In the mid-1980s, customers threatened to bypass local gas distribution companies in favor of other suppliers and cheaper fuels. In response, states began to reform their natural gas regulatory policies to lower delivered prices to potential bypassers. In this Article, Professor Kelly argues that the most promising means of reform is to unbundle traditional local gas utility services, that is, to make gas transportation services available to customers separately from gas retail sales services. This Article provides a thorough analysis of the unbundling policies adopted by state regulators across the nation. Through this systematic review of intrastate regulatory policies, Professor Kelly outlines the best method of maintaining open access to markets, of retaining sufficient regulatory control over local utility companies, and of maximizing competition and minimizing the adverse effects of cost-shifting and stranded investment. Professor Kelly asserts that regulatory bodies must recognize the competitive character of unbundled gas retailing service and the monopolistic nature of both unbundled gas transportation services and the services that remain bundled, in order to promote most effectively the primary goal of unbundling: prevention of uneconomic bypass by providing market-priced natural gas to end users.

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"Unpredictability was only the attention-grabber. Those studying chaotic dynamics discovered that the disorderly behavior of simple systems acted as a creative process."^1

Introduction

A revolution is transforming natural gas regulation in the fifty states. Prior to 1984, all was quiet and traditional in this field of regulation. The states predictably exercised their jurisdiction over intrastate gas pipelines and local distribution companies (LDCs). The business of buying, transporting and reselling gas was bundled up in the LDC and governed by classical cost-of-service ratemaking, entry and exit control, and production-related regulation. Then, bypass commenced and large, long-time gas users threatened to leave the gas system to use a cheaper alternative fuel such as oil. This jolted regulators into awareness that the natural gas industry faced substantial difficulties. Regulators began to experiment with alternative forms of regulation designed to eliminate the threat of bypass by lowering the delivered price of gas. These experiments continue today.

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2. New York was the first state to reform its regulation of local distribution by requiring utilities to carry gas owned by others in certain circumstances. See Opinion and Order Requiring the Filing of Transportation Tariffs, No. 28,672 (N.Y. Pub. Serv. Comm'n Apr. 24, 1984).
4. Cost-of-service ratemaking is routinely used by governments to regulate prices and profits of businesses. For a detailed description of this traditional form of regulation, see STEPHEN BREYER, REGULATION AND ITS REFORM 36-59 (1982).
5. Bypass occurs when customers leave the LDCs' distribution system and turn to another distribution system to obtain fuel. A customer might purchase natural gas from another pipeline, or they might switch to an alternative fuel. Initially, the most common form of bypass involved customers switching to alternative fuels. In the mid-1980s, however, a change in federal regulatory policy made it easier for gas end users to switch from an LDC's distribution system to an interstate natural gas distribution system. For this reason, the opportunities for bypass have broadened. See discussion infra note 25.
6. Commentators had recognized that the pre-1984 changes in gas price regulation, discussed infra Part I(A), would cause market anomalies, including uneconomic bypass, unless concurrent regulatory reform of interstate and intrastate pipelines and LDCs was undertaken. See, e.g., Richard J. Pierce, Jr., Reconsidering the Roles of Regulation and Competition in the Natural Gas Industry, 97 HARV. L. REV. 345 (1983); Harry G. Broadman, Regulatory Reform of Interstate Natural Gas Pipelines (unpublished manuscript, on file with author); Paul R. Carpenter et al., Natural Gas Pipeline Regulation after Field Price Decontrol (unpublished manuscript, on file with author); House Republican Research Comm. Task Force on Energy and Natural Resources, Contract Carriage: Competition in the Natural Gas Market (July 15, 1983) [hereinafter Task Force Report].
Bypass of local gas distribution systems occurs, in part, because many large gas consumers are able to burn oil as well as gas. In the early 1980s, the delivered price of gas began to increase relative to that of oil. Large gas users threatened to switch to oil unless their gas prices were lowered. If these consumers bypassed the natural gas transportation and distribution system, the cost of maintaining the system would fall to the small, captive customers. Faced with the prospect of raising rates to these customers, regulators had an incentive to find ways to lower the delivered cost of gas to potential bypassers. They were supported in this quest by many gas producers who had been shut out of existing markets and were clamoring to sell their gas, even at lower than prevailing prices.

In the late 1970s, gas producers across the country increased production capacity in response to the higher wellhead prices of the Natural Gas Policy Act of 1978 (NGPA). However, these higher prices had a classic, predictable effect on consumers: they steadily scaled back gas consumption from a 1979 maximum. By 1984, many gas producers with excess production capacity were willing to sell directly to consumers at prices lower than those allowed by regulations. Federal deregulation of wellhead prices under the NGPA led to competition among gas producers and encouraged direct bargaining between producers and consumers. Regulators quickly saw that the easiest way to lower gas costs to potential bypassers was simply to let willing producers sell cheaper gas. However, direct retailing of natural gas to customers by a seller other than a pipeline was a significant break from tradition. Change can be difficult in any industry, but it is particularly so in one guarded by entrenched economic regulation. Over the last seven years, state administrative agencies have gingerly, but increasingly, required gas utilities under their jurisdiction to provide gas transportation service to customers who want to buy gas from other vendors. This unbundling of gas and transportation, two services traditionally offered only as one package by local gas utilities, established competition in the merchandising of gas. This is a momentous change for the natural gas industry; it demands an equally momentous change in intrastate regulation of the industry.

7. The bypass phenomenon and its causes are discussed in more detail infra Part I(A).
9. Robert Hahn and John Hird summarize studies estimating the cost of natural gas price regulation. They estimate the efficiency benefits of price deregulation to be $5.0 billion. See Robert W. Hahn & John A. Hird, The Costs and Benefits of Regulation: Review and Synthesis, 8 YALE J. ON REG. 233, 265-67 (1990); see also Pierce, supra note 6, at 352, 371-72 (estimating net annual loss in social welfare of $2.5 to 5.0 billion as a result of governmental regulation of wellhead gas prices).
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So far, there is no model policy prototype for intrastate regulatory reform to implement unbundling. Most states are experimenting with new regulatory regimes on a case-by-case basis; only fifteen states have developed comprehensive policies. The lack of consistency even among these policies, plus the absence of any lexicon for comparing similarities and contrasting differences, have hindered discussion of the advantages and disadvantages of innovative intrastate regulatory reforms. This Article offers several models that can be used to foster dialogue and to develop more widely used methods of regulating, or not regulating, unbundled gas and transportation services.

Review of the various state approaches to rebundling regulation shows that much of the lack of clarity and consistency is due to a failure to reflect the distinct theoretical foundations of monopoly and nonmonopoly regulation. For example, intrastate distribution of natural gas remains a monopoly in most places in the U.S. and, thus, rate regulation remains appropriate. In contrast, the sale of gas is subject to competition and is already a competitive business in some end use sectors. For this nonmonopoly service, classical cost-of-service, entry and exit, and production regulation is not appropriate. Failure to recognize these distinctions results in both overregulation and underregulation that thwart the original goal of the regulators—to lower delivered gas prices to potential bypassers. Another regulatory precept holds that achieving lower prices for potential bypassers will shift costs to other customer classes if prices previously included a subsidy paid by the bypassers. Failure to appreciate this principle has resulted in new complicated regulatory programs that are designed


12. In adopting its final order eliminating the vintage pricing of gas, the Federal Energy Regulatory Commission (FERC) noted that both Congress and the courts have recognized the competitive nature of this market. FERC Order No. 451, 51 Fed. Reg. 22,217, 22,217 at n.28 (1986). See Natural Gas Policy Act, Title I, 15 U.S.C. § 3301; see also Pennzoil Co. v. FERC, 645 F.2d 360, 378-89 (5th Cir. 1981), cert. denied, 454 U.S. 1142 (1982); Permian Basin Area Rate Cases, 390 U.S. 747, 756-57 (1968) (“Producers of natural gas cannot usefully be classed as public utilities.... They are intensely competitive vendors of a wasting commodity they have acquired only by costly and often unrewarded search.”). Recently, several commentators have analyzed the degree of competitiveness of today’s wholesale gas market. See Mohammad Harunuzzaman et al., Regulation for Local Gas Distribution Companies Under Changing Industry Structure 38-44 (1991). They conclude that “[o]ne can reasonably contend that the market for short-term spot contracts is workably competitive while market dominance for contracts for peak-load gas may exist. It may be true that pipelines do dominate the market for peak-load contract gas. This dominance, however, may be regulatory-induced rather than reflecting the exercise of market power.” Id. at 40. Although the nature of this non-monopoly market does not demand utility-like rate regulation, regulation may nevertheless be necessary to prevent anticompetitive abuse.


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to prevent cost-shifting, but that prove inefficacious and counterproductive to the original goal.

This Article evaluates issues confronted by states in choosing whether and how to reform regulation of local gas companies. Part I explains why reform occurred and prescribes intrastate unbundling to transform the gas industry and its regulation. It also outlines the regulatory experimentation that has ensued in the states. Part II proposes that post-unbundling regulation of the LDC as independent gas retailer be formulated separately from regulation of the LDC as gas transporter and discusses three models that may be used to regulate the LDC as independent gas retailer. In addition, it describes various state approaches to regulation of unbundled transportation service and offers two models to explain how transportation rate regulation has evolved. Part III specifies the most effective approaches to intrastate regulatory reform, concluding with concrete recommendations.

I. Unbundling Intrastate Natural Gas Utility Services

A. The Impetus to Change Local Gas Utility Service and its Regulation

In the mid-1980s the threat of what came to be called “uneconomic bypass” prompted state regulators to reform traditional natural gas utility service and its regulation. At the gas distribution level, bypass occurs when customers of the LDC turn to another gas provider such as an interstate, intrastate, or private pipeline; or start using a fuel other than gas, including coal, electricity, fuel oil, or wood; or invest in conservation measures to consume less gas. Significant bypass by long-standing customers causes severe financial problems for the LDCs. The LDCs will be saddled with the fixed costs previously borne by the bypassers and any new costs occasioned by their departure, such as take-
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or-pay liabilities. The gas companies are likely to look to regulators to require the remaining customers to pick up these costs.

Customers bypass if they can use alternative fuels or conserve at a lower price or if alternate gas providers can furnish comparable service at a lower price. The bypass is termed uneconomic if it would not have occurred had the delivered gas not been priced higher than its cost. In other words, the bypass would not have occurred if the gas previously provided to the bypasser had been priced at market price and the transportation of that gas had been priced at cost.

The potential for bypass increased in the period 1980-83 when the price of oil, an acceptable alternative fuel for many large gas users, decreased relative to the price of gas. During the mid- and late-1970s, the price of gas was significantly less than the price of oil, but in 1981 the prices started to converge.

By 1983, the national average price of 1% sulfur residual fuel oil was

\[ \text{Price of Residual Fuel Oil} \]

16. Take-or-pay liabilities arise from a typical provision in a contract between an LDC and a gas producer which obliges the LDC to take a minimum volume of gas from the producer or pay for it anyway. If the LDC loses customers who have traditionally consumed and paid for this minimum volume of gas, the LDC must nevertheless pay for the gas not taken. For additional discussion of take-or-pay contracts and minimum commodity purchase commitments, see infra notes 38 and 76 and accompanying text.

17. This Article makes no attempt to explain to the cost analyst how to conduct cost analysis to arrive at a cost-based rate. Rather, it attempts to highlight the objectives of post-unbundling regulatory reform that may affect professional judgment within the cost study. In ratemaking, “cost” may mean, for example, marginal cost, embedded cost, fully allocated cost, etc. For a discussion of some of the tensions arising from attempts at pricing in a competitive but regulated environment, see CER REPORT, supra note 10, at 42-51. Because marginal cost-based rates do not cover the large fixed costs of pipeline monopolies, deviation from marginal cost pricing (the pricing that would prevail under perfect competition) is necessary to pick up the common fixed costs and allow the pipeline to earn its revenue requirement. Daniel Z. Czamanski, Price Discrimination Limits and the Loss of Load by Gas Utilities, in NATURAL GAS INDUSTRY RESTRUCTURING ISSUES 74-75 (J. Stephen Henderson, ed., 1986). Cost allocation in this context leaves much room for judgment. Cost allocation is frequently made on usage-based criteria. Regulators differ as to how much deviation from marginal cost constitutes undue discrimination. From an economic perspective, Czamanski explains, the revenue recovered from potential bypassers need only recover the costs incurred by the LDC in excess of the stand-alone costs of the other customers. Id. at 75-83. Thus, any rate discount to potential bypassers that does not violate this principle would not constitute undue economic discrimination.

18. In 1983 it was estimated that 4 to 6 trillion cubic feet (Tcf) of U.S. gas consumption could quite easily switch to residual fuel oil. See Carl V. Swanson, Business Strategy for Natural Gas Pipelines Caught in the Middle Between Field and Consumer Markets 2 (unpublished manuscript, on file with author). Given 1983 natural gas consumption of approximately 17,500 trillion of Btu (17 Tcf), 23% to 35% of total gas consumption could easily switch to residual fuel oil. See AMERICAN GAS ASS'N, 1984 GAS FACTS 123 (1984).

19. Distillate fuel oil and residual fuel oil compete with natural gas in industrial and utility end-use markets.

less than the national average price of gas to industrial customers. The stage
was set for fuel switching.22

State regulators saw this scenario unfold. Uneconomic bypass motivated a
number of them23 to adopt regulatory changes designed to counter bypass by
driving the price of gas delivered by their LDCs down to the market price.
Eliminating bypass caused by overpriced natural gas does not prevent all bypass
of the LDC’s system. Customers will still leave the system if they can obtain
an alternative fuel24 at a cheaper price.25

B. A Fitting Solution: Offering Unbundled Utility Services

Regulators of intrastate pipelines and LDCs may use three policies to lower
delivered gas prices to potential bypassers: lowering the total delivered price
to potential bypassers on a case-by-case basis with an antibypass discount;
lowering the transportation charge to bypassing customers through transporta-
tion rate design reform; and/or encouraging provision of market-priced gas to
end users through the unbundling of traditional local gas utility services.
Unbundling provides the most fitting solution.

21. Id. at 69-76. Oil prices fell again in 1986 while many contract gas prices did not, causing
significant fuel switching, as evidenced by gas and oil consumption changes between 1985 and 1986. Utility
consumption of natural gas decreased by 14.5% during this period, and industrial consumption decreased
by 11.4%. During the same time, fuel oil consumption increased by 16.4% and residual fuel oil by 1.3%.
See Hank C. Jenkins-Smith, An Industry in Turmoil: The Remaking of the Natural Gas Industry, 27 NAT.

22. This development helped motivate the Federal Energy Regulatory Commission (FERC) to experi-
ment with regulatory reform of interstate pipelines. See, e.g., FERC Order No. 234-B, 48 Fed. Reg. 34,872
§ 284 (1983)) (permitting interstate pipelines to transport gas to large users capable of switching to
alternative fuels). On reviewing these orders, the D.C. Circuit observed, “[t]he Commission saw promise
in [these] arrangements whereby pipelines would simply transport gas sold directly by producers, at prices
competitive with alternative fuels, to end users who might otherwise exit the system.” Maryland People’s
Counsel v. FERC, 761 F.2d 780, 781-82 (D.C. Cir. 1985) (vacating the FERC orders for failure to consider
the anticompetitive effects of limiting the availability of transportation of direct-sale gas to large users).

23. See discussion infra Part I(C).

24. Oil is the primary alternative fuel for large gas users. Because the market price of oil is similar
to the market price of gas, bypass can be eliminated largely by lowering the price of gas to market levels.

25. They will also leave if they can get gas delivered at a cheaper price by, for example, finding a less
costly delivery system than the LDC’s. FERC’s present policy of encouraging interstate pipeline competition
by having pipelines expand their facilities through private contracts without putting existing ratepayers at
risk for new investment has increased this type of bypass and spawned much controversy with the states.
have approved of, and brought within exclusive federal jurisdiction, FERC’s authorization of interstate
pipelines to make direct delivery of gas to customers who would otherwise have their gas delivered by
the local distribution system. For a discussion of these decisions, see William G. Traynor, Judicial Approval
of Bypass Transportation: The MICHCON Cases, 36 WAYNE L. REV. 1473 (1990); see also Martin V.
Kirkwood, Comment, Distributor Bypass in the Deregulated Natural Gas Industry—Are Consumers Being
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Antibypass discounts will keep potential bypassers on the system, but the cost of the discount is borne entirely by the other customers on the system or by the LDC’s shareholders, not by the gas retailers, who should bear it. In addition, antibypass discounts do nothing to address the cause of most LDC bypass—competition among fuels arising from oil and gas price deregulation. Transportation rate design reform may result in lower delivered gas prices, but it alone will not consistently prevent bypass.\(^{26}\) Only unbundling allows LDCs to retain their customers by causing gas retailers to absorb most, if not all, of the cost of lowering gas prices. Unbundling enables the market, rather than regulators, to govern competition among fuels. The states have experimented with all three of these approaches. Unbundling, however, is the most promising long-range solution to counter the decreased competitiveness of natural gas in the energy market.

Some states have authorized utilities on a case-by-case basis to provide a potential bypasser with an antibypass discount in order to retain the load. For example, the Wyoming Public Service Commission granted the application of Cheyenne Light, Fuel & Power Co. to reduce gas rates to an industrial customer and concomitantly to increase gas rates to Cheyenne Light’s remaining customers.\(^{27}\) The customer wanted to connect directly to, and be served by, an interstate pipeline. The Commission found that if the customer left Cheyenne Light’s system, the increase for each of the utility’s customer classes (residential, commercial, industrial, and special contract), which would be necessary to pick up the payments for fixed costs previously made by the departing customer, would range from 2.06% to 3.04%.\(^{28}\) To avoid this, the Commission raised rates from between 0.46% to 0.65% to fund the antibypass discount. Other states have acted similarly.\(^{29}\) While the antibypass discount does preserve the LDC’s load from bypass, it does not further any structural industry reforms to eliminate uneconomic bypass.

When regulators reform the LDC’s transportation rate design to avoid bypass, they lower the transportation component of the rate. Previously, many states allocated a greater amount of common costs to the transportation rates of large users in order to extend lower rates to other preferred custom-

\(^{26}\) See, e.g., Broadman & Kalt, supra note 11, at 200 (arguing that “inappropriate LDC rate designs or the inability to provide customers with the services that they demand are the underlying roots of bypass”).


\(^{28}\) Id. (Order of July 18, 1984) at 2 ¶ 3. These increases are premised on the Commission’s assumption that the cost of the discount would be borne entirely by the customers.

\(^{29}\) A report on recent cases in Washington, Illinois, and Idaho indicates that not all regulators in these states have immediately passed on the cost of the discount to remaining customers. See Mary Nagelhout, “Antibypass” Discounts: Load Preservation Without Rate Discrimination, PUB. UTIL. FORT., Feb. 1, 1991, at 45, 47-49.
ers—residential users, for example. However, minimizing the allocation of common costs to the rates of potential bypassers does not lower the delivered price of gas enough to compete with the delivered price of alternative fuels when the cost of the gas itself is above market rates. Also, like antibypass discounts, the price discounts available to potential bypassers through transportation rate design reform must be covered by other customers if the LDC is to maintain its revenues. As more state regulators now realize, a competitive price can be achieved only when the gas component of the delivered price equals the market price and the transportation component is set at cost.

Unbundling traditional gas utility services entails offering and pricing separately the services which traditionally have been offered only as a singly priced package by pipelines and LDCs. These services, broadly defined, include the provision of gas and of its transportation. If these services are unbundled, purchasers are free to buy gas in the market from numerous sellers, presumably at the market price. Of course, purchasers need not avail themselves of unbundled services. Unbundling as described here and throughout this Article does not mean that a local utility offers only unbundled services, but rather that it offers unbundled services in addition to the traditional prepackaged service. Unbundling appealed to many state regulators in the mid-1980s because they saw it as solving the problem of providing market priced gas to large users, thus eliminating the threat of uneconomic bypass. Unbundling also promised to solve two other problems nagging regulators at the time: angry producers who could not get their gas to market and disgruntled captive gas consumers who were paying higher than market prices for their gas.

In the early 1980s, there was an excess supply of gas on the market, and many producers without contracts could not get interstate pipelines, traditional

30. See Pierce, Reconstituting the Industry, supra note 13, at 49; Colin C. Blaydon, State Policies Under Pressure, in DRAWING THE LINE ON NATURAL GAS REGULATION 157, 161 (Joseph P. Kalt & Frank C. Schuller eds. 1987); Czarnanski, supra note 17 (discussing economic costs and benefits of various pricing policies); see also supra note 17 (discussing allocation of common costs).
31. Even if all of the costs incurred by the LDC after the gas reaches the city gate were put in the transportation component of retail rates, these costs still only amount on average to about 24% of the delivered price of gas. In 1989, only 23.46% of the average price to the consumer represented costs incurred after the gas reached the city gate; in 1988, this percentage was 24.79, and in 1987 it was 23.41. See AMERICAN GAS ASS’N, 1990 GAS FACTS 112 (1990).
32. See discussion supra note 17.
33. In 1985, FERC initiated its “blanket transportation certificate” program which provided incentives to interstate pipelines to open up access to their transportation services. See supra note 25, FERC Order No. 436. This order initiated the unbundling of interstate pipeline services. This development gave many states an additional reason to unbundle at the local level.
34. For a summary of this market problem, see BROADMAN, NATURAL GAS, supra note 13, at 5.
purchasers, to buy gas. Other producers had contracts with pipelines to take gas, but pipelines, responding to a slack demand, were not taking the gas. In some instances, pipelines that had take-or-pay contracts with producers were not taking gas or paying for it. Thus, producers were seeking to sell gas to individual large users, even at low spot market prices. Some states initiating regulatory reform saw that unbundling could work to the benefit of these producers by allowing them to sell directly to consumers wanting lower-priced gas supplies instead of selling to pipelines. Also, some regulators, realizing that unbundling enhances the competitiveness of the gas commodity market by eliminating the pipeline monopsony, hoped that captive consumers would reap benefits from such a market over time.

C. The Chaos of Resulting Regulatory Reform

Unbundling the sale of gas from its transportation at the local level causes fundamental changes in the traditional functions and structure of the industry. The most profound is the injection of competition into the retail gas monopoly. Once consumers are free to buy gas separately from transportation, they examine whether a seller other than their LDC can better meet their needs. This forces the LDC to compete with other retailers to sell a commodity. If an LDC decides it wants to compete in this market, it must adapt its preexisting gas procurement activities to the new function. This, in turn, may force it to restructure its organization to achieve its new objective. Alternatively, the LDC may decide not to compete in the retailing of gas. Since LDCs have historically made their profits only on the transportation of gas, not the sale, of it, a utility may have no interest in developing its competitive gas retailing business. As long as that LDC can maintain its transportation volumes without participating in the new competitive gas retailing market, it may have no incentive to enter. In either event, the regulators of LDCs must determine whether to modify regulation which has been premised on a monopoly of both the transportation and retailing of natural gas.

37. See supra note 16 for a definition of take-or-pay contracts.
41. Id. at 228.
42. The Gas Company of New Mexico, a large LDC, has chosen not to operate in the competitive gas retailing market. Interview with John Ackerman, President of the Gas Company of New Mexico, in Santa Fe, New Mexico (Apr. 1989).
Another significant change to the industry resulting from unbundling is the emergence of new market participants, the independent retailers. Independent retailers include gas marketing companies, which purchase and pool gas for resale from a number of producers, and gas brokers who arrange purchases and sales of gas without taking title to the commodity. Independent retailers may or may not be affiliated with a pipeline or LDC. They join gas producers, LDCs, and pipelines in making gas sales directly to consumers. The presence of these new entities and the new relationships among traditional entities also require a rethinking of the regulation of the industry; including whether there should be any regulation of the new natural gas retailers or the new retail transactions and, if so, what form this regulation should take.

The states that have unbundled sales and transportation have answered these questions differently. The resulting regulation in the states is anything but traditional and predictable. Only fifteen states have adopted comprehensive, state-wide regulatory policies to govern unbundling in their jurisdictions. They are California, Colorado, Iowa, Kentucky, Maryland, Massachusetts.

43. In a 1988 survey conducted by the National Regulatory Research Institute, 35 states and the District of Columbia reported that they have gas transportation of some sort. ROBERT E. BURNS, DANIEL J. DUANN & PETER A. NAGLIER, STATE GAS TRANSPORTATION POLICIES: AN EVALUATION OF APPROACHES (1989).


48. In 1984, the Kentucky Legislature authorized the Kentucky Public Service Commission to require its intrastate pipelines and LDCs to transport gas owned by others. KY. REV. STAT. ANN. §§ 278.505-278.507 (Michie 1989). In a series of orders, the Kentucky Commission ordered each utility operating within the Commonwealth to offer transportation on a first-come, first-served, nondiscriminatory basis. See In re An Investigation of the Impact of Fed. Pol. on Natural Gas to Ky. Consumers and Suppliers, No. 297 (Ky. Pub. Serv. Comm’n May 29, 1987); Order granting Motions and Petitions for Clarification and Rehearing, July 2, 1987; Order on Rehearing, Oct. 23, 1987. For a summary of these orders, see Natural Gas Marketing and Transportation Committee: 1990 Annual Report, supra note 44, at 87.

49. The Maryland Public Service Commission has required its four largest LDCs to transport gas owned by others. In re Interstate Sale and Transp. of Gas, 80 P.U.R.4th 1 (Md. Pub. Serv. Comm’n 1986). Maryland’s smaller LDCs are encouraged, but not required, to offer transportation services. Id. For a summary of Maryland’s policies, see Natural Gas Marketing and Transportation Committee: 1990 Annual Report, supra note 44, at 87-88.
50. The Massachusetts Department of Public Utilities requires its LDCs to offer firm and interruptible transportation service. In re Intrastate Natural Gas Transp. Serv., 86 P.U.R.4th 23 (Mass. Dep't Pub. Util. 1987). Massachusetts has a comprehensive policy regarding transportation rates but leaves specificity of other terms and conditions of transportation open for decision on a case-by-case basis. Id. at 56. For a summary of this policy, see Natural Gas Marketing and Transportation Committee: 1990 Annual Report, supra note 44, at 88.


53. New York has a statute authorizing its Public Service Commission to order its local gas companies to transport gas owned by others. N.Y. PUB. SERV. LAW § 66-d (2) (McKinney 1989). The Commission implemented this law, set forth standards governing firm and interruptible transportation, and required almost all its gas companies to provide transportation services. Motion of the Commission to Determine Whether and With What Restrictions Transp. of Customer Owned Gas Should Be Authorized, Order 85-6, Case No. 28672 (N.Y. Pub. Serv. Comm'n Apr. 24, 1984) [hereinafter NYSPSC Order]. Although the Commission has not amended its transportation guidelines on a generic basis, it has made changes in subsequent, individual cases. See Order re Staff Recommendation of Consol. Edison Co. of N.Y. Tariff Filing to Permit Greater Flexibility to Market Interruptible Serv. (Nov. 18, 1988); Order re Staff Recommendation of Rochester Gas & Elec. Tariff Filing to Define LDC Supply Obligations to Transp. Customers (Oct. 5, 1990); Order re Staff Recommendation of Niagara Mohawk Power Co. Revisions to Transp. Serv. (Jan. 31, 1990) (tightening rules regarding balancing). For a summary of these standards, see Natural Gas Marketing and Transportation Committee: 1990 Annual Report, supra note 44, at 90-91.


57. The Virginia State Corporation Commission has established policies for voluntary transportation services, although it has declined to require that its utilities offer transportation services. In re Natural Gas Indus. Rates and Transp. Policies, 78 P.U.R.4th 57 (Va. St. Corp. Comm'n 1986). For a summary of these policies, see Natural Gas Marketing and Transportation Committee: 1990 Annual Report, supra note 44, at 93-94.

58. West Virginia state law authorizes the West Virginia Commission to allow or to require jurisdictional intrastate pipelines and LDCs to transport gas owned by others. W. VA. CODE § 24-3-3a(b) (1986). The
twenty states have begun experimental unbundling utility-by-utility. 60 Even some of the states with uniform policies have altered them over the few years they have been in existence. 61 These examples indicate that individual policies and utility unbundling experiments often differ markedly between states. 62 This differentiation is not surprising because regulatory experimentation has proceeded more or less simultaneously and independently in each of the states. Historically, there was no model policy for unbundling services of intrastate facilities, 63 and even today there is no widely accepted outline of essential elements of regulatory reform. Also, many states seek to accomplish more than one goal with their reform. Numerous states want to promote competition in the gas commodity market to avoid uneconomic bypass by providing gas at the lowest possible price. 64 However, they also want to minimize any shifting of costs to customers 65 and to protect their utilities from incurring unrecoverable costs. 66 A few states have also attempted to use unbundling to promote the
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devlopment of indigenous natural gas. In light of these assorted aims, it is not surprising that the existing regulatory regimes are so diverse.

II. Rebundling the Regulation of Natural Gas Utility Services: Approaches that Have Evolved in the States

A. The Theoretical Underpinnings of Post-Unbundling Regulatory Reform

Unbundling changes the traditional function of the LDC in the natural gas industry. Regulation should be reformed to respond to these changes and to achieve the goals of unbundling. An understanding of regulatory theory provides valuable insights into if and how traditional intrastate LDC regulation should be modified to accommodate unbundling.

1. The Changes to the LDC Effected by Unbundling and their Regulatory Implications

After unbundling, the LDC will still provide prepackaged service to those customers who find it cheaper to have the LDC procure and transport their gas. Today, these probably comprise the bulk of the LDC's customers. The LDC will also provide, however, a transportation service which may be purchased without buying the gas retailing function. Regulators should adopt two new and different policies designed to suit the differences between the individually offered gas retailing and the transportation function. These policies should be adopted in addition to the traditional LDC regulatory policies for bundled functions.

The LDC's unbundled gas retailing service differs substantially from its traditional, bundled gas sales service. Prior to unbundling, the LDC was the only gas retailer available to most end users and was appropriately regulated as a monopoly. It was traditionally subject to rate and production regulation. This meant, first, that the LDC was required to sell gas to every end user at the same price (the weighted average cost of its supplies of gas (WACOG)), and second, that the LDC's acquisition of gas was regulated to assure a

67. Pennsylvania specifically advocated unbundling as a way of promoting the development of Pennsylvania natural gas. Id. Indeed, it attempted to favor the transportation of gas produced in Pennsylvania by setting the maximum rate for transportation of that gas at the rate justified through a cost of service study. In contrast, Pennsylvania set transportation rates for other gas using the gross margin approach, presumably leading to rates, at least to industrial customers, higher than those that would be adopted under a cost-based approach. Id. at § 60.2(4); In re Regulations Governing Intrastate Natural Gas Transp. Rates and Serv., supra note 56, at 5-9.

68. Cf. Blaydon, supra note 30, at 161 ("Considering this heterogeneity [of ownership, service offerings and vertical integration] among LDCs, it is not surprising that the regulatory standards of fifty-one state jurisdictions are so wildly diverse.").
reasonable and prudent supply of gas at a reasonable and prudent price. After unbundling, the LDC will be subject to heavy competition from independent retailers of gas. Regulation tailored for LDCs as monopoly retailers of gas is inappropriate if and when they function in a competitive marketplace. Therefore, a new policy should be designed to ensure the development of a fair and efficient competitive marketplace for gas retailing.

The LDC's unbundled transportation service has one characteristic which distinguishes it for regulatory purposes from the LDC's traditional transportation service. Although the LDC's gas distribution pipeline has the same monopoly characteristics that existed prior to unbundling, this monopoly is now an essential element of the competitive gas retailing market. Sellers and buyers of unbundled natural gas need easy access to transportation. Thus, a new regulatory policy designed to open access to the common carrier portion of the pipeline should be adopted. At the same time, because the LDC still has a monopoly on transportation of gas, transportation rate regulation, such as existed prior to unbundling, remains appropriate.

2. The Possible Goals of Unbundling and the Feasibility of their Attainment

The new regulatory policies that are developed to provide a fair and efficient market in the retailing of gas and open access to the common carrier should meet the primary goal of unbundling and as many secondary regulatory goals as possible. The primary goal of unbundling is elimination of the threat of uneconomic bypass. This goal is accomplished by fostering an environment where gas users can obtain market priced gas transported at cost-based rates. Many regulators would like to satisfy additional goals with post-unbundling regulatory reform, including prevention of cost shifting and stranded investment, and improvement in business for local gas producers. Review

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69. This monopoly characteristic demands continued classical regulation. Id. at 169.


71. LDCs have a monopoly on distribution in most areas of the country. See supra note 11. However, competition in distribution is increasing. Recently, the New York Public Service Commission concluded that the threat of bypass of LDCs, particularly by large gas users located near interstate pipelines, demanded the adoption of a policy to prevent LDC bypass. See In re Bypass by Gas Cogeneration Projects, 120 P.U.R.4th 385 (N.Y. Pub. Serv. Comm’n 1991).

72. See supra Part I(C) and notes 64-67.

73. Indeed, these two regulatory fears are also at the heart of regulators' concern about bypass. The fear is that circumvention of the LDC system by large users will cause utilities to lose their investment in gas and facilities purchased to serve these customers. The result of this stranded investment will be the shifting of costs to other LDC customers as well as an adverse impact on the utilities.
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of regulatory theory shows that some of these goals can be satisfied and some
cannot.

First the good news. Competition in gas retailing should not threaten the
typical LDC with stranded investment in transportation-related facilities. The
investment is not threatened because unbundling does not affect the monopoly
character of the LDC's transportation service. The LDC will continue to
transport gas to all its preexisting customers, even those who buy gas from
another retailer. Therefore, the LDC will continue to receive the same level
of transportation revenues. If the LDC's transportation business varies at all,
it is likely to improve. Assuming unbundling achieves its goal of lowering gas
prices to the market price, economic theory predicts that the lower price will
lead to higher demand. If this theory correctly predicts the gas market, the
LDC's transportation volume and, therefore, its revenues would increase.

The gas sales-related investment of an LDC may consist of take-or-pay
contracts or minimum commodity purchase commitments with pipelines. This
investment will be threatened if gas customers switch to non-LDC sources
of supply, leaving the LDC liable to pay for gas it cannot sell. However, the
take-or-pay costs may be recovered through transportation surcharges on these
customers. Unbundling should not adversely impact most LDCs by creating
stranded investment. On the contrary, unbundling is calculated to minimize this
threat, which is otherwise likely to be caused by uneconomic bypass.

Now the bad news. It is unlikely that many jurisdictions can prevent cost
shifting when they unbundle LDC services. At a minimum, the price of each
unbundled service subject to competition (gas retailing and also, in some
circumstances, transportation) will eventually cover no more than the cost of
providing that service to that class of customer. The whole point of unbundling
is to lower prices to large, price sensitive customers, thereby keeping them on
the LDC's system. To the extent services were cross-subsidized before
unbundling, prices will increase for some and decrease for others.

74. LDCs invest heavily in transportation-related facilities and gas sales-related assets. Fixed gas sales
costs include demand charges, minimum commodity bill payments paid to pipeline suppliers, and take-or-pay
penalties paid to producers.

75. To the extent another pipeline begins to serve any of the LDC’s preexisting customers, it will not
be a consequence of unbundling but rather a federal or state policy to encourage, or at least not interfere
with, competition in gas transportation and distribution.

76. The minimum bill obligation is less significant for most LDCs since FERC's minimum bill order,
No. 380, but LDCs in gas producing states usually have take-or-pay contracts with producers. Robert
Johnston & David Sullins, Comments on State Policies Under Pressure, in DRAWING THE LINE ON NATURAL

77. The extent to which surcharges can be imposed may be limited.

78. This is quite common under price regulation for different industries. See, e.g., discussions in Meyer
& Tye, supra note 70, at 277, and BREYER, supra note 4, at 293-98.

79. It is theoretically possible that some customers who might otherwise be subject to a price increase
will not fully incur it. If unbundling results in lower prices for the most elastic customers, they may
For these reasons, unbundling can likely be accomplished without stranding the utility with investment in unused facilities. However, unbundling is likely to be accompanied by a shift in prices to the consumers, with an increase in price felt most likely by previously subsidized residential customers. Unbundling will benefit local gas production by ending the pipelines' monopsony in the gas retail market, thereby increasing the likelihood that local gas producers can find purchasers. However, states should not favor local gas production with, for example, discounted transportation rates not available to out-of-state producers. Although unbundling cannot achieve every desirable outcome, the undesirable effects of unbundling would be magnified without it. If uneconomic bypass occurs because unbundling is foregone, stranded investment and cost-shifting to ameliorate the impact of stranded investment will occur.

B. Post-Unbundling Regulation of the LDC as Gas Retailer

If gas customers are free to buy gas separately from transportation, and LDCs want to retail gas to them, regulators can respond in one of three ways: refrain from regulating the LDC operating as an independent gas retailer except to preclude anticompetitive behavior (the "Hands-Off Approach"); comprehensively regulate the activities of the LDC as gas retailer (the "Hands-On Approach"); or prohibit the LDC from retailing gas separately from transportation (the "Prohibitory Approach").

1. The Hands-Off Approach

Two characteristics define this approach. First, regulators permit the LDC to compete with independent gas retailers by offering gas sales service separately from transportation service. Second, regulators refrain from regulating the LDC operating as gas retailer except as necessary to preclude it from unfairly using its monopoly transportation position and monopoly on bundled gas service.

There is some variation among the states using this approach. Some correspondingly increase their consumption of natural gas, thereby increasing total volumes transported by the LDC and decreasing the per unit cost of transportation.

80. The LDC acts as an independent retailer when it competes with other retailers to provide gas to certain end users. Over time the retail market may be competitive for all end users, not just the end users that individually or as a voluntarily-formed group consume large volumes of gas. The subsequent analysis in this Article assumes that the LDC still acts in a noncompetitive market providing gas to small end users and is still regulated as a traditional natural monopoly when providing that service.

81. At least five states, Colorado, Kentucky, Maryland, New Mexico and Wisconsin, follow the hands-off approach with needed regulation to prevent the LDCs, as unbundled gas retailers, from exercising monopoly powers. See In re Rules of the Pub. Util. Comm’n of Colo. Regulating Gas Transp. Serv., supra note 46, § 6.1; In re An Investigation of the Impact of Fed. Policy on Natural Gas to Ky. Consumers and
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states require their LDCs to form an affiliate to carry on an unbundled gas retailing business. Two of the states that do not require LDCs to form an affiliate nevertheless prohibit them from segregating low-priced gas supplies from their gas supply mix to sell to unbundled customers. Of course, these LDCs could form a marketing subsidiary to provide least-cost gas to price sensitive end users. So the prohibition on segregating low-priced gas supplies from the pool of gas otherwise intended to serve system gas customers is, in reality, just a less direct way of requiring LDCs to form separate subsidiaries or to form separate bundled and unbundled gas sales operations within the same corporate structure.

The hands-off approach is a regulatory policy well-suited to the characteristics of the LDCs' new unbundled gas retailing service. It is designed to permit the LDC to function in the competitive gas retailing marketplace as any other independent gas retailer. The only regulatory constraints on the LDC as competitive gas retailer are those necessary to keep it from wielding an unfair advantage over other independent gas retailers. An LDC could potentially use its transportation monopoly to give itself or its marketing affiliate an advantage in the unbundled gas retailing market. Assuming the LDC has a marketing affiliate, the unconstrained LDC could pass its affiliate confidential information about retailing competitors; give its affiliate preferential access to transportation,

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As discussed infra Part II(B)(3), California recently prohibited its LDCs from participating in the unbundled gas market and from forming new affiliates to do so. At the same time, California adopted the hands-off approach for its existing LDC marketing affiliates. In re Rulemaking on the Structure of Gas Util. Procurement Practices and Refinements to the Regulatory Framework for Gas Util., supra note 45, at 9-10.

82. New Mexico requires its utilities to form separate subsidiaries if they choose to broker or market gas. N.M. STAT. ANN. § 62-6-4.1(F) (Michie 1988); NMPSC Rules, supra note 52, § 660.10. In 1987, independent gas resellers instigated the introduction of a bill in the New Mexico legislature prohibiting LDCs from participating in unbundled gas retailing, but it was not enacted into law. H.R. 444, 38th Leg., 1st Sess., 1987 N.M. Laws § 62-6-1.1.

Wisconsin suggests, but does not require, that its utilities set up a subsidiary to market gas to avoid problems of dedicating special utility gas supplies to specific customers. See In re Natural Gas Distribution Util., supra note 59, at 641.


84. It would be in the interest of such LDCs to form an independent subsidiary to participate in the potential profits as well as losses associated with activity in a competitive market. See discussion of separate gas portfolios infra Part II(B)(2).

85. Wisconsin handled the conflict presented by an LDC desiring to target least-cost gas to price sensitive end users by explicitly encouraging its LDCs to form marketing affiliates. Alternatively, while declining to prohibit targeted gas arrangements, Wisconsin suggested the utility create a portfolio of spot market gas to sell to price sensitive customers. The Wisconsin Commission did not clearly state whether this spot market portfolio was also to be part of the system supply mix. In re Natural Gas Distribution Util., supra note 59, at 641. This special gas marketing portfolio idea has been used in California to regulate extensively LDCs operating as unbundled gas retailers, as discussed infra Part II(B)(2).
LDC-released gas,87 or other LDC-provided services; provide preferential rates; or require anticompetitive tying arrangements between LDC-provided services and an affiliate’s services.88

The hands-off approach is consistent with achieving the primary goal of unbundling—making market priced natural gas available to end users. Market priced gas availability requires fair competition between gas retailers. By allowing the LDC to become another retailer, the hands-off approach provides more competition in the market which in turn increases the potential for a fair and efficient market. This policy also tries to ensure that the LDC is a seller in the new market just like any other seller by attempting to keep the LDC from taking any unfair advantage it has because of its related monopolies. A potential drawback to this approach, however, is the difficulty of enforcing proscriptions on anticompetitive activity against an LDC determined to give its marketing affiliate an advantage.89

Those states that require LDC subsidiaries to market unbundled gas wisely eliminate a potentially large advantage that the LDC might otherwise have over other gas retailers.90 Because FERC, in reforming its regulation of interstate pipelines, has grandfathered in LDC use of upstream interstate pipeline capacity,91 an LDC that markets unbundled gas has a built-in preference to

87. LDC-released gas is gas that the LDC initially purchased as part of its pool of gas to serve its traditional customers but is later segregated from this pool and released for sale to other gas retailers or directly to unbundled customers. This released gas is typically either low-priced gas or gas which will be priced lower once it is segregated from the pool. In either event, it is sold at a lower price than the pooled gas. The price of the pooled gas is the weighted average cost of all the volumes of gas in the pool.


90. Cf. Curtis Cramer, Natural Gas Pipelines and Monopoly in PUBLIC UTILITY REGULATION 137, 143-48 (Kenneth Nowotny et al. eds., 1989) (discussing the reasons why pipelines should not be allowed to favor their retailing/producing affiliates).

91. See FERC Order No. 500, Regulation of Natural Gas Pipelines After Partial Wellhead Decontrol, 3 F.E.R.C. Stats. & Regs. §§ 30,761, 52 Fed. Reg. 30,334 (1987), 18 C.F.R. §§ 2, 284 (1988). A pipeline that is “upstream” of the LDC is one that hooks into the local distribution system and is capable of
upstream interstate capacity. The LDC's marketing subsidiary would lose any competitive advantage.

The hands-off approach also appropriately distinguishes between the market for bundled gas sales and transportation service, which is still a monopoly of the LDC, and the market for unbundled gas sales, which is competitive. It continues traditional regulation of the former, but refrains from regulating the latter, relying instead on the emergence of competition to transform it into a fair and efficient market.

As explained above, refusing to permit the unbundling of gas services contributes to the incidence of uneconomic bypass and its attendant adverse impacts on the utility and its remaining customers. However, unbundling gas services and allowing customers to use nonsystem supplies of gas may not preclude all cost shifting; in particular, gas costs may shift. To the extent that an LDC obtained lower priced gas supplies in the pre-unbundling era because of the characteristics of certain gas customers, such as large consumption or high load factor, and these customers switch to non-LDC supplied gas, the price of the LDC's gas supplies may increase, thus raising the cost of gas to system supply customers. On the other hand, increased competition in the sale of gas may decrease the overall market price of gas, including the price of gas for LDCs. The hands-off approach to regulating the LDC as an independent gas retailer will, if successful, tend to increase competition in the unbundled retailing of gas. Thus, this approach will add to any competition-borne tendency for the price of gas to fall.

2. The Hands-On Approach

The hands-on approach is the opposite of the hands-off approach. The hands-on approach is characterized by monopoly-like regulation of the LDC, even when it operates in the competitive gas retailing market. California pioneered this approach in 1986. California's regulation was gas customer, rather than gas supplier, oriented. It divided gas customers into core and noncore categories. Core customers are residential and commercial customers without alternative fuel capacity; noncore customers are the other commercial customers and large users. Noncore customers are permitted to purchase gas

transporting gas to it. Pipeline capacity is space on the pipeline for carrying gas. Gas sellers, buyers or transporters can permanently reserve capacity for their own exclusive use, which is particularly valuable in markets where pipeline capacity is inadequate to serve demand. See discussion at infra note 98 and accompanying text.


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separately from transportation. The LDCs may sell unbundled gas to noncore customers, but they are regulatorily constrained in how they can do it. The LDCs must maintain separate portfolios of gas for the core and noncore customers, and the LDCs' purchasing, pricing and marketing practices for their noncore gas portfolios are strictly regulated. For example, the California LDCs were required to buy their noncore gas only in the spot and short term markets on contracts for terms of not more than one year. Further, the LDCs were permitted to sell gas out of this portfolio to noncore customers only at the average portfolio price. Discounting to individual customers or targeting particular gas supplies for particular customers was prohibited. LDCs were permitted to market gas to end users outside their service territory, but could only market gas from their noncore portfolio at the average portfolio price. Finally, the LDCs were not prohibited from using information they obtained through their transportation monopoly to advantage their noncore marketing, business because the LDCs' activities in the competitive gas market were considered to be utility activities by the regulators.

The hands-on approach to regulating the LDCs' new unbundled gas retailing service is not well-suited to the characteristics of the unbundled gas market. Monopoly-like regulation of a participant in a competitive, or potentially competitive, market is antithetical to traditional regulatory theory that reserves such regulation for natural or regulatorily-created monopoly situations.

The hands-on approach also is not likely to achieve the goal of preventing uneconomic bypass by making market priced gas available to customers. Under this approach, an LDC operating in the unbundled gas market retains many of its monopoly advantages, such as its preference for upstream interstate pipeline capacity and its inside information about the needs of particular customers. To the extent these advantages are valuable in the new market, they could keep potential gas retailers out of the market, thus constraining potential competition.

The regulated LDC attempting to operate in the unbundled gas market also bears the disadvantage of unbundled gas supplies regulated by source and price.

94. Id. at 47-48.
95. Id. at 49-50.
96. Id.
97. Neither did California regulators intend to create a monopoly in the provision of unbundled gas: "[N]oncore customers can choose procurement from either [core or noncore] portfolio or from nonutility sources." Id. at 9.
98. In California, for example, LDCs in the unbundled gas market must have access to upstream interstate pipeline capacity because there is a shortage of this capacity. In 1989, this dilemma led a coalition of California end users and non-utility gas producers and marketers to petition the California Public Utilities Commission to change its regulation. The petitioners stated, "Owing to the utilities' preferential access to interstate pipeline capacity and storage, . . . most noncore customers are forced to rely upon the utilities for their gas supplies. This prevents noncore customers from obtaining gas supplies—often at more favorable prices—from other suppliers." Letter from John W. Leslie, Attorney for Mock Resources, Inc. and Salmon Resources Ltd., Luce, Forward, Hamilton & Scripps, et al., to G. Mitchell Wilk, President, Cal. Pub. Util. Comm'n 3-4 (July 28, 1989) (on file with author).
By contrast, non-LDC, independent retailers have the freedom to acquire gas supplies responsive to end users' needs, rather than regulators' opinions of end users' needs. This regulation also retards the growth of an efficient market for the sale of unbundled gas because it restricts the ability of the LDCs to use their unbundled gas supplies to respond to the demands of the customers.

3. The Prohibitory Approach

Under the prohibitory approach, regulators bar both LDCs and their affiliates from participating in the unbundled gas market. In 1990, California revamped its regulations to prohibit LDCs in the state from selling unbundled gas to end users or forming any new marketing affiliates to do so. California decided that the difficulties of regulating the LDC and its marketing affiliate to prevent undesirable inter-affiliate transactions outweighed the advantages of LDC and affiliate participation in the unbundled gas market.

Banning a utility and its affiliates from participating in the competitive, unbundled gas market is an extreme safeguard against competitive abuse. This approach is likely to be unpopular, but it does not contravene any traditional regulatory principles. It will have the effect of precluding a potential retailer, the LDC, from entering the marketplace, but this is not likely to prevent attainment of a fair and efficient market for the retailing of gas.

99. California recognized this disadvantage but contemplated allowing utilities to develop multiple noncore portfolios of gas in lieu of deregulating the utilities' procurement of unbundled gas:

[W]e intend to explore the concept of multiple supply portfolios during procurement hearings in the near future. Multiple supply portfolios would provide the utilities with additional flexibility to meet the diverse procurement needs of noncore customers. Procurement hearings would also offer parties the opportunity to consider the issue of deregulating noncore procurement as recommended by PSD [Public Staff Division].


100. In re Rulemaking on the Structure of Gas Util. Procurement Practices and Refinements to the Regulatory Framework for Gas Util., supra note 45, at 7-9. The Commission added that it would reconsider the ban on new utility marketing affiliates only if utilities could prove the unbundled gas market was not providing "reliable and adequate gas supplies to noncore customers." Id. at 9.

101. Id. California's action contrasts with FERC's decision not to require interstate pipelines to divest themselves of marketing affiliates nor to forbid the pipelines from doing business with their own affiliates. FERC concluded, "Such structural remedies should be adopted only where they are shown to be necessary to prevent more seriously anticompetitive practices." FERC's Anticompetitive Practices Rule, supra note 89, 53 Fed. Reg. at 22,141.


103. In response to its inquiry, supra note 102, FERC also received a comment objecting to the prohibition of pipeline marketing affiliates on the ground that there is "a moral obligation on the part of the [Federal Energy Regulatory] Commission to permit the pipelines to work off their heavy take or pay obligations incurred in good faith . . . ." Id. at 21,591.
Indeed, it eliminates the threat of anticompetitive activity posed by the entry of the LDC or its affiliate into the market.\textsuperscript{104}

The prohibitory approach differs from the hands-off approach only in the importance accorded to both the advantage of adding the LDC to the unbundled gas retailing market and the disadvantage that, once there, the LDC might act to lessen the market’s competitiveness. The prohibitory approach is premised on the belief that the advantage does not outweigh the risk. The hands-off approach is premised on the belief that the risk can be largely ameliorated by enacting certain anticompetitive prohibitions. In all other respects, the two approaches are identical. Thus, the prohibitory approach is as likely, if not more so, than the hands-off approach to achieve the goal of preventing uneconomic bypass by making market priced gas available to LDC customers.\textsuperscript{105} It is also as likely to be attended by some gas cost-shifting.\textsuperscript{106}

The prohibitory approach, like the hands-off approach, is based on the recognition that sale of unbundled gas should not be a regulated activity and that the development of a competitive unbundled gas market is the key to the success of unbundling.

C. Post-Unbundling Regulation of the LDC as Gas Transporter

The states that have unbundled gas sales from transportation have designed various policies to govern access to the unbundled transportation service. All of these transportation access policies are similar in that they resolve the same six issues: (1) whether LDCs must, or may, offer unbundled transportation; (2) which customers will be eligible for unbundled transportation service; (3) which aspects of transportation will be unbundled; (4) what the status of transportation-only customers will be in the event of curtailments; (5) whether the LDC will have a utility-like obligation to serve transportation-only customers who desire to switch back to prepackaged transportation and gas service; and (6) how transportation rates will be regulated.

\textsuperscript{104} Richard Pierce takes the position that the concern that LDCs may act in anticompetitive ways if regulators permit them to participate in the unbundled market, “cannot be allayed by banning LDCs from providing unbundled service. Either form of LDC participation in the market creates the risk of anticompetitive behavior.” Richard J. Pierce, Jr., Intrastate Natural Gas Regulation: An Alternative Perspective, 9 YALE J. ON REG. 407 (1992). On the contrary, banning LDCs from becoming independent gas retailers does remove the economic incentive the LDC otherwise would have to favor its affiliate with preferential treatment such as special access to the distribution system. Thus, this approach is a method, albeit drastic, of eliminating such concern. To the extent Professor Pierce also means to suggest that LDCs prohibited from operating in the independent gas retailing market still have the potential to prefer themselves as bundled retailers of gas over unbundled retailers, I agree. See discussion infra Part II(C) regarding regulation of the LDC as gas transporter to achieve a competitive gas retailing market. However, it does not follow from this fact that regulators should ignore the additional incentives for anticompetitive behavior posed by the LDC engaging in the riskier, but potentially more profitable, independent gas retailing business.

\textsuperscript{105} It is more likely to achieve this goal if the anticompetitive prohibitions on LDC conduct with a marketing affiliate do not effectively prevent this behavior.

\textsuperscript{106} See supra Part II(B)(1) (discussing cost-shifting that is likely to occur under the hands-off approach).
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1. Voluntary versus Mandatory Offering of Unbundled Services

Four of the fifteen states that have designed comprehensive state-wide regulatory policies for unbundling LDC sales and transportation functions as well as the other states that have unbundled gas and transportation-only services on a case-by-case basis, have not required their LDCs to offer unbundled services. This policy of allowing utilities to decide for themselves whether to offer transportation-only service works against the goal of opening access to transportation because it invites the LDCs to decline to do so.

The regulators fear shifting costs to other customers and burdening the utility with the administrative costs of unbundling. Although unbundling may cause rates to rise in the short-term to customers who have been beneficiaries of regulatory cross-subsidies, it prevents uneconomic bypass and higher rate increases in the long run. The fear that the utility will incur unacceptable administrative costs can be assuaged by requiring that administrative costs caused by unbundling be included in the cost of using unbundled transportation service. Those customers finding it less expensive to use unbundled transportation service priced at cost, including associated administrative costs, will use the cheaper service and pay the utility for the cost it incurs in offering transportation. To the extent the costs of switching to transportation-only service are too high for potential subscribers, no customers will switch and the utility will incur no costs. This approach to unbundling is calculated to provide more open access and yet avoid the adverse impacts of unacceptable cost shifting and unrecoverable administrative costs.

2. Eligibility for Unbundled Transportation Service

Two approaches can be used to determine eligibility for unbundled transportation service: (1) allowing any customer wishing to use the service to do so; or (2) restricting availability of the service to customers with particular characteristics, such as consumption levels.

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107. These states are Missouri (In re Transp. of Natural Gas, supra note 51, at 79-80 (exemptions from mandatory transportation available)); Ohio (In re the Commission Ordered Investigation of the Availability of Gas Transportation Service Provided by Ohio Gas Distribution Utilities to End-Use Customers, No. 85-800-GA-COI (Ohio Pub. Util. Comm'n Aug. 1, 1989 (adopting guidelines for determining whether any voluntary transportation arrangements are reasonable)); Virginia (In re Natural Gas Indus. Rates and Transp. Policies, supra note 57 (establishing transportation policies to be applied in future cases resolving requests for transportation)); and Wisconsin (In re Natural Gas Distribution Util., supra note 59 (announcing regulatory principles applicable to transportation programs voluntarily adopted by LDCs)).

108. Indeed, in Missouri, the regulating guidelines governing mandatory transportation offerings provide exemptions for LDCs able to show that they cannot feasibly implement the required transportation program or that doing so will result in an increase in costs to non-transporting customers, all the LDCs subsequently filed affidavits of exemption from mandatory transportation service. In re Transp. of Natural Gas, supra note 51, at 125. Kansas Power & Light later filed transportation tariffs effective May 1, 1990.

109. See, e.g., id.
Several states follow the first approach and allow any customer procuring his own gas to have access to unbundled transportation.\footnote{110} This approach to eligibility is the one best calculated to open access to transportation. Assuming the transportation rate is the same whether the customer buys bundled or unbundled service,\footnote{111} customers will buy their own gas if it is cheaper to do so. No artificial barriers imposed by regulators will preclude these customers from participating in the competitive gas retailing market.\footnote{112}

Other, many states restrict eligibility for transportation-only service to customers who purchase a minimum volume of gas. Still other states limit the availability of transportation to specified classes of end users, such as consumers able to switch to oil. Some states limit transportation service only to those customers willing to enter into long-term contracts. Those states that impose, or permit their LDCs to impose, a minimum volume requirement seem to do so because they believe it is necessary to protect their LDCs from unreasonable administrative costs associated with minimal volumes of gas.\footnote{113} However, instead of imposing a flat prohibition on transportation of small quantities of gas, regulators could assess an additional charge for the actual administrative cost associated with transporting that volume.\footnote{114} In this way the customer, not the regulator nor the LDC, decides whether it is worthwhile to him to transport a small volume of gas with a high administrative cost. Thus, no customer will unintentionally be closed out of the competitive gas retailing market.\footnote{115}

\footnote{110. These states include Colorado, Iowa, New Mexico, Virginia, West Virginia and Wisconsin.}
\footnote{111. See infra Part II(C)(6)(b) (discussing problems arising when these rates differ).}
\footnote{112. Virginia expressed a similar view when it warned utilities not to submit transportation tariffs that limited access: "We have concern over tariff conditions imposing minimum terms or volumes and other conditions which may be contrary to the market." In re Natural Gas Indus. Rates and Transp. Policies, supra note 57, at 71.}
\footnote{113. See, e.g., In re Transp. of Natural Gas, supra note 51, at 80 ("The local distribution company may establish reasonable minimum volume eligibility requirements based on a consideration of the transaction and administrative costs associated with providing transportation service to customers with varying usage levels"); In re An Investigation of the Impact of Fed. Policy on Natural Gas to Ky. Consumers and Suppliers, supra note 81, at 53 ("The Commission finds that LDCs should offer transportation on a nondiscriminatory basis. This means that transportation will be available to any end user who can arrange for its own supply of natural gas unless the capacity simply does not exist. The Commission is aware that problems do occur with load balancing and accounting for receipt and delivery of natural gas in transportation. Thus, availability may be subject to a minimum volume requirement that will address these concerns"); In re Interstate Sale and Transp. of Gas, supra note 49, at 9 ("An LDC's tariff may include restrictions on the availability of transportation services to customers to the extent that such restrictions are reasonably based upon operating and load management conditions. Examples of reasonably based operating conditions include minimum gas quality standards, minimum volume requirements, minimum time requirements (i.e., duration of a transportation agreement), and load balancing provisions and penalties").}
\footnote{114. This is an example of the general proposition that many problems seemingly created for LDCs by unbundling can be eliminated by viewing the problems as merely costs of doing business which can be incorporated into the rate charged for the service. For a broad discussion of this approach to eliminating hurdles to a transportation policy, see Robert C. Means, A Rate Design Alternative for Dealing with Potential Shifts from Sales to Transportation (Apr. 1984) (unpublished manuscript on file with author).}
\footnote{115. The Pennsylvania Public Utility Commission declined to establish a generic volume limit for availability of gas transportation because of just this possibility—"that a utility in the Commonwealth could
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Whether customers can pool their individual gas demands to meet any volume minimum for transportation becomes an issue in those states that impose minima. In Pennsylvania, for example, regulators have limited pooling to three or fewer customers, finding that this is the best balance of the potential benefits to customers of access to transportation service with the costs to the LDC of administering the service. Again, in order to increase access to unbundled transportation service, a better approach is to let the customer balance the benefits and costs of using transportation himself. If the regulator instead required the LDC to determine the cost of administering pools of demand and required customers to pay these costs, the regulator would avoid imposing unrecoverable costs on the LDC without discouraging potential customers from using unbundled transportation service.

Some states limit the availability of unbundled transportation service to specified classes of end users. For example, in 1985, California divided customers into core and noncore categories, permitting only noncore customers and core customers using more than 250,000 therms per year to use transportation service. The California Commission's primary reason for prohibiting some core customers from using transportation was concern over the possibility that customers would make the wrong gas purchasing decision. This is classic regulatory paternalism. Even if we assume the

accompany a transportation customer at a lower volume." In re Regulations Governing Intrastate Natural Gas Transp. Rates and Serv., supra note 56, at 19. The Commission did, however, give each utility the authority to establish a minimum. See 52 PA. CODE § 60.3(a) (1990).

Two of the states that initially imposed volume minima on transportation customers have changed their policies. After operating for less than one year under a statute limiting the availability of transportation to consumers using 25,000 or more decatherms of gas a year, 1984 N.Y. Laws ch. 519, N.Y. PUB. SERV. LAW § 66-d (McKinney 1989), the New York Legislature amended the law to eliminate any minimum. 1985 N.Y. Laws ch. 790, N.Y. PUB. SERV. LAW § 66-d (McKinney 1989). The Legislature made this change on finding that "[m]any small manufacturers and other consumers of natural gas" wanted to buy their own gas, a 25,000 decatherm limit was "inexcusably restrictive," and "natural gas production and sales would be enhanced in the state" if more customers participated in the competitive gas retailing market. Id. After two years' experience administering a transportation policy provision that allowed LDCs to impose a "reasonable minimum volume ... of up to 100 MBtu per day" on transportation customers, the New Mexico Public Service Commission eliminated the ability of LDCs to impose any volume minimum. In re Transportation of Natural Gas by Public Utilities, 65 P.U.R.4th 287, 293 (N.M. Pub. Serv. Comm'n 1985).

However, the California Public Utilities Commission subsequently announced that up to 10% of each California LDC's core load can pool its gas demand to reach the 250,000 therm volume minimum for unbundled transportation for core customers. In re New Regulatory Framework for Gas Utilities, supra note 45. However, the California Public Utilities Commission subsequently announced that up to 10% of each California LDC's core load can pool its gas demand to reach the 250,000 therm volume minimum for unbundled transportation for core customers. In re New Regulatory Framework for Gas Utilities, 120 P.U.R.4th 394, 403 (Cal. Pub. Util. Comm'n 1991).

California limited the availability of unbundled transportation service (and thus, unbundled gas procurement) to large customers and those with alternative fuel capabilities because of the Commission's
Commission is justified in believing core customers are likely to make the wrong decision about purchasing gas, the market is likely to develop protections for these consumers.\textsuperscript{121} If the Commission is not satisfied with the market's protections in the transition period, the Commission can protect these customers from the worst consequences of a bad decision without precluding core customers who will make the right decisions from participating in the competitive gas retailing market. For example, the Commission could require the LDC to standby with a safety net of gas for customers who are defrauded by an independent gas seller.\textsuperscript{122} Also, the Commission could enable core customers disillusioned with the competitive gas retailing market to return to the LDC's bundled gas and transportation services.\textsuperscript{123} These alternatives would protect customers from any potential life- or business-threatening absence of gas while not unduly retarding the development of the competitive gas market. The flat prohibition on core participation in this market seems an unnecessary hindrance to achievement of the goal of unbundling.\textsuperscript{124}

The Commission's administrative cost concerns can be handled by passing on the administrative cost to those who avail themselves of the opportunity to benefit from unbundled services. In short, a regulatory injunction against certain classes of consumers using unbundled transportation unnecessarily thwarts the goal of establishing a competitive gas retailing market. Even if regulators' concerns about the possible costs to the consumers and the utilities of more participation in this market are justified, alternative means of allaying those fears are available that do not interfere with the development of the market.

3. The Extent of Unbundling

Unbundling gas transportation and sales services means allowing the LDC to price and sell these services separately. Some states have gone further with their unbundling efforts and allowed or required utilities to price and offer separately the numerous traditional services usually provided under the

\textsuperscript{120} Paternalism is a typical, albeit questionable, justification for economic regulation. BREYER, supra note 4, at 33-34.

\textsuperscript{121} For example, the market may respond to the risk of an independent retailer's failure to provide gas by requiring brokers to post performance bonds. Brokers may eventually be subject to state licensing or other entry regulation. See Blaydon, supra note 30, at 164-65.

\textsuperscript{122} In fact, the California Commission has imposed such a requirement on LDC service to noncore customers. See discussion infra note 132.

\textsuperscript{123} See infra Part II(C)(5) (discussing ways this could be accomplished).

\textsuperscript{124} But see Pierce, Intrastate Natural Gas, supra note 104.
categories “transportation” and “sales.” For example, an LDC’s bundled transportation service traditionally includes the gathering and processing of gas, if the LDC transports gas directly from the wellhead, or the right to transportation capacity in one or more intrastate or interstate pipelines, if the LDC purchases its gas from a pipeline. An LDC also typically provides to its bundled customers the choice of either firm or interruptible transportation and, perhaps, peak and off-peak service. Under the generic label of “gas sales service,” the LDC provides gas storage, load balancing, and, for those customers taking service under contract, standby sales service.

Most of the states that have allowed their utilities to unbundle transportation and sales services have required them to offer\textsuperscript{125} standby gas sales service.\textsuperscript{126} Most of the states that have unbundled have also required their utilities to offer both firm and interruptible transportation services to transportation customers if the LDCs offer such options to traditional customers.\textsuperscript{127} However, most of the states that have adopted unbundling policies have been silent on the question of whether utilities could separately offer and price gas and transportation subservices.\textsuperscript{128} A notable exception is Kentucky, which

\begin{itemize}
  \item 125. States requiring that standby service be offered include: Iowa, see 250 IOWA ADMIN. CODE § 19.13(1) (Supp. 1989) (requiring that firm and interruptible service be provided with and without standby service); Kentucky, see In re An Investigation of the Impact of Fed. Policy on Natural Gas to Ky. Consumers and Suppliers, supra note 81, at 37 (requiring that standby service be offered); Maryland, see In re Interstate Sale and Transp. of Gas, supra note 49, at 10 ("The tariff for transportation services shall contain a provision which offers transportation customers the right to elect standby-type sales service."); and Pennsylvania, see 52 PA. CODE § 60.5 (1990) ("Standby retail service . . . shall be made available to transportation service customers . . . .").
  
  Colorado and Ohio did not explicitly require their utilities to offer standby service when they authorized the separate transportation of gas, but they appear to contemplate that utilities will nevertheless provide it. See In re Rules of the Pub. Util. Comm’n of Colo. Regulating Gas Transp. Serv., supra note 46, § 2.4(e) ("Within each class, a transportation customer who has contracted for standby supply service . . . ."); In re Investigation of the Availability of Gas Transp. Serv. Provided by Ohio Gas Distribution Util. to End-Use Customers, supra note 54, app. A, § 8 ("Where gas-related services such as supply back-up are contracted for, the cost of providing such service shall be in addition to the basic transportation rate.").
  
  126. At least one state, Wisconsin, has mandated the purchase of standby service by any transportation customer who provides essential services to the community. See In re Natural Gas Distribution Util., supra note 59, at 639; see also discussion infra Part II(C)(1). Essential services are defined as those offered by schools, hospitals, nursing homes and similar institutions. In re Natural Gas Distribution Util., supra note 59, at 639.
  
  127. See, e.g., In re Rulemaking on the Structure of Gas Util. Procurement Practices and Refinements to the Regulatory Framework for Gas Util., supra note 45, at 17, 23, 25 (Commission requires utilities to provide firm and interruptible transportation services); 250 IOWA ADMIN. CODE § 19.13(3) (Supp. 1989) (requiring utilities to provide firm and interruptible services); In re Interstate Sale and Transportation of Gas, 80 P.U.R.4th 1, 6-7 (Md. Pub. Serv. Comm’n 1986); In re Interstate Natural Gas Transp. Serv., supra note 50, at 23; NYSPSC Order, supra note 53, at 20-30 (interruptible transportation service must be offered to all, not just existing interruptible customers); In re Investigation of the Availability of Gas Transp. Serv. Provided by Ohio Gas Distribution Util. to End-Use Customers, supra note 54, app. A, § 8; 52 PA. CODE § 60 (1990); In re Regulations Governing Interstate Natural Gas Transp. Rates and Serv., at 236 (declining to mandate interruptible transportation option but stressing that "LDCs which do have capacity constraints remain free to file interruptible transportation rates."); W. Va. Transp. Rules, supra note 58, § 3.2 ("Utilities and intrastate pipelines shall offer, at a minimum, both firm and interruptible transportation services.").
  
  128. For example, Colorado’s transportation rules are broad enough to permit utilities to separately price and offer transportation and sales subservices. See In re Rules of the Pub. Util. Comm’n of Colo.
has required every LDC to tariff and provide separately all services which "should be [separately] provided in order to compete or that may be requested by its customers."  

Kentucky’s approach is the best calculated to achieve open access. Under this approach, if the LDC provides a subservice that is also available in the competitive market, the LDC must offer it to customers separately, instead of requiring it to be purchased as part of a package that includes a necessary monopoly service. An example may make this point more clearly. An LDC’s transportation service, and thus its transportation rate, typically includes an intrastate or interstate pipeline demand charge to cover the LDC’s need for capacity on that pipeline (Pipeline A) to deliver gas to the LDC. A transportation-only customer, however, may be procuring gas from Pipeline B, or from another supplier using its own reserved capacity on Pipeline A, not the LDC’s reserved capacity on Pipeline A. In any of these scenarios, the customer will have to pay his independent gas supplier a demand charge associated with Pipeline B or with the supplier’s capacity on Pipeline A. If the customer is also required to pay the LDC a demand charge associated with capacity on Pipeline A, which the customer is not using, the customer is paying more than the market price for gas delivered. Thus, the customer remains tempted to engage in uneconomic bypass. Indeed, the double charge for delivery of his gas may dissuade the customer and those similarly situated from

Regulating Gas Transp. Serv., supra note 46. Pennsylvania likewise uses broad language allowing its utilities to tax and offer separately “the components of transportation service to afford customers flexibility in choosing the degree of supply risk they are willing to assume.” 52 PA. CODE § 60.2(1) (1990). But this flexibility appears limited by another provision of the Pennsylvania Code which requires that services be offered “under terms, conditions and rates which minimize the shifting of costs to retail customers and provide the natural gas utility with an opportunity to recover the fixed costs incurred to serve the transportation service customers.” Id. at § 60.1. Unbundling services is very likely to cause cost shifting. See discussion supra Part II(B)(1).

129. West Virginia has invited, but not required, its utilities to “further propose to unbundle services associated with both firm and interruptible transportation which may be appropriate to their individual operating capabilities and characteristics.” W.Va. Transp. Rules, supra note 58, § 3.2.

130. In re An Investigation of the Impact of Fed. Policy on Natural Gas to Ky. Consumers and Suppliers, supra note 81, at 38. A Kentucky LDC not wishing to provide such a service has the burden of proving that it cannot or should not do so. Id. at 37. Several other states have required the unbundling of a few subservices in addition to firm and interruptible transportation and standby sales. Oregon additionally requires its utilities to provide separately for storage and load balancing or “show why it is not practical” to offer them. In re Natural Gas Transp. Serv., supra note 55, at 218. California requires its LDCs to remove their interstate pipeline demand charges from the rates of transportation customers. In re Rulemaking on the Structure of Gas Util. Procurement Practices and Refinements to the Regulatory Framework for Gas Util., supra note 45, at 26. Indeed, California removed all demand charges from the transportation rates of all transportation customers except UEGs but replaced them with use-or-pay charges for transportation customers. Id. at 17, 26. New Mexico does not require, but authorizes, its utilities to provide separately gas processing, gas gathering, gas storage, load balancing and off-peak transportation services. NMPSC Rules, supra note 52, § 660.8.

131. Many end users have access to more than one pipeline because of the numerous interstate and intrastate pipelines serving the more highly populated states. Al H. Ringleb, The Natural Gas Regulatory Dilemma: A Market Solution, Another Complex Compromise, Or the Status Quo?, 6 J. ENERGY L. & POL’Y 107, 130 (1985).
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participating in the direct gas sales market, with the possible consequence that the gas retailing market will not develop fairly and efficiently. This is contrary to the whole point of unbundling.

The wisdom of the second prong of Kentucky’s approach, requiring the LDC to make separately available a subservice requested by a customer, is also best illustrated with an example. A traditional LDC customer contemplating becoming a transportation-only customer is likely to want to continue using some of the same transportation subservices he has been using. For example, a traditional LDC customer using interruptible transportation service is likely to continue to want interruptible transportation service for gas procured from an independent gas retailer. In short, the LDC should continue to offer to unbundled customers the same services it offers to bundled customers. Therefore, those states that require their utilities to offer both firm and interruptible transportation services to transportation-only customers, if they offer both firm and interruptible transportation to traditional, bundled customers are acting consistently with achieving the goal of opening access to the common carrier portion of the LDC’s system.

Similarly, those states requiring LDCs to offer standby gas sales service are acting consistently with the goal of open access. Standby gas sales service means the customer and the LDC contract such that the LDC will stand ready to supply the customer with gas if his demand unexpectedly exceeds his non-LDC supply of gas. This contrasts with emergency sales service, where the LDC supplies the unexpectedly needy customer with gas even though the LDC has no contract to do so. Because many gas customers, such as hospitals and universities, are unlikely to venture into the new market of independent gas retailing without the security of the gas supply they previously enjoyed, a requirement that the LDC offer gas sales standby service eliminates this impediment to the development of a gas retailing market. Over time, the market may provide this service, and regulators will not have to require LDCs to do so. If standby service is priced to cover cost, this requirement can be imposed without harm to the LDC or its traditional customers. Other services a customer may request are likely to be those upon which he relied prior to becoming a transportation-only customer. For example, a traditional sales

132. California neither requires nor authorize its LDCs to provide standby service, although it does require them to provide emergency service. See In re Rulemaking on the Structure of Gas Util. Procurement Practices and Refinements to the Regulatory Framework for Gas Util., supra note 45, at 38. Note that California calls its LDCs’ emergency services “standby services,” but it does not meet the “contracted for” criteria of standby service, and it is given the lowest priority in periods of curtailment. Id. 133. Richard Pierce would not require LDCs to offer standby service because he believes state regulators will not be able to establish cost-based rates for standby service. Pierce, Intrastate Natural Gas, supra note 104, at 414-15. However, Frank Graves, James Read, and Paul Carpenter have already begun analyzing how to value this service. See Frank C. Graves, James A. Read, Jr., & Paul R. Carpenter, Estimating the Cost of Switching Rights on Natural Gas Pipelines, 10 ENERGY J. 59 (1989) (showing how option pricing techniques can be used to calculate the value of standby service).
customer has excellent security of supply. Even though he opts to purchase gas from an independent retailer, he may still wish, and be willing to pay for, a secure back-up supply of gas.\footnote{134}

Since many LDCs have been hostile to opening access to their distribution system, regulators may have to require, rather than just authorize, their LDCs to unbundle transportation and sales subservices to get effective open access practices. The primary fear regulators have faced in deciding to unbundle subservices is that separately pricing and offering these services will lead some customers neither take nor to pay for them, resulting in an increase in price to remaining customers. This is a short-sighted view of cost-shifting. In the long run, more unnecessary cost-shifting will occur if uneconomic bypass is permitted.\footnote{135}

Additionally, there are two frequently overlooked advantages to full unbundling of subservices. First, full unbundling may indirectly help local gas producers. Gas producers face stiff competition from each other because availability of natural gas in the United States still greatly exceeds demand. In states that have not unbundled pipeline demand charges from their LDCs' transportation service, customers sometimes are faced with paying double demand charges. In some markets with stiff gas-on-gas competition, it may be that producers, not consumers, are paying this double charge. Unbundling this subservice would eliminate the unnecessary charge to gas producers. Second, full unbundling will keep the LDCs' independent gas retailing affiliates on the same footing as other independent retailers. In those markets served by more than one pipeline, independent gas retailers using a pipeline other than the one used by the LDC and, often, by its marketing affiliate, will not suffer the

\footnote{134} The cost of the right to choose between gas supplied by an independent retailer and LDC system gas can be substantial. See, e.g., Graves, et al., \emph{supra} note 133, at 18 (showing a value of \$1.0 per switchable mcf for a year of rights to leave a fixed contract in an idealized market even when the spot price is equal to the fixed contract price).

\footnote{135} The Pennsylvania Commission understood this issue. The Commission explicitly incorporated its concern about cost-shifting in its rules governing open access: "Transportation service should be provided under terms, conditions and rates which minimize the shifting of costs to retail customers..." 52 PA. CODE § 60.1 (1990). However, the Commission also recognized that, even though cost-shifting cannot always be prevented, it is nevertheless preferable to business as usual without open access. In the rulemaking leading to the adoption of the Pennsylvania rules, one LDC argued that it was inconsistent with the public interest to adopt an open access policy which permitted any shifting of costs. The Commission rejected this position, noting that the benefits of open access would often outweigh the disadvantages of cost-shifting. The Commission stated:

With regard to [Philadelphia Electric Company's] comments, we have crafted our policy to minimize concerns over cost shifting, but this concern must be weighed against the expected benefits of our policy. With increased gas transportation, LDCs will have an added incentive to increase the efficiency of their gas purchasing practices, providing benefits to all classes of customers.

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competitive disadvantage of having to pay the LDC pipeline's demand charge as well as their own.

4. Status in the Event of Curtailment

Every open access policy needs to determine the transportation-only customer's priority in the event of a transportation curtailment (also called a service interruption) and a supply curtailment. Almost every state responds to the possibility of a transportation curtailment by giving the transportation-only customer the same priority he would have if he were a traditional bundled customer.\(^{136}\) New York does not follow the majority approach, but rather gives transportation customers a curtailment priority between the traditional customers receiving firm transportation and those with interruptible transportation.\(^{137}\) The majority approach is most consistent with the goal of open access. It leaves both traditional and transportation-only customers in the same position they stood prior to the advent of transportation-only service. Maintaining this status quo has no adverse cost-shifting or stranded investment results. However, the alternative of penalizing traditional customers for seeking a cheaper supply of gas by lowering their curtailment priority could create a disincentive to becoming transportation-only customers. It is unwise to leave these customers subject to the lure of uneconomic bypass when nothing is gained by the policy.

Policies concerning supply curtailment are characterized by even more variability among the states.\(^{138}\) This issue is more complicated, in part because regulators are concerned with multiple categories of supply: the LDC-owned gas being sold to the LDC's traditional customers, the LDC-owned gas being sold on standby or on an emergency basis to the transportation customers, and the non-LDC-owned gas in the LDC's distribution system. Curtailment policy in the first category of supply, the LDC-owned gas being sold to the LDC's

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Additionally, in California and Massachusetts where transportation-only customers can negotiate interruptible transportation rates based on the value of the service to them, customers paying more for interruptible transportation will receive a curtailment priority above interruptible customers paying less. In re Rulemaking on the Structure of Gas Util. Procurement Practices and Refinements to the Regulatory Framework for Gas Util., supra note 45, at 24; In re Intrastate Natural Gas Transp. Serv., supra note 50, at 53.


138. The discussion in this part concerns only the issues presented by a shortage in the LDC-owned gas supply. The issue presented by a shortage in a customer-owned gas supply is different. See discussion infra Part II(C)(1) for a discussion of the LDCs' obligation to serve transportation-only customers desiring to return to the LDCs' gas supply.
traditional customers, is not affected by the adoption of an open access policy. The curtailment priorities for traditional customers will remain the same in the event of a supply shortage where states adopt an open access policy.

Only two states have addressed the effects of a shortage on transportation customers receiving standby gas from the LDC. Both Colorado and New Mexico provide that these customers will have their standby supplies of gas curtailed on the same basis as if they were traditional customers. This approach leaves all customers in the same position they were prior to the initiation of transportation-only service and fosters open access without any adverse consequences.

The states vary in the amount of control they allow LDCs to exert over non-LDC-owned gas in the distribution system when the LDC experiences a shortfall in its supply. A few states flatly prohibit the LDC from appropriating this gas unless the transportation customer agrees to sell it to the LDC. The others allow the LDC to seize gas in certain circumstances to serve certain traditional customers.

Even though various state provisions relating to curtailment of non-LDC-owned gas are different, they all provide the transportation-only customer with a gas supply at least as secure as he had as a traditional customer. Thus, these provisions present no disincentive to a traditional customer considering purchasing gas in the competitive market and are consistent with the goal of open access and prevention of uneconomic bypass. The first option, allowing a transportation customer exclusive control of his gas even in a supply emergency, puts him in a better position than he was as a traditional customer. In this sense it gives him an artificial incentive to buy non-LDC supplied

\[139. \text{In re Rules of the Pub. Util. Comm'n of Colo. Regulating Gas Transp. Serv., supra note 46, § 2.4(d); NMPSC Rules, supra note 52, § 660.7(b)(3).} \]
\[140. \text{California is the only state to specify a curtailment policy for LDC-owned gas being supplied on an emergency basis to transportation customers. California gives this gas the lowest priority during a supply curtailment. In re Rulemaking on the Structure of Gas Util. Procurement Practices and Refinements to the Regulatory Framework for Gas Util., supra note 45, at 38.} \]
\[141. \text{These states include Kentucky, Colorado and New Mexico. In re An Investigation of the Impact of Fed. Policy on Natural Gas to Ky. Consumers and Suppliers, supra note 81, at 51; In re Rules of the Pub. Util. Comm'n of Colo. Regulating Gas Transp. Serv., supra note 46, § 2.4(c); NMPSC Rules, supra note 52, § 660.7(b)(2).} \]
\[142. \text{Oregon and Pennsylvania allow their LDCs to take non-LDC-owned gas to serve high priority firm sales customers (such as hospitals). In re Natural Gas Transp. Serv., supra note 55, at 224. In Pennsylvania, the LDC will pay the gas owner for the gas taken at the LDC's WACOG rate if this rate is higher than the owner's cost. PA. CODE § 60.2(11) (1990).} \]
\[\text{Ohio allows this gas to be taken as necessary to serve residential users, and requires the transportation customers and their suppliers to continue to ship their gas into the LDC's distribution system for use by residential customers until the curtailment situation abates. In re Investigation of the Availability of Gas Transp. Serv. Provided by Ohio Gas Distribution Util. to End-Use Customers, supra note 54, app. A, ¶ 2(b), 2(c). The transportation customer need only supply the system with 50% of the volume of gas that the customer took the preceding month. Id., ¶ 2(c). New York and Wisconsin have vaguely broad provisions authorizing the LDC to appropriate non-LDC-owned gas in a supply emergency. See, e.g., N.Y. Opinion, supra note 137, at 12 n.1; In re Natural Gas Distribution Util., supra note 59, at 645.} \]
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gas.\textsuperscript{143} It gives him a level of control over his energy source similar to what he would have if he received energy from a private source delivered by private transportation.\textsuperscript{144} This is an unnecessary bias in favor of the transportation customer.\textsuperscript{145}

5. \textit{Obligation to Serve}

A public utility traditionally enjoys a monopoly franchise at the price of accepting an obligation to serve the public. When natural gas is sold competitively, the question arises whether utilities are still obliged to provide gas to all who ask for it, particularly to those who have previously bought gas from independent retailers. On one end of the spectrum are those few states that mandate that LDCs have no obligation to serve transportation customers who have not purchased standby supply service and now wish to return to the LDCs’ gas supply.\textsuperscript{146} On the other end is New York, which provides an unconditional right of transportation customers to return to LDC-owned gas supply.\textsuperscript{147} Several states attempt to prevent such a situation from occurring by requiring their “human needs” customers\textsuperscript{148} to purchase standby service or have alternative fuel capability.\textsuperscript{149} Most states take a stand in the middle of the spectrum on this issue; they require their LDCs to furnish gas to former transportation-only customers in certain circumstances and under certain conditions.\textsuperscript{150}

\textsuperscript{143} This is so unless the LDC charges the customer for the added security of supply.
\textsuperscript{144} Allowing a transportation customer exclusive control over his supply and, thus, possibly removing this gas as a source of supply in an emergency, puts greater pressure on the LDC to assure adequate gas supplies for bundled customers. However, there are better ways to achieve this goal. See, for example, the discussion of options available to the regulator seeking to improve the efficiency of LDCs’ gas procurement practices in \textsc{Haranuzzaman et al.}, supra note 12, at 45-110.
\textsuperscript{145} It may be justifiable in a particular case where a customer would otherwise leave the LDC’s system for the security of supply offered by a private transporter.
\textsuperscript{146} See, e.g., \textit{In re Transp. of Natural Gas, supra} note 51, at 82; \textit{In re Natural Gas Indus. Rates and Transp. Policies, supra} note 57, at 70; \textit{In re Natural Gas Transp. Policies, supra} note 58, at 468-69.
\textsuperscript{147} \textsc{N.Y. Opinion, supra} note 137, at 13.
\textsuperscript{148} “Human needs” customers include residential customers and residential-like customers, such as hospitals, prisons, schools, and nursing homes.
\textsuperscript{149} See, e.g., \textit{In re Investigation of the Availability of Gas Transp. Serv. Provided by Ohio Gas Distribution Util. to End-Use Customers, supra} note 54, app. A, ¶ 1(a); \textit{In re Natural Gas Distribution Util., supra} note 59, at 639.
\textsuperscript{150} Several states require LDCs to supply gas to former transportation-only customers who did not purchase standby, or sufficient standby, service, but only if the LDC has gas available. Colorado, for example, requires its LDCs to supply gas, if available, at the applicable sales tariff. \textit{In re Rules of the Pub. Util. Comm’n of Colo. Regulating Gas Transp. Serv., supra} note 46, § 2.4(f). Pennsylvania has a rule declaring there is no duty to provide gas service to such a customer. \textsc{52. Pa. Code} § 60.5(3) (1990). However, if gas is available, the LDC “shall” sell it to the desirous customer. \textit{In re Regulations Governing Intrastate Natural Gas Transp. Rates and Serv., supra} note 56, at 28.

Some states require LDCs to supply gas if it is available, but with an additional charge or at a higher rate than otherwise similarly situated sales customers are charged. This charge may or may not be cost-based, depending on the state. California requires LDCs to provide transportation customers with additional gas as needed, but allows the LDCs to price the gas at the highest incremental cost of gas for the month.
Taking the position that LDCs have no obligation to serve former transportation customers wishing to return to system supply conflicts with the goal of an open access policy and achieves nothing that cannot be achieved through a conditional obligation to serve. The position appears to have been taken in response to two concerns. First, doing otherwise will impose instability and unrecoverable costs on an LDC that will have to stand ready to serve unanticipated loads. Second, allowing customers to purchase gas from either an independent retailer or the LDC whenever advantageous is unfair to traditional customers. This option should be permitted only at a premium.

Both of these concerns can be handled in a way that does not require short-sighted elimination of the obligation to serve transportation-only customers.

The concern that an LDC will suffer adverse effects by being forced to stand ready to serve returning customers can be alleviated with a conditional obligation to serve. The conditions might include a requirement that the customer give notice of return and pay any incremental costs associated with his return. The envy that traditional customers might have of customers enjoying the advantages of a competitive gas retailing market can be dampened, if not eliminated, by the realization that keeping these customers on the system is advantageous even to those who find themselves unable to participate in the competitive gas retailing market.

or 150% of the system WACOG, whichever is higher. In re Rulemaking on the Structure of Gas Util. Procurement Practices and Refinements to the Regulatory Framework for Gas Util., supra note 45, at 38. Iowa requires returning customers to pay "a reconnection charge." 250 IOWA ADMIN. CODE § 19.13(4)(c) (Supp. 1989). There is no discussion of whether such a fee will be cost-based. Kentucky allows its LDCs to charge a "reasonable re-entry fee." In re An Investigation of the Impact of Fed. Policy on Natural Gas to Ky. Consumers and Suppliers, supra note 81, at 68. It appears that the fee is to be cost-based. The fee is to be determined by the Commission on a case-by-case basis, taking into account the "size of the bypasser and LDC and the LDC's pipeline commitments." 151. As a result, the Commission must "take the bitter with the sweet," the "bitter" being a lower commodity cost and the "sweet" being the inability to float readily back and forth between system sales and transportation." In re Natural Gas Distribution Util., supra note 59, at 639.

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States that impose no obligation to serve returning customers would, of course, permit LDCs to serve them. It may seem logical that LDCs would want to serve these customers whenever possible in order to transport a greater volume of gas, thereby increasing transportation revenue. However, some LDCs might not welcome the changes brought by open access and independent gas retailing. They could easily use the power to deny a return to LDC supply to discourage initial participation in these markets. Thus, it is unwise to give LDCs the discretionary power to decide not to serve returning customers.

Requiring certain customers to purchase standby supply service also runs counter to the goal of open access and hinders the development of an efficient gas retailing market. Customers, even human needs customers, may be able to assure themselves of adequate back-up supplies of gas through contractual arrangements with non-LDC suppliers. Requiring them to purchase standby from the LDC prohibits the development of the non-LDC supply market. In the event a customer should have obtained back-up supplies and did not, the utility can change the customer's behavior by supplying emergency gas at emergency gas prices. Requiring customers to purchase standby from the LDC may also provide the decisive, uneconomic disincentive for the customer to decline the transportation option, contrary to the goal of an open access policy.

Among the conditional approaches to the LDCs' obligation to serve returning transportation customers, New Mexico's is most consistent with the goal of open access. New Mexico obliges LDCs to treat returning customers who give six months notice like new, traditional customers. For example, such customers are charged for gas only at the WACOG. Requiring customers give less than six months notice they are not treated like new customers, but the LDC does incur some obligations on their account. For these customers, New Mexico's LDCs must use "reasonable efforts" to obtain for them the lowest cost gas "reasonably available." In return, the LDC charges the customer the actual cost of that gas if it is higher than the system WACOG. However, this treatment ends six months after the customer posts notice of his return.

This approach resolves the regulatory dilemma regarding whether the returning customer should be treated like a new customer. It does so by focussing on those characteristics that distinguish the returning customer from the new customer and designing the appropriate policy for each. For

153. See NMPSC Rules, supra note 52, § 660.13(d).
154. Id. at § 660.13(e).
155. Id.
156. Compare this approach with Iowa's approach. Although the Iowa Commerce Commission recognized that length of notice distinguished the new from the returning customer, it did not design its policy to accommodate this difference. Instead, it merely provided that returning customers shall pay "a reconnection charge." This opened the Board up to the criticism that it was arbitrarily penalizing the returning customer even though the new customer might put the same or more demand on the system as the returning customer. See discussion in In re Natural Gas Distribution Util.; Obligation to Serve and
example, New Mexico distinguishes a new customer from a returning customer by the number of days of notice a returning customer must give to trigger the traditional utility obligation to serve, which is six months in New Mexico. Thus, a returning customer giving six months notice is treated like a new customer. However, if the returning customer wishes to be served before the six month period runs, the Commission imposes a “reasonable efforts” obligation on the LDC. This rule eliminates the potential that a utility might engage in strategic behavior and unreasonably attempt to withhold service from transportation customers in the hopes of thwarting initial participation in the independent gas retailing market. At the same time, imposing a “reasonable efforts” standard avoids the possibility that the utility will face unpredictability and unrecoverable costs by trying to anticipate unexpected loads.

6. Two Approaches to Rate Regulation of Transportation

The states that have unbundled the LDCs’ transportation from gas sales service have followed one of two approaches to determining transportation rates. The first approach is to set specific, tariffed transportation rates for firm transportation customers by end use class. These rates are set equal to the transportation component of the tariffed, bundled rates applicable to traditional customers of the same class and are designed to recover the LDCs’ revenue requirement (the “determinate rate approach”). The other approach is to allow the LDC to negotiate a transportation rate for each firm transportation customer (the “flexible rate approach”).

Both approaches are consistent with the theoretical underpinnings of economic regulation. The first is designed to encourage fair and efficient competition among sellers of natural gas and thereby displace the lingering, adverse effects of long-time price regulation of gas. It seeks to prevent that bypass which can be prevented by delivering gas at the market price. The second approach attempts to go further. It seeks to prevent as much bypass of the LDC’s system as possible by lowering transportation rates on a case-by-case basis in order to retain existing customers on the system. Flexible transportation rates for firm service may be designed to encourage LDCs in competition with other natural gas pipeline distribution systems to lower their costs. Today, however, the states use flexible rates to prevent existing customers from turning to a less costly alternative fuel or conservation measure. Some states also use flexible rates to lower a customer’s cost of doing business so he can remain in business and remain a customer.

The authority to negotiate transportation rates is a very powerful tool in the hands of an LDC. It can be misused, intentionally or inadvertently, to frustrate...
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competition among sellers of natural gas, contrary to the primary goal of unbundling and open access transportation. In addition, it allows LDCs to give transportation rate discounts unnecessarily to gas consumers who would remain on the system without discounts. This adversely affects other customers of the LDC who will be forced to make up the discount through higher rates if the LDC is to recover its revenue requirement.\(^1\) Most states adopting flexible transportation rates as part of their unbundling policies have done so without discussion of the pros and cons of giving such power to LDCs. This raises concern that regulators do not understand the significance of the distinction between deregulating natural gas prices to encourage gas to become a competitive commodity and deregulating the prices for the LDCs’ transportation service, which remains a monopoly.

a. *The Determinate Rate Approach*

Many states adopting open access policies have required LDCs to charge each customer class a determinate transportation rate equal to the transportation component formerly applicable to customers of the same class.\(^2\) The transportation rate is determined in one of two ways. It may be calculated by subtracting the cost of gas from the rate for traditional, bundled service (often called the gross-margin approach to setting transportation rates). Alternatively, it is arrived at by subtracting the cost of gas and gas procurement, from the rate for traditional, bundled service (the simple-margin approach).\(^3\) To the extent the rate for traditional bundled service has allocated a high proportion of common fixed costs to likely bypass customers, a number of states have

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1. Regulators can avoid this problem if they put the LDCs’ shareholders at risk for the discounts or for all the fixed and variable costs associated with serving potential bypassers. See *Harunuzzaman et al.*, supra note 12, at 79-83.


3. Consider, for example, Maryland’s formula for setting transportation rates:

[A]t this time the initial design of transportation rates should be based upon the LDCs’ total retail sales rates less (a) the commodity cost of gas and (b) the value of any interstate pipeline’s demand-type charge or reservation-type fee which the LDC will no longer have to pay to the pipeline as a result of the customer switching from the LDCs’ sales service to firm or interruptible transportation.


Massachusetts has adopted a similar formula: “LDCs should file gross-margin-based firm transportation rates within 45 days of this Order. Such rates would simply be calculated as the existing firm sales rates less the embedded gas costs.” *In re Intrastate Natural Gas Transp. Serv., supra* note 50, at 52-53.
expressed their desire to redesign these rates over time.\textsuperscript{160} They are reluctant to make the change abruptly because of the potential that utility earnings will drop and/or core customer rates will rise.\textsuperscript{161} Consistent with the cost-based-rate philosophy, states have sought to add to transportation rates any costs incurred by LDCs in permitting a customer to decline its gas service, such as costs incurred under LDCs' take-or-pay gas contracts with their suppliers.\textsuperscript{162}

As long as distribution of natural gas remains a monopoly, setting a determinate rate for transportation using traditional cost-of-service ratemaking principles is consistent with the theory underlying economic regulation of natural monopolies. Additionally, setting the transportation rate for each

\begin{footnotesize}
\begin{enumerate}
\item 160. Iowa initially adopted an open access policy which anticipated making any changes immediately. In re Natural Gas Distribution Util.; Obligation to Serve and Transp. Tariffs, supra note 47, at 5 ("All rates and charges for transportation shall be based on the cost of providing the service."). Also, New York concluded that its initial rates for firm transportation were "reasonable proxies for the direct costs of firm transportation service," although it invited interested parties to bring forth better cost of service evidence in future rate cases. NYPSC Order, supra note 53, at 18-19.

161. Consider, for example, Maryland's explanation:

In future proceedings, the Commission will examine the advisability of adopting transportation rates based upon cost of service studies which identify the unbundled costs of various types of services. The transition from margin-based to cost-based transportation rates must be made in conjunction with appropriate adjustments to sales rates. An orderly transition will insure that all customers receive more accurate price signals and will minimize rate shock to captive sales customers.


Although Massachusetts recognized that the gross-margin approach to rates would likely result in the transportation customer "bear[ing] many costs unrelated to transportation service, such as storage costs and production costs," and would continue "to perpetuate the disparity in existing class rates of return," it nevertheless found the approach valuable at least as an interim measure because it would allow transportation to be implemented immediately "in a manner that should not prove financially disruptive to the LDC, even if large sales volumes are converted to transportation volumes." In re Intrastate Natural Gas Transp. Serv., supra note 50, at 52.

Virginia explained it this way:

We will direct that an embedded cost of service approach to transportation rate design be applied on a company by company basis for both firm and interruptible transportation service. Over time, the non-gas margin of the industrial sales rates will be more closely aligned with the transportation rates, however at the present time we must provide viable competitive options for utilities to offer their customers. Moreover, since the growth in transportation service is a recent phenomenon, development of embedded cost of service transportation rates at the present time will not result in rate shock to the captive customers. An immediate elimination of the subsidy currently being provided by industrial customers in the retail rates would, however, result in rate shock. We would note, however, that, with the recent drop in oil prices, the impetus to shift much of the fixed costs of the utility to firm customers is already in place.


162. Iowa requires that "[i]n order to take transportation without buying standby service, the customer must buy itself out of any current contract [with the LDC for gas supply]." In re Natural Gas Distribution Utilities; Obligation to Serve and Transportation Tariffs, No. RMU-86-11 at 2 (Iowa St. Commerce Comm'n May 30, 1986), and Maryland's position that any pipeline demand-type charge or reservation-type fee incurred on behalf of the now-transportation customer that the LDC must continue to pay, should remain in the transportation customer's transportation rate. In re Interstate Sale and Transp. of Gas, supra note 49, at 12.
\end{enumerate}

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particular class of customers equal to the transportation component of the traditional rate for that class of customers is consistent with the goal of opening access to transportation. If the charges differed, each customer would receive an uneconomic incentive in the direction of one service or another. For example, if the transportation rate were cheaper than the transportation component of the traditional rate, the customer would be able to buy gas actually priced higher than the gas offered by the LDC, but at a lower delivered price. Though this would be advantageous to the customer, it would erroneously signal the competitive gas market that the higher gas price was set low enough to satisfy demand. This result would be contrary to the efficient development of that market and contrary to the goal of unbundling and open access.

As between the gross- or simple-margin approaches to setting transportation rates, the latter is better calculated to prevent uneconomic bypass. Indeed, the simple-margin approach is better for setting the transportation component of traditional rates as well as setting transportation rates for preventing uneconomic bypass. To the extent a rate to a potential bypasser is higher than cost, uneconomic alternatives could be more attractive than they would be if the potential bypasser were receiving transportation at its actual cost. However, the decision to move gradually to cost-based rates is a rational one for regulators to make.  

b. The Flexible Rate Approach

Many states have unbundled LDCs' services to counter uneconomic bypass only after exhaustive debate over whether encouraging a competitive gas retailing market is in the best interest of the public. However, many have gone on, perhaps unwittingly and certainly with little debate, to embrace a universal policy of competition by empowering LDCs to negotiate individual transportation rates to retain load. The negotiating power to LDCs varies among the states.

In Oregon, the negotiating power is the most circumscribed. Oregon LDCs are directed to discount transportation rates for customers having the capability to burn oil so that the delivered price of gas is "competitive with" the delivered price of oil. In a number of other states, LDCs have the broader power to

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163. Robert Means and Deborah Cohn make a similar point. See Means & Cohn, supra note 10, at 561-62.
164. Id. at 560-64.
165. In re Natural Gas Transp. Serv., supra note 55, at 219. However, if the transportation customer with oil burning capability procures gas from a supplier at a below-market price (defined by the Oregon Commission as below the market price of oil), then the LDC must discount the transportation rate so that the customer keeps half of the "savings" he obtained through his gas purchase. Id. at 219-20. Oregon realized that simply directing the LDC to set a transportation rate for customers with the potential to burn oil such that the cost of gas delivered was equal to the cost of delivered oil eliminated any incentive the customer might have had to procure lower cost gas from an independent supplier. Id. at 219.
negotiate transportation rates "to compete with alternate fuels." In New Mexico, the power is even more sweeping; LDCs may negotiate transportation rates "to compete for business." Some states allow their utilities to negotiate rates without specifying any purpose to be served by the negotiated rate.

Typically, the regulators broadly confine in advance the range within which rates may be acceptably negotiated. Usually, they require the LDC to file determinate transportation rates and permit the LDC to adjust these rates down on a case-by-case basis to a specified minimum. Ordinarily, the minimum is the variable cost of the service provided. Some states also permit their LDCs to adjust transportation rates up from the filed rate. A ceiling on upward flexibility may be imposed. A few states attempt to curb

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167. NMPSC Rules, supra note 52, § 660.8(h).


These rates are determined through the gross-margin method, see discussion supra text accompanying note 158, or through new cost of service studies. For example, Colorado directs that this rate be "based on fully allocated cost methods" and include "an allowance for return on allocated rate base equal to the last rate of return authorized." In re Rules of the Pub. Util. Comm'n of Colo. Regulating Gas Transp. Serv., supra note 46, § 4.2(e)(1).


Pennsylvania declined to set a minimum on the ground that the LDCs would not negotiate a financially adverse discount. In re Regulations Governing Intrastate Natural Gas Transp. Rates and Serv., supra note 56, at 4-5.

171. However, Colorado reserves the right to tariff the minimum rate at a level it determines "to be just and reasonable." In re Rules of the Pub. Util. Comm'n of Colo. Regulating Gas Transp. Serv., supra note 46, § 4.2(a)(1).

172. These states include Kentucky and West Virginia. In re An Investigation of the Impact of Fed. Policy on Natural Gas to Ky. Consumers and Suppliers, supra note 81, at 54; NMPSC Rules, supra note 81, at 54; W. Va. Transp. Rule, supra note 58, § 3.3(a), at 467. However, West Virginia's regulations prohibit LDCs from charging more than the tariffed transportation rate to customers transporting gas produced within West Virginia. W. Va. Transp. Rule, supra note 58, § 3.3(c), at 467.

173. In West Virginia, the determinate benchmark rate is calculated on the basis of fully distributed costs. The maximum rate up to which transportation rates may flex is the LDC's "otherwise applicable sales tariff rate excluding the utility's avoidable purchased gas commodity costs." W. Va. Transp. Rule,
the possibility of unnecessary discounting by establishing a presumption that any unrecovered fixed costs caused by transportation discounts will not be obtainable from ratepayers.\textsuperscript{174}

Regulators who have granted LDCs authority to negotiate firm transportation rates do so with the hope of retaining load to ensure stable revenue adequate to cover fixed costs.\textsuperscript{175} Discounted transportation rates can be used to entice gas consumers to forego cheaper energy alternatives or even, in some states, to forego going out of business.\textsuperscript{176} In other words, discounted transportation rates can be used in an attempt to prevent all, or almost all, bypass of the LDCs' systems. This goal is different from the primary goal of unbundling, which is, to prevent bypass of the LDCs' systems caused by solely delivery of gas priced above the market.

This distinction has several implications. First, the decision whether to empower LDCs to negotiate transportation rates need not be made in the context of adopting a policy to govern unbundling and its implementation.\textsuperscript{177} The market situation in which a discounted transportation rate is necessary to retain load, is not one that arises because of unbundling and, therefore, need not be adopted as part of unbundling reform.\textsuperscript{178} Second, the decision whether, and how, to prevent all LDC bypass should not be made using the same criteria governing the decision whether, and how, to prevent bypass caused by the unavailability of market priced gas.\textsuperscript{179} Third, because the perceived urgency of the threat to the LDC from all bypass is likely to be lessened by reforms designed to prevent bypass due to the unavailability of market priced gas, consideration of regulatory change to attempt to prevent all bypass could be nullified by successful implementation of unbundling. Finally, before the

\textsuperscript{174} Pennsylvania's Rule Sec. provides, "There shall be a rebuttable presumption . . . that natural gas supply fixed costs relating to transportation customers should not be recovered from sales customers." \textit{In re Regulations Governing Intrastate Natural Gas Transp. Rates and Serv.}, supra note 56, at 22. Wisconsin's guidelines state, "Any revenue shortfall resulting from this discount should be borne by the LDC's shareholders and not by ratepayers." \textit{In re Natural Gas Distribution Util.}, supra note 59, at 645.

\textsuperscript{175} For a critique of Ramsey Pricing as used by regulators during the transition from regulated to deregulated status, see Meyer & Tye, supra note 70, at 280-86. \textit{Cf.} Pierce, \textit{Reconstituting the Industry}, supra note 13, at 49.

\textsuperscript{176} The LDC may attempt to recover the loss incurred by discounted rates through the use of rates with high profit margins for customers with less elastic demand.

\textsuperscript{177} See, e.g., Meyer & Tye, supra note 70, which discusses the problems, including revenue adequacy, inherent in transition from a regulated to deregulated environment. It analyzes the usual solutions proposed for the transition, including discriminatory pricing and value of service ratemaking, concluding that a regulatory approach concerned with how the market would have handled the issues presented is often the best for assuring a successful transition.

\textsuperscript{178} Means and Cohn argue that any discounted transportation rate should be equally applicable to the pipeline's sales and transportation customers. See Means & Cohn, supra note 10, at 562-64.

\textsuperscript{179} For example, it may be that decisionmakers will conclude that the long-term cost of attempting to prevent all bypass is too great to justify the effort. See, e.g., Johnston & Sullins, supra note 76, § 7, at 173, speculating that continued gas service on some LDC systems to some customers or customer classes may have been economically feasible when gas was underpriced but may be economically infeasible when gas rises to market value. In such situations, they suggest, LDCs may have to recognize a loss. \textit{Id.}

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decision is made to grant LDCs rate negotiation power, its likely adverse impacts on the primary goal of unbundling should be understood.

Giving the LDC authority to negotiate transportation rates can easily undercut the purposes of unbundling reform. The purpose for making the LDC’s transportation service available independent of its sales service is to facilitate the development of the incipient competitive market for the sale of gas in order to get market priced gas to the burnertip. The LDC’s ability to discount transportation rates takes pressure off gas retailers to lower prices to the market level. Yet it is the gas retailers who are the better parties to be pressured to lower prices because they operate in the unregulated, competitive market and can gain as the market price for gas rises. If the LDC will cut its transportation rate, the retailer does not have to lower his gas sales rate as far to achieve the same delivered price. Indeed, the mere act of endowing the LDC with authority to negotiate rates exposes it to pressure to discount its transportation rate. This pressure comes from both from retailers seeking as high a margin as possible and from consumers seeking as low a cost as possible. Given that the LDC’s access to information to substantiate the legitimacy of the demands for a transportation discount will always be less than perfect, that the LDC has had little if any previous experience negotiating a sale in a competitive market, and that the LDC may have little financial incentive to resist a request for a discount, the pressure to give discounts,

180. This critique of discounted transportation rates is neither directed at discounted rates for interruptible transportation nor at discounted rates for transportation of gas outside the intrastate pipeline’s service area which serves a different function for the LDC. See Means & Cohn, supra note 10, at 562.

181. See Means & Angyal, supra note 3, at 44. But see TOMAN, supra note 13, at 6 (“Competition from alternative fuels also provides a curb on excessive rates; thus, alternative-fuel-based rates are useful for meeting competition and responding to changing market conditions.”). See also Means & Cohn, supra note 10, at 562 (“Discount transportation rates may also be justified for an identifiable category of customers, those who would not use the pipeline if the full rate were charged. It is better to obtain some contribution to fixed costs through a discount rate than to obtain no contribution at all by insisting on the full transportation tariff.”).

182. The fact that the utility will always find it difficult to know whether a transportation discount is, in fact, warranted was sufficient to cause the Virginia State Corporation Commission to reject the recommendation that its LDCs be allowed to flex transportation rates:

There are problems, however, associated with flexible transportation rates. The value of transportation to individual customers will vary on the basis of a number of different factors. Unlike the flexible retail rates, there is not a readily identifiable alternate source of competition to transportation. Transportation may occur due to any one of a number of factors ranging from wellhead cost of gas to alternate fuel prices. To respond to these variables, the utility would need to apply a different rate for each customer and would consequently engage in discriminatory ratemaking between similarly situated transportation customers. Such a framework would also result in problems with effective regulatory review problems.


183. Only a few states have adopted the policy of holding the LDC’s shareholders responsible for revenues lost by discounting. See supra note 171. Even then, it may be a difficult policy to enforce, and it raises the question whether shareholders should not also be able to benefit from flexible rates by allowing the LDC to charge transportation rates above tariffed rates. Another possible approach, not yet adopted by the states, is to put shareholders at risk for all the fixed costs associated with serving potential bypassers.
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including those unnecessary to retain load, likely will prove too much to withstand. The threat of a regulatory review disapproving of transportation discounts may provide some incentive to keep discounts to a minimum, but the effectiveness of such a review is problematic.\textsuperscript{184} The regulators will be hampered by the same lack of information plaguing the LDC in evaluating whether a discount is necessary.

Allowing an LDC to negotiate transportation rates, but not to negotiate the transportation component of bundled rates, results in differing treatment of otherwise similarly situated transportation and traditional customers. This difference in treatment could easily give rise to incentives for a customer to choose bundled over unbundled service or vice versa.

Empowering the LDC to negotiate transportation discounts also increases concern that the LDC could favor an independent retailer with preferential access to the transportation system, in this case by charging lower transportation rates. The danger of this type of anticompetitive behavior will be more acute if the LDC or its affiliate is an independent retailer of gas. In New Mexico, a state that allows transportation discounting, this fear led to a requirement that any discounted rate offered to a purchaser or end user be made available to any retailer supplying gas to that purchaser or end user.\textsuperscript{185}

Finally, insulating LDCs from any threat of bypass eliminates the opportunity for the LDC to respond to the threat by increasing its efficiency and decreasing its costs.\textsuperscript{186} The better course for regulators concerned about bypass would be to content themselves initially with trying to lower the cost of the gas by unbundling to foster development of a competitive natural gas market. The cost of gas comprises, on average, about 76\% of the delivered price.\textsuperscript{187} Only if that reform fails to eliminate the significant threat of bypass should regulators assume the risks inherent in empowering LDCs to discount transportation rates.

III. An Effective Approach to Intrastate Regulatory Reform

Paradigms for post-unbundling regulation of the LDC which will assure successful intrastate natural gas regulatory reform can be developed from the preceding evaluation of the various methods that have evolved in the states. The resulting models eliminate much of the confusion of existing intrastate regulation, but are still general enough to accommodate individual state innovation. Two regulatory models are necessary, one to govern the potential

\textsuperscript{184} See discussion supra note 182.
\textsuperscript{186} Cf. Broadman & Kalt, supra note 11, at 195.
\textsuperscript{187} See discussion supra note 31.
functions of the LDC as independent retailer and one to govern the LDC's unbundled transportation services.\textsuperscript{188}

\textbf{A. Intrastate Regulation of the LDC as Natural Gas Retailer}

The analysis above regarding regulation of the LDC as an independent gas retailer\textsuperscript{189} dictates a plan that deters LDCs from engaging in activities having an anticompetitive effect on the gas retailing market, but otherwise eschews regulation of the LDC as independent gas retailer.\textsuperscript{190} The heart of the plan would be a provision either forbidding the LDC from becoming, or from creating a corporate affiliate to become, an independent gas retailer\textsuperscript{191} or permitting the LDC to participate in the market through an unregulated affiliate,\textsuperscript{192} but strictly proscribing the LDC's interactions with its marketing affiliate to prevent the LDC from giving its affiliate an advantage not given to other independent retailers.\textsuperscript{193}

Either of these approaches to the LDC's possible participation in the unbundled gas retailing market is likely to achieve the goal of unbundling.\textsuperscript{194} If the LDC is permitted to participate in this market, it is better to require it to do so through an affiliate rather than through an unregulated arm of the LDC. Formation of an affiliate eliminates the upstream interstate capacity advantage the LDC would otherwise have over non-LDC marketers.\textsuperscript{195} Further, many believe this corporate separation makes it easier for regulators to monitor the LDC's dealings with its marketing arm.\textsuperscript{196} Whether or not the LDC is allowed to participate in the independent gas retailing market through an affiliate, regulatory prohibitions should be enacted to preclude the LDC from giving any preference under the regulated distribution system to any independent retailer.\textsuperscript{197} Prohibiting the LDC from giving an advantage to a

\textsuperscript{188} See discussion supra Part II(A)(1) (explaining that the LDC's post-unbundling transportation-only and gas-only services have different characteristics which demand different regulatory treatments). In addition, the LDC will continue to provide the traditional bundled service governed by traditional regulation, which is not discussed here.

\textsuperscript{189} See discussion supra Part II(B).

\textsuperscript{190} See supra Part II(B)(2) (discussing how monopoly-like regulation of LDC when it operates in otherwise potentially competitive unbundled gas retailing market is antithetical to traditional regulatory theory and is contrary to the goals of unbundling).

\textsuperscript{191} This is the prohibitory approach to regulation of the LDC as gas retailer. See discussion supra Part II(B)(3).

\textsuperscript{192} This is one of the variations of the hands-off approach to regulation of the LDC as independent gas retailer. See discussion supra Part II(B)(1).

\textsuperscript{193} See discussion supra note 88 and accompanying text.

\textsuperscript{194} See discussion supra notes 105-106 and accompanying text.

\textsuperscript{195} See discussion supra note 90 and accompanying text.


\textsuperscript{197} See discussion supra note 88 and accompanying text.
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particular independent retailer develops a fair and competitive gas retailing market, which is the goal of unbundling.

B. **Intrastate Regulation of the LDC as Gas Transporter**

The six issues central to a transportation access plan are whether LDCs must, or may, offer unbundled transportation; which customers will be eligible for unbundled transportation service; which aspects of transportation will be unbundled; what the status of transportation-only customers will be in the event of curtailments; whether the LDC will have a utility-like obligation to serve transportation-only customers who desire to switch back to prepackaged transportation and gas service; and how transportation rates will be regulated.198

The above analysis regarding the first aspect of a transportation access plan, whether regulators should require or merely permit LDCs to offer unbundled transportation service in addition to traditional prepackaged utility services, leads to the conclusion that states wanting a competitive gas retailing market to prevent uneconomic bypass must mandate, not just authorize, unbundling.199 Giving LDCs the discretion to choose unbundling leaves them free to reject it even when it is in their own, and the public’s, short-term or long-term best interest.200 For example, they might refrain from offering separate transportation service out of fear that the administrative cost is too high. The better solution would be simply to include the administrative cost in the price of the service. Those who believe it is an acceptable cost will willingly and happily pay for the service.

The above analysis regarding the second aspect of a transportation access policy, that is, whether any customer wishing to use transportation-only service should be able to do so or whether the availability of the service should be restricted to customers with particular characteristics, leads to the conclusion that all customers should be eligible for unbundled transportation service.201 To the extent certain types or classes of customers impose a particular cost on the LDC not imposed by other customers, the cost should be added to the price of the transportation made available to them.202 In this manner, those customers can decide for themselves whether choosing the transportation option

198. *See* discussion *supra* Part II(C).

199. *See* discussion *supra* Part II(C)(1)(a) (examining states’ experiences with voluntary and mandatory unbundling).

200. Robert Johnston and David Sullins argue that it is important for public utility commissions to be involved in the LDC’s decision whether to use non-pipeline gas brokers to supply the LDC gas before, not after, the decision is made. *See* Johnston & Sullins, *supra* note 76, at 174.

201. *See* discussion *supra* Part II(C)(1)(b).

202. For example, the concern raised in some states is that transporting “small volumes” of gas will impose an unacceptable cost on the LDC. *See* discussion *supra* note 113 and accompanying text.
is economically wise. To the extent the regulator is concerned that certain types or classes of customers might unwisely choose transportation-only over prepackaged service, the regulator should devise a safety net program and charge customers who use it, rather than enact a blanket proscription against the potential participation of these customers in the market.\textsuperscript{203}

The above analysis regarding the third aspect of a transportation access policy, the extent to which states should unbundle the subservices traditionally provided as part of gas transportation and sales service, leads to the conclusion that utilities should separately offer as many subservices as demanded.\textsuperscript{204} These subservices potentially include firm transportation, interruptible transportation, off-peak transportation, rights to upstream pipeline capacity, gas processing, gas gathering, gas storage, load balancing, standby sales service, and emergency sales service. Separately offering and pricing these services is necessary to ensure that traditional LDC customers decide whether to use a non-LDC gas retailer solely on the basis of differences related to gas cost and service. If a subservice that a traditional LDC customer has been using and wants to continue using remains bundled up with the LDC’s sales service, then the traditional customer will not be able to avail himself of the opportunity to use an independent gas retailer. This leaves the customer susceptible to uneconomic bypass. For example, if the customer has been using interruptible transportation as a traditional LDC customer, but cannot get that service if he uses an independent gas supplier, he has an uneconomic incentive to remain an unsatisfied gas sales customer of the LDC or to leave the LDC’s system.

Another potential problem of leaving subservices bundled up with the LDC’s gas transportation service is that the customer using an independent gas supplier might have to pay twice for a gas sales subservice.\textsuperscript{205} He might have to pay his independent retailer for a subservice the retailer actually provides him, while still paying the LDC for the same service, which the LDC does not provide him, because it is part of the LDC’s transportation rate. The presence of this double charge gives the customer an uneconomic incentive to leave the LDC’s system. It also provides an uneconomic incentive for customers to remain on the LDC’s gas supply, contrary to the goal of developing a fair and efficient gas sales market and adverse to the long term health of the LDC and its traditional customers.\textsuperscript{206}

The above analysis regarding the fourth aspect of a transportation access plan, the status of the customer using non-LDC supplied gas in the event of curtailment, leads to the conclusion that all the LDC’s customers, traditional

\textsuperscript{203.} See discussion supra note 115 and accompanying text.
\textsuperscript{204.} See discussion supra Part II(C)(3).
\textsuperscript{205.} An example of how this could occur is described above. See supra note 131 and accompanying text.
\textsuperscript{206.} See supra Part II(C)(3) (noting two incidental benefits of full unbundling of subservices for gas producers and independent retailers).
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and transportation-only customers, should be treated the same in the event of
curtailment. If customers not using the LDC’s gas supply are given an
inferior curtailment status, they will have an uneconomic incentive to remain
on the LDC’s gas supply and remain susceptible to uneconomic bypass.

The above analysis regarding the fifth aspect of a transportation access plan,
whether an LDC has an obligation to serve a customer who wishes to switch
from a non-LDC gas supply to the LDC’s gas supply, leads to the conclusion
that regulators must impose an obligation on the LDC to serve returning gas
customers equivalent to the obligation imposed on the LDC to serve new gas
customers of the same class. If the LDC has no obligation to serve new
industrial customers, then it likewise should have no obligation to serve
returning industrial customers. If, however, returning customers are treated more
onerously than new customers, returning customers are uneconomically deterred
from buying non-LDC supplied gas initially. Therefore, they have an
uneconomic incentive to leave the LDC’s system. It might seem unnecessary
to impose such an obligation to serve on the LDC because it appears to be in
the LDC’s best interest to serve a returning customer if the LDC possibly can.
Nevertheless, the obligation should be imposed to foreclose the possibility that
a LDC resistant to an open access policy refuses to serve returning customers
in order to discourage them from initially participating in open access.

The above analysis regarding the sixth aspect of an open access plan, how
transportation rates will be regulated, leads to several conclusions. First, the
approach to setting transportation rates should be the same for unbundled and
bundled customers alike. For example, if unbundled transportation rates for
certain customer classes can be negotiated with the LDC, the transportation
component of bundled rates for those customer classes also should be
negotiable. Rates for unbundled transportation services should be cost-based,
and the rate should include the administrative costs of offering unbundled
services. It is better to include this cost in the rate and let potential users of the
unbundled service decide whether it is to their advantage to unbundle, rather
than let the administrators try to decide in advance what customers will be
willing to pay.

If unbundling successfully results in the availability of market priced natural
gas and if regulators design cost-based transportation rates discounted

207. See discussion supra Part II(C)(4).
208. Some states give these customers a better curtailment status in the event of a supply, but not
transformation, curtailment. The effect of this is evaluated in supra Part II(C)(4).
209. See discussion supra Part II(C)(5).
210. In California, for example, LDCs only have an obligation to provide a non-core customer with
gas if the customer enters into a two-year commitment to take-or-pay for 75% of the volume nominated.
In re Rulemaking on the Structure of Gas Util. Procurement Practices and Refinements to the Regulatory
211. See supra note 17 (discussing complexity of this endeavor).
transportation rates may not be necessary to prevent most LDC bypass. Therefore, the decision whether to give LDCs the authority to negotiate rates should be made independently of the decision whether to open access to the LDCs' distribution systems and should be delayed until the other regulatory reforms have a chance to impact the industry. If regulators pursue the goal of preventing all, or almost all, LDC bypass by empowering LDCs to negotiate transportation rates for potential bypassers, regulators are likely to undercut the benefits that should accrue from unbundling. First, transportation discounting threatens the competitiveness of the gas retailing market because it has the potential to take the pressure off gas retailers to sell gas at competitive rates. Second, unless transportation rate discounts are similarly available to bundled customers, a customer may have an uneconomic incentive to choose bundled or unbundled service. Third, LDCs may not have the incentive or information to give only necessary discounts. Finally, authority to negotiate rates can be preferentially exercised to favor particular gas retailers, also contributing to decreased competition in the gas retailing market.

Conclusion

A set of working principles to guide resolution of the regulatory issues presented by unbundling can be distilled from the preceding analyses. These principles are broad enough to allow states to adopt innovative reforms, but sufficiently narrow to restrict the reforms to those consistent with the regulatory theory underlying the changes, and most likely to achieve the goals of reform. They include:

1. The regulatory policy governing the LDC as an independent gas retailer should be developed separately from that governing the LDC as a gas transporter. Although the ultimate aim of both these policies is to develop a fair and efficient market for the sale of gas, the different characteristics of the LDC's unbundled gas retailing service and its transportation service demand different regulatory schemes.

2. Regulation of the LDC as an independent gas retailer should be designed to implement a fair, competitive gas retailing market. Several corollaries follow from this proposition:
   a. The focus of regulating the LDC as an independent gas retailer should be to prevent it from engaging in activities having an anticompetitive effect on the gas retailing market. Creating a competitive gas retailing market demands the participation of as many retailers as possible. New entrants can

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212. See discussion supra note 183 (arguing that this adverse impact could be ameliorated by putting shareholders at risk for the discounts or for all the fixed costs associated with serving potential bypassers).
be encouraged only if no retailers have any special advantage arising from past or present regulation of the distribution system.

b. If the LDC is allowed to participate in the independent gas retailing market, its activities in that arena should not be subjected to utility-like regulation. The point of unbundling is to establish a competitive gas retailing market. If the regulator permits the LDC to operate in one corporate form or another in this market, it is counterproductive to subject these operations of the LDC to monopoly-like rate regulation. Rate regulation hinders the LDC's ability to acquire gas supplies responsive to end users' needs and hinders the development of a fair and competitive gas retailing market.

3. Regulation of the LDC as gas transporter should be designed to assure access to the distribution pipeline in a way that implements a competitive gas retailing market. Several corollaries follow from this proposition:

a. Access to the distribution system should be arranged so that the end user chooses one potential gas supplier over another, including the LDC as traditional gas supplier, solely because of differences related to gas cost and service. In other words, the terms and conditions for using the LDC's transportation service should be the same for any customer regardless of from whom he chooses to purchase his gas, including from the LDC as traditional gas supplier.\(^{213}\) If the transportation customer is treated one way if he chooses traditional prepackaged service and another way if he chooses to purchase his gas from an independent retailer, he will have an uneconomic incentive to choose one over the other. This would unnecessarily retard the development of a fair and efficient gas market.

b. Regulators should refrain from precluding the availability of unbundled transportation options out of concern that the cost to the LDC to do so is too high; instead, price the option to include this cost and let the consumer decide whether it is too high to use. This approach ensures that the regulator does not unnecessarily foreclose the gas retailing market to a willing participant.

c. Regulators should refrain from delegating the discretion to make unbundling decisions to the LDC, although it may know its financial incentives better than the regulator. Even if the LDC knows better than the regulator where its financial best interest lies under an unbundling regime, and even if this interest is always coincident with the goal of developing the competitive gas market, there is no guarantee, at least in the short-term, that the LDC will choose the option that maximizes this interest. The LDC may instead engage

\(^{213}\) This mirrors the principle enunciated by the U.S. House Republican Research Committee's Task Force on Energy and Natural Resources in their report on contract carriage for interstate pipeline regulation. See TASK FORCE REPORT, supra note 6, at 14 ("All customers of a pipeline system should be treated on an equal footing: new contract carriage customers should be treated the same as new sales customers").

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in strategic behavior designed to stymie the implementation of unbundling reform.

Adoption of policies consistent with these principles, taking into account the individual circumstances in each state, is just the beginning of the regulatory reform necessary to bring market priced natural gas to consumers. In time, these policies will help the gas market make the transition from a pervasively regulated monopsony to a more competitive market. As competition in the sale of gas increases, certain policies may profitably be adjusted.\textsuperscript{214} For example, non-LDCs may come to offer extensive standby services, and regulators will not have to require LDCs to do so. Federal regulatory change may also trigger responsive intrastate regulatory action.\textsuperscript{215} All future reform will be most effective if it is consistent with the monopolistic or competitive characteristics of the underlying markets.

\textsuperscript{214} See, \textit{e.g.}, Curtis A. Cramer, Intrastate Natural Gas Regulation: Developments to Come, 2-3 (Feb. 1992) (unpublished manuscript, on file with author) (arguing that growth of competition eliminates public utility’s responsibility for service reliability).

\textsuperscript{215} See \textit{id.} at 3-4 (discussing possible federal triggering actions).