly, Vice President of Marketing and Supply Services for Tenneco Gas in Houston, stated, “No-notice service would work to an extent, but customers should rely on it only for unexpected situations—not for handling everyday demand swings. If you ask somebody to provide you a contract without obligation but with the right to take huge quantities when

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<sup>26</sup> FERC Order No. 636 “Final Rule,” Docket No. RM91-11-000, 57 Federal Register, April 16, 1992, p. 13286.

<sup>27</sup> A.D. Koen, “U.S. Gas Pipelines Preparing for life under FERC Order 636,” *Oil and Gas Journal*, July 6, 1992, p. 23.

<sup>28</sup> *APGA Order 636 Conference Notebook* Section 2, “No-Notice Service,” p.1.

<sup>29</sup> Docket No. RM91-11-0002, p. 2.

<sup>30</sup> *Ibid*, p. 138.

you need it, that gas is not going to be inexpensive.” He added that one of the biggest misunderstandings among LDCs is that they have assumed that with no-notice service they could take as much gas as they want whenever they want it. However, pipelines say that when LDCs take no-notice gas they must contact their suppliers and start putting replacement gas in the system within 24 to 48 hours.<sup>31</sup>

No-notice service is an optional transportation service for customers. It will most likely cost more than regular firm transportation because no-notice service may include the costs of managing *imbalances*. An imbalance is the difference in the amount of gas the supplier or producer delivers to the pipeline for transportation purposes and the amount the customer actually takes (i.e., excess gas temporarily stored in the pipeline system). No-notice service is the commission’s version of an insurance policy to secure a pipeline’s obligation in the event other parties fail to supply the contracted gas or the LDC fails to nominate sufficient quantities.<sup>32</sup>

Elton Clark with First Utility District of Tipton County commented that this service under Order 636 is essentially the same service they had in the past, but it will cost more because of the separate contract now required with the pipeline for the transportation services.<sup>33</sup> Clark added he has already seen increased gas transportation prices as a result of Order 636. When asked whether this no-notice service will be beneficial for his companies, Jerry Amos, a lawyer who represents United Cities Gas and Nashville Gas, stated, “For small LDCs, no. For larger LDCs, yes, because they will be able to negotiate the better rates.”<sup>34</sup> Ben Andrews, with Smyrna Natural Gas Systems, stated he did not see how the residential rates would be kept low under this no-notice service. Small LDCs, he said, could subsidize costs from large industrial customers to avoid significant rate increases for residential customers, but industries will also be competing for better rates.<sup>35</sup>

In spite of the criticisms and the charges by several petitioners (e.g., the American Public Gas Association) that the no-notice transportation service is hypothetical or untested, the commission believes the pipelines can provide a reliable no-notice transportation service. The commission believes

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<sup>31</sup> Quoted in A.D. Koen, “U.S. Gas Pipelines Preparing for life under FERC Order 636,” *Oil and Gas Journal*, July 6, 1992, p. 23.

<sup>32</sup> Gibbs, p. 59.

<sup>33</sup> Telephone Interview with Mr. Elton Clark, Tipton, Tennessee Utility District, November 16, 1992. He presented the small LDC perspective on Order 636. This utility district primarily serves rural residential customers and small commercial businesses.

<sup>34</sup> Telephone Interview with Mr. Jerry Amos, of Brooks, Pierce, McClendon, Humphrey, and Leonard, Attorneys at Law, November 17, 1992. His firm represents United Cities Gas and Nashville Gas. He gave the private distribution companies perspective on Order 636.

<sup>35</sup> Telephone Interview with Mr. Ben Andrews, Smyrna Natural Gas Systems, November 10, 1992.

the service is superior to the previous no-notice bundled sales service because gas purchasers will be able to obtain the service for gas supplies purchased from any gas seller, not just from pipelines.<sup>36</sup>

### **Capacity Reallocation**

Under Order 636, LDCs will have to contend with capacity (i.e., reservation space) releasing, formerly referred to as capacity brokerage. When the LDC contract is nearing expiration, the pipeline may seek offers from other persons interested in receiving the transportation. This *capacity releasing* program permits resale of excess capacity to those desiring capacity on a temporary or permanent basis through the use of an electronic bulletin board.<sup>37</sup> If several offers are received, the pipeline will accept one of the offers if the existing customer chooses not to match its terms. The pipeline will then present this offer to the existing customer, who will continue to receive the transportation service upon matching the terms of price and contract duration. Some parties assert that bidding wars will result in excessively tying up capacity, contrary to the goals of Order 636, while others fear the pipeline affiliates could artificially bid up the transportation rate.

Prior to Order 636, an LDC that held firm transportation capacity on a pipeline could temporarily “broker” that capacity to another party when the LDC had no use for the capacity. It was tantamount to subletting an apartment, and was attractive to LDCs for two reasons: first, it gave them an opportunity to pass the capacity costs on to the brokeree, and second, LDCs were usually able to broker directly to industrial end-users on their systems.<sup>38</sup> William Boswell, Vice President, General Counsel, and Secretary of the Peoples Natural Gas Company in Pittsburgh, surmises that FERC did away with capacity brokering because the commission was uneasy about granting so much control to the LDCs (outside of FERC review) over interstate pipeline capacity. Now instead of capacity brokering there is capacity releasing.

According to Boswell, under 636, when the LDC desires to find another “home” for unneeded capacity it may designate its party of choice to receive the capacity. However, unless that party is willing to match any higher bids it will not get the space. Under 636, the LDC may not automatically broker to the party of its choice. Instead, it must inform the pipeline of the available capacity and let the pipeline find another party

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<sup>36</sup> FERC Order No. 636 “*Final Rule*,” Docket No. RM91-11-000, 57 Federal Register, April 16, 1992, p. 13286.

<sup>37</sup> *Order 636 Fact Sheet*, p. 2.

<sup>38</sup> William Boswell, “The New Competitive Monopoly: A Thundering Silence,” *Public Utilities Fortnightly*, October 1, 1992, p. 28.

willing to take it. Ultimately then, under 636, the pipeline gets to decide what constitutes the “best offer,” further restricting the LDC’s ability to provide a needed service to end-users.

The commission’s aim in Order 636 was to ensure against the inefficient or necessary retention of capacity at the contract’s expiration. To exercise the *right of first refusal*, the existing customer or LDC must agree to match the highest rate bid, and the longest contract term offered by another shipper.<sup>39</sup> The LDCs argue that the nature of the service they provide makes it impossible for them to match longer contract term bids by competitors. The LDC has a public service obligation to provide gas to its customers, but customers have no obligation to buy. An LDC runs the risk of incurring substantial costs if it is forced to match a long-term bid with a competing bidder.<sup>40</sup> Industrial groups further argue that a customer who absolutely needs the service for two years may be forced to contract for 10 years, in effect agreeing to pay far more than the regulated rate for the two years of needed service.

Representatives of Illinois Power and New England Gas Distributors state that because of their public service obligation, LDCs will have no choice but to match the longest term bid for capacity needed to meet their obligations. Furthermore, several parties argue that LDCs cannot reasonably be expected to know their requirements beyond 10 years. In addition, their decision to enter into a long-term contract could be challenged on valid economical grounds at the state and local levels.<sup>41</sup> Representatives of United Distribution Companies also state that this requirement tips the balance in favor of the gas producers or marketers interested in obtaining a monopoly over certain customers. If a supplier is able to take capacity away from an LDC shipper with a public service obligation, the LDC will have to buy gas from that supplier. United Distribution Companies assert that this would shift monopoly power away from the regulated pipelines to the unregulated suppliers.<sup>42</sup>

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<sup>39</sup> Pipeline Service Obligations and Revisions to Regulations Governing Self-Implementing Transportation Under Part 284 of the Commission’s Regulation; 18 CFR Part 284; Docket No. RM91-11-002 (August 3, 1992); Pipeline Service Obligation (After Restructuring), p. 297.

<sup>40</sup> Ibid, p. 301.

<sup>41</sup> Ibid, p. 301.

<sup>42</sup> Docket No. RM91-11-002, p. 300, contains several references from Industrial Groups who have petitioned the Commission regarding Order 636. Industrial Groups; American Paper Institute, APGA; New England Gas Distributors; Northern Illinois Gas; Northern Indian; Northwest Natural; United Distribution Companies; Citizen Action; State of Michigan; and Wisconsin Distributor Group.

According to Chris Carpenter, a marketer with Entrade Corporation, this capacity releasing mechanism will be important for industrial and residential customers who may have firm transportation service.<sup>43</sup> The mechanism is supposed to provide flexibility for firm transportation users as a means to recover costs of unused capacity. For example, a local government may not want to pay all of the costs associated with firm transportation service. The pipeline may offer to trade the firm transportation for excess capacity. Or if Nashville Gas, for example, had nominated a specified amount of capacity and did not use it all, it could release the excess capacity to a third party. Nashville Gas still would be obligated for the entire amount whether it was used or not. However, it could release the excess on the open market to offset any remaining costs. The pipeline would be acting as the “middleman” in this capacity releasing program. Carpenter added that this mechanism could benefit small industries and municipals in the summer months when they have the most unused capacity to assign. In short, the capacity reallocation plan assures buyers access to sellers on all pipelines.

Boswell concludes, “In eliminating capacity brokering, FERC has delivered a blow to LDCs who are struggling to compete. No longer will the LDC have the ability to channel valued pipeline capacity to customers desiring that capacity directly on its system. Indeed, under the capacity release mechanism, the capacity might be snapped up by a party not even on the releasing LDC’s system! This off-system migration of capacity is not only economically harmful to the LDC, it also seriously detracts from the LDC’s ability to market itself to its competitive customers, for whom the inability to get firm pipeline capacity for the LDC could be reason enough to switch to an alternative energy supply.”

### **Curtailment**

In Title IV of the Natural Gas Policy Act of 1978 (NGPA), Congress made all pipeline sales service subject to a *curtailment* scheme based on the end uses of the gas. During the 1970s gas shortages, the commission designed a system of curtailment to specify those categories of users who would get gas first. As a result, all pipeline tariffs included the lists of priorities of use (ranging from residential and commercial uses to boiler uses).<sup>44</sup> According to Joe Ramsey with Tenneco, pipelines would usually cut services to the industrial users first if supply was tight during the winter months because they had alternative supplies. However, as a result of Order

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<sup>43</sup> Telephone Interview with Chris Carpenter, Entrade Corporation, November 2, 1992. His marketing firm works with LDCs in managing gas imbalances and penalties. Order 636 will increase these marketing firms’ access to pricing information and end-users.

<sup>44</sup> Ibid., p. 1.

636 this policy is gone. Pipelines are now required only to provide firm transportation.

Order 636 will permit pipelines to curtail customers' gas supplies on a pro rata basis instead of on a priority basis. In other words, homes, schools, and hospitals that can use only natural gas will be treated no differently than electric utilities and industries that can burn other fuels. This contradicts the long-standing curtailment policy that gave these high-priority consumers preferential treatment.

FERC refused to extend the protections of NPGA Title IV to high priority end-users such as residential customers. Prior to Order 636, the curtailment priorities for end-users applied to curtailments resulting from a shortage of pipeline gas supplies and not to those resulting from a shortage of transportation capacity. Accordingly, when a pipeline's gas supplies are scarce, the pipeline should curtail its sales customers without affecting transportation customers. FERC even suggested that the price charged by pipelines should reflect these priorities, and it encouraged customers to make private agreements among themselves for compensation in case of a supply curtailment.<sup>45</sup>

According to Edwin Rothschild with Citizen Action, this new curtailment policy is a major concern.<sup>46</sup> Boswell, Vice President, General Counsel, and Secretary of the Peoples Natural Gas Company in Pittsburgh, stated, "The long and the short of it is that LDCs must assume the risk of supply shortages and nondelivery. If the weather gets bitter in February and there's not enough gas to go around, someone has to be curtailed. The commission won't let the gas company shut off the residential customers so this means the LDC's industrial customers will be squeezed out. As competitive customers, they will just take their business elsewhere and may not come back."

### **Administrative Changes Under Order 636**

As a result of the order, LDCs are required to make all economic gas purchasing and transportation decisions for their cities that pipelines performed for them in the past, in addition to managing day-to-day operations. LDCs will have many new questions to resolve: What resources (central offices, new policies, systems) are needed to meet goals? Will the LDC conduct gas activities as a gas marketer, pipeline, aggregator, or producer? What new requirements will be needed for enhanced EDP systems, particularly electronic data interchange? Is there a greater need for marketing and administrative personnel? How can an LDC acquire personnel who are knowledgeable about pipeline systems to track and bill gas

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<sup>45</sup> *APGA Order 636 Conference Notebook* Section 4 "Curtailment" p. 1.

<sup>46</sup> Telephone Interview with Edwin Rothschild, Citizen Action (consumer group), Washington, D.C., January 29, 1993.

transportation services? The answers to these questions will inevitably lead to additional costs for the LDCs.

Most small LDCs do not have the expert staff to handle these responsibilities. Because pipelines under 636 no longer have to provide merchant services, LDCs may be forced to sign more long-term sales and transportation agreements. Without the pipelines as backup on a sales basis, LDCs will need to ensure more long-term gas supplies. Historically, LDCs relied on the pipelines to estimate their supply needs. This is important because an LDC can reduce costs with accurately predicted supply needs. If the LDC fails to properly estimate, however, no additional supply may be available.

According to Robert Murray, City Manager in Mount Pleasant, Tennessee, under 636 his city will have seven contracts instead of only one. He added that managing those contracts will increase the city's costs and will immediately raise customers' rates. He stated, "We don't have engineers and computers and buyers and sellers. We'll have to hire a marketer to bundle our sales. Big customers...have that kind of capacity in-house, but smaller cities like Mount Pleasant don't."

Many small LDCs will have to contract with a third party or a marketing firm to act as an agent to procure gas supply and make *nominations* (i.e., pre-order supply). Ben Andrews with Smyrna Natural Gas Systems believes that some LDCs will work with a marketing company that handles a majority of a particular pipeline's customers to monitor shortages or imbalances.

Because Order 636 allows open market access to many services formerly restricted to the pipelines, it will increase the market's access to pricing information and the accessibility of end-users. As a result, a new breed of marketing middlemen who can be thought of as "supply aggregators" will enter the industry. These firms will manage imbalances, buy firm capacity rights, and decide how to determine and market transportation services. When 636 is implemented, marketers will gradually dominate gas markets because of their diverse supplies and regional markets. Major marketers/aggregators are making many short-term spot sales, functioning more like clearinghouses.

According to Chris Carpenter with Enttrade Marketing Corporation, these marketers will organize the coordination of supply and transportation services. Prior to 636, cities—usually the sole supplier for all residential and industrial users in their areas—had firm entitlements for all of their supply and transportation needs. Carpenter explained that cities nominated or ordered their supply needs monthly from a merchant or pipeline, which would daily balance gas supplies to avoid penalties. This was sometimes difficult because of the swings in temperature which caused demand for

supply to rise unexpectedly for residential customers. Under 636, the cities will have to predetermine supply and manage imbalances on their own.

Thomas Gregg, attorney with Miller, Balis & O'Neil, represents APGA at FERC hearings. He advises LDCs to know the unregulated company from which they will buy their natural gas: how the company is organized, where its gas is located, and its track record. Next, the LDC must have a clear understanding of the operations of the pipelines/transporter. To negotiate a gas supply contract that will provide reliable supplies, an LDC must assure that gas is delivered into the pipeline at a location and in a manner that will ensure successful transport to the city gate. He further advises that to avoid losing bargaining power or falling captive to a single seller, LDCs should not let gas supply contracts expire on the eve of the peak usage period.

### **Costs Under 636**

There are some legitimate concerns regarding the substantial rate increases to small LDCs because of Order 636. The shifting of the costs appears to fall to the LDCs, which will significantly influence the rates customers will pay. The wealth appears to flow upward to the pipelines and the producers. Under this order, pipelines have no real incentive to minimize costs when they have 100 percent recovery of *transition costs*. There is the possibility that LDCs will be forced to reduce their contract demand levels and subsequently their reliability in serving their customers.

Under 636, FERC views natural gas as a commodity—like soybeans or sugar—and not as a service. Buyers and sellers, then, will haggle over the price of this commodity.<sup>47</sup> According to William Malin with Independent Energy Corporation, the price of gas will be based on the New York Mercantile Exchange.<sup>48</sup> The marketing companies will aggregately purchase gas and sell it at a profit to the LDCs. Gas is a precious commodity in this new open market. As a result, LDCs purchasing natural gas on the open markets have had to implement changes in rate structures to reflect changes in the federally mandated rate design.

Subsequently, Order 636 has mandated changes in the way pipelines charge LDCs for transporting natural gas. These changes shift costs to the fixed or *demand charges* (a fee for holding gas supply to serve peak day needs), thereby increasing costs to firm customers. Cities will have to predetermine their supplies 12 months in advance and pay demand charges or *reservation fees* based on the coldest day of the year.<sup>49</sup> The pipelines will make a profit based on the coldest day everyday, whether the supply is

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<sup>47</sup> Hollingsworth, April 1993.

<sup>48</sup> Telephone Interview with Mr. William Malin, October 14, 1992.

<sup>49</sup> Andrews, November 10, 1992.

needed or not. This is to ensure that customers without alternative energy supplies have access on the coldest day of the year.

Unlike other public utilities such as water, electricity, and telephone, there are always alternatives to natural gas. LDCs face many non-regulated competitors that supply fuel oil, propane, coal, and even wind, solar, and wood. In some cases, these alternatives may be more expensive or less appealing environmentally; however, they do exist and some customers may choose to use them instead of natural gas. As a result, the magnitude of the costs associated with Order 636 will clearly impact LDC and end-user decisions on the role of natural gas as their fuel of choice.

### **Transition Costs**

Pipelines are authorized 100 percent recovery of the transition costs incurred in complying with Order 636. Transition costs include unrecovered purchased gas cost, cost of altering supply contracts, and the physical cost to change and improve systems to comply with Order 636.<sup>50</sup> There is no pipeline cost absorption requirement.<sup>51</sup> If conversion to Order 636 increases a pipeline's costs 100 percent or more, FERC will allow the costs to be phased in over a three-year period.<sup>52</sup>

According to several small Tennessee cities, these "transition costs are going to hurt everyone for awhile. Some cities predict gas costs will go up 10 percent as a result of Order 636."<sup>53</sup> On November 18, 1992, the *Smithville Review* published an article stating that natural gas prices would rise as a result of Order 636. According to the article, Middle Tennessee Natural Gas Utility District (MTUD) announced a rate increase resulting from changes within the natural gas industry. The executive director of MTUD explained that the rate hike was a direct result of the deregulation process affecting the natural gas industry. MTUD serves over 29,000 customers in 16 Tennessee counties.<sup>54</sup>

### **Unrecovered Purchased Gas Costs**

Because the price of pipeline sales will no longer be regulated, pipeline purchased gas costs will be eliminated. Pipelines are authorized to directly bill outstanding "*Account 191*" balances, which represent the unpaid balance of costs incurred to obtain merchant gas for resale. Pipeline customers who were sales customers when the gas purchase costs were

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<sup>50</sup> FERC Order No. 636 "Final Rule," Docket No. RM91-11-000, 57 Federal Register, April 16, 1992, p. 13307.

<sup>51</sup> *APGA Order 636 Conference Notebook*, Section 3, "Transition Costs," p.1.

<sup>52</sup> FERC Order No. 636 "Final Rule," Docket No. RM91-11-000, 57 Federal Register, April 16, 1992, p. 13307.

<sup>53</sup> Hollingsworth, April 1993.

<sup>54</sup> Stanley, Dennis, "Natural Gas Prices Rise" *Smithville Review*, No. 18, November 1992, p. 1 col. 1-2; p. 7-A col. 1.

incurred will be responsible for any outstanding balances. The pipelines would deposit remaining unrecovered gas costs (or credits) in these accounts.<sup>55</sup>

Before 636, according to Joe Ramsey of Tenneco, pipelines would buy gas and sell it under contract to the LDCs at a fixed contract rate. If the gas prices went up, the pipeline would still be obligated to sell the gas to the LDC at the contract rate. As a result, the pipelines would have outstanding account balances. The 191 accounts were actually balancing mechanisms to track gas costs. Now, the pipelines are authorized to recover these costs from their former bundled sales customers. The pipelines must allow the customers to pay the bill in either a lump sum over 12 months or over some other reasonable period of time at the customer's option.

### **Gas Supply Realignment Costs**

The pipeline will be entitled to recover 100 percent of the incurred costs for realigning their gas supply contracts with the producers as a result of implementing the rule.<sup>56</sup> (See section on Gas Producer Contracts on p. 9.) Pipelines can recover *gas supply realignment costs* using an exit fee, a demand or reservation fee surcharge, or some combination. An exit fee could be a cash payment made by a sales customer that reduces or terminates its sales obligation during the restructuring proceedings.<sup>57</sup> Jim Choukas-Bradley, attorney for the APGA, stated this was a major cost of Order 636.

### **Straight Fixed Variable (SFV)**

FERC's new rule requires pipelines to use a rate design known as *Straight Fixed Variable* (SFV). SFV will cause a dramatic rise in the rates LDCs pay the pipelines and pass through to their customers. This is because the LDCs must pay the same demand charge to reserve pipeline capacity in summer as they use in the winter, even when they are taking little or no gas. The pipelines are guaranteed recovery of their fixed costs and will not have the same incentive they once did to keep their rates low.<sup>58</sup> LDCs will have to pay the dramatically higher pipeline rates, figure out a way to recoup the costs from their core customers, and remain competitive with nonregulated energy suppliers, electric utilities, and other LDCs.

Before Order 636, pipelines were at risk for a portion of their fixed costs; that is, the return on equity or profit, and the taxes associated with it, were included in the commodity rate component (a rate based on the amount actually purchased), and could only be recovered to the extent the pipeline

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<sup>55</sup> Ibid, p. 13307.

<sup>56</sup> Ibid., p. 13307-13308.

<sup>57</sup> *Order 636 Fact Sheet*, p. 3.

<sup>58</sup> The costs for transmission and storage vary, while the cost for the volume of gas transported is fixed.

sold or transported gas.<sup>59</sup> This benefited LDCs because pipelines had an incentive to keep their commodity rates competitive in order to recover these costs.<sup>60</sup> Under the new design, pipelines are authorized to recover their transportation costs by assigning all fixed costs (return on equity and associated taxes) related to transportation to the reservation charge.<sup>61</sup> This, in the commission's opinion, will promote gas-on-gas competition, because the pipeline's commodity, or usage, charges will not be distorted with the inclusion of non-gas costs.<sup>62</sup>

Several consumer groups have written to Congressman Jim Cooper's office asking Congress to step in to ensure that residential and small business consumers do not bear the total burden of FERC's administrative deregulation of the nation's natural gas industry. Their comments included the following:

This method forces consumers who need gas to heat their homes and places of work to pay much higher rates than large industries who use natural gas to generate electricity used in their manufacturing processes. This makes low load users pay fixed charges on gas supplies all year round in order to have availability. The SFV rate design unfairly shifts 100 percent of the fixed costs to large customers, increasing producer profits and guaranteeing full cost recovery to pipelines. FERC has forced customers with the least economic choice to pay the higher costs, a reverse of the basic goal of regulation.<sup>63</sup>

Bob Cave, APGA Executive Director, believes that because of the SFV rate design LDCs are being required to pay a disproportionate amount of money compared to actual usage. He explained that the pipeline charges customers for reservations to use space on the pipeline system. The LDCs must pay demand charges based on the coldest day of the year. Basically, the

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<sup>59</sup> Variable costs typically refer to the reservation and usage charges of the pipeline's rates.

<sup>60</sup> Boswell, p. 28.

<sup>61</sup> FERC Order No. 636 "Final Rule," Docket No. RM91-11-000, 57 Federal Register, April 16, 1992, p. 13293.

<sup>62</sup> FERC Press Services issued a Backgrounder/Fact Sheet on the MEGA-NOPR (Notice of Proposed Rulemaking) on July 31, 1991. The MEGA-NOPR is the next step in a process begun in 1985 when the Commission issued Order No. 436, which instituted its open access transportation program.

<sup>63</sup> Several consumer groups wrote U.S. Congressman Jim Cooper, Tennessee 4th District, on September 18, 1992, voicing their concerns regarding Order 636. Those consumer groups included: Citizen Action, Consumer Federation of America, Ohio Consumer Counsel, National Association of State Utility Consumer Advocates, National Council of Senior Citizens, and the Pennsylvania Public Utility Commission.

pipelines will make a profit based on the coldest day, everyday, whether the supply is needed or not.

Each LDC has a public service obligation to fulfill customers' needs at the most economical cost. By shifting to the Straight Fixed Variable (SFV) rate design, FERC has forced customers with the least economic choice to pay the higher costs. This "one-rate fits all" design contradicts the true intent of Order 636, which is to create a more competitive market. The nature of a competitive market allows for some tailoring and customizing of individual prices and contract terms.

### **Stranded Costs**

Stranded costs represent the pipelines' assets used to provide bundled services, such as gas in storage and capacity that cannot be directly assigned to new customers of the unbundled services.<sup>64</sup> Some pipelines that were not designed with "unbundled" transportation services in mind will no longer be needed to supply service. In addition to physical plants, facilities can include capacity reservations and stored supplies of gas. These facilities may be stranded or abandoned.<sup>65</sup>

### **New Facility Costs**

New facility costs for implementing Order 636 include meters, valves, communications equipment, etc.<sup>66</sup> The restructuring of the industry will require the pipeline companies to install new equipment to ensure that end-users enjoy the benefits of a competitive market at the wellhead, or point of production. According to FERC, these costs represent the only new costs of implementing Order 636.<sup>67</sup>

### **Industrial Rates/Economic Expansion**

Chris Carpenter of Entrade Corporation expressed concern that the rate design changes implemented by Order 636 coupled with increasing energy costs will impact large industry's location decisions. If the energy costs are too high in one area, a company may choose to relocate causing a drop in the tax base. Because of the unbundling of services, industries will be competing with LDCs for the most economical services. The industry may choose to contract directly with a producer or a pipeline and go around the LDC for a better rate. Carpenter explained that, as a result, some industrial users may choose to locate near pipelines to receive direct supplies.

Before 636, under the incremental pricing of the NGPA, interstate pipelines and LDCs were required to pass along the costs of gas to large industrial customers who used gas as a boiler fuel to generate steam or

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<sup>64</sup> FERC Order No. 636 "Final Rule," Docket No. RM91-11-000, 57 Federal Register, April 16, 1992, p. 13307.

<sup>65</sup> General Accounting Office (GAO) report released November 1993 entitled "Natural Gas: Costs, Benefits, and Concerns related to FERC's Order 636." p.65.

<sup>66</sup> Ibid., p. 13307.

<sup>67</sup> GAO, November 1993, Order 636 report, p. 66.

electricity. The industries were charged at a higher rate to benefit other users, such as small commercial and residential customers.<sup>68</sup> These industries helped to offset gas imbalances and penalties created by the residential customers.<sup>69</sup>

According to Tom Mulkey with Municipal Gas Authority of Georgia, the industries primarily depend on interruptible service. In the past, the LDCs were able to shut down this service if the residential customers needed more. Ben Andrews with Smyrna Natural Gas Systems stated that under 636, LDCs cannot shut off service for weather changes. Carpenter added that public systems will have to decide if they will keep industrial customers. Many industries can buy gas from their parent company or another partner company and obtain a more economical gas supply by paying jointly for transportation costs.

Large industrial gas users might benefit from the increased availability of gas resulting from Order 636. The extra gas on the market will result in fewer and more predictable supply interruptions, which are costly and disruptive. Industrial and electrical users generally bypass LDCs, relying heavily on spot supplies in a competitive market served by brokers and pipeline companies. Electrical and industrial users of natural gas rely heavily on spot supplies and can switch fuels easily.<sup>70</sup> Industrial users might have more leverage with LDCs and pipeline companies so they can receive more compensation for interruptions than they do now.

Boswell states, “Many of the Peoples Natural Gas Company’s large industrial customers are either dual fueled, meaning they have access to another fuel as well as natural gas, or are hooked up to another gas company and can switch back and forth at their whim. Such customers demand quality services and will walk away if they don’t get their gas when they need it.”

#### **Private Investor-owned LDC Rates**

The private-owned LDC services will also be affected by Order 636. These systems will have to renegotiate contracts and inevitably raise prices. Most of the private-owned gas systems, however, have expert staff and resources to counter the effects of 636.

The Division of Rates under the Tennessee Public Service commission (PSC) regulates the rates that private investor-owned LDCs charge their customers. The Gas Safety Division of the PSC regulates the public systems for compliance with safety maintenance requirements. The PSC also conducts audits, approves costs of services, and represents the

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<sup>68</sup> Weiss & Klass, p. 173.

<sup>69</sup> Carpenter, November 2, 1992.

<sup>70</sup> Stephen Brown & Mine K. Yucel, “The Pricing of Natural Gas in U.S Markets,” *Economic Review*, Second Quarter 1993.

LDCs at FERC proceedings.<sup>71</sup> According to PSC staff there are six major private gas systems; several have satellite companies located in different areas of the state.<sup>72</sup>

## **Congressional Views of Order 636**

Members of both the U.S. House and Senate have expressed dissatisfaction with Order 636. U.S. Representative Jim Cooper (D-Tenn.), in a presentation at the Nashville APGA May 1992 seminar, expressed concern regarding the economic impact of Order 636 on residential, small commercial, and other high priority users. He stated that he and other members of the Energy and Power Subcommittee and the Energy and Commerce Subcommittee requested that the General Accounting Office (GAO) conduct an in-depth study on the effect of Order 636 on public-owned gas suppliers. Cooper believed that Congress needed a comprehensive objective report on Order 636 and its impact on public systems and consumers so it could develop legislation or pressure FERC to make needed changes.<sup>73</sup> Senator Harlan Mathews (D-Tenn.) has said, "I am very concerned about the impact of this order on small Tennessee communities. It seems to contain all the elements of the breakup of the telephone system."<sup>74</sup>

Representative Tom Bevill (D-Ala.), House Energy and Water Appropriations Subcommittee Chairman, has become a critic of the SFV rate design. According to an article in *Oil and Gas Journal*, Bevill threatened to take action against the design but instead has urged Representative John Dingell (D-Michigan), Energy and Commerce Chairman, to block implementation of Order 636 until the GAO can study its effects. The article also contains comments from Representative Phil Sharp (D-Indiana), of the House Energy and Power Subcommittee, who believes that FERC's rule will shift more costs of the national pipeline system to firm customers, mainly gas utilities and their home heating and small business customers who use about 40 percent of the nation's gas. He added the initial effect of the order seems

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<sup>71</sup> Telephone Interview with Archie Hickerson, Tennessee Public Service Commission, November 12, 1992.

<sup>72</sup> The following major gas systems have satellite locations: Chattanooga Gas Company has a system in Cleveland, Tennessee; Nashville Gas System has a system in Hartsville, Tennessee; and United Cities Gas has systems in Bristol, Columbia, Franklin, Greeneville, Johnson City, Kingsport, Maryville, Morristown, Murfreesboro, Shelbyville, and Union City.

<sup>73</sup> Transcription of Congressman Jim Cooper's address to the APGA in Nashville on May 11, 1992; a draft letter to some consumer groups informing them of his intent to pursue a GAO study of Order 636, and newspaper clippings relating to Order 636.

<sup>74</sup> Mathews remarks were contained in Hollingsworth's article in *Tennessee s Town and City*, April 12, 1993.

to be a large increase rather than a decrease in costs for captive gas consumers, such as homeowners.<sup>75</sup>

Senate Energy and Natural Resources Committee Chairman J. Bennett Johnston (D-Louisiana) joined the crusade begun by Representatives Sharp, Dingell, Thomas Biley (R-Virginia), and Cooper who earlier had requested that the GAO conduct a study of the economic impact of Order 636. The congressmen wanted to check the accuracy of an analysis released in May 1992 by FERC's Office of Economic Policy estimating fiscal benefits of up to \$40 billion from implementation of Order 636.<sup>76</sup>

### **General Accounting Office (GAO) Report on Order 636**

At the request of several members of Congress, the GAO released the report *Natural Gas: Costs, Benefits, and Concerns related to FERC's Order 636* in November 1993. The GAO performed several analyses looking at the potential shift in costs. The actual amount of fixed costs that will be shifted among distribution companies and their end-users cannot be determined with precision until after Order 636 has been fully implemented. Their results include:

- Cost shifts related to the change in rate design, coupled with transition costs and costs related to maintaining reliable gas services will result in increased costs to some end-users, particularly residential end-users served by smaller distribution companies.
- The proposed secondary market may enable a distribution company to resell its unneeded capacity and thus mitigate some of the costs resulting from the change in rate design. However, the cap set by FERC on prices in this market may limit a distribution company's ability to offset the increased costs of reserving pipeline capacity. The cap may inhibit the efficient rationing of unneeded pipeline capacity to those who value it most.
- Order 636's mandated change in rate design could shift about \$1.2 billion per year nationally of the pipeline company's fixed costs (about 11 percent of such costs) to customers that require guaranteed delivery of gas, such as residential end-users. The GAO estimate is \$400 million higher than FERC's estimate of \$800 million. FERC did not adjust its estimate to account for the price discounts the pipeline companies offered for interruptible service.
- Based on case studies of five pipeline companies serving the eastern seaboard, GAO found that the change in rate design will affect end-users differently. Residential end-users could see increases in their gas bills of

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<sup>75</sup> Koen, p. 25.

<sup>76</sup> Berg, p. 26.

up to nine percent, while nonresidential end-users served by many distribution companies could experience decreases of as much as seven percent. Customers with firm services are expected to pay about 76 percent—up from 65 percent of the pipeline’s industry total fixed costs of about \$11.4 billion. Customers with interruptible service would pay about 24 percent of these fixed costs.

- The actual cost shift for the LDCs served by the pipeline companies, as well as those in other regions of the country, will depend on many factors. These factors include (1) the fixed costs of the pipeline companies, (2) the distribution companies’ utilization of their reservations of pipeline capacity, (3) measures prescribed by FERC in Order 636 or adopted by the pipeline companies to mitigate the cost shifts, and (4) actions taken by the state and local authorities that approve the rates the distribution companies can charge their end-users.
- According to the pipeline companies’ preliminary estimates, the transition cost of implementing the new order is about \$7 billion. This estimate includes the cost of terminating or modifying contracts, abandoning equipment that is no longer needed, closing out unpaid balances on gas supplies, and purchasing required new equipment. Most of these costs will be collected from customers with firm service, and the remainder from customers with interruptible service. Officials of distribution companies and state regulators believe that the pipeline companies will have little incentive to minimize the transition costs if they can recover all of these costs from their customers. About \$300 million represents new costs to society, such as costs for new equipment that would not have been incurred before Order 636.
- GAO questioned FERC’s estimate that the benefits will exceed the costs by between \$2 billion and \$6 billion per year because the estimate is based on various independent projects of increased gas use and did not consider the effects of Order 636.
- Order 636 places new responsibilities on the pipeline customers, particularly small distribution companies, to negotiate contracts with natural gas suppliers in order to ensure their own supplies.
- FERC’s adoption of the Straight Fixed Variable rate design provides the pipeline companies with greater assurance that they will recover their fixed costs. At the same time, FERC’s elimination of triennial review of many pipeline companies’ rates places a greater burden on those that pay such cost to challenge the appropriateness of the rates they pay.

## **Consumer Groups' Views of Order 636**

Several consumer advocate groups have written to Representative Jim Cooper's office urging Congress to examine Order 636's impact on small public systems, so that residential and small business consumers do not bear the total burden of FERC's administrative deregulation of the nation's natural gas industry. These groups believe the basic provisions of this new rule will sharply and unfairly increase costs for residential and small business consumers in every part of the country. The consumer groups include: the National Association of State Utility Consumer Advocates, National Council of Senior Citizens, Consumer Federation of America, Ohio's Consumer Counsel, Citizen Action, and Pennsylvania Public Utility Commission.

The Coalition Against Straight Fixed Variable, whose membership is largely gas distributors, complained to FERC in its rehearing request that the switch to straight fixed variable tariffs will shift about \$3 billion a year to residential and commercial customers. The group claims the rule violates the Natural Gas Act by failing to protect residential consumers against unreasonable natural gas costs.<sup>77</sup>

Edwin Rothschild with Citizen Action believes that Order 636 is designed to shift costs to burden the small LDCs from competing in the marketplace. The order allows pipelines and producers to renegotiate their contracts without producers bearing any additional costs. Rothschild fears residential customers will pay much more for gas. In addition, the small LDCs, which will be affected by all major provisions of the order, have expressed problems with the new curtailment policy. He also stated that his organization has found serious problems with FERC's economic analysis of Order 636. (See further discussion of this analysis on pp. 29-30.)<sup>78</sup>

Margaret Ann Samuel, Chair of the Ohio Consumer Council Gas Committee, believes that with Order 636 FERC made abrupt changes in the process of buying and selling gas that were unnecessary and that these changes substantially raised costs for residential customers and small LDCs. She believes that the major beneficiaries of Order 636 are the producers, marketers, and the bid end-users. Her office has examined the effects of Order 636 on residential consumers and small LDCs. She said that the pipeline association estimates that restructuring existing contracts will increase costs \$100 annually per residential household. Transition costs will shift to the captive customers. Samuel believes that unbundled pipeline services (i.e., delivery, storage, balancing, etc.) will be more expensive for LDCs. In addition, in order to obtain gas supply, small LDCs have to rely on

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<sup>77</sup> Koen, p. 25.

<sup>78</sup> Telephone Interview with Edwin Rothschild, Citizen Action Consumer Group, January 29, 1993.

an outside entity such as a market aggregator. Small LDCs, however, lack the necessary resources to go out and seek the best prices.

Samuel said that the major concerns her office has heard from LDCs regarding Order 636 include cost, rate design, pipelines' ability to recover fixed costs, capacity reallocation, and reliability of supply. She said her council has been active at FERC, appealing to the courts those aspects of Order 636 especially hurtful to residential customers, and urging Congress to help get more consumer-oriented commissioners appointed to the commission.<sup>79</sup>

## **Professional Responses**

### **American Public Gas Association (APGA)**

In a November 2, 1992, telephone interview, Bob Cave, Executive Director of the APGA, stated that Order 636 is detrimental for municipally owned gas distribution companies. He expressed concern regarding the Straight Fixed Variable (SFV) rate design, the new curtailment policy, capacity reallocation, and the transition costs. He believes these particular aspects will hurt small municipalities.

### **Interstate Natural Gas Association of America (INGAA)**

INGAA is the pipeline industry trade association. In an article printed in *Inside F.E.R.C.* published April 20, 1992, the chairman, Ronald Kuehn, Jr., said that Order 636 couldn't have been better if he had written it himself. According to the article, the INGAA chairman was enthusiastic about the transition cost recovery mechanisms. He explained, "This section could not have come out any better for pipelines, short of FERC saying 'Here's a blank check.'" Kuehn went on to point out that the notion of service obligations by pipelines to their customers "is gone, gone forever" to be replaced by a strict emphasis on contractual entitlements. INGAA is particularly pleased with the 100 percent recovery of transition costs, operational control over facilities remaining in the hands of pipelines, the move to straight fixed variable rates, and unregulated merchant services provided by the pipelines.

INGAA has asked for clarification on a number of issues. Association representatives believe FERC should recognize that the shift to SFV rates does not assure a pipeline recovery of all costs, and lines should be given a higher rate of return because risk will increase in some instances. They also believe FERC should make it clear that pipelines no longer guarantee gas supplies in some cases, as they did in bundled sales services. The Natural Gas Supply Association and Indicated Producers group, in a joint filing, said the three key elements of restructured service—gas

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<sup>79</sup> Telephone Interview with Margaret Ann Samuel, Ohio Consumer Council, February 24, 1993.

borrowing, cost unbundling, and no-notice transportation—need further definition.<sup>80</sup>

In comments from House hearings on Order 636, George Mazanec representing INGAA stressed that 100 percent recovery of prudently incurred transition costs is “of major importance to INGAA, the pipeline industry, and the investment community, and is an essential part of the balance of Order 636.” Mark Schroder, deputy counsel for the Department of Energy, said the adoption of SFV, which was supported by the Bush Administration, will promote accurate price signals between the wellhead and the burner tip.<sup>81</sup>

## **Costs and Benefits Analysis**

FERC’s Office of Economic Policy (OEP) issued *Costs and Benefits of the Final Restructuring Rule (Order 636)* in the spring of 1992. In the paper, OEP describes the need for Order 636, analyzes alternatives to the rule’s overall approach, and estimates the resulting costs and benefits.<sup>82</sup>

OEP states that Order 636 addresses the problems in the natural gas industry by encouraging markets for long-term contracts, such as helping both pipelines and other suppliers offer credible long-term contracts at competitive prices; addressing the major sources of pipeline inefficiency; and allowing the commission to eliminate needless regulation. In addition, the paper contains several alternatives to the rule, such as returning to a regime of pervasive regulation, bundled service with incentive regulation, divestiture of pipeline sales function, and deregulation (requiring legislation), all of which OEP concludes would be inefficient and impractical.<sup>83</sup>

The paper’s final chapter is an analysis of the social benefits and costs expected as a result of issuing the final rule. OEP estimates the quantifiable benefits to range from \$15 billion to \$42 billion (in 1990 dollars) for the seven-year period from 1994 to 2000, averaging from \$2.1 billion to \$6 billion per year. The paper defines net social benefits as real economic gains for the nation as a whole, determined by comparing social benefits and costs. Social benefits involve the creation of consumption and resource benefits, such as increased consumption of gas resulting from the discovery and marketing of gas from a new field. Social costs are incurred in the

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<sup>80</sup> Koen, p. 25.

<sup>81</sup> Thomas Berg, “Order 636 heats up House hearing. (FERC order that revises the gas transmission industry’s rate structure)”, *Public Utilities Fortnightly*, August 15, 1992, p. 26.

<sup>82</sup> *Costs and Benefits of the Final Restructuring Rule*, Office of Economic Policy, FERC (Washington, D.C.), Spring 1992, p. 12.

<sup>83</sup> *Ibid*, pp. 2, 18-22.

creation of these benefits, such as costs involved in finding and delivering the gas to consumers.<sup>84</sup>

In April 1992, the Bush Administration was well into its 90-day regulatory moratorium when Order 636 was released. The Bush administration explained that the rule would lessen government oversight and help the economy, and asked FERC to explain exactly how the new rules would actually save consumers money. After much reluctance from FERC, the Bush administration decided on a savings between \$2.6 billion and \$5.9 billion. Some claim that the rule will instead *cost* consumers \$11 billion. Only after much prodding by Congress and the Council on Competitiveness did FERC release its “costs and benefits” analysis of Order 636. FERC’s five commissioners did not even sign off on the analysis, and the following is stamped across its cover: “Does not necessarily represent the views of the commission, any individual commissioner, the commission staff or any individual member of the commission staff.”<sup>85</sup>

## Requests for FERC Reconsideration

Although the commission has received many requests to reconsider portions of Order 636, it rejected three pipelines’ requests to relax the implementation schedule. One article quoted FERC’s response: “While the commission seeks to ensure that all pipelines will be in full compliance with the final rule for the 1993-94 winter heating season, it strongly encourages compliance with the rule this calendar year. We anticipate that many pipelines will be able to implement all required elements of the final rule in advance of the 1993 winter heating season.”<sup>86</sup> FERC addressed the rehearing requests with respect to the commission’s legal basis and rationale for adopting Order 636.<sup>87</sup> Several pipelines contended the commission did not weigh the benefits of unbundling against the costs. For example, the commission did not quantify the alleged benefits of unbundling or factor in the transition costs likely to result from unbundling sales service. In the docket, the commission stated that it expects any costs incurred by the pipeline in implementing the rule will reflect either (1) costs associated with past contractual commitments which the industry was bound to face regardless of Order 636 or (2) short-term expenditures to restructure pipeline services so the industry can operate efficiently in the long-run.<sup>88</sup>

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<sup>84</sup> Ibid, p. 23.

<sup>85</sup> Daniel Macy, “Looking Behind the Numbers,” *The Journal Of Commerce and Commercial*, August 31, 1992.

<sup>86</sup> Koen, p. 25.

<sup>87</sup> Pipeline Service Obligations and Revisions to Regulations Governing Self-Implementing Transportation under Part 284 of the Commission’s Regulations Docket No. RM91-11-002 released August 3, 1992

<sup>88</sup> Docket No. RM91-11-002, pp. 40-41.

The document also contains statements from Atlanta Gas and Citizen Action arguing that the Office of Economic Policy's (OEP) analysis should be made a part of the restructuring proceedings. The commission stated that it did not rely on the OEP's paper with respect to the costs and benefits of adopting Order 636, that the paper was not a part of the rulemaking, and that there was no reason to make it part of the record.<sup>89</sup>

### **FERC Order 636-A**

The commission, responding to over 150 requests for rehearing of Order 636, made certain adjustments in response to the concerns raised by small municipalities and LDCs over the impact on rates they would pay to the pipelines.<sup>90</sup> Order No. 636-A makes the following significant adjustments to Order 636:

- Requires pipelines to continue existing one-part *volume* rates or seasonal contract entitlements for small customers computed at the existing demand rate.
- As a transitional provision for small customers seeking to continue to purchase gas from pipelines, the commission will condition *blanket sales certificates* to require pipelines to offer to sell gas on an unbundled basis to small customers at a cost-based rate for one year beginning with the effective date of each pipeline's compliance with Order 636.
- Changes capacity releasing provisions to permit releases for periods up to one calendar month to begin without advance posting or bidding. However, the release would have to be posted on the electronic bulletin board within 48 hours.
- Reaffirms the straight fixed variable rate design, but requires pipelines to use other rate making techniques for the distribution of the revenue responsibility among customers to avoid cost shifts from the implementation of SFV.
- Reaffirms its decision to allow pipelines 100 percent transition cost recovery. However, Order 636-A modifies the provisions to require pipelines to recover 10 percent of their gas realignment costs from their rates to interruptible transportation customers (i.e., industries). The remaining costs would be recovered from firm transportation customers.<sup>91</sup>

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<sup>89</sup> Ibid, p. 40.

<sup>90</sup> FERC issued on August 3, 1992, a News Release, "Commission largely affirms restructuring rule; modifications made to address small customers' concerns."

<sup>91</sup> Ibid, p. 4.

In a July 30, 1992, statement on Order 636-A, FERC Commissioner Trabandt stated that he believed Order 636-A struck a very delicate balance: On one side of the scale are the legitimate concerns of various parties. On the other side of the scale are the critical features of SFV, unbundling, and equality of service crucial to complete the transition to a competitive natural gas industry, largely driven by the market forces rather than Federal regulatory order. Those included small customers' legitimate concerns about substantial rate increases, low load factor customers' concerns about significant cost shifts, industrial customers' concerns about different rates for different customer classes for the same services, a broad spectrum of parties' concerns about the fairness of recovery transition costs, firm capacity holders concerns about capacity release vs. capacity brokering, and other important issues. In each case the delicate balance was struck by refining 636 to remedy or mitigate the concerns, but without compromising the essential elements of Order 636.

### **Other States' Solutions**

Several states have established gas authorities or joint purchasing organizations to aggregately purchase gas supplies for member cities. As a large load user, the agency or authority can usually negotiate better prices with the pipelines and producers than individual cities or LDCs. Following is an exhibit of four states that have formed gas authorities or joint purchasing organizations: Georgia, Louisiana, Illinois, and Florida. Alabama has attempted to form a similar organization, but has met opposition from LDCs and the interstate pipelines serving the areas.

#### **STATE GAS AUTHORITIES**

<b>State</b>	<b>Georgia</b>	<b>Louisiana</b>	<b>Illinois</b>	<b>Florida</b>
<b>Staff</b>	20 plus, full-time.	5 volunteers.	No full-time. All services contracted.	Not determined.
<b>Year of Creation</b>	1987	1987	1990	1993
<b>Number of Member Cities and Contracts</b>	67 member cities with five-year contract. 5 in Alabama; 3 in north Florida.	54 cities with three- to five-year contracts.	35 cities with three- to five-year contracts.	14 cities/ indefinite period.
<b>Funding Sources</b>	Tax-exempt bonds, gas and meter sales, member contracts.	Member fees, tax-exempt bonds.	Membership fees, gas resales.	Gas resales.

Basically these authorities provide their member cities with a low cost, reliable source of natural gas and assist them with other gas system services such as:

- Handling all communications with pipelines and suppliers.
- Automatically taking care of members' imbalances to avoid cost penalty charges.
- Negotiating monthly or intermediate term supply agreements with producers/brokers.
- Representing all members in obtaining transportation agreements, negotiation of service agreements at FERC proceedings, and other pipeline issues.
- Analyzing supply requirements of all members, considering supply options, anticipating industry trends, and developing supply plans to assure reliable future supplies for the members.
- Cost forecasting and assistance with retail rate setting.
- Through a monthly newsletter and periodic member meetings, providing explanation of industry changes and other information to assist the members in understanding the natural gas business.<sup>92</sup>

Because of the changes resulting from the open access regulations, the directors of these gas authorities decided that an authority or joint action cooperative could more effectively purchase gas in the aggregate at lower rates than individual cities. According to William Miller, an attorney with the firm of Miller, Balis & O'Neil, P.C., the Florida gas authority was formed primarily in response to the mandated restructuring in FERC Order 636.<sup>93</sup>

The authorities' basic mission is to out-perform the rates the cities would get if they contracted individually. Authorities reduce costs to small LDCs by aggregating contracts, purchasing long-term gas reserves, and securing firm transportation agreements with the pipelines.

One of the gas authority directors stated:

We thought small LDCs could deal on a more even basis through a gas authority. Historically, the pipelines have had the upper hand in contract negotiations. The LDCs did not have the expertise, and the gas authority makes this expertise available. The main disadvantage of Order 636 is that the small municipal LDCs are not sophisticated enough to function alone. They need someone to sort through all of the new services, regulations, and the

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<sup>92</sup> Information obtained from a list of *Services Performed* provided by Mr. Tom Mulkey, Georgia Municipal Gas Authority.

<sup>93</sup> Telephone Interview with Mr. William Miller, February 24, 1993. His law firm Balis, Miller, O'Neil, P.C., is helping with the establishment of the Florida Gas Authority. His firm also represents the American Public Gas Association (APGA) at FERC proceedings.

negotiations the knowledgeable staff would cost. The private LDCs may not be as affected because most are affiliated with a large company that has the expert staff.<sup>94</sup>

Another director added:

The major disadvantages are that the LDCs will eat a majority of the costs for dislocating from traditional pipeline supply. Also the change in rate methodology from a modified to a fixed rate design will seriously impact the LDCs. The transition costs will be a big bite for the small customer. These are costs the small customers are not responsible for. Especially when you consider that most of these small LDCs have been 100 percent firm transportation customers, and now the broad costs will be spread across the entire group. The benefit of our agency is to pool funds from the cities to mount a credible intervention against those changes imposed by FERC. Our agency is an active intervention group for the cities.<sup>95</sup>

### **Clarksville, Tennessee**

Clarksville, Tennessee, has attempted to form a nonprofit corporation to buy gas for its surrounding cities as a single source supplier. The corporation wants to enter into a contract with the Tennessee pipeline to buy 80 percent of its gas needs using the tax-exempt bonds. The remaining 20 percent would be purchased with short-term contracts. The corporation is also in the process of securing long-term gas reserves. The corporation as a single source supplier can buy gas at a better rate and lock in a contract. Jim Choukas-Bradley, with the firm of Miller, Balis & O'Neil, P.C. in Washington, D.C., is also assisting the city of Clarksville. The firm represents Clarksville at FERC rate proceedings, assists in finding long-term gas supplies, and helps the city execute or restructure contracts.

### **Tennessee Association of Utility Districts (TAUD) Concerns**

TAUD held its annual conference on June 5-7, 1994, in Knoxville, Tennessee. In a workshop entitled "Living with FERC," a panel of gas system managers discussed how Order 636 has affected their companies. Some of the panelists and gas officials in the audience said there had been some real changes since Order 636 officially went into effect in the Fall 93-

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<sup>94</sup> Telephone Interview with Mr. Floyd Simpson, Executive Director, Louisiana Gas Authority, February 24, 1993.

<sup>95</sup> Telephone Interview with Mr. Dean Parks, February 25, 1993. His engineering firm, Barnes, Henry, Meisenheimer & Gende Consulting, Inc., manages the daily operations of the Illinois Municipal Gas Authority.

94 winter heating season. The gas managers stated they have had to handle the predicted problems with gas storage, capacity, supply, and lack of staff and expertise. Some of the small gas system managers said that they felt intimidated in negotiating gas prices. Others stated 636 has allowed them to learn much more about pipeline operations. Most said that costs have risen because of having to ensure adequate supplies for the peak periods and in anticipation of buying changing patterns. The option of a gas consortium was discussed. Some gas managers stated they would be willing to join if they occasionally had the freedom to arrange their own deals outside of the consortium. Some gas managers stated that smaller regional authorities might work better than one statewide authority because there are a number of pipelines that serve several regions within the state.

### **After FERC Order 636 Implementation**

Since Order 636 has been implemented, pipeline companies are no longer required to provide local distribution companies with backup gas supplies and transportation services when these services and supplies cannot be obtained from other sources. According to Elton Clark of First Utility District of Tipton County, several factors could threaten the delivery of gas supplies, including the potential for supply disruption, growth in the number of buyers and sellers in the marketplace, and that FERC is not requiring pipeline companies to give residential and small commercial end-users priority. Jack Irion, General Counsel for several Tennessee gas systems, has seen several gas systems rely heavily on private marketing firms to arrange for adequate gas supplies. He also added that some gas systems have considered selling their systems to private companies.<sup>96</sup> One county has contracted to sell their gas system to a major private investor-owned system.

The Tennessee Attorney General's Office has ruled that Utility Districts cannot sell, merge, or dispose of their gas utility system to a private company. However, under the Utility District Law in *Tennessee Code Annotated* §7-82-202(e) a utility district may consolidate and transfer all of its property to a county or municipality. Under Order 636, unlike municipal gas systems, struggling utility districts do not have the option to sell to a private company.

### **Statutory Powers**

There are several state statutes that would give Tennessee public-owned gas systems the authority to purchase gas jointly. Several states that have formed gas authorities used local government or municipalities'

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<sup>96</sup> Telephone Interview with Mr. Jack Irion, September 19, 1994. He is employed with the law offices of Boman, Shofner, Irion, Rambo, located in Shelbyville, Tennessee.

authority to issue bonds and jointly purchase gas. (See pp. 32-34.) *TCA* §7-39-305 gives municipal gas companies the authority to issue bonds for gas acquisition. *TCA* §12-9-101, et seq., known as the Interlocal Cooperation Act, allows any two or more local governmental units to enter into agreements with one another for joint or cooperative purchasing. The Municipal Purchasing Law, *TCA* §6-56-302, allows governing bodies to exempt fuel, fuel products, and perishable commodities from the public advertisement and competitive bidding requirements when the items are purchased on the open market. The section also adds that any contract for the purchase of natural or propane gas for resale may be made without complying with competitive bidding requirements. These sections give public-owned gas systems the legal authority to aggregately purchase gas.

## Recommendations

FERC Order 636 will cause changes in gas operations for both public- and private-owned gas systems. The public-owned systems because of their small size and poor load characteristics will be particularly vulnerable to cost increases. This report seeks to determine whether the state government should take actions to protect Tennessee's small public-owned systems.

A majority of people interviewed for the report agreed that Tennessee could benefit by pooling the efforts of the various providers. This could occur either by establishing state or regional gas authorities or joint-action cooperatives to aggregately purchase supplies, especially considering the immediate increased costs caused by Order 636. These options differ in that an authority usually has established legal authority to buy gas backed by state legislation, whereas a joint action cooperative is a loose knit organization of cities which purchases gas for the group as a whole.

Most people indicated the smaller rural LDCs have found it harder to compete with the larger urban LDCs and industries in this new open market, contradicting the order's intent. To survive in this market, the smaller cities need to pool their efforts. Several people were interviewed on whether Tennessee would benefit from a gas authority:

“A lot of Tennessee cities are trying to strike their own separate deals...there is a lot of selected selling being performed. The pipeline will look for the biggest and best customer and give them the best price. Tennessee cities need staff with the expertise to negotiate contracts or deal with FERC. I do not think presently there is anyone in Tennessee who singly performs pipeline curtailment or gas imbalance services.”

“That would be a big job to organize. Georgia has an active municipal organization that helped to push the establishment of their organization. A similar thing could happen in Tennessee but it would have to be swift. Georgia quickly established their organization through legislation and eliminated as much opposition from the private LDCs and the pipelines as possible. Georgia has a lot of similarities to Tennessee. One is that in Georgia there are a lot of municipally owned distribution centers like in Tennessee. The state of Georgia is divided into three huge grand divisions that are served by different pipelines such as in Tennessee.”

“Yes! It would be very beneficial. You can call it whatever—an authority or a joint-action cooperative. These small LDCs need to

band together to get the best prices for their supplies. These small LDCs need an avenue to pool their efforts.”

“Yes it would be a good idea! I think it is important to have strength in numbers, especially for the smaller cities. I think it would be a cost-effective way to handle a lot of the administrative duties that have changed as a result of Order 636.”

A gas authority or joint action cooperative could perform several services for local governments to lessen the impact of FERC Order 636:

**1. A gas authority or joint action cooperative could aggregately purchase gas for local governments at a cheaper rate than they could get individually and could consolidate gas purchasing and transportation into one contract for the local governments.** As a large-load purchaser, the authority could negotiate a cheaper rate. The gas authority would coordinate the supply and transportation decisions for the cities. Most Tennessee local governments are completely dependent on the pipelines for access to gas supplies, either through pipeline merchant service or through the transportation of third-party gas supplies. Therefore, the local governments usually have to pay the price the pipelines set. Representatives of all the states with gas authorities mentioned the lower costs of aggregation. The gas authority could potentially obtain a more equalized rate for local governments than they could obtain alone. The local governments would also benefit from aggregation of pipeline contracts. All member local governments would get one bill from the gas authority for all gas purchases, transportation, storage, and pipeline demand charges. The authority could replace the pipeline’s previous role as aggregator, distributor, and balancer of gas supplies.

**2. The gas authority or cooperative could act as an agent for negotiations with the pipelines.** The gas authority or cooperative could represent all local governments in obtaining transportation agreements; keep members in balance to avoid penalty charges; analyze supply requirements of all local governments; consider supply options; and develop supply plans to assure reliable future supplies for local governments.

**3. The gas authority or cooperative would have the staff expertise to relieve the substantial administrative burden for the local government.** Under 636, the small LDCs have a number of new management responsibilities to tackle and decisions to make. In the past, the pipelines managed gas imbalances and purchasing and transportation decisions for local governments. Now these responsibilities have shifted to local governments. The small LDCs lack the expert personnel to negotiate rates and services with the major players in the industry. With a gas authority or cooperative, the LDCs would have access

to expert staff knowledgeable about the distinct elements of the services, and the prices associated with the full range of services needed to purchase and deliver gas from the wellhead to the customer.

In all of the states contacted for this report, the gas authorities initially contracted with either a law or engineering firm, or experienced gas industry professionals to handle the organizational issues of developing the operating budget and establishing pipeline contracts until additional staff was added. Some states discovered it was cheaper to contract for these services than to hire full-time staff.

**4. The gas authority or cooperative could perform cost of service**

**calculations for local governments.** The order allows pipelines to recover 100 percent of the transition costs including unrecovered purchased gas costs, costs of altering supply contracts, and the physical costs to improve their systems to meet the demands of Order 636. The gas authority or cooperative could intervene on behalf of the local governments in their restructuring proceedings in an attempt to reduce the pipeline rate increases under 636. The gas authority in evaluating resources would have to examine some of the capital expenditure decisions associated with selecting between investments to gather gas or create transportation alternatives, and adding new measurement equipment to monitor gas supply and track imbalances to help minimize expensive peaking supplies.

In addition, there is concern that the rate design changes implemented under Order 636 will impact large industries' decisions whether to relocate in a particular local government. The industrial customer could choose to contract directly with the producer and/or a pipeline and bypass the LDC for a better rate. The gas authority could provide ideas to local governments on how to structure rates to keep industrial customers and maximize revenues. The authority could also help local governments negotiate agreements with large industrial customers.

**5. The gas authority or cooperative could monitor capacity reallocation**

**among its member cities.** In eliminating capacity brokering, FERC has delivered a blow to LDCs that are struggling to compete. No longer will LDCs have the ability to channel valued pipeline capacity to customers directly on their systems.

The gas authority could monitor transportation between member cities to share gas supplies and move gas where it is needed. The authority could identify opportunities where new facilities or existing facilities could jointly meet the needs of a number of cities.

**6. The gas authority or cooperative could provide advice during pipeline**

**curtailment.** The authority could notify cities in the event of a pipeline

curtailment and advise them on meeting their gas requirements without incurring pipeline penalties.

**7. The gas authority or cooperative could provide a long-term supply plan for local governments.** A major concern of LDCs under the new FERC order is whether the gas supply will be as dependable as it was before. Because pipelines under Order 636 no longer have to provide merchant service, LDCs may be forced to sign more long-term sales and transportation agreements. A major disadvantage of the order is that local governments have to predetermine their supply for 12 months in advance and must pay demand charges or reservation fees based on the coldest day of the year. The pipelines make a profit based on the coldest day everyday, whether the supply is needed or not. The gas authority could provide the long-term supply plans for local governments by gathering sales information from each of the member local governments to be used for forecasting future gas requirements and evaluating gas supply options. The gas authority could decide the source, longevity, and the price of future gas supplies to ensure security of supply.

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## Appendix 1: Glossary of Technical Terms

**Account 191 balances:** These represent the unpaid balance of costs a pipeline incurred to obtain merchant gas for resale. Unrecovered gas costs are not future costs incurred to comply with the rule, but are costs incurred prior to implementation of the rule. A hypothetical pipeline may have contracts for half its gas at a price of \$2.00 per thousand cubic feet, and face a market price for gas of \$4.00 per thousand cubic feet. The pipeline could potentially lose money because it is locked in at the lower price. To protect their supplies, pipelines may buy gas at a higher price than they would in a strictly competitive market, and automatically pass these added costs along to their customers through “purchased gas” adjustments. Under Order 636, pipelines will be permitted to directly bill the Account 191 balance to their former bundled sales customers whether or not the customers elect to continue as firm sale customers on an unbundled basis. Under 636, these unrecovered gas costs cannot be billed to customers who were not sales customers when the gas purchase costs were incurred.

**Blanket sales certificates:** Order 636 converts existing sales certificates to blanket certificates so pipelines can sell gas to unregulated sellers at market-based rates. The certificates will enable a pipeline’s sale customers to freely negotiate the quantity and price of supplies purchased from the pipeline or other gas suppliers, and will provide potential opportunities for long-term sales contracts.

**Bundled services:** Bundled service is gas sales service sold together with transportation service.

**Capacity:** This refers to space reserved on the pipeline to transport gas supplies.

**Capacity releasing:** Under Order 636, capacity releasing will allow firm capacity holders to permanently or temporarily release some or all of their capacity through the pipeline to be reassigned to others desiring that capacity. The capacity releasing mechanism would afford buyers and sellers of firm capacity with a “one-stop shop” to ensure that firm capacity is used as efficiently as possible. The procedure will work like this: a firm capacity holder will inform the pipeline that it wants to release excess capacity; the pipeline will then post the information on its electronic bulletin board. The main difference between capacity brokering now and before Order 636 is

that under capacity brokering, the brokering customer could enter into and execute its own deals without involving the pipeline. Under capacity releasing, all offers must be put on the pipeline's electronic bulletin board and contracts are negotiated directly with the pipeline.

**City gate:** This is the location where the buyer receives the natural gas into the city's facilities.

**Curtailement:** In Title IV of the Natural Gas Policy Act (NGPA) of 1978, Congress made all pipeline sales services subject to a curtailment scheme based upon the gas end-uses. Gas distributors could restrict access to gas by disrupting supplies to commercial and industrial users during shortages. In Order 636, FERC refused to extend the protections of Title IV of the NGPA to high priority end-users by ordering pipelines to curtail firm transportation capacity based on end-use.

**Demand charges:** This is the rate the pipelines charge to reserve capacity or space on the pipeline.

**Electronic bulletin board:** Order 636 requires pipelines to provide timely and equal access to all information necessary for buyers and sellers to arrange for capacity reallocation, and requires this information to be provided on an electronic bulletin board. Under 636, electronic data interchange would be a key component in managing unbundled, open access transportation storage.

**Evergreen/rollover clauses:** If a customer elects to purchase from a pipeline, the pipeline's sales service obligation terminates when the contract is over. FERC suggested that LDCs negotiate evergreen or roll-over contract clauses with their suppliers if they are concerned about the security of supply. This was suggested by FERC in Order 636 to extend the mutual obligations of the buyer and seller for a specific period after the primary term expires. Some LDCs may choose to defer application of pre-granted abandonment by including evergreen or roll-over clauses in their contracts. If the provision is not included in the contract, the customer is still assured the right to continued service if it meets competitive bids. LDCs argue that they do not have the leverage to negotiate inclusion of roll-over clauses in their long-term contracts. The pipelines have the market power over transportation and have no incentive to give up monopoly power at the end of the contract.

**Federal Energy Regulatory Commission (FERC):** This commission was created by Congress as the successor to the Federal Power Commission (FPC). The commission, located within the U.S. Department of Energy, sets rates and charges for the transportation and sale of natural gas, the transmission and sale of electricity, and the licensing of hydroelectric power projects.

**Firm Customers:** Firm customers are generally residential or small commercial businesses such as hospitals and schools that require a reliable guaranteed gas supply. Firm customers, or those not willing to accept an interruptible service, pay for this reliability plus an additional fixed monthly charge.

**Gas supply realignment costs (GSR):** Pipelines incur costs to realign their existing gas supply contracts with producers. FERC will permit pipelines full recovery of costs incurred in implementing Order 636. Under 636, an LDC may remain a sales customer of the pipeline, or it may take a part of the pipelines' existing contracts to pay a reservation fee surcharge for costs approved by the commission.

**Imbalance:** Imbalance occurs when gas customers take more or less gas from the pipeline system than previously scheduled. Before Order 636, pipelines monitored the balances for LDCs, and assessed monthly or daily imbalance penalties. However, under 636, LDCs must manage these imbalances and equate what is used to what is delivered so that they are balanced within a pre-determined percentage area.

**Interruptible:** "Interruptible" customers usually include large industries and commercial customers who have the necessary equipment to switch fuels at low costs. These customers are willing to accept a contract that could interrupt their gas supply during peak seasons in return for lower rates during the rest of the year. In this case, industrial customers pay only a commodity charge, a rate based on the amount actually purchased.

**Load:** This term generally refers to volume or amount of gas purchased or used. For example, public-owned LDCs are referred to as low load users, because their gas supply needs are not as great as a large industry. Small LDCs also tend to have low supply needs in the off-peak periods.

**Local Distribution Companies (LDCs):** A Local Distribution Company (LDC) purchases gas at a single purchase price from the pipelines.

The LDC distributes the gas throughout localities and sells it to residential consumers, small commercial consumer businesses, and large industries.

**Market centers:** An area where gas purchases and sales occur at the intersection of different pipelines.

**MEGA-NOPR (Notice of Proposed Rulemaking):** NOPR was the predecessor to Order 636. The document issued July 31, 1991, was the next step in a process begun in 1985 when the commission issued Order No. 436, which instituted its open access transportation program. The NOPR was proposed to amend Part 284 of the commission's regulations governing natural gas transportation.

**Modified Fixed Variable Rate Design (MFV):** This cost classification method was eliminated under Order 636. The commission concluded the MFV was not in the public interest, that it unreasonably hinders competition among gas sellers, and that it is unjust and unreasonable under the Natural Gas Act (NGA). This method was first adopted in recognition of the annual underutilization of pipeline facilities. MFV helped pipelines recover some fixed costs (return on equity and related taxes) in the firm usage rate. However, MFV created some problems within the industry. First, because pipelines have rate bases that vary according to their original costs and depreciation, and because pipelines have different capital structures and allowed rates of return on equity, they have different amounts of fixed costs in their usage charges under MFV. In today's market, tying firm usage rates to capital structure may inefficiently bias the choice of capital structure. Secondly, gas customers who can choose among pipelines will—other things equal—buy from the one with the lowest usage charge because it offers the lowest delivered price.

**Natural Gas Act (NGA) of 1938:** The justification for federal intervention in the natural gas market was based on a series of Federal Trade Commission (FTC) reports that documented numerous abuses, including monopolistic control over prices by pipeline companies. As a result, the FTC recommended federal regulation of interstate natural gas prices. The Natural Gas Act (NGA) was designed to control pipeline monopoly in order to protect consumers. The act introduced the use of price ceilings for the resale of natural gas. Price ceilings were calculated according to the traditional public utility method, in which prices were set to cover actual costs, plus a reasonable rate of return and depreciation. The Federal Power Commission (FPC) administered the NGA and first focused its attention on the regulation of pipelines. The scope of the NGA was expanded in 1954, with the U.S.

Supreme Court's decision in *Phillips v. Wisconsin*. According to the Court's interpretation, the NGA required the FPC to regulate rates charged by natural gas producers, as well as pipelines, for interstate gas. The FPC was given the authority to regulate the wellhead price of interstate natural gas.

**Natural Gas Policy Act (NGPA) of 1978:** In 1978, Congress passed the NGPA which allowed the wellhead price of much of the nation's gas to rise according to the assumed future price of oil, and then to be decontrolled in 1985. The NGPA combined price controls and deregulation by creating nationwide price ceilings and by allowing phased deregulation of certain categories of gas. The NGPA also mandated an "incremental pricing" or "curtailment" system. This law required that FERC and state public utility commissions establish two categories of gas prices to be paid by different types of final users. The burden of higher gas prices was placed on industrial customers. Once all the gas purchased by the industrial users had reached the price ceiling specified by FERC, the price was frozen and any additional sales of higher price gas were borne by residential or small commercial users.

**Nominations:** This term refers to gas customers who either advance order or pre-schedule delivery of their gas supplies from the gas merchant, or both.

**No-notice:** This is transportation service under which a customer can receive up to its firm entitlement without penalty on any day, even if the customer did not previously schedule that amount of gas for transportation. This will ensure that pipeline customers continue to receive an adequate and reliable supply of gas to meet their customers' peak service needs.

**Non-discriminatory access/Open access transportation:** An interstate pipeline that offers transportation service on a firm basis must provide service equal in quality for all gas supplies, whether purchased from the pipeline or another seller.

**Order 636-A:** In response to numerous requests for rehearing of Order 636, FERC made adjustments to the order, especially with respect to concerns raised by small municipalities and local distribution companies about the impact on rates they pay to interstate pipelines. The major provisions require pipelines to continue using the one-part volumetric rates computed at the existing load factor for unbundled transportation service for small customers, and require pipelines to offer to sell gas on an unbundled basis to small customers for one year. The basic provisions in 636—such as SFV, unbundling, capacity releasing, 100 percent transition cost recovery, and equality of services—remain intact in 636-A.

**Peak periods:** In the gas industry, the coldest times of the year are referred to as “peak periods.” Gas buyers acquire and transport most of their gas supplies during the winter months.

**Pipeline:** Interstate transmission, or pipeline, companies purchase, sell, and transport gas across state lines. Sales and transactions are strictly controlled and profits are limited to a specific rate of return based on the pipeline’s capital stock, not operations. The gas is sold at cost plus the regulated rate of return. These transactions are regulated by FERC.

**Pipeline gas:** This is natural gas which meets the quality and requirements of interstate pipeline or transporting gas directly to the buyer.

**Pooling areas:** Pooling areas may either be places where title passes from the gas merchant to the gas shipper or places where aggregation, balancing, and penalties are determined. The commission believes that the meeting of gas purchasers and gas sellers can be facilitated by the creation of production pooling areas on individual pipelines. The commission will not mandate pooling areas, but will not permit actions that inhibit their development.

**Pregranted abandonment:** A pipeline may cease providing service at the expiration of the contract without first obtaining individual abandonment authority from the commission. This pregranted provision also applies to storage.

**Producers:** These are firms that explore and extract natural gas from the gas fields. Pipelines have sales contracts with producers to purchase gas supplies to sell and transport to the local distribution companies.

**Public/Private systems:** A public system is usually local government owned and nonprofit. A private system is owned by investors and stockholders with a profit motive.

**Reservation fee:** When the customer purchases firm service, a pipeline may impose a reservation fee or charge as a condition for providing such service. If a reservation fee is charged, it must recover all fixed costs attributable to firm transportation service.

**Restructuring discussions:** Pipelines were required to initiate restructuring proceedings with their customers by June 8, 1992. Firm sales customers could reduce or terminate any sales contract with a pipeline in

effect on May 18, 1992, by giving notice to the pipeline during its restructuring proceedings.

**Right of first refusal:** When a contract is nearing expiration, the pipeline may seek offers from other entities interested in receiving the transportation by posting available capacity and terms on its electronic bulletin board. The existing customer has the “right of first refusal,” or the right to match terms and price offered by any other entity. If the contract does not include an evergreen or roll-over clause, the customer is still assured the right to continued service if it exercises the right of first refusal by matching competitive bids. The effect and intent of this provision is to ensure against the inefficient or unnecessary retention of capacity at the expiration of the contract.

**Sales contracts:** Sales contracts between producers and pipelines generally include three major components: term, volume, and price. The term of a contract stipulates the length of time the contract is valid and the conditions for its renewal. Most long-term contracts—greater than 20 years—were negotiated before 1970. Older contracts usually have fixed prices and generally do not include conditions for renegotiation. Recent contracts are for shorter time periods, reflecting producers’ and pipelines’ fears of being locked into fixed prices in a period of inflation. Sales contracts between pipelines and LDCs generally take place across state lines and are regulated by FERC. The Public Service Commission regulates the costs LDCs can pass on to end-users. These sales can be considered as wholesale transactions, and sales by LDCs to the final users as retail.

**Service agreements:** Service agreements between pipelines and LDCs specify the term, volume, and price. The price in a service agreement is determined by FERC, and is based on rate schedules that establish different prices for various conditions of the sale. The rate schedules have two major cost components: the purchase price of the gas paid by the pipeline company to the producer, including any severance taxes, and transportation costs. The latter includes a return on the pipeline’s investment, depreciation, interest, operation and maintenance, and property and income taxes.

**Spot market:** It is often cheaper for pipeline sales customers to buy gas on the spot market, and pay the pipeline’s demand charge plus the interruptible rates, than to purchase the pipeline’s gas. A significant amount of spot gas is purchased on a short-term as well as a long-term basis. Industrial and electrical users of natural gas generally can switch easily between fuels to seek the lowest cost energy source. As a result, end-users rely heavily on the

spot supplies purchased directly from pipeline companies and brokers. Customers can buy spot gas that is cheaper than pipeline gas and still insist on their full contract demand when the pipeline price is below spot.

**Storage:** Pipelines cannot carry enough gas to meet demand for fuel on the coldest days. As a result, gas must be stored when demand is low. Storage refers to any process, properties, activities, or facilities used to hold, store, or maintain gas. Order 636 brings storage within the definition of transportation so that pipelines must provide customers with open access to storage on a contract basis. Under 636, storage will be unbundled from transportation and separately charged. However, some storage will be retained by the pipeline for its balancing and system management operations associated with transportation and for its no-notice transportation service.

**Straight Fixed Variable (SFV):** The SFV rate design recovers most pipeline costs through a demand charge to customers, thereby minimizing the incremental charge to transport gas. No fixed costs are assigned to the usage charge. The commission believes assigning costs to fixed costs inhibits competition by preventing gas purchasers from making accurate comparisons of prices, terms, and conditions offered by various gas sellers. In practice, SFV makes firm usage rates (rates to move more volume within the capacity reserved) very low and essentially equal for all pipelines. LDCs argue the SFV method reduces costs for customers with high annual load factors, and increases costs for customers with poor load factors (those who use little off-peak service).

**Take-or-pay :** This refers to provisions which require the buyer to pay for certain quantities of gas at preset prices regardless of whether delivery occurs at the time of payment.

**Transition costs:** Currently, pipeline sales customers are given a transition period during which they can lower or terminate purchases from a pipeline in order to switch to another gas seller. These are the costs the pipeline will incur to move away from the bundled merchant service. Order 636 authorizes pipelines 100 percent recovery of the costs incurred for realigning their gas supply contracts as a result of implementing the rule.

**Transportation:** Services include storage, exchange, backhaul, displacement or other methods of transporting gas from its acquisition site between or among cities.

**Unbundling:** The most important provision of Order 636 requires sales unbundling—pipelines must separate sales from transportation and offer the same transportation service to all transportation customers including those who buy from the pipeline. The rule also requires transportation unbundling—pipelines must split transportation service into component parts as far as practicable.

**Volume:** The volume component of a contract establishes the obligations and rights of the two parties with respect to the amount of gas delivered and purchased. Often volume rather than price is the key contract provision for pipelines, because of pressure to fulfill customer orders and to maintain pipeline utilization as close to capacity as possible.

**Wellhead:** This is the area where gas is first extracted by gas producers and sold to buyers.

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## Appendix 2

### Public Natural Gas Systems

Adamsville	Selmer
Algood	Smyrna
Athens	South Fulton
Bells	Brownsville
Centerville	Covington
Clarksville	South Pittsburg
Collinwood	Springfield
Cookeville	Sweetwater
Dunlap	Trimble
Dyersburg	Troy
Englewood	Waynesboro
Etowah	Lobelville
Fayetteville	Madisonville
Friendship	Munford
Gainesboro	Obion
Gallatin	Parsons
Gallaway	Ripley
Gates	Somerville
Halls	Bolivar
Harriman	Lexington
Henderson	Marion
Henning	Erin
Hohenwald	Humboldt
Jackson	Jamestown
Knoxville	Lafayette
Lawrenceburg	Lebanon
Lenoir City	Lewisburg
Linden	Livingston
Loretto	Loudon
Martin	Maury City
Memphis	Monteagle
Mount Pleasant	Newbern
Pikeville	Portland
Pulaski	Ridgetop
Rockwood	Savannah

**Source:** Division of Municipal Audit—August 1994

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## Appendix 3

### Private Natural Gas Systems

Alama  
Alcoa  
Ashland City  
Bell Buckle  
Belle Meade  
Berry Hill  
Big Sandy  
Bluff City  
Bradford  
Brentwood  
Bristol  
Bruceton  
Burns  
Byrdstown  
Camden  
Carthage  
Charleston  
Chattanooga  
Clifton  
Clinton  
Coalmont  
Collegedale  
Columbia  
Cottage Grove  
Cowan  
Crossville  
Dandridge  
Dayton  
Decherd  
Dickson  
Eagleville  
East Ridge  
Elizabethton  
Estill Springs  
Fairview  
Farragut  
Franklin  
Gatlinburg  
Germantown  
Gleason  
Goodlettsville  
Grand Junction  
Greenfield  
Greenville  
Hartsville  
Henry  
Iron City

Jefferson City  
Jellico  
Johnson City  
Jonesborough  
Kenton  
Kingsport  
Lafollette  
Lake City  
Lakesite  
Manchester  
Maryville  
Mason  
Mason  
McEwen  
McMinnville  
Medon  
Middleton  
Milan  
Millington  
Monterey  
Morrison  
Morristown  
Mosheim  
Mountain City  
Mt Carmel  
Murfreesboro  
New Market  
New Tazwell  
Newport  
Niota  
Oak Hill  
Oak Ridge  
Oneida  
Paris  
Piperton  
Pleasant Hill  
Red Bank  
Red Boiling Springs  
Rogersville  
Saltillo  
Samburg  
Sevierville  
Sharon  
Signal Mountain  
Smithville  
Soddy Daisy  
South Carthage

Sparta  
Spring City  
Spring Hill  
Surgoinsville  
Tazwell  
Townsend  
Trezevant  
Tullohoma  
Union City  
Vonore  
Walden  
Wartburg  
Watertown  
White House  
White Pine  
Whiteville  
Woodbury  
Woodland Mills

*Source:* Division of  
Municipal Audit - August  
1994

\* Private Gas systems may  
serve more than one city

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## Appendix 4

### Gas Utility Districts

Citizens Gas	Crockett PUD
Elk River PUD	Gibson Co.
Hardeman-Fayette	Horton Highway
Humphreys Co.	Jefferson-Cocke Co.
Lake Co.	Middle TN Natural Gas
Paris-Henry	Powell-Clinch
Servier Co.	Unicoi Co. Gas
West Tennessee PUD	Upper Cumberland Gas
Natural Gas UD of Hawkins Co.	First Utility District of Tipton Co.

*Source:* Division of Municipal Audit - August 1994

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## Appendix 5

### Persons Interviewed

William Case  
Audit Manager, Division of Municipal Audit  
Office of the Comptroller of the Treasury

William Malin  
President and CEO  
Independent Energy Corporation (IEC)  
New Orleans, Louisiana

Tom Fleming  
Director, Office of Local Government  
Office of the Comptroller of the Treasury

Lauren Looney  
Legislative Assistant  
Office of Representative Jim Cooper  
4th District Tennessee

Tom Mulkey  
President and General Manager  
Municipal Gas Authority of Georgia  
Marietta, Georgia

Jim Choukas-Bradley  
Legal Counsel  
Miller, Balis & O'Neil, P.C.  
Washington, D.C.

Robert Cave  
Executive Director  
American Public Gas Association  
Fairfax, Virginia

Chris Carpenter  
Marketing Consultant  
Entrade Corporation  
Louisville, Kentucky

Joe Ramsey  
Tenneco  
Houston, Texas

Ben Andrews  
Smyrna Natural Gas System  
Smyrna, Tennessee

Archie Hickerson  
Utility Rate Division  
Public Service Commission

Glen Blanton  
Gas Safety Division  
Public Service Commission

Elton Clark  
1st Utility District of Tipton Co.  
Covington, Tennessee

John Clark  
Vice President of Marketing  
Nashville Gas

Jerry Amos  
Legal Counsel  
Brooks, Pierce, McClendon, Humprey &  
Leonard  
Greensboro, N.C.

Jesse Robinson  
Federal Energy Regulatory Commission (FERC)  
Washington D.C.

Andy Lange  
ARCO  
Dallas, Texas

Edwin Rothschild  
Citizen Action  
Washington, D.C.

William Miller  
Legal Counsel  
Miller, Balis & O'Neil, P.C.  
Washington, D.C.

Floyd Simpson  
Louisiana Municipal Gas Authority  
Baton Rouge, Louisiana

Margret Ann Samuel  
Chair Gas Committee  
Ohio Consumer Council

Dean Parks  
BHM Consulting, Inc.  
St. Louis, Missouri