Natural Gas Price Escalation Clauses: A Legal and Economic Analysis

David Crump
Natural Gas Price Escalation Clauses: A Legal and Economic Analysis

David Crump*

INTRODUCTION

Natural gas is an inexpensive, clean, and efficient fuel for many fixed-location uses. Its importance to both residential and industrial users has caused sharp differences in attitude among producers and consumers. These differences are intensified by the division of the country into producing and consuming regions and by a federal regulatory system that has been the subject of justified criticism. At the same time, the depletable nature of natural gas, together with the laws of economics, have caused the price of natural gas to increase. Recently, these factors have combined to produce complex and protracted litigation over natural gas contracts.

Long-term natural gas contracts usually contain what are known as price escalation clauses. These clauses are as much a part of the consideration for the contract as the initial purchase price. Often a price escalation clause causes a given contract price to increase significantly over a period of years. With tens or even hundreds of millions of dollars at stake, disputes concerning natural gas contracts often occur. The interpretation and enforceability of an escalation clause is often at the heart of the controversy.

* Professor of Law, South Texas College of Law.


3. Id. But cf. infra notes 233-236 and authorities cited therein (suggesting that consuming regions might benefit from natural gas decontrol).

4. See infra notes 42-82 and accompanying text.

5. See E. Neuner, supra note 1, at 266-69.
The typical dispute begins when a purchaser of natural gas refuses to pay an increased price demanded by a producer pursuant to an escalation clause. When the producer sues to enforce the contract, the purchaser may defend on various grounds, including assertions that the escalation clause is unconscionable or against public policy. In addition, other defensive theories, including those grounded in regulatory statutes, common law, or principles of contract interpretation, are also frequently based on public policy arguments. These arguments, in turn, force courts to consider whether there is sufficient justification for the use of price escalation clauses.

This Article attempts to explain the persuasive economic justifications for escalation clauses in order to aid the interpretation of natural gas contracts and the determination of public policy defenses asserted against them. The Article begins by setting forth essential aspects of the natural gas industry, including the roles of producers, pipelines, and distributors, the types of escalation clauses in general use, and the impact of the federal regulatory system on natural gas pricing. Next, the Article considers the economic arguments both for and against the use of escalation clauses. Finally, the Article examines how courts have dealt with these economic considerations in cases involving pricing clauses in natural gas contracts.

I. ESCALATION CLAUSES AND THE NATURAL GAS MARKET

Traditionally, the natural gas market has included producers, who produce and sell gas; pipelines, which purchase gas from producers for sale to direct customers or to distributors; and distributors, who purchase gas from pipelines and sell it to ultimate consumers. This simple model is subject to varia-

6. See infra notes 238-257 and accompanying text.

There are some opinions, based upon early positions taken by the Federal Power Commission (FPC), acknowledging or accepting arguments that escalators of certain kinds may contravene public policy. The FPC altered its interpretation, and modern cases reject the argument. See infra note 238.

7. For example, the purchaser may use arguments supported by reference to regulatory statutes to claim that price clauses should not be enforced so as to require prices to rise in a manner unrelated to alleged legislative purposes.

8. See generally E. Neuner, supra note 1, at 1-79 (discussing concentration of the natural gas supply market and price and demand patterns in various geographic regions); Pierce, Reconsidering the Roles of Regulation and Competition in the Natural Gas Industry, 97 HARV. L. REV. 345 (1983) (analyzing the structure of the “downstream” gas market and the effect of regulation
tions: for example, pipelines may own production, may agree to carry someone else's gas without purchasing it, or may sell to intermediaries other than distributors. For purposes of this Article, however, it is sufficient to treat the producer as the seller of gas and the pipeline as its purchaser for resale.

A. THE IMPACT OF LONG-TERM CONTRACTS ON PRICING PROVISIONS

Natural gas is generally sold through long-term contracts, typically with terms lasting for decades. Pipelines purchasing gas have historically insisted on long-term contracts because an assured supply of gas is necessary to obtain both regulatory approval and financing for their projects. A natural gas pipeline requires a substantial fixed investment and, once in place, it cannot be moved about like a garden hose.

Unfortunately, however, the supply of natural gas is depletable, and its market value must rise over the long term. The federal regulatory scheme nevertheless has historically constrained prices. During the 1970's, when natural gas shortages produced layoffs, plant closings, hardships, and even deaths, it became clear to all informed observers that the market price of gas would rise. Accordingly, the negotiation of natural gas contracts has, for several years, required the parties to set fair prices for the duration of a long-term contract in a market in which prices are expected to rise.

9. See supra note 8.
10. E. NEUNER, supra note 1, at 265-66.
11. See infra note 85 and accompanying text.
12. See infra notes 42-82 and accompanying text; see also Breyer & MacAvoy, The Natural Gas Shortage and the Regulation of Natural Gas Producers, 86 HARV. L. REV. 941, 974-75 (1973) (comparing actual average gas prices to "unregulated" prices derived from economic models).
13. See infra notes 61-63 and accompanying text.
14. See infra notes 65-68 and accompanying text.
15. See generally P. STARRATT, THE NATURAL GAS SHORTAGE AND THE CONGRESS 37-38 (1974) ("The imbalance . . . can be seen as a virtually inevitable result of the low regulated producer prices."); Breyer & MacAvoy, Regulating Natural Gas Producers, in ENERGY SUPPLY AND GOVERNMENT POLICY 182 (R. Kalter & W. Vogel eds. 1976) ("In the absence of price ceilings, higher prices would have been specified . . . , and significantly greater new reserve commitments might have been made. . . . [T]he demand response should also have been substantial.").
There are two ways in which a buyer and seller can agree on fair prices in such a situation. One theoretical method is by agreeing to a constant price over the life of the contract. A constant price would have to be set very high, well above the market price for gas at the time of contracting, to reflect the fact that it would be well below the market price at the end of the contract term twenty or so years later. Very high initial prices, however, are undesirable to a purchaser. Additionally, they are unfair to a utility's customers, because a consumer is forced to pay above market rates during the initial year while a consumer at the end of the contract term receives a subsidy.

A second and more desirable way to set contract prices in a fluctuating market is to use an index that ties the contract price to the market price of the commodity. This approach is reflected in escalation clauses. This measure of the contract price may be prices paid by the same or other purchasers, or it may be prices prevailing for other fuels, or it may be price ceilings set by the government; but the purpose is the same in each case: to provide a mechanism that keeps the contract price roughly related to market levels as market prices rise. In this manner, producers can be induced to commit supply for long terms, and purchasers can be assured of paying prices similar to those paid by others in the market.

B. TYPES OF PRICING CLAUSES IN GAS CONTRACTS

Fixed price contracts can be found today, but they are generally relics of history. At one time, substantial amounts of gas were sold for long terms at fixed prices, and some producing fields are still governed by them. This gas may be sold for pennies per thousand cubic feet (Mcf), far below the market level. Similarly, there are some fixed-escalation contracts still in existence, limiting increases to definite, periodic increments such as a certain number of cents per unit per month or year.

17. The purchaser would be unable to resell at a price higher than his purchase price, and the impracticality of carrying the necessary credit over the life of the contract would be prohibitive even if a constant price arrangement were itself considered desirable.

18. See infra notes 20-41 and accompanying text.

19. See E. Neuner, supra note 1, at 265-66; Pierce, supra note 16, at 78, 94.


21. See Pierce, supra note 16, at 80; see also Decision Analysis Corp., Analysis of Natural Gas Producer/Interstate Pipeline Contracts 5 (1981) (study sponsored by the American Gas Ass'n) [hereinafter cited as AGA Study].
Again, these clauses result in prices far below the market-clearing level.  

In contrast to these fixed price contracts, most modern contracts include indefinite price escalation clauses. There are a number of different types of indefinite price escalation clauses in use. A “favored nations” clause, for example, ties the contract price to the rates paid to other sellers. A “two party” favored nations clause requires the purchaser to pay a contract price equivalent to the highest price it pays to any other producer. This arrangement gives the purchaser some control over contract prices, since it can avoid or limit escalation by its own future purchases. A “third party” favored nations clause requires the purchaser to pay a contract price equivalent to the highest price paid by any purchaser to any producer in a given geographic area.

Favored nations clauses vary significantly from contract to contract. Important subjects of negotiation include the geographic area in which comparison sales are to be considered, the procedures by which price increases are triggered, and the types of sales to be taken into account. A third party favored nations clause with wide geographical limits and liberal inclusion of comparative contracts may cause the contract price to escalate more frequently, and to advance generally ahead of market price levels; a two-party favored nations clause with

---

22. See supra note 21 and authorities cited therein.
23. Of interstate gas contracts for “old” gas, the majority contained some kind of indefinite price escalator as of 1981. AGA STUDY, supra note 21, at 5; see also infra notes 25, 31, 38.
24. Favored nations clauses take their name from the law governing international trade, under which a country entitled to most favored nation status accedes to the same tariff or other requirements as the most favorably treated nation. See E. NEUNER, supra note 1, at 91; see also 8 H. WILLIAMS & C. MEYERS, OIL & GAS LAW 514 (1984); Pierce, supra note 16, at 80-81.
25: As of 1981, 83% of interstate contracts for “old” gas contained favored nations clauses. AGA STUDY, supra note 21, at 14.
26. E. NEUNER, supra note 1, at 91; see also 8 H. WILLIAMS & C. MEYERS, supra note 24, at 514; Pierce, supra note 16, at 80-81.
27. See supra note 26.
28. See E. NEUNER, supra note 1, at 271. Compare the two-party clause at issue in Superior Oil Co. v. Western Slope Gas Co., 604 F.2d 1281, 1282 (10th Cir. 1979) (requiring buyer to pay seller a price equal to the highest price paid by buyer to any seller in the area), aff’d, 758 F.2d 500 (10th Cir. 1985) with the third party clause in Kerr-McGee Corp. v. Northern Util., Inc., 673 F.2d 323, 324 (10th Cir.) (specifying a date on which the contract price would rise to the highest price received by any producer in the area), cert. denied, 459 U.S. 989 (1982).
29. E. NEUNER, supra note 1, at 98, 272.
narrow geographical limits and confined to certain kinds of contracts, on the other hand, would tend to lag behind the market. In either event, the comparison to other contract prices provides an index that ties the contract price, albeit roughly, to the market on a continuing basis.\textsuperscript{30}

Another frequently used indefinite price escalator is the “area rate” clause, also known as an “FPC [Federal Power Commission] price protection” or “J & R” clause.\textsuperscript{31} Such clauses, like favored nations clauses, may be worded in various ways, but their effect is to index the contract price to the highest federally regulated price ceiling\textsuperscript{32} for the geographic area in which the natural gas well is located. Some area rate clauses limit escalation to ceilings for gas of the same regulatory category, while others do not. Ambiguity surrounding this issue has given rise to litigation.\textsuperscript{33} Similarly, some area rate clauses expressly incorporate price ceilings set by successors to the FPC, while others do not. Again, ambiguities have created litigation because of the abolition of the FPC and its replacement by the Federal Energy Regulatory Commission (FERC), which now administers congressionally legislated price ceilings.\textsuperscript{34}

\textsuperscript{30} See Pierce, supra note 16, at 81.
\textsuperscript{31} As of 1981, 89% of the interstate contracts for “old” gas contained area rate clauses. AGA Study, supra note 21, at 8. The name is derived from a regulatory variation in which the FPC set prices by producer areas. See infra notes 42-82 and accompanying text. The “J & R” designation reflects typical reference in such clauses to “just and reasonable” rates set by the FPC.
\textsuperscript{32} For a discussion of federal price ceilings, see infra notes 57-60 and accompanying text.
\textsuperscript{33} E.g., Tuthill v. Southwestern Pub. Serv. Co., 614 S.W.2d 205, 210-11 (Tex. Civ. App.—Amarillo 1981, writ ref’d n.r.e.) (holding that price under particular contract, because it referred to “applicable” regulatory ceilings, escalated only to “old” gas ceiling, even though a differently drafted contract could have caused escalation to “new” gas rates because the sale was for intrastate consumption); see also Amoco Prod. Co. v. Delhi Gas Pipeline Corp., 674 S.W.2d 469, 472-73 (Tex. Ct. App.—Dallas 1984, writ ref’d n.r.e.) (holding that the FPC’s—and subsequently the Natural Gas Policy Act’s (NGPA)—classification of well vintaging rather than contract vintaging applied to trigger price escalation clauses indexed to government price ceilings even though contract vintaging was the rule at the time of contracting).
\textsuperscript{34} The litigation has been extensive and has produced widely differing results, depending upon the clause, the evidence, and the court. Compare UGI Corp. v. Amoco Prod. Co., No. 80-1411, slip op. at 1-2 (E.D. Pa., Aug. 1, 1984) (clause in contract “was not intended to allow collection of congressionally-set” prices) and Energy Reserves Group v. Kansas Power & Light Co., 230 Kan. 176, 183-85, 630 P.2d 1142, 1149 (1981) (holding that “NGPA did not trigger a price increase because the contracts . . . did not contain a sufficient escalation mechanism) with Oxley v. Oklahoma Gas & Elec. Co., No. 55,655 (Okla. Ct. App. May 4, 1982), reported in 53 OKLA. B.J. 1161, 1162 (1982), rev’d and dissenting op. adopted, No. 55,655 (Okla. Oct. 4, 1982), reported in 53 OKLA.
Currently, "FERC" clauses are in use, setting prices by reference to the FERC's actions pursuant to the Natural Gas Act\textsuperscript{35} and Natural Gas Policy Act.\textsuperscript{36} Area rate clauses are based on the assumption that increases in regulatory price ceilings will roughly correspond to the market price for natural gas.\textsuperscript{37} Thus, area rate clauses are another way of ensuring that the contract price, although it may not be precisely the level set by the market, will at least be related to it.

There are several other kinds of natural gas price escalation clauses in current use. For example, clauses indexing the contract price to the market price of No. 2 or No. 6 heating oil, as reflected in standard reference works such as Platt's Oilgram Price Service, are increasingly common.\textsuperscript{38} Deregulation clauses, which provide for a change of index if price ceilings are removed from the gas subject to the contract, are also in current use.\textsuperscript{39} A further development, which is the natural result of the evolution of gas transactions, is the recent appearance of "market-clearing price" escalation clauses in some contracts, tying contract prices more directly to the market.\textsuperscript{40}

Finally, different indexes may be used in combination. For example, a favored nations clause may refer to the average of the two or three highest prices in the area, or clauses them-

\textsuperscript{37} See Pierce, supra note 16, at 81.
\textsuperscript{38} In 1981, eight percent of interstate contracts for “old” gas referred to No. 2 oil, and three percent referred to No. 6 oil. AGA STUDY, supra note 21, at 14; see also Pierce, supra note 16, at 81 n.71. These commodities compete with, or, as an economist would say, are for some purposes "substitute goods" for, natural gas. See Natural Gas Regulation, supra note 2, at 622-23.
\textsuperscript{39} The contract may provide for a change of index upon deregulation (for example, if it contains a reference to regulatory ceilings that would cease to exist upon deregulation). Alternatively, the contract may provide for renegotiation or for other specified alternatives. See Natural Gas Regulation, supra note 2, at 627-28.
\textsuperscript{40} See FOSTER NAT. GAS REP. NO. 1477, Aug. 2, 1984, at 3 (reporting upon contract between Natural Gas Pipeline Co. of America and Kerr-McGee Corp., with 15-year term and price at the pipeline's "market-clearing price," defined as the average price representing its market competition less certain factors such as transportation costs, taxes, etc.).
selves may be used in combination. Inclusion of a fixed price escalation clause and an indefinite escalation clause, such as a favored nations or area rate clause, is typical of this variation.\footnote{41}

C. THE FEDERAL REGULATORY SCHEME


\footnote{43} For example, the contract at issue in UGI Corp. v. Amoco Prod. Co., No. 80-1411 (E.D. Pa. Aug. 30, 1983) (opinion denying summary judgment), provided for (1) a fixed price escalator of three cents per thousand cubic feet (Mcf) semi-annually; (2) a favored nations clause tied to the average of the two highest prices paid by certain named purchasers within the contract area, referred to as a “redetermination” clause; (3) an area rate clause, and (4) a limit upon both indefinite escalators in the form of a maximum price determined by reference to prices in Platt’s Oilgram Price Service. \textit{Id.}, slip op. at 3.

\footnote{44} The principal concern was with asserted abuses of monopoly by interstate pipelines. State regulation affecting interstate sales by pipelines generally had been held unconstitutional. \textit{See Missouri ex rel. Barrett v. Kansas Natural Gas Co.}, 265 U.S. 298, 307-10 (1924); \textit{Pennsylvania v. West Virginia}, 262 U.S. 553, 595-600 (1923); \textit{cf. Pennsylvania Gas Co. v. Public Serv. Comm’n}, 252 U.S. 23, 31 (1920) (holding constitutional “local regulations of a reasonable character” as applied to gas piped directly from the gas main into the state for sale to local consumers). States were left free, both by the decisions and by the NGA, to regulate intrastate pipelines, distribution, or production. Nordhaus, \textit{supra} note 42, at 829-30; Pierce, \textit{supra} note 16, at 65.
This legislation gave the FPC responsibility for protecting consumers with respect to natural gas prices. The legislation required that regulated rates be "just and reasonable." The Act authorized the FPC to regulate "natural gas companies" and to set price limits on sales of gas for resale in interstate commerce. Thus, interstate pipelines were clearly included. The FPC was prohibited, however, from regulating the "production" of natural gas. The Act did not specify whether "production" was limited to the producer's activities in actually drilling for or producing gas, or whether it also included wellhead sales by producers. In 1954, however, the Supreme Court decided the landmark case of Phillips Petroleum Co. v. Wisconsin, which required the FPC to regulate wellhead sales of natural gas intended for resale in the interstate market.

The FPC had declined to exercise jurisdiction over wellhead sales before Phillips. It regarded such regulation as neither necessary nor appropriate, because it viewed the field pricing of natural gas as competitive and not amenable to the

48. The Commission's jurisdiction extended "to the sale in interstate commerce of natural gas for resale . . . but . . . not . . . to the production or gathering of natural gas." Id. The ambiguity existed because producers sell gas for resale (which would be covered if in interstate commerce), but they do so as a part of production activities (which were exempt).
49. 347 U.S. 672 (1954).

The decision was based upon a finding of congressional intent to confer "Commission jurisdiction over the rates of all wholesales of natural gas in interstate commerce, whether by a pipeline company or not . . . ." Id. at 682. In the Court's view,

Regulation of the sales in interstate commerce for resale made by a so-called independent natural-gas producer is not essentially different from regulation of such sales when made by an affiliate of an interstate pipeline company. In both cases, the rates charged may have a direct and substantial effect on the price paid by the ultimate consumers. Protection of consumers against exploitation at the hands of natural gas companies was the primary aim of the Natural Gas Act . . . Attempts to weaken this protection by amendatory legislation exempting independent natural gas producers from federal regulation have repeatedly failed . . . .

Id. at 685.

Justice Douglas dissented on the grounds that the FPC's contemporaneous and long-standing interpretation deserved respect, that rate setting for producers would require supervision of numerous producer activities, and that there would be unintended adverse effects on production. Id. at 699-90.
kind of utility regulation that was applied to pipelines.\textsuperscript{50} Shortly after \textit{Phillips}, Congress passed legislation reversing its effect. President Eisenhower originally indicated he would sign the legislation into law, but ultimately vetoed the bill because of a scandal concerning an alleged bribe offered by an industry lobbyist to a legislator.\textsuperscript{51} This historical accident, worthy of soap opera drama, created an atmosphere in which deregulation or even regulatory reform was politically impossible, and it ushered in an era of natural gas price ceilings set by a reluctant FPC using a dizzying, if not embarrassing,\textsuperscript{52} sequence of different approaches.

The FPC initially attempted to regulate more than eight thousand gas producers\textsuperscript{53} by setting individual rates for each, using the traditional utility method with which the Commission was familiar.\textsuperscript{54} The difficulty of estimating costs and fair returns for thousands of producers, however, created an enormous backlog of cases.\textsuperscript{55} The Commission therefore shifted to

\begin{itemize}
  \item \textsuperscript{50} \textit{In re Phillips Petroleum Co.}, 10 F.P.C. 246, 278 (1951) (holding Phillips' sales to be “part of Phillips gathering business process or at least an exempt incident thereof”). Cf. Breyer & MacAvoy, supra note 12, at 941-42 \& n.5 (indicating that while the Supreme Court’s decision in \textit{Phillips Petroleum Co.} v. Wisconsin, 347 U.S. 672 (1954), was arguably consistent with the legislative history, it was not responsive to the underlying economic policy); Pierce, supra note 16, at 66 n.14 (noting that although Court’s reasoning was consistent with legislative history, it did not address underlying economic policies).
  \item \textsuperscript{51} \textit{See Johnson, Producer Rate Regulation in Natural Gas Certification Proceedings: CATCO in Context}, 62 COLUM. L. REV. 773, 783 n.57 (1962); see also Southern Louisiana Area Rate Cases, 428 F.2d 407, 415 (5th Cir.), \textit{cert. denied}, 400 U.S. 950, \textit{reh’y granted}, 444 F.2d 125 (5th Cir. 1970); Pierce, supra note 16, at 66-67 \& n.14.
  \item \textsuperscript{52} One Supreme Court justice referred to early producer regulation as the Commission’s “Sisyphean labors . . . as it marche[d] up the hill of producer regulation only to tumble down again with little undertaken and less done.” Wisconsin v. FPC, 373 U.S. 294, 315 (1963) (Clark, J., dissenting). The Court was later to cite descriptions of producer regulation as the “outstanding example in the federal government of the breakdown of the administrative process.” \textit{Permian Basin Area Rate Cases}, 390 U.S. 747, 758 (1968) (citing \textit{Lan

\begin{itemize}
  \item \textsuperscript{53} \textit{Permian Basin Area Rate Cases}, 390 U.S. 747, 756-57 (1968). \textit{See also} Morgan & Patterson, supra note 42, at 109-110.
  \item \textsuperscript{54} The difficulty of making such estimations and the backlog they created was only part of the disadvantage of this method. By setting each producer’s rate on the basis of cost plus return, the FPC reduced each producer’s incentive to act efficiently. \textit{See infra} notes 179-181 and accompanying text.
  \item \textsuperscript{55} Morgan & Patterson, supra note 42, at 109-110. In \textit{Atlantic Ref. Co. v. Public Serv. Comm’n of New York}, 360 U.S. 378, 389, \textit{reh’y denied}, 361 U.S. 801 (1959), the Court said that individual producer regulation produced delays that
what became known as the “in-line” doctrine: rates were approved if they were in line with other rates prevailing in the geographical area.56

In 1960, the FPC began setting batch rates by geographical areas.57 It considered general or across-the-board producer costs for each area, reasonable producer returns, and non-cost elements designed to bring gas to market.58 The area rate pricing methodology also introduced the concept of “vintaging,” or natural gas pricing that included reference to historical costs. “Old” or “flowing” gas was assigned a lower price ceiling than “new” gas, which was thought to be associated with both higher costs of production and greater need for incentives to stimulate exploration and development of new supplies.59 Eventually, in 1968, the Supreme Court upheld the Commission’s first effort at what the Court called the “experiment” of area rate setting in the landmark Permian Basin Area Rate Cases.60 The process, however, had lasted almost a decade, during which price ceilings had remained uncertain.

Serious signs of regulatory failure began to appear soon after Permian. In 1969, an FPC staff report predicted impending

57. Area Rate Proceeding No. AR 61-1, 24 F.P.C. 1121, 1124 (1960).
59. In the Permian Basin cases, for example, the FPC set a lower rate for gas produced from wells dedicated to interstate commerce before January 1, 1961, and for associated gas (or gas produced in association with oil, which was considered to require lower production costs). The other vintage, with higher rates, was for gas produced from wells dedicated after January 1, 1961. Permian Basin, 390 U.S. at 759-60. In the Southern Louisiana proceeding, three different vintages were established. Southern Louisiana, 428 F.2d at 419-20. Regulation pursuant to the NGPA has resulted in more than thirty different categories or vintages.

There is, of course, no physical difference between “new” gas and “old” gas. Gas is gas, and if a molecule of “old” gas meets a molecule of “new” gas at the burner tip, each produces the same result. Furthermore, both have the same value. The artificial distinction created by vintaging is dysfunctional in many ways. The economic difficulties with vintaging include failure to ration demand, creation of the perception in producers of new gas that their gas is subject to the risk of vintaging, and discouragement of enhanced production from old wells. The FPC at one point announced an intention to phase out all vintaging. Statement of Gen. Policy No. 61-1, 18 C.F.R. § 2.56, 24 F.P.C. 818 (1960). However, it retained the concept in later proceedings.
60. 390 U.S. 747 (1968).
natural gas shortages.\textsuperscript{61} In 1970, in the \textit{Southern Louisiana Area Rate Cases},\textsuperscript{62} the Fifth Circuit affirmed the second area rate proceeding to reach the appellate courts, but noted that it did so because it was constrained by the Supreme Court's decision in \textit{Permian}. The Fifth Circuit also criticized the Commission for failing to insure that adequate gas supply would reach the market, and it pointedly accused the Commission of "whistling in the dark."\textsuperscript{63} The Commission responded by reopening its proceedings in the case.\textsuperscript{64}

In the early 1970's, the OPEC oil embargo was accompanied by severe winters and by shortages of natural gas.\textsuperscript{65} In response, the FPC allowed special incentive prices which were higher than otherwise applicable area rates.\textsuperscript{66} Finally, the Commission abandoned its efforts to regulate by area rates, and instead adopted national price ceilings for different categories of gas.\textsuperscript{67}

\textsuperscript{61} FPC, \textit{STAFF REPORT ON NATIONAL GAS SUPPLY AND DEMAND} 1, 4, 11, 19 (1969).


\textsuperscript{63} \textit{Id.} at 444.


\textsuperscript{65} See MacAvoy, \textit{supra} note 42, at 67-68; Morgan & Patterson, \textit{supra} note 42, at 112; Nordhaus, \textit{supra} note 42, at 836-841; Pierce, \textit{supra} note 16, at 67-68. See generally P. STARRATT, \textit{supra} note 15, at 29-39, 63-65 (arguing that the shortage was the inevitable result of FPC price regulation).

\textsuperscript{66} For example, the Commission attempted to exempt "small" producers from price ceilings. Order 428, 45 F.P.C. 454 (1971). This order was reversed because it did not require small producer rates to be just and reasonable. Texaco, Inc. v. FPC, 474 F.2d 416 (D.C. Cir. 1972), \textit{aff'd}, 417 U.S. 380 (1974); see Nordhaus, \textit{supra} note 42, at 838-40. Treatment of short-term emergency purchase rates met with mixed results in the courts and poor response from producers. \textit{Id.} The Commission did successfully impose a "small producer rate," which increased ceilings to 130% of the otherwise binding maximum price. Small Producer Regulation, Opinion 742, 54 F.P.C. 853, 856-58 (1975).

The FPC also created an apparatus for regulating gas curtailments. FPC v. Louisiana Power & Light Co., 406 U.S. 621, 626-29 (1972) (FPC has power to regulate interstate sales of gas under its transportation jurisdiction); see Morgan & Patterson, \textit{supra} note 42, at 113-14.


The second round of "national area rates" was also upheld in American Public Gas Ass'n v. FPC, 567 F.2d 1016, 1061-64 (D.C. Cir. 1977), \textit{cert. denied}, 435 U.S. 907 (1978). In this second set of proceedings, the FPC took account of recent costs, declining discovery rates, and discounted cash flow; as a result, the second set of prices was double those of the first set. Morgan & Patterson, \textit{supra} note 42, at 112.
The winter of 1976-77 was unusually severe, and it resulted in natural gas curtailments, layoffs, and seventy-five deaths attributed to gas shortages. The shortages were recognized as the product of three problems in the regulatory system. First, prices were inadequate to call forth sufficient supply from producers. Second, since only the interstate market was regulated, producers were prompted to dedicate gas for sale within the state in which it was produced, rather than to the interstate market. Thus, consuming states had inexpensive gas but inadequate supply, while producing states ironically had gas that cost more but was plentiful. Furthermore, a plentiful supply of gas created a flight of people and industry from consuming states to producing states. Third, and finally, artificially suppressed prices stimulated consumption and discouraged conservation.

In 1978 Congress passed the Natural Gas Policy Act (NGPA) in an attempt to deal with these problems. The NGPA represented a compromise between forces advocating deregulation and those advocating continued controls. It extended regulation to the intrastate market for the first time. It divided gas into categories defined by well dates, dedication to interstate commerce, formations, and other factors. "High-cost" natural gas in formations or at depths making it expensive.

---

68. Pierce, supra note 16, at 67 n.18.
70. See infra note 91 and accompanying text.
sive to produce was scheduled for early deregulation,\textsuperscript{74} and soon began to command increased prices. Price ceilings for "new" natural gas were determined by a formula that included both inflation and real increases,\textsuperscript{75} while different categories of "old" gas were assigned fixed prices based upon the previous NGA rates, with adjustments for inflation.\textsuperscript{76} Most significantly, however, new gas was scheduled for ultimate decontrol.\textsuperscript{77} The theory underlying the NGPA was that diminishing volumes of old gas in the national supply, coupled with increasing percentages of new, decontrolled gas would ultimately lead to a functioning market in natural gas that would be largely unregulated.\textsuperscript{78} The NGPA, however, was the product of compromise, and it too has been criticized as creating inefficiencies.\textsuperscript{79}

This history of regulatory failure contains the seeds of the present battle over escalation clauses. During times of shortage, against a backdrop of dwindling reserves, pipelines were concerned with obtaining adequate long-term supplies of gas. Accordingly, they were willing to pay ceiling prices and to enter into long-term contracts with escalation clauses that would motivate producers.\textsuperscript{80} The deregulation of high-cost gas in the NGPA, however, showed that although inexpensive gas was scarce, supplies of more expensive gas were plentiful. In

\textsuperscript{74} NGPA § 107, 15 U.S.C. § 3317 (1982). High-cost gas categories included gas produced from depths below 15,000 feet, from geopressed brine, from coal seams, and from Devonian shale. The FERC has exercised authority to add designated "tight" formations. \textit{See} Pennzoil Co. v. FERC, 671 F.2d 119, 120-21 (5th Cir. 1982). Section 108 of the NGPA establishes a special ceiling for stripper well gas. 15 U.S.C. § 3318 (1982).

\textsuperscript{75} NGPA § 102, 15 U.S.C. § 3312 (1982). The provision sets an April 20, 1977 date for production in commercial quantities as the determinant. The well must also be at least two and one-half miles from an existing well, or drilled to at least 1000 feet deeper than any well within that distance.

\textsuperscript{76} Thus, different prices are set for new onshore production wells, or wells that develop existing fields (section 103); for old gas (section 104); for "rollover" contract, or renewals of expired contracts (section 106); and for various categories of other gas (section 109). NGPA §§ 103, 104, 106, 109, 15 U.S.C. §§ 3313-14, 3316, 3319 (1982).


\textsuperscript{78} \textit{See} Pierce, \textit{supra} note 16, at 89.

\textsuperscript{79} \textit{See} Pierce, \textit{supra} note 8, at 349.

\textsuperscript{80} \textit{See} id. at 353-57; \textit{Natural Gas Regulation, supra} note 2, at 636-38. One reason for this behavior was that curtailments created enormous potential liability for pipelines. \textit{See}, \textit{e.g.}, City of New Orleans v. United Gas Pipe Line Co., Nos. 575-544, 479-940 (L.A. Dist. Ct. Aug. 24, 1984) (awarding damages of more than $85 million in curtailment-related suit), summarized in \textit{FOSTER NAT. GAS REP. No. 1482, Sept. 6, 1984, at} 1.
addition, higher prices led consumers to conserve gas or switch to alternative energy sources, and this response reduced demand. The result is that in recent years the market has produced an oversupply or "bubble"\(^8\) of natural gas. Pipelines that agreed to escalation clauses when they contracted for large volumes of new gas have sometimes found themselves unable to market it.\(^2\) These circumstances have placed pressure on some pipelines to avoid the payment of escalated prices, while producers have naturally resisted these efforts.\(^3\) The resulting conflict has led to disputes over the justification for price escalation clauses, which is the subject of the next section of this Article.

II. THE ECONOMIC ARGUMENTS IN FAVOR OF ESCALATION CLAUSES

The economic function of escalation clauses can be illustrated by the following simplified example. If a reservoir of a depletable commodity such as natural gas were to be sold in a given year (here called "year 1"), for a rate to be paid over fifteen years and to be computed by reference to the market price, the seller would receive payments somewhat as follows:

\(^8\) "There is little doubt that there is now a 'gas glut' in that more gas can be delivered to purchasers than they are willing to buy at currently prevailing prices." *Natural Gas Regulation, supra* note 2, at 637-38. See *FOSTER NAT. GAS REP*. No. 1470, June 14, 1984, at 10 (reporting AGA estimate of the bubble at 2.3 trillion cubic feet (Tcf) within the continental United States in 1984).

\(^2\) This difficulty was exacerbated when prices approached fuel oil levels. *See Natural Gas Regulation, supra* note 2, at 619; *FOSTER NAT. GAS REP*. No. 1395, Dec. 29, 1982, at 9; *FOSTER NAT. GAS REP*. No. 1376, Aug. 12, 1982, at 2. One pipeline reported the loss of two-thirds of its jurisdictional sales owing to fuel oil substitution and similar market effects. *FOSTER NAT. GAS REP*. No. 1394, Dec. 16, 1982, at 19.

\(^3\) *See infra* notes 238-289 and accompanying text.
On the other hand, if it contracted for a constant price, the seller would demand a much higher initial rate and would receive payments as follows:  

The darkened portion of each bar on the second graph represents the amount by which the constant price would exceed the market price. The dotted lines which appear in later years represent the amount by which the constant price would be below the market price.

Several features of these graphs are noteworthy. First, the graphs assume an increasing market price for natural gas. Economic principles dictate such increases because of the deplet-

---

84. This graph is simplified for illustrative purposes. Its limitations are set forth infra notes 85-88 and accompanying text.
able nature of the resource. Second, the constant price graph may understate the payments necessary to provide an equivalent to the market price graph because a constant price contract shifts the allocation of risk between the parties, and principles of economics dictate that this shift must be reflected in price. Third, the graphs are equalized in present dollars to account for the time value of money. Fourth, both graphs assume that the commodity cannot be purchased except at market value. In the long run, this result too is a consequence of economic principles, because producers cannot be induced to produce the commodity, as opposed to placing their money elsewhere, if prices are below market. Nor can the government accomplish that result without dedicating equivalent resources and therefore paying the equivalent of market value, in the

85. See infra notes 209-213 and accompanying text. Price in a given year may rise or fall, but the long run trend must be one of increase. Id.
86. See infra notes 105-129 and accompanying text.
87. A payment in 1990, for example, has a present value in 1975 considerably less than that of a payment actually made and received in 1975. In order to compare the two payments, one must translate the 1990 payment into present value as of 1975 (or the 1975 payment into present value as of 1990). To do the former, one may use the formula

\[ V_n = \frac{P_n}{(1+i)^n} \]

Where \( V_n \) is the present value of payment \( P \) in the \( n \)th year and \( i \) is a discount factor that can be approximated by the market rate of interest in the beginning year. Thus, the present value of the estimated total income stream from the escalating contract must equal the present value of the constant dollar income stream, or

\[ \sum \frac{P_n}{(1+i)^n} = C \sum \frac{1}{(1+i)^n} \]

where \( C \) is the level of the constant price. See J. Griffin & H. Steele, Energy Economics & Policy 66 (1980).

The charts, rather than attempting to reflect actual dollars for each year, simply assume that a present value multiplier has been applied to obtain easier comparisons.

This consideration of time-value theory provides the basis for one justification of escalators. In part, the 1990 payment is significantly higher because 1990 dollars are worth significantly less than 1975 dollars. The tendency of the purchaser to complain in 1990 that his then-current payment far exceeds his initial payment is simply misplaced. He has obtained the use of the difference between his 1975 payment and a fair constant-level price (plus the sum of such differences for all early payments) and has been able to invest it or use it. Conversely, the producer, when he contracts in 1975, must discount the 1990 payment, which is worth less to him. The failure to consider the impact of time on costs and markets has been a frequent source of difficulty in natural gas regulation.
Finally, it is apparent that the market-price graph, rather than the constant-price graph, is the one that corresponds most closely to natural gas contracts with escalation clauses. Contract price and market price may not be identical, because the index used may lag below or rise above market price from time to time, but a contract with an escalation clause will follow the market in a rough way. Both graphs reflect payment of market price over the life of the contract. The escalating price, however, roughly corresponds to the market price throughout the term of the contract. Thus, to ask whether escalation clauses are consistent with public policy is, in essence, to ask whether it is desirable for contract prices to follow market levels.

A. SUPPLY, DEMAND, AND PRICE IN A MARKET ECONOMY

A rise in market price is a signal to entrepreneurs to invest capital in the production of the commodity whose price is rising. At the same time, a rise in price is a signal to consumers to reduce consumption or seek substitute fuels. If price is artificially depressed by decisions such as the refusal to allow natural gas prices to rise to market levels, the market sends misleading signals to both producers and consumers. Producers put fewer resources into production, abandon properties that they would not abandon if the market were functioning properly, refrain from utilizing more expensive secondary and tertiary recovery techniques, and generally produce less. Consumption, on the other hand, is subsidized, and demand increases above market levels. The end result of this excess of demand over production, in the long run, is shortages of natural gas.

The following graph, adapted from an economist's standard chart, illustrates the law of supply and demand for the energy

---

88. Were it to compensate producers for below market prices, the government would have to dedicate resources of a value equivalent to market value because each factor of production must be compensated in proportion to its marginal productivity, and because the paper upon which money is printed does not have intrinsic value but is only a medium of exchange. See R. Dorfman, PRICES AND MARKETS 93-94 (3d ed. 1978).

89. See infra notes 207-211 and accompanying text.

90. See infra notes 93-101 and accompanying text.

91. This result follows even if the commodity, like natural gas, is a depletable resource that needs to be conserved. See infra notes 187-190 & 196-197 and accompanying text.

92. See infra notes 93-101 and accompanying text.
Point P is the "equilibrium point" where supply equals demand, here at $25 per unit. If price rises above the equilibrium point, "excess capacity" is created. Thus, at the higher price of $30, producers' output is twenty million units, but consumers will accept only ten million; thus the excess capacity (here represented by the distance from point A to point B) is ten million units. Given such a situation, economists generally agree that firms will feel pressure to reduce inventory by cutting prices. Lower prices will also increase consumer demand, and bring supply and demand closer to equilibrium.

A regulatory ceiling set below market levels, however, pre-
vents the market from balancing supply and demand. The dysfunctional result of this regulation can be depicted as follows:96

A market functioning normally would reach equilibrium at point P, where the supply and demand curves intersect. This graph assumes, however, that regulatory policy requires gas to be sold at below-market prices. As a result, demand exceeds supply and there is a shortage (here represented by the distance from point X to point Y). In a graph depicting the natural gas market during the 1970's, such a shortage would represent spot sales at above-market prices, service interruptions, and the flight of people and industry to the producing states where plentiful gas was available in the unregulated intrastate market.

Similar effects result whenever the price of any commodity is artificially held below market.97 Thus Professor Paul Samu-

96. H. MERKLEIN & W. HARDY, supra note 93, at 22-24. The graph happens to be one depicting the result of domestic crude oil price regulation, and the shortage represents the amount of imported oil necessary to fill the gap. Id. at 28-30. Some economic texts give slightly different and more complex treatment of the natural gas market, since pipeline limitations and long-term contracts distribute welfare gains differently than in the oil market, see infra note 101 and authorities cited therein, but the basic principle remains the same in both markets, and the long term result is similar.

97. See P. SAMUELSON & W. NORDHAUS, ECONOMICS 64-66, 391-92 (12th ed. 1985) (using domestic oil price regulation and resulting shortages as example); see also Ringleb, supra note 42, at 727 n.94 (graph showing supply, demand,
elson uses an identical graph depicting the sugar market to illustrate these principles. Samuelson hypothesizes that the government intervenes to hold prices below market because "high prices would have contributed to 'profiteering' in that industry. . . . So go the arguments of would-be price fixers."

Samuelson details the unhappy results of such regulation:

At the legal ceiling price, supply and demand do not match. Consumers want thousands of pounds of sugar in excess of what producers are willing to supply. . . .

. . . There follows a period of frustration and shortage . . . .

The price mechanism is stymied and blocked. Nonmonetary considerations must determine who is the lucky buyer and who the unlucky one: the warmth of the smile that the customer flashes on the grocer . . . or the accident of being in the store when the sugar is put on the shelves.

Nobody is happy . . . . It is no wonder that black markets occasionally develop. . . .

If for political or social reasons market price is not to be permitted to rise high enough to bring demand down to the level of supply, the only solution under these circumstances lies in outright coupon, or point, rationing.

Samuelson concludes that "[a]ny haphazard interference with competitive supply and demand is likely—save in some exceptional circumstances—to be a bad rather than a good thing."

The above analysis represents a broad consensus. Other economic texts include treatments of the subject that are functionally identical. Furthermore, the inconveniences associated with shortages are not the only result of artificially

and shortage identical to graph in H. MERKLEIN & W. HARDY, supra note 93, at 22, with additional identification of producer's and consumer's surplus, social loss, and effective demand price).

99. P. SAMUELSON, supra note 94, at 386-88. These arguments, posited by Samuelson as hypothetical reasons for controlling sugar prices, are strikingly similar to those asserted in support of historical natural gas wellhead price regulation, which the Congress now ultimately seeks to remove. NGPA § 121, 15 U.S.C. 3331 (1982)

100. Id. at 387.

101. See, e.g., A. ALCHIAN & W. ALLEN, EXCHANGE AND PRODUCTION: COMPETITION, COORDINATION AND CONTROL 93-98 (2d ed. 1977); J. DARMSTADTER, CONSERVING ENERGY 81-82 (1975); R. DORFMAN, supra note 88, at 1-25; A. GILLOW, ECONOMICS 361-67 (1962); J. ORR & D. SAVAGE, ECONOMICS IN AMERICAN SOCIETY 290-92 (1970). For works of energy economists to similar effect, see J. GRIFFIN & H. STEELE, supra note 93, at 246-49, 251-53; H. MERKLEIN & W. HARDY, supra note 93, at 20-30; P. STARRATT, supra note 15, at 37-38. Professors Steele and Griffin argue that the welfare losses are differently distributed in oil markets and gas markets owing to delivery differences, and they use different graphs in the case of natural gas to show short-term gains to some consumers and losses to others. J. GRIFFIN & H. STEELE, supra note 93, at 246-49.
depressed prices. Welfare losses\textsuperscript{102} in the natural gas market are significant in amount. In 1980, the Department of Energy estimated welfare losses due to nonproduction of demanded gas in the range of $2.5 to $5 billion per year.\textsuperscript{103} Additional losses, owing to misallocation among consumers, would increase these figures.\textsuperscript{104} None of these estimates, however, can adequately reflect human costs of dislocations such as plant closings or population migration.\textsuperscript{105}

B. THE EFFECT OF RISK ON PRICES

The concern over misallocation of resources is not the only argument supporting escalation clauses. In fact, escalators increase economic efficiency in a more direct way. A producer locked into a long-term, constant-price contract runs the entire risk that the market price will rise more quickly than anticipated, in which case the constant price will be less than the market value of the producer's gas.\textsuperscript{106} The use of an escalator divides this risk between the purchaser and the producer. Since entrepreneurial risk-taking is itself a factor of production

\textsuperscript{102} Welfare losses stem from two sources: first, inefficiency caused by the failure to produce gas whose value exceeds its cost, and second, misallocation among consumers; see Ringleb, supra note 42, at 727-30 and infra notes 103-104; see also Pierce, supra note 16, at 70-72.

\textsuperscript{103} See Pierce, supra note 16 at 70-71 (citing DEPARTMENT OF ENERGY, REDUCING U.S. OIL VULNERABILITY II-B-27 (1980) and W. LOURY, AN ANALYSIS OF THE EFFICIENCY AND INFLATIONARY IMPACT OF THE DECONTROL OF NATURAL GAS PRICES 10 (1981)). Loury's estimate of welfare losses due to nonproduction of demanded natural gas is $4.15 to $4.96 billion.

\textsuperscript{104} These losses were estimated at $1 billion per year in 1980. See Pierce, supra note 16, at 72 (citing P. MERRILL, THE REGULATION AND DEREGULATION OF NATURAL GAS IN THE U.S. (1938-1985) (Energy & Environmental Policy Center, John F. Kennedy School of Government, Harvard University, Discussion Paper E-80-13, 1981)).

\textsuperscript{105} See supra notes 65-68 and accompanying text; see also P. STARRATT, supra note 15, at 7-8, 66-68; Breyer & MacAvoy, supra note 15, at 90.

\textsuperscript{106} See Superior Oil Co. v. Western Slope Gas Co., 549 F. Supp. 463 (D. Colo. 1982), aff'd, 758 F.2d 500 (10th Cir. 1985).

Without such a clause, the producer is in effect being asked to assume one hundred percent of the risk of the contract. That is a risk the producer will want to be compensated for in terms of a significantly higher contract price from the very beginning. \textit{Id.} at 471; cf. Pierce, supra note 16, at 81, 94 (arguing that indefinite escalation clauses suggest purchaser has agreed to assume risk of price increases; however, fixed escalation clauses are completely ineffective under deregulation and indicate that the producer has assumed the risk of price increases because they dramatically Understate the market price for gas).
that must be adequately compensated, a constant price contract would not merely require overall prices that would equal indexed prices in present-value dollars. To compensate for the producer's risk, the constant price would have to exceed the total cost of an indexed contract. An escalation clause thus reduces the total contract price required to induce the producer to furnish the necessary supply.

Commentators have noted empirical evidence of this phenomenon. Professor Paul MacAvoy, in a study of long-term contract pricing terms, concluded that "prices were significantly higher for . . . [longer term] contracts" but that "[c]ontracts with [escalators] had significantly lower prices than those without [them]." Another commentator points out that the parties "trade price increases [initially] for . . . certain contract clauses," and that these clauses are "as much a part of the total consideration" as the initial contract price.

Natural gas is not unique in this respect. Many commodities that are sold in long-term contracts are sold by indexed prices. Variable rate mortgages, for example, are functionally indistinguishable from natural gas price escalation clauses. Many sellers of mortgage money (lenders) will not take the risk of lending at a constant rate in a fluctuating market unless the constant rate is set unaffordably high. Floating interest

---

107. [R]isk introduces a new element of cost . . . . Because most people are reluctant to assume risks, the cost of venture capital is higher than the cost of riskfree capital.

108. See P. SAMUELSON & W. NORDHAUS, supra note 97, at 661; see also Superior Oil Co. v. Western Slope Gas Co., 549 F. Supp. 463, 471 (D. Colo. 1982) (applying concept of compensating entrepreneurial risk-takers to natural gas contract), aff'd, 758 F.2d 500 (10th Cir. 1985). Cf. Southern Louisiana Area Rate Cases, 428 F.2d 407, 424, 442 (5th Cir. 1970) (high rates of return are justified because of the high risks involved in gas exploration; because discovery of new natural gas supplies is dependent upon risk-taking entrepreneurs investing in gas production, regulation of the industry should consider the availability and sources of capital as well as the number of entrepreneurs who will be dissuaded from investing as a result of the regulations).


110. E. NEUNER, supra note 1, at 266-69.


112. Id. The differential between adjustable rate and fixed rate mortgages exceeded five percent of the rate during 1984 in many locations. This differ-
rates indexed to the prime rate have been in use in commercial transactions for many years.\textsuperscript{113} Similarly, many long-term leases of commercial office space contain escalation clauses.\textsuperscript{114} Other energy resources sold on long-term contracts, such as coal and uranium, use indexed prices.\textsuperscript{115} Recently, even contracts for the services of professional athletes over multiple years have included provisions similar to favored nations clauses.\textsuperscript{116}

Risk also enters into natural gas pricing through regulatory uncertainty. Some regulatory policies have the effect, if not the design, of frustrating legitimate contract expectations. For example, vintaging\textsuperscript{117} is designed to reduce prices for gas in which producers have already invested, on the theory that higher prices are not necessary to prompt them to produce, while newer supply requires "incentive prices." The producers of newer gas, however, are certainly aware that their production may also be vintaged; thus the frustration of old gas producers' expectations may cause new gas producers to demand a premium as compensation for the risk of vintaged prices.

One commentator states the proposition thus:

The point is a simple one: there is no way to obtain capital financing for a utility at less than the market valuation of the corresponding risk. Regulated industries not only face risks similar to those faced by other industrials; they also confront risk associated with nonresponsive pricing. Regulatory commissions traditionally respond either by paying the investor a premium for the risk or by ignoring the increased risk and letting the capital market adjust to the stock and bond prices to reflect the risk. In either event, the utility customer ultimately bears the increased capital costs . . . or faces declining service because no capital will be available for modernization.

\textsuperscript{113} See Wilcox Dev. Co. v. First Interstate Bank, 605 F. Supp. 592, 595-96 (D. Ore. 1985) (jury verdict finding antitrust violations from defendant's use of national prime bank lending rate set aside and judgment notwithstanding the verdict entered for defendant).

\textsuperscript{114} The index may be tied to various kinds of factors including indicia of market levels, such as tenants' sales.

\textsuperscript{115} Favored nations clauses are commonly used in contracts for these commodities. For an example of a typical favored nations clause, see E.I. DuPont de Nemours & Co. v. FTC, 729 F.2d 128, 134 (2d Cir. 1984) (reversing FTC ruling prohibiting use of favored nations clauses in gasoline-additive sales contracts).

\textsuperscript{116} See, e.g., Houston Chronicle, June 10, 1983, sec. 2, at 1, col. 1 (reporting that United States Football League's new Houston franchise had contracted with quarterback Jim Kelly by means of an agreement indexed to other players' future contracts).

\textsuperscript{117} See supra note 59 and accompanying text.
Investment services, such as Standard & Poors, are frank in stating that "how regulation has responded in the past, how it sees its responsibilities today, and how it is likely to respond in the future are directly related to the relative level of credit quality."  

For several reasons, the effects of regulatory uncertainty are exacerbated in the natural gas industry. Large invest-

118. Warren, Regulated Industries' Automatic Cost of Service Adjustment Clauses: Do They Increase or Decrease Cost to the Consumer?, 55 NOTRE DAME LAW. 233, 345 (1980).

119. Fendrich, Utility Rating Criteria, Financial Outlook, and Observations on Regulation, PUB. UTIL. FORT., Jan. 4, 1979, at 32 (article by Standard & Poors Vice President for Corporate Ratings). Graphically, the effect of frustrating reasonable expectations can be shown by the following chart. Line A represents the market-clearing price for natural gas. A period of market price is followed by a period of price below market (line B) owing to inaccurate interpretation, new regulatory ceilings or contract abrogation.

When the policy is lifted, price cannot be expected to go to level C, where it would have been in the absence of below-market pricing. Instead, greater-than-normal capital must be attracted to compensate for deferred investment, causing an increment to the level represented by D. But even that level will not attract capital, because investors, newly aware of the risk of nonresponsive regulation, will extract a premium for that risk. Thus, the price to attract new capital is actually higher still, at point E. See, e.g., W. NICHOLSON, INTERMEDIATE MICROECONOMICS AND ITS APPLICATION 297-300 (2d ed. 1979) (noting that price ceilings block the market's adjustment mechanism).

120. See supra note 112 (market risks make up more than five percent of fixed rate mortgages in uncertain economy). The likelihood is that greater risks in natural gas exploration as compared to mortgage lending lead to a
ments requiring lengthy lead times are particularly likely to be deterred by uncertainty.\textsuperscript{121} Furthermore, industries subject to frequently changing government regulations, such as the gas industry,\textsuperscript{122} experience enhanced uncertainty costs even if the changes are benign.\textsuperscript{123} Again, these views represent a broad consensus. For example, Professor John Kenneth Galbraith, although skeptical of neoclassical economics, wrote in 1973 that “[t]he contract” in such an industry “is central for the protection of prices” and that the inability to rely on contracts created “blackouts and brownouts” and a situation in which, at that time, “the expansion of the oil industry, though still powerful, no longer [kept] pace”\textsuperscript{124} with market needs.

Concerns about economic efficiency and protecting contract expectations are not foreign to natural gas regulation. In \textit{United Gas Pipe Line Co. v. Mobile Gas Service Corp.}\textsuperscript{125} and \textit{FPC v. Sierra Pacific Power Co.},\textsuperscript{126} the Supreme Court announced what has become known as the \textit{Mobile-Sierra} doctrine: subject to regulatory constraints, natural gas contracts are to be honored as written between the parties.\textsuperscript{127} In those cases the doctrine protected purchasers,\textsuperscript{128} but the principle may protect sellers as well.\textsuperscript{129} The supply and demand, allocation of risk, greater market risk component. “The evidence seems to show that equity capital does demand a somewhat higher rate of return where risks are higher—where firms’ fortunes vary wildly, or where profits fluctuate a lot from year to year.” R. CAVES, \textit{AMERICAN INDUSTRY: STRUCTURE, CONDUCT AND PERFORMANCE} 69 (5th ed. 1982).

\textsuperscript{121}. See P. STARRATT, \textit{supra} note 15, at 30.

\textsuperscript{122}. See \textit{supra} notes 42-82 and accompanying text.


\textsuperscript{124}. J.K. GALBRAITH, \textit{ECONOMICS AND THE PUBLIC PURPOSE} 128 (1973). In an industry with short-term capital requirements, uncertainty is not a deterrent to investment, because “if prices become unfavorable, the entrepreneur can turn promptly . . . to the production of something else.” \textit{Id.} at 112. But, in the oil and gas industry, “heavy costs are incurred before there is a saleable product.” \textit{Id.} at 113. These characteristics require better control over prices, costs, and consumer and government demand than would be necessary in other industries. \textit{Id.} at 112-13.

\textsuperscript{125}. 350 U.S. 332 (1956).

\textsuperscript{126}. 350 U.S. 348 (1956).

\textsuperscript{127}. \textit{Mobile}, 350 U.S. at 344; \textit{Sierra}, 350 U.S. at 352-53.

\textsuperscript{128}. The cases hold that escalation to regulatory ceilings does not occur absent contractual authority. \textit{See Mobile}, 350 U.S. at 344; \textit{Sierra}, 350 U.S. at 352-53.

\textsuperscript{129}. \textit{See} Opinion 77, 10 F.E.R.C. ¶ 61,214 (1980) (prices are presumed to escalate to NGPA ceilings under area rate clauses because that interpretation best reflects parties’ probable intent); \textit{see, e.g.}, 18 C.F.R. § 270.205(b)(1) (1981),
and regulatory uncertainty analyses suggest that the policy of enforcing contracts is economically efficient. Its efficiency depends, however, upon an accurate determination of the intent of the contracting parties. Furthermore, the analyses indicate that doctrines abrogating contracts, such as public policy or unconscionability, may harm the very interests they were designed to protect unless they are appropriately limited.

C. ECONOMIC EFFICIENCY, ENERGY POLICY, AND POLITICAL FREEDOM

This analysis leads to the conclusion that natural gas contracts indexed to the market result in increased economic efficiency. An efficient economy exhibits several advantages. These advantages include the distribution of goods in a manner that maximizes consumer satisfaction, the allocation of factors of production to produce the mix of goods and services desired by consumers, and the employment of resources in a way that tends to maximize society's output. Other advantages include innovation that proceeds at a rate chosen by consumers and a rate of consumption, as versus saving and investment, conforming to consumer preferences over time.

Efficient markets are the result of millions of individual, autonomous transactions. Regulatory failures, conversely, ripple through the economy and have unintended effects on apparently unrelated transactions. Such failures reduce economic efficiency, often in unforeseen ways. The natural gas market is no exception to this ripple-effect phenomenon.

For example, during the past decade, the federal government repeatedly warned that the United States must reduce de-
dependence upon natural gas. Congress went so far as to outlaw a wide spectrum of natural gas uses by statute. Natural gas price ceilings set below market prices, however, had the unintentional effect of removing economic incentives for, and thus postponing, appropriate shifts to alternate fuels. Below-market pricing also discouraged the development of alternate sources of energy by depressing prices for them as well. Samuelson explains this effect as follows:

No market is an island unto itself. When the price of beef rises (because of, say, hoof and mouth disease abroad), it pulls up the prices of domestic cowpokes and land needed for expanded domestic beef output. It raises the prices of rival goods like lamb, pork, and chicken that some demanders will now turn to. It might even lower the wage at McDonald's.

Thus, the energy policies of the 1970's depressed demand for coal, uranium, solar energy equipment, discouraged potential suppliers or developers of these alternative fuels, and reduced the development of conservation methods.

Ultimately, such economic inefficiencies impinge upon political freedom because they require that consumer choices be governed by an additional regulatory apparatus. The United States, in fact, set up such a system in the 1970's in the form of regulation of home appliances, temperature controls for buildings, prohibition of certain uses of gas, and similar measures. The regulatory apparatus was gargantuan in scope: 2,800,000 buildings were subjected to federal temperature controls, and proposed home appliance regulations were over 3,000 pages long and cost $8.5 million to write.

Such systems require large specialized bureaucracies, allocate resources inefficiently because creation of a sufficient

138. P. SAMUELSON & W. NORDHAUS, supra note 97, at 70.
139. J. GRIFFIN & H. STEELE, supra note 93, at 252-54.
140. See J. RAWLS, A THEORY OF JUSTICE 272 (1971). "A . . . significant advantage of a market system is that . . . it is consistent with equal liberties and fair equality of opportunity. . . . There is no reason at all for the forced and central direction of labor." Id.
number of exceptions is a practical impossibility,\textsuperscript{142} and interfere with the freedom of producers and consumers to structure transactions as they choose.\textsuperscript{143} For example, the Federal Powerplant and Industrial Fuel Use Act of 1978\textsuperscript{144} addresses the effects of price suppression through direct prohibitions upon the burning of gas for certain purposes. Recent efforts to repeal the Act have been supported in Congress by worst-case estimates that, by the year 2000, the Act will have cost $44 billion in unnecessary capital investment or will have resulted in the loss of 1.5 million jobs.\textsuperscript{145}

In the absence of market allocation, the only solution, and a highly unsatisfactory one, may be an additional layer of regulations, such as the Federal Powerplant and Industrial Fuel Use Act, designed to mitigate the disadvantages of existing regulation. In the process of enacting such compensating regulations, as one ethical philosopher has put it, "it is hard to see how... certain aspects of a command society inconsistent with liberty can be avoided."\textsuperscript{146}

III. THE ECONOMIC ARGUMENTS AGAINST ESCALATION CLAUSES

Opponents of price escalation clauses employ economic theory and other qualifications and objections to argue that escalation clauses should not be enforced, and these arguments are the subject of this section of the Article. Economically-based arguments concerning alleged failures of competition; economic rents or "windfall" profits; preference for historical cost of production rather than market price as the measure of appropriate rates; price inelasticity; pipelines' lack of incentive to be economically efficient; inappropriateness of methods used for indexing; lack of purchaser incentives toward efficiency; and failure of the market to achieve distributive justice have all been advanced as reasons for avoiding escalation. This portion

\begin{itemize}
\item \textsuperscript{142} For instance, temperature controls ironically resulted in the waste of fuel in some buildings. Houston Chronicle, Feb. 18, 1981, § 1, at 12, col. 1; See also infra note 145 and accompanying text.
\item \textsuperscript{143} For example, building controls would interfere with the freedom of an individual willing to trade other articles of consumption for the temperature of his preference. The controls would prevent him from arranging to pay an increment in rent to his willing landlord commensurate with the cost of the temperature adjustments.
\item \textsuperscript{144} 42 U.S.C. §§ 8301-8484 (1982).
\item \textsuperscript{145} See FOSTER NAT. GAS REP. NO. 1515, May 2, 1985, at 1.
\item \textsuperscript{146} J. RAWLS, supra note 140, at 272.
\end{itemize}
of the Article suggests that these arguments do not support the abolition of escalation clauses although they may, and in some instances should, affect their interpretation.

A. COMPETITION, COLLUSION, AND MONOPOLY PRICES

The NGA was based upon an FTC report concerning abuses of natural monopoly in the gas industry. The report dealt with pipelines, which were indeed natural monopolies at that time, but in Phillips Petroleum Co. v. Wisconsin the Supreme Court interpreted the Act to cover producers as well. In the resultant confusion, the monopoly argument has been extended to producers as well as to pipelines. This argument cannot be justified because barriers to entry in the production of natural gas are relatively low, drilling ventures are formed by groups of comparatively small firms, there is a fringe of marginal operators, and the field price market is competitive.

The view that natural gas production is a competitive industry is generally shared "by economists specializing in energy markets, such as Professors Adelman, Hawkins, MacAvoy, and Russell," as well as others. Melvin Laird writes that:

First, with regard to market concentration of the producers, natural gas supply is one of the least concentrated natural resources industries in the country. The largest ten firms account for less than 40 percent of the market, and small independent wildcatters abound. Even writers supporting regulation concede that "energy supply industries are not overly concentrated." Sometimes, monopoly arguments are based on the premise that even though natural gas extraction is not a concentrated industry, it nevertheless functions as one, because producers

---

147. See supra note 43 and accompanying text.
148. FTC REPORT, supra note 43, at 28. Even in the pipeline industry, one may be skeptical today of regulation based upon monopoly concerns, because the industry has changed dramatically. See Pierce, supra note 79, at 346.
149. 347 U.S. 672 (1954).
150. Id. at 677; see supra notes 49-50 and accompanying text.
151. Phillips was based in part upon the economically unsound proposition that regulating independent producers was essentially no different from regulating pipelines. Phillips, 347 U.S. at 681-84.
152. For an excellent analysis of the monopoly argument, including a detailed refutation based upon structure, conduct, and performance data, see J. Griffin & H. Steele, supra note 93, at 253-70.
operate as a cartel.\textsuperscript{156} As support for the cartel argument, proponents refer to the size of some energy producers, make allegations of collusion among producers, and point out that producers have refrained from production until prices rose.\textsuperscript{157} Closer examination, however, reveals that the cartel argument is unsound. As mentioned previously, the ten largest natural gas producers account for less than forty percent of the market, and independent wildcatters abound.\textsuperscript{158} Given the unconcentrated structure of the natural gas industry,\textsuperscript{159} cartel maintenance would be extraordinarily difficult,\textsuperscript{160} and the cartel theory is refuted by the responsiveness of producers to changes in the market. Finally, the argument that nonproduction because of inadequate price is somehow improper, or indicative of monopoly, is baffling. Nonproduction is precisely the behavior that would be expected in a competitive industry in which the government regulates prices below market.\textsuperscript{161} In the absence of actual evidence of collusion in a given market, the monopoly and cartel arguments cannot support the refusal to enforce price escalation clauses.

B. ECONOMIC RENTS

Rent, to an economist, is the premium paid to the holder of a factor of production owing to its limited supply.\textsuperscript{162} A landowner who unexpectedly discovers that her property is more valuable than she believed, because of the presence of recoverable oil and gas, is paid economic rent.\textsuperscript{163} Payments of rent do

\begin{footnotesize}
\textsuperscript{156} See J. Griffin & H. Steele, supra note 93, at 253-70.
\textsuperscript{157} Id.
\textsuperscript{158} See supra note 154 and accompanying text.
\textsuperscript{159} Thus, many economists believe that, even in a concentrated industry, the presence of only a few independent competitors can mean vigorous competition. E.g., R. Bork, The Antitrust Paradox 103-04 (1978); Oppenheim, The Sherman Act and Internal Company Growth, in Nat'l Industrial Conference Bd., Conference on Antitrust in an Expanding Economy 11 (1962); see also Ethyl Corp., 101 F.T.C. 425, 671-73 (1983) (dissenting op. of Chairman Miller), rev'd and dissenting op. followed, E.I. DuPont de Nemours & Co. v. FTC, 729 F.2d 128 (2d Cir. 1984).
\textsuperscript{161} See supra note 152.
\textsuperscript{162} See supra notes 90-105 and accompanying text.
\textsuperscript{163} See P. Samuelson & W. Nordhaus, supra note 97, at 603, 914.
\textsuperscript{164} This statement is true only if the holder of the interest in question has not herself paid for the interest as a factor of production at market price, i.e., in accordance with its marginal productivity. If she has so paid, then the rent
\end{footnotesize}
not increase economic efficiency in production, and, therefore, economic theory supports taxing them away. Proponents of regulation or taxation of oil and gas translate these ideas into the rhetoric of "windfall profit." Economic rent or windfall profit arguments are not a sound basis for refusing to enforce escalation clauses, however. Prohibiting the collection of rent, as opposed to taxing it, sends a distorted signal to the consumer, who perceives the commodity to be in oversupply. Refusal to allow the collection of economic rents would thus encourage inefficient consumption of a limited resource. Furthermore, the concept of rent does not support intervention to limit payments received by producers because producers may not be the parties receiving rent. In a country that protects private ownership of oil and gas, producers must pay market value for the right to explore for and produce natural gas. Such intervention would therefore artificially reduce producer incentives, and this effect would

in question has actually been received by her predecessor in title (or by that person's predecessor in title). It may be difficult to determine who has received economic rent, and thus it may be difficult to devise an efficient and equitable means for taxing it. See P. SAMUELSON & W. NORDHAUS, supra note 97, at 606.

164. Id. There are difficulties in practice with this theory, however. See infra notes 170-172 and accompanying text.


This concept underlies both vintaging rules and efforts to imply vintaging in contracts. Id. It also underlies some efforts to use the doctrines of public policy or unconscionability to abrogate natural gas contracts. See Kerr-McGee Corp. v. Northern Util., Inc., 500 F. Supp. 624, 634 (D. Wyo. 1980) (denying enforcement of third party favored nations clause because of alleged "windfall profit"), rev'd, 673 F.2d 323 (10th Cir.), cert. denied, 459 U.S. 989 (1982).

166. Rents do serve the useful function of rationing demand. P. SAMUELSON & W. NORDHAUS, supra note 97, at 607-08. Their disadvantage is that they do not enhance marginal productivity.

167. Some nations' law provides for common, public ownership of oil and gas. For example, the Constitution of Mexico provides that "direct [dominion] of all of the natural resources . . . belongs to the Nation." MEX. CONST. of 1917, art. 27.

168. See Pannill, supra note 42, at 56 (existence of an efficient and secure economy with a price system that can balance supply and demand serves the national interest more than an abstract concern over windfall profits); see also supra note 163.

169. If applied to production from leases that producers might prospectively acquire, a tax would approach more closely in theory the result of removing rents, because it would lower the marginal productivity of mineral interests and thus lower their market prices (i.e., the tax would be "passed on" in part to landowners in the form of reduced lease payments). Such a plan
PRICE ESCALATION CLAUSES

in turn distort the allocative function of the market. Even if applied to landowners, this policy would result in regressive taxation\(^{170}\) and inequities,\(^{171}\) and it would fail to achieve the purpose of eliminating rent unless the landowner subject to tax had acquired the oil and gas beneath his land for less than its market value.\(^{172}\) In any event, a refusal to enforce escalation clauses as a means of preventing the receipt of economic rent or windfall profit by producers is economically unsound.

C. PREFERENCE FOR HISTORICAL COST OF PRODUCTION RATHER THAN MARKET AS THE BASIS FOR PRICE

Opponents of escalation clauses often argue that escalation clauses should not be enforced because historical cost of production, rather than market value, is the proper determinant of natural gas prices.\(^{173}\) If the argument is limited to the proposition that contract prices are required to remain below regulatory price ceilings, which are set in part on the basis of cost elements, it is obviously legally correct. Contract provisions, including escalation clauses, cannot be enforced in contravention of valid regulatory provisions.

The argument is sometimes made, however, that even if the contract price would otherwise remain below the applicable ceiling, the contract should be interpreted to cause prices to conform to historical costs of production.\(^{174}\) This argument is untenable. The concept of just and reasonable rates expressed in the NGA and NGPA is not limited to cost basis. It may be, and frequently has been, interpreted to include non-cost ele-

\(^{170}\) Its incidence upon those least able to pay would likely be greater as a percentage of income than its incidence upon those most able to pay. P. SAmuelson & W. Nordhaus, \textit{supra} note 97, at 606.

\(^{171}\) The Crude Oil Windfall Profit Tax, for example, has created certain inequities by frustrating reliance interests. \textit{See Windfall Profit Tax Rips into Retirees' Income, Texas Business}, Oct. 1980, at 8. It has also been the subject of serious interpretive inconsistencies. \textit{See General Accounting Office, Report to the Secretary of the Treasury: Uncertainties about the Definition and Scope of the Property Concept May Reduce Windfall Profit Tax Revenues} 2, 14 (1982).

\(^{172}\) \textit{See supra} note 163.

\(^{173}\) \textit{E.g.}, Superior Oil Co. v. Western Slope Gas Co., 604 F.2d 1281, 1288-89 (10th Cir. 1979) (rejecting implied vintaging). The notion of vintaging itself makes historical cost one of the elements of regulation. \textit{See supra} note 59.

\(^{174}\) Superior Oil Co. v. Western Slope Gas Co., 604 F.2d 1281, 1283-85 (10th Cir. 1979).
ments associated with bringing gas to market.\textsuperscript{175} Furthermore, the NGPA recognizes that, as a general national policy, contracts should be enforced as written if they conform to regulatory price ceilings.\textsuperscript{176}

A more subtle argument is based on the conclusion that, in a competitive market at static equilibrium, price theoretically equals marginal cost, including reasonable profit as a cost. This equation is a fundamental principle of economics.\textsuperscript{177} Opponents of escalation clauses use this principle to argue that a contract term providing for prices greater than historic costs of production is inefficient and contravenes public policy.

This argument fails to consider, however, that marginal cost\textsuperscript{178} equals price only if the market is at ideal efficiency, in a

\textsuperscript{175} This idea was first expressed in the so-called \textit{Bluefield-Hope} "end result" test: a regulatory body must consider prices not in the abstract but in terms of their end result in bringing gas to market. Bluefield Water Works & Improvement Co. v. Public Serv. Comm'n, 262 U.S. 679, 692-93 (1924); FPC v. Hope Natural Gas Co., 320 U.S. 591, 601-02 (1944). "Far-sighted gas rate regulation . . . will use price as a tool to bring goods to market—to obtain for the public service the needed amount of gas." Colorado Interstate Gas Co. v. FPC, 324 U.S. 581, 612 (1945) (Jackson, J., concurring).

In the modern era, the Permian Basin Area Rate Cases, 390 U.S. 747, 756-57 (1968), recognized the need for non-cost analysis because "[t]he value to the public of the services they perform is measured by the . . . natural gas they produce, and not by the resources they have expended in its search." \textit{Id.} at 757. Similarly, the Fifth Circuit explicitly upheld the use of non-cost factors while criticizing the FPC for failing adequately to take market as well as cost into account in the Southern Louisiana Area Rate Cases, 428 F.2d 407, 426, (5th Cir.), \textit{cert. denied}, 400 U.S. 950 (1970). Finally, in its Opinion 770, 56 F.P.C. 509, 516 (1976), which set the second round of national rates, the FPC expressly held that, although costs should be a principal component, noncost factors such as "the price of competitive fuels, the impact upon supply and demand, inflationary pressures, the nation's natural gas shortage, and conservation . . ." were also to be considered. \textit{Id.} at 516. The Commission in Opinion 770 relied not upon historical cost, but on current costs. Manning, \textit{supra} note 42, at 1092.

The Supreme Court did hold, in response to FPC special programs to alleviate shortages, that a market rate resulting from the equivalent of deregulation cannot be the final measure of [what is] "just and reasonable" within the meaning of the NGA. The Court, however, did not prohibit use of market considerations in ratemaking. FPC v. Texaco, Inc., 417 U.S. 380, 397 (1974); cf. Consumer Federation v. FPC, 515 F.2d 347, 350 (D.C. Cir.) (setting aside FPC exemptions of certain pipelines from NGA certification requirements because the FPC "stretched" its "narrow" exemption authority and "failed to establish a valid scheme of indirect regulation."), \textit{cert. denied}, 423 U.S. 906 (1975).

\textsuperscript{176} See \textit{supra} notes 125-127 and accompanying text.

\textsuperscript{177} See R. DORFMAN, \textit{supra} note 88, at 38; P. SAMUELSON \& W. NORDHAUS, \textit{supra} note 97, at 478-79.

\textsuperscript{178} Marginal cost is defined loosely as the cost of producing the last unit
static condition of perfect equilibrium. The natural gas industry has frequently been subjected to regulatory changes, demand shifts, and interfuel substitutions, and can hardly be expected to have reached stasis. A dynamic market, such as that in natural gas, will naturally experience transactions in which both profit and price are above normal levels. This result is necessary if price is to perform the signalling function of bringing resources into industries in which demand exceeds supply.

Furthermore, absent the prospect of return above or below normal levels, efficient and inefficient firms would fare equally well, and there would be no incentive for any firm to attempt to be efficient. The appropriate question, therefore, is whether the oil and gas extraction industry has earned abnormally high profits over the long run. The available empirical evidence suggests that oil and gas profits have been close to the average for all manufacturing industries.

An additional difficulty with basing price on the historical cost of production is that historical costs cannot be reliably determined in the gas industry and have often been underestimated. In the past, federal regulatory programs attempted to tie the price of gas to its historical cost of production. This approach was used in the system of individual producer costs in the 1950's, and in the systems of area and national batch rates in the 1960's and 1970's. None of these methods proved effective. Their failure was partly attributed to regulatory lag and to the inherent fallacy of using historical, as opposed to current and future, costs. Therefore, the FPC used updated costs in the second round of national rates. The essential reason for the failure, however, may be that, in the long run, price does

produced. R. DORFMAN, supra note 88, at 50. Mathematically, it is the slope of the total cost curve plotted against unit cost, or MC(x) = dTC(x)/dx. Id. at 50.

179. Id. at 49; cf. P. SAMUELSON & W. NORDHAUS, supra note 97, at 485-86 (discussing the allocative efficiency of a perfectly competitive market).

180. See supra notes 90-105 and accompanying text.

181. This concern demonstrates one of the fallacies underlying individual producer regulation on the basis of cost. See R. POSNER, ECONOMIC ANALYSIS OF LAW 259-60 (2d ed. 1977).

182. S. REP. NO. 394, 96th Cong., 2d Sess. 147-48, reprinted in 1980 U.S. CODE CONG. & AD. NEWS 551 (chart from Chase Manhattan Bank, showing oil and gas producers' return on equity to be similar to the average return on equity of all manufacturing industries and significantly below other industries, for example, pharmaceuticals; reproduced in statement of Sen. Gravel on Windfall Profit Tax).

183. See supra notes 42-82 and accompanying text.


185. See supra note 175 and authorities cited therein.
approximate marginal cost in the gas industry, but our economic technology does not enable us to measure costs accurately enough to make this determination. In summary, it is inappropriate to argue that as a matter of public policy escalation clauses should not be enforced because they fail to conform to the historical costs of natural gas production.

D. PRICE ELASTICITY

Opponents of escalation clauses sometimes argue or assume that because energy is a basic necessity, energy demand is inelastic and does not respond to price. This argument is based upon faulty assumptions regarding price inelasticity and consumer dependence. The evidence shows that both industrial and residential energy demands are responsive to changes in price. For example, one commentator's empirically derived demand curve for residential energy consumption shows a decrease in demand of eighty percent in response to a doubling of price. Furthermore, a 1980 American Gas Association study of residential, commercial, and industrial energy consumption over the previous seven years found significant price-induced conservation in all three categories.

One commentator has identified three responses to a scenario of rising energy costs: behavior modification, modification of existing energy-consuming equipment, and modification of

186. This conclusion would follow from the competitive structure of the industry and the absence of abnormal profit. See supra notes 147-161 and accompanying text; see also supra note 182.

187. See, e.g., infra note 188.

188. Thus in Kerr-McGee Corp. v. Northern Util., Inc., 500 F. Supp. 624, 634 (D. Wyo. 1980), rev'd, 673 F.2d 323 (10th Cir.), cert. denied, 459 U.S. 989 (1982), the district court computed the impact of an escalation clause by multiplying hypothetical existing consumer prices by the rate of increase in the pipeline's purchase contract and found such prices to be at levels so high that they were against public policy. Kerr-McGee, 500 F. Supp. at 634. The amicus curiae brief filed by the Legal Foundation of America indicated that the evidence and standard reference works of which the court could take judicial notice showed only modest price increases. See Brief of Amicus Curiae, The Legal Foundation of America, at 19-21, Kerr-McGee. The reason for the error was that the district court tacitly assumed price inelasticity and thus failed to take account of the conservation response of consumers. Id. at 27-30.

189. R. DORFMAN, supra note 88, at 85-86.

190. AMERICAN GAS ASS'N, A SURVEY OF ACTUAL AND PROJECTED CONSERVATION IN THE GAS UTILITY INDUSTRY: 1973-1980 (1981), summarized in The Oil Daily, Mar. 25, 1981, at 5, col. 2. The projected decline in natural gas use from 1973 to 1980 was 16.2% in residential use, 12.7% in commercial, and 10.8% in industrial. Id.
the energy intensiveness of new capital equipment. The first of these responses, behavior modification, produces significant savings "by turning the dial of a thermostat." Further savings result from "using the energy-consuming equipment less," such as by turning the heat off when the building is unoccupied or by using different amounts of heat in different areas of the building. The second response, the modification of existing equipment, can lead to further energy savings. An investigation of a typical furnace shows that "between stack and duct loss, there is a tremendous amount of energy lost simply because of non-energy conserving design or poor insulation." Thus, "the energy intensiveness of a typical house can be decreased by about .6 or .7 for a relatively small incremental cost." Even greater energy efficiency gains can be obtained by implementing the third strategy and designing new houses to be energy efficient. Similarly, many consumer goods can be redesigned to use less energy, as can many industrial processes.

When natural gas prices fail to conform to the market, however, they send a false signal to energy users about the availability of the resource. The market then fails to trigger the appropriate consumer response of conservation. If the cheaply obtainable supply of a commodity is limited, that commodity must somehow be allocated. At the very least, policies should not be adopted that cause the commodity to be inefficiently consumed. The price inelasticity argument is inconsistent with the evidence that indicates that price increases trigger conservation measures and, in the absence of other politically acceptable methods of allocation, it is an unsound reason for refusing to enforce price escalation clauses.

192. Id. at 10-11 (chart showing energy savings as a function of thermostat settings).
193. Id. at 11. Up to 55% of the heating value of fuel is unnecessarily wasted in stack, duct, and related losses.
194. Id. at 15.
195. Id. at 17.
196. Id. at 16-17.
197. The pricing mechanism for a commodity produced with long-term declining returns to scale, such as natural gas, cannot fulfill its market function unless price increases in the long run. See infra notes 209-210 and accompanying text.
E. Pipelines' Incentive to Maximize Profit

Another argument advanced in opposition to escalation clauses is based on the natural gas distribution chain, in which pipelines purchase from producers for resale to distributors, who in turn sell gas to ultimate consumers. Pipeline tariffs allow pipelines to recover their costs of purchasing natural gas through purchased gas adjustment (PGA) clauses. This recovery is allowed by the NGA in the absence of fraud or abuse. Opponents of escalation clauses argue that, since a pipeline that receives a return that assertedly does not vary with purchasing efficiency, the basic economic assumption that profit maximization induces efficiency breaks down. Therefore, with respect to pipeline purchases, reliance on market forces or upon escalators that respond to the market is unjustified—or so the argument goes. As evidence that pipelines lack incentive to purchase efficiently, opponents point to instances in which pipelines have agreed to contract adjustments increasing prices they pay to producers.

The market assumption, however, is that firms maximize profit in the long run. It is efficient behavior for a natural gas pipeline to insure long-term supply, and in some circumstances long-term supply may be enhanced by concessions to producers. In fact, producers just as frequently make reciprocal concessions to pipelines for reasons of long-term gain, even though producers cannot pass along their costs. Further-

199. 15 U.S.C. § 3431(c)(2) (1982); Pierce, supra note 16, at 84. The effect has been criticized as "generally permitting pipelines to operate in what is essentially a cost-plus environment." Natural Gas Regulation, supra note 2, at 629-30.
201. See supra note 10 and accompanying text.
202. The [AGA] study demonstrates that pipelines agree to contractual modifications not obviously in their immediate interest. A number of contracts were amended in the period following the relaxation of producer price ceilings to insert indefinite price-escalation clauses. Pierce, supra note 16, at 82. For example, fully 43% of contracts without area rate clauses were amended to include them. Id. The reason for this amendment may be enhanced recovery or bargains struck for new supply from other wells, or it may be deficiencies in rate design. See infra notes 204-206 and accompanying text. It should be noted that producers also make accommodations to pipelines that are not in the producers' short-term interests but that are advantageous to them in the long term. Thus, the sinister explanation that pipelines behave in an inappropriate and purely self-interested manner may
more, even with the benefit of purchased gas adjustments, pipelines must function with at least minimal efficiency in order to maximize profit. If they consistently pay too much for the gas they purchase from producers, they will face deteriorating markets in the long run. The evidence that some pipelines have already experienced market resistance, and have in some cases purchased gas that they have been unable to market, is a manifestation of the differences in efficiency among firms.

The total picture, however, is more complex than the above discussion indicates. Some commentators argue that the regulatory system, or the expectation of regulatory bailout in the event of catastrophe, either leads to inefficient behavior on the part of pipelines or at least tempers their response to the consequences of inefficient behavior. Commentators differ concerning whether the solution to this problem is marginal cost pricing, more intense regulation, more selective regulation, deregulation, or abolition of pipelines as purchasers in favor of making them common carriers on a contract basis. The key

---

203. See W. Nicholson, supra note 119, at 479-81. See supra note 82 and accompanying text.

204. Thus, the use of a rate design that allows "rolled in" pricing, or pricing based upon the weighted average cost of gas (WACOG), encourages pipelines with substantial access to cheaper gas (referred to as a "cushion" of old or cheap gas) to purchase high-cost gas that they could not sell directly at a price covering their costs. See Pierce, supra note 8, at 363; see also Pierce, Natural Gas Rate Design: A Neglected Issue, 31 Vand. L. Rev. 1089, 1096-98 (1978).

205. Marginal cost pricing refers to the attribution to each purchase of the marginal cost associated with it. Thus an electric utility using "time of day" pricing may charge higher rates at peak usage periods, when generation costs more. The NGPA provisions for incremental pricing, NGPA §§ 201-08, 15 U.S.C. §§ 3341-48 (1982), were intended to function as a variant of marginal cost pricing by attributing to lower priority users the highest cost units. These users, however, tended to be those that could most readily turn to substitutes such as fuel oil, and the result was loss of load factor and the attribution of fixed costs in heavier proportion to high-priority residential consumers. Accordingly, many of FERC's early efforts to implement incremental pricing were disapproved by congressional veto because of gas oversupply and a determination that incremental pricing would not achieve policy goals. Morgan & Patterson, supra note 42, at 131-33.

206. Professor Richard Pierce argues persuasively for pipeline deregulation, noting the growth of the pipeline industry from four to 113 interstate firms. Service from multiple firms at most locations is generally readily available; selective regulation of the remaining producers with monopoly positions could supplement the deregulatory regime. Pierce, supra note 8, at 346, 376-85.
point, however, is that none of these problems of pipeline rate
design could be solved by refusing to enforce escalation clauses.
Even if pipeline rate design were improved, there would still be
a need for a mechanism to relate prices to increases in market
value in order to induce producers to commit supplies over the
long term. Thus these arguments cannot provide a principled
basis for refusal to enforce escalators.

F. ACCURACY OF THE INDEX: THE "TWO-WAY STREET"
ARGUMENT, EFFECTS OF REGULATION, LACK OF
PURCHASER INCENTIVES TOWARD EFFICIENCY,
AND OTHER CRITICISMS

Some criticisms of escalation clauses are based on the as-
sumption that they fail to provide a "two-way street." It is al-
leged that escalation clauses cause prices to rise continuously
and never cause them to decrease. The short answer to this
argument is that it is incorrect, because some escalation clauses
contain an express provision calling for decreased contract
prices if there is a decrease in the index. Furthermore, since
the purpose of escalation clauses is to allow contract prices to
follow the market, ambiguous clauses should be interpreted to
allow for decrease with the index.

A more complete explanation, however, is that over the
long term, natural gas prices will inevitably increase—not be-
cause of escalation clauses as such, but because natural gas is a
depletable resource. Natural gas production is an industry
characterized by decreasing returns to scale. Rather than the
economies of scale that result from increased firm size in most

207. See, e.g., Superior Oil Co. v. Western Slope Gas Co., 758 F.2d 500, 502-
03 (10th Cir. 1985), (Doyle, J., dissenting) (arguing that escalator should be in-
validated as contravening public policy because "rates will be increased regu-
larly at the behest of utilities. It is very probable that there will never be a
reduction of rates . . . ").

208. Thus the criticism expressed by the dissenting judge in Superior Oil
was invalid to the extent it was based upon this argument, because the clause
there at issue provided for decrease with the index. Superior Oil, 758 F.2d at
501.

209. See, e.g., R. DORFMAN, supra note 88, at 68-72. The more common situa-
tion of increasing economies of scale produces a long-term cost curve that
gradually decreases. Id. at 64-68. The long-term cost curve of a firm facing
decreasing returns to scale instead resembles an exponential function in its in-
crease. Id. at 70 (chart). This increasing cost, which in the gas industry
reflects the sequential exhaustion of cheaply developed reserves and the nec-
essary development of increasingly expensive new ones, must be reflected in
the price if new reserves are indeed to be developed. Actually, even in the ab-
sence of increasing cost, prices must rise owing to the phenomenon of "user
industries, production of greater and greater volumes of natural gas causes the next unit to cost more rather than less. Lower-cost units are produced first, and the price necessary to induce production of further supply and balance demand is unavoidably higher for later units. Of course, temporary price decreases may result from discovery of new fields, technological advances, interfuel substitutions, or market dislocations due to excess supply, and these aberrations might produce a sawtoothed appearance in a graph of market prices for natural gas. Such short-term swings, however, cannot prevent long-term increases as cheaply available reservoirs are exhausted.

Furthermore, the long-term trend of increasing prices cannot be counteracted by diligent government efforts to hold prices down. It is impossible to produce natural gas without committing adequate resources to the effort, and adequate resources will not be committed unless producers receive an adequate price in return. Thus, economic efficiency is maximized by natural gas prices that follow the long-term increasing trend. The economic effects of depletion can no more be avoided by removing escalation clauses than bad news can be prevented by killing the messenger. Indeed, any effort to depress prices artificially may only make bad news worse by creating unnecessary shortages, as happened during the severe winters of the 1970's.

The complete answer is not so simple, because dysfunctional aspects of the regulatory system sometimes cause inappropriate results. For example, the presence of price controls on regulated gas may temporarily drive unregulated gas to prices far in excess of market levels, triggering favored nations clauses that were designed to approximate market levels in-

costs," which reflect the scarcity value of the resource in each period (and which naturally increase). J. Griffin & H. Steele, supra note 93, at 67-73.

210. This effect can be avoided only if substitutions, technological change producing infinite supply, or social change render the commodity valueless. Otherwise, the effect can be influenced by such factors as changes in the social rate of discount, revisions in future demand, altered production costs, and technological change, but prices of a depletable resource must eventually rise. See J. Griffin & H. Steele, supra note 93, at 73-87. Indeed, substitutions or technological change that would reduce or eliminate long-term price increases are unlikely until and unless price increases make substitution or innovation economically attractive.

211. If the price for gas from an older, declining well were not to rise with the market, for example, the producer would be prevented from using enhanced recovery to increase production, even though that alternative might be cheaper than new exploration.

212. See supra notes 13-15 & 65-68 and accompanying text.
stead. Unless the contract compels the conclusion that the parties intended this result, the favored nations clause should be construed to conform to its purpose of approximating the market price. Conversely, if the government completely deregulates natural gas, the result might be to defeat the intended function of escalators tied to government-imposed price ceilings, such as area rate clauses. At least one commentator has suggested that, in such a situation, area rate clauses should be interpreted in accordance with applicable Uniform Commercial Code provisions that would achieve the parties’ intended result by substituting market-clearing prices for regulated price ceilings. This reasoning is sound, both legally and economically.

Another problem with escalation clauses arises when they are combined with take-or-pay clauses. Take-or-pay clauses require pipelines to purchase certain volumes of gas per unit of time or pay for the gas even if they do not take delivery of it. In the mid-to-late 1970’s, many pipelines entered into contracts containing both escalation clauses and large, fixed take-or-pay obligations. If a high proportion of a pipeline’s supply is subject to take-or-pay, however, and if there is rapid price escal-

213. See supra note 74 and accompanying text.
214. This construction could be reached with reasoning similar to that reflected infra note 216 and accompanying text if it were concluded that the price contemplated by the index had thus failed to be set (although that inference is somewhat more difficult to make in this situation).
216. U.C.C. § 2-305(1)(c) (1977) provides that, if “the price is to be fixed in terms of some agreed market or other standard as set or recorded by a third person or agency and it is not so set or recorded”, the price is “a reasonable price at the time of delivery.” Such a price has often been held to be the market price for the commodity although it may be some other price above or below market depending upon the presence of evidence of intent. Pierce, supra note 16, at 94-96; see North Cent. Airlines, Inc. v. Continental Oil Co., 574 F.2d 582, 593 (D.C. Cir. 1978).
217. Pierce, supra note 16, at 78-79; see Natural Gas Regulation, supra note 2, at 626 (defining take-or-pay clauses as requiring the purchaser to pay for a minimum percentage of the quantity of gas which the seller’s wells can physically produce, regardless of whether the purchaser actually buys the gas). Additional issues are created by the interplay between take-or-pay and so-called “ratable take” rules which require purchasers to take proportionally from all producers in a field to prevent unfair drainage. Ratable take effectively extends the purchaser’s take or pay obligations to other producers. See Transcontinental Gas Pipe Line Co. v. State Oil & Gas Bd., 457 So. 2d 1298, 1324 (Miss. 1984), cert. granted, 105 S. Ct. 1840 (1985).
tion, serious problems can result.\textsuperscript{219} Attempts to fix supply, demand and price by contract for a large number of customers far into the future will likely have deleterious consequences\textsuperscript{220} because the pipeline is contractually obligated to purchase large volumes of gas at high prices even though consumer demand will be simultaneously decreasing in response to price increases. Thus, at the same time that an escalation clause may motivate ultimate consumers to conserve and use lesser amounts of gas, a take-or-pay clause may countermand that response.

These problems, however, are created by rigid take-or-pay clauses, and not by escalation clauses as such.\textsuperscript{221} The problem is a knotty one, because producers may be dependent upon the cash flow provided by take-or-pay, and frustration of their reliance interests would create long-term costs;\textsuperscript{222} thus, legislation

\begin{itemize}
\item \textsuperscript{219} Hays & Williamson, \textit{supra} note 218, at E-1 to E-2, E-6 to E-14; cf. F. Schuller, \textit{Toward Solving the Contracts Problem: A Public Policy Perspective for the Natural Gas Industry} 1-3 (Energy & Environmental Policy Center, John F. Kennedy School of Government, Harvard University, Discussion Paper No. E-84-07, 1984) (voluntary compromise between producers and pipelines is preferable solution to problems caused by take-or-pay contracts and rapid price escalation).
\item \textsuperscript{220} In a smaller transaction, in which purchaser and seller agree to a quantity and a price for goods that are a small portion of the seller's stock and the purchaser's need, the discrepancy may create no serious difficulty because over-supply or under-supply can be adjusted with the next transaction. If, however, the transaction is for the next twenty year's supply of natural gas for a major metropolitan area, adjustments are more difficult to make.
\item \textsuperscript{221} Thus, Professor Richard Pierce points out that the advantages of market pricing and contract stability would be destroyed at "enormous cost" by the elimination of escalators. Producers "would become understandably reluctant to enter into future long-term contracts." Pierce, \textit{supra} note 16, at 122. Eliminating take-or-pay through bargaining, judicial relief, or legislative incentives to negotiate would be preferable. \textit{Id.} at 103-04, 111-13; see also F. Schuller, \textit{supra} note 219, at 3, 22-23 (arguing that negotiation is superior to either legislation or adjudication).
\item \textsuperscript{222} In addition, a pipeline's failure to take can in some instances impair natural gas reservoirs, and loss of cash flow can result in loss of leases (owing to non-payment of royalty) or loss of other investment. See, e.g., Pogo Producing Co. v. Sea Robin Pipeline Co., No. 84-48823-H (La. Dist. Ct., Feb. 21, 1985), in \textit{Foster Nat. Gas Rep.} No. 1509, Mar. 21, 1985, at 7-8 (temporary injunction granted enforcing monthly minimum take because shutdown of water-drive reservoirs "has permanently damaged and will continue to damage the reservoirs"); Sid Richardson Carbon & Gasoline Co. v. InterNorth, Inc., 595 F. Supp. 497, 501 (N.D. Tex. 1984) (temporary injunction granted because purchaser's intended withholding of 20% of 100% allowable take-or-pay would cause irreparable injury by denial of current use of funds by producers for their "substantial investment in deep, extensive gas wells").
\end{itemize}
dealing with take-or-pay clauses has proved difficult to draft.\textsuperscript{223} Increasingly, negotiated or contract solutions, in the form of escape valves known as “market-out” or “economic-out” clauses,\textsuperscript{224} have been adopted\textsuperscript{225} as a means of dealing with the problems created by take-or-pay. These solutions can be carried out without disturbing the necessary function of escalation clauses.

G. DISTRIBUTIVE JUSTICE

Economic texts point out the political attractiveness of as-

\textsuperscript{223} The difficulty arises in drafting a suitable market-out provision. In order to protect producers, the provision must provide reasonable, objective criteria . . . and yet must provide pipelines with some flexibility in making such a determination. . . . It would seem virtually impossible to design uniform, national standards for market-out provisions, let alone an actual provision, that could accommodate the wide range of situations . . . .

\emph{Natural Gas Regulation}, supra note 2, at 640.

\textsuperscript{224} See Hays & Williamson, supra note 218, at E-14. Market-out refers to language predicated upon the occurrence of named market contingencies, while economic-out refers to more general language providing flexibility to the purchaser to determine that resale is not economical. The terms are sometimes used interchangeably, however, and the precise effect of the language differs from clause to clause. The same result can be obtained by the inclusion of “partial or entire loss of markets” served by the buyer in the listing of events of force majeure. \emph{See} FOSTER NAT. GAS REP. NO. 1477, Aug. 2, 1984, at 3.

\textsuperscript{225} Such negotiations have sometimes been initiated when a pipeline writes a “take it or leave it” letter. \emph{See} Hays & Williamson, \emph{supra} note 218, at E-15 (showing example of “unilateral price redetermination” or “unilateral market out” letter). Litigation may follow, and it may precipitate settlement. \emph{Cf.} FOSTER NAT. GAS REP. NO. 1509, Mar. 21, 1985, at 10 (Numerous pipelines have filed complaints against producers claiming that take-or-pay payments violate NGPA ceilings; several of these suits have settled.); FOSTER NAT. GAS REP. NO. 1483, Sept. 13, 1984, at 12 (noting that several suits alleging pipelines’ refusal to make take-or-pay payments are pending in state and federal courts).

A producer has some incentive to negotiate relaxation of take-or-pay liability for several reasons: pipeline insolvency would result in curtailed payments; the producer may wish to sell other volumes of gas; the outcome of litigation is uncertain; litigation is itself slow and expensive; and the producer’s reputation for fair dealing is important in a business dependent upon stable long-term relationships. \emph{See} F. Schuller, \emph{supra} note 219, at 15-16 (suggesting that voluntary compromise is the preferable method for dispute resolution), \emph{see also} FOSTER NAT. GAS REP. NO. 1515, May 2, 1985, at 4 (reporting Transco’s reduction of its take-or-pay liability by $175 million through compromises with producers). Such incentives may provide an incomplete solution, and it has been argued that legislation to deal with take-or-pay problems may be desirable. \emph{Cf.} Pierce, \emph{supra} note 16, at 103-04, 110-13 (suggesting that where voluntary modifications in contract behavior offer only an incomplete solution, a single purpose, narrowly-drawn statute could solve the contractual problems involved).
sisting low-income consumers by artificially lowering the price of a single commodity for the entire population. The legitimate concern for low-income consumers may thus manifest itself in a refusal to enforce escalation clauses as a means of wealth redistribution. Professor Paul Samuelson argues that such attempts to redistribute wealth to assist the poor are irrational when accomplished by blockage of the price system:

For example, suppose that 100,000 very wealthy oil drillers sold oil in competitive markets to 10 million very poor people. Would you be tempted to say, "Let's control oil prices, not allowing the producers to get rich at the expense of the poor?" Congress took this view, and domestic oil prices were put under price controls. The result, as would be predicted by supply-and-demand analysis, was that oil imports grew rapidly. By 1979, a consensus developed that the equity gains from oil-price controls were not worth the efficiency losses, and domestic oil prices were gradually decontrolled.

Samuelson generalizes the example thus:

Interfering with the competitive supply-and-demand mechanism is often an inefficient way of correcting the income distribution. Whatever distribution you want to end up with can often be more efficiently attained by using the tax system to redistribute income than by narrow interferences in a single market.

The United States has adopted such a tax-based distribution system in times of rapid increase in fuel costs, in the form of low-income energy grants and similar programs. Similarly, the government does not attempt to keep food prices below market but rather provides food stamps; nor does it attempt to force privately funded medical care costs below market; instead, the government provides Medicare.

These programs can be justified by the conclusion that the marketplace cannot provide a solution to the problem of inequitable wealth distribution. While the allocations made by the

---

227. P. Samuelson & W. Nordhaus, supra note 97, at 395; see also P. Samuelson, supra note 94, at 388 (referring to "ad hoc," "Robin Hood" interventions in single markets).
228. P. Samuelson & W. Nordhaus, supra note 97, at 395.
230. See R. Dorfman, supra note 88, at 174-75. The market tends to produce a Pareto-optimal distribution, meaning one in which barter between consumers cannot increase satisfaction. This condition, however, could be reached without equitable distribution in a hypothetical satrapy in which the ruler is fabulously wealthy but all other inhabitants remain in poverty. The introduc-
marketplace are economically efficient within the existing wealth distribution, a society must look elsewhere for a system of social welfare. The existence of a humane as well as efficient economic system may thus depend upon the maintenance of transfer payments in the form of low-income energy assistance or other general welfare systems. Either expressly or intangibly, the recipients of transfer payments are and should be supported by a tax upon all other producers and consumers. By the same token, however, welfare issues should not be addressed by distortion of the market mechanism for those not requiring public support because the distortion would reduce efficiency. In the long run, holding natural gas prices below market causes net disadvantages for the consuming public as a whole, including low-income consumers, because it subsidizes wasteful consumption. Thus the distributional argument justifies intervention, but it does not justify refusal to enforce escalation clauses.

A separate concern of distributive justice is that some geographic regions may experience economic losses due to rising gas prices. A study sponsored by the Harvard Energy and Environmental Policy Center, however, concludes that the northeastern region, including New York and New England, would

---

231. Economists often criticize in-kind welfare (such as food stamps or low-income energy assistance) as theoretically inefficient in comparison to unrestricted transfer payments because the recipient cannot allocate in-kind assistance so as to maximize his satisfaction. See W. Nicholson, supra note 119, at 594. The political system, however, has typically insisted upon in-kind assistance. See R. Dornbusch & S. Fischer, supra note 226, at 564. This insistence may be economically efficient if the political view is considered to be based upon the notion that ignorance or external effects would cause recipients to misallocate cash payments.

Lifeline rates—or rates structured so that the amount of gas or electricity necessary to maintain a modest home costs significantly less than amounts exceeding that amount—are an example of in-kind assistance. Governmental adoption of such a rate design imposes a hidden tax upon the majority of consumers because rates for amounts exceeding the lifeline amount are higher than they would otherwise be, and non-needy consumers subsidize the lifeline. The introduction of inefficiencies will be further exacerbated if the lifeline amount is available to all consumers and not merely to those in need. The subject of lifeline rates is therefore controversial.

232. See supra notes 84-105 and accompanying text. The negative effect upon low-income consumers would be to enhance long-term price increases, which must follow because the industry is characterized by declining returns to scale. See supra notes 209-211 and accompanying text.
experience a net gain from natural gas decontrol.\textsuperscript{233} A study of the northwestern United States reaches the same result.\textsuperscript{234} While there might well be parts of the country that would be net losers from complete natural gas decontrol,\textsuperscript{235} that concern alone does not justify a refusal to enforce contractual mechanisms upon which the industry has traditionally relied\textsuperscript{236} because the nation as a whole would suffer significant efficiency losses from such a policy.\textsuperscript{237}

IV. ESCALATION CLAUSES AS AFFECTED BY PUBLIC POLICY, CONTRACT INTERPRETATION, AND SIMILAR DOCTRINES

Ordinarily, economic principles such as those discussed in the preceding sections of this Article are not directly relevant as evidence in contract litigation. Recently, however, public concern over natural gas pricing clauses has prompted increasing resort to arguments of public policy. Economic arguments

\textsuperscript{233} J. KALT, H. LEE, & R. LEONE, NATURAL GAS DECONTROL: A NORTH-EAST INDUSTRIAL PERSPECTIVE (Energy & Environmental Policy Center, John F. Kennedy School of Government, Harvard University, Discussion Paper No. E-82-08, 1982). The gains would result from a combination of increased energy efficiency and ownership effects. Individuals, pension plans, businesses, and other entities in the northeast own significant interests in natural gas production. Thus not every resident of the northeast would gain from decontrol, and indeed some would lose. The distributional concerns expressed elsewhere in this section would then be relevant. See supra notes 227-232 and accompanying text.


\textsuperscript{236} The question whether to retain escalators is a simpler one in terms of regional impact than is the issue of decontrol. Some mechanism to adjust compensation and risk is necessary to induce commitment of supply in any event. Further, escalators are unlikely to have macroeconomic disadvantages (and may even mitigate such disadvantages owing to their gradual effects). See, e.g., R. DORNBUSCH & S. FISCHER, MACROECONOMICS 526-28 (2d ed. 1981) (deleterious effects of price increases are lessened where price increases are anticipated in advance).

\textsuperscript{237} Legitimate concern might be raised over the macroeconomic effects of a sudden widespread increase in gas prices. This concern has most frequently been expressed in connection with sudden decontrol. H. GRIFFIN & J. STEELE, supra note 93, at 245-46. If the process is gradually phased in, however, even decontrol shows "quite positive effects" in macroeconometric modelling. Id. at 251.
similar to those set forth in the preceding section are likely to shape the issues in such cases.

A. PUBLIC POLICY AND UNCONSCIONABILITY ARGUMENTS

One of the leading cases concerning these issues is Kerr-McGee Corp. v. Northern Utilities, Inc., in which the district court, applying Wyoming law, refused to enforce a third-party favored nations clause on the ground it was unconscionable and against public policy. In reaching its decision, the court accepted the economic rent argument, concluding that because the clause provided for prices exceeding cost of production, the producers would receive “windfall profits.” As indicated in the preceding section of this Article, this argument is invalid. The district court also considered the impact of price escalation upon low-income consumers. It foresaw rapid and steep price increases, which, the court reasoned, would dramatically and “illegally” increase consumers’ payments for necessary utilities. The evidence actually showed that utility payments by consumers had increased little as a result of the escalation clause. The district court’s reasoning was incorrect because, among other things, it failed to take account of conservation.

---


In certain periods, pursuant to opinions of the FPC rendered under the NGA, courts had acknowledged the argument that favored nations clauses were against public policy. E.g., Permian Basin Area Rate Cases, 390 U.S. 747, 825-29 (1968); FPC v. Texaco, Inc., 377 U.S. 33, 39-45 (1968); Opinion 341, 25 F.P.C. 383, 388 (1961). See generally Pennzoil Co. v. FERC, 645 F.2d 360, 372-83 (5th Cir. 1981). The FPC did permit escalation with area rate regulation although it allowed increases only to regulated ceilings. Superior Oil Co. v. Western Slope Gas Co., 604 F.2d 1281, 1291 (1979) (concurring opinion).


240. Kerr-McGee, 500 F. Supp. at 636; cf. id. at 634 (The demands of Amoco, Phillips, and Kerr-McGee would lead to “an inequitable, illegal and oppressive result.”). This economic rent or windfall profit argument is invalid since the court’s decision did not affect royalty payments to landowners, who, if anyone, were the true recipients of rent. See supra notes 166-172 and accompanying text.

241. See supra notes 162-172 and accompanying text.


243. See, e.g., Brief of Appellant Kerr-McGee Corp. at 26, Kerr-McGee Corp. v. Northern Util., Inc., 673 F.2d 323 (10th Cir.) (record evidence showed average monthly bill of consumers in service area to be $46.80, not $250 as found by district court), cert. denied, 459 U.S. 989 (1982); see also Brief of Amicus Curiae The Legal Foundation of America, in id., at 19 (consumers in ser-
PRICE ESCALATION CLAUSES

The district court in *Kerr-McGee* also accepted the "one-way street argument," holding that the escalation clause favored only the seller and would cause prices to rise. While the latter comment was correct, the increase was inevitable in light of the fact that natural gas is a depletable resource. Furthermore, the court's conclusion that the clause favored only the seller was incorrect. Finally, the district court accepted the argument that historic costs of production were the proper measure of prices. The court's reasoning was thus a virtual compendium of the economic arguments against escalation clauses.

The court of appeals reversed the district court and held that the escalation clause should be enforced. The appellate court did not venture far into the realm of economics and natural gas policy; its opinion properly stressed that these questions should be resolved by the legislature. The court rejected the unconscionability argument by recognizing that unconscionability is found in situations so one-sided and oppressive that no reasonable person would contract for them. Escalation clauses in natural gas contracts, the court concluded, did not meet this definition because they have legitimate market purposes. Furthermore, as the court pointed out, the clause at issue was advantageous to the buyer at the time it was agreed.

---


245. *See supra* notes 207-211.


247. *Kerr-McGee Corp. v. Northern Util., Inc.*, 673 F.2d 323, 326 n.7 (10th Cir.), *cert. denied*, 459 U.S. 989 (1982). The district court accepted a kind of implied vintaging, disallowing escalation based on small producer rates because of limitations not applicable to the contract itself. *Id.* at 326 n.7.


249. *Id.* at 325-28.

250. *Id.* at 329-30; *see also* *id.* at 329 (setting forth factors leading to a determination of contract unconscionability including absence of meaningful choice, compulsion, lack of opportunity for meaningful negotiation, and gross inequality of bargaining power).

251. *Id.* at 329.
upon.\textsuperscript{252}

The court also rejected the parallel argument that the escalation clause was against public policy. In so doing, the court relied on Wyoming’s failure to take action restraining escalation clauses\textsuperscript{253} and Congress’ adoption of the NGPA.\textsuperscript{254} These factors, the court concluded, indicated a legislative policy to rely in part on the functioning of the market and not to require cost justification of all elements of price.\textsuperscript{255} The NGPA sanctioned price escalation clauses, and the producers in question were not attempting to collect prices in excess of the price ceilings applicable to them.\textsuperscript{256} These prices, as the court pointed out, were defined by law as just and reasonable.\textsuperscript{257} The appellate court’s conclusions in this regard were legally sound and, within the constraints imposed by regulatory imperfections, they were generally consistent with economic principles as well.

B. “IMPLIED VINTAGING” AS A LIMIT ON ESCALATION CLAUSES

Unconscionability and public policy are not the only doctrines that have been used to argue against escalation clauses. A related argument, illustrated by the case of \textit{Superior Oil Co. v. Western Slope Gas Co.},\textsuperscript{258} uses the regulatory concept of

\textsuperscript{252} \textit{Id.} at 328, 330.

\textsuperscript{253} Some states have enacted intrastate price ceilings below NGPA maximums. \textit{E.g.}, Kansas Natural Gas Price Protection Act, KAN. STAT. ANN. §§ 55-1401 to -1415 (1983). The court considered the absence of any such legislation in Wyoming to be “significant” in this regard; furthermore, it found the decision in \textit{Amoco Prod. Co. v. Stauffer Chem. Co.}, 612 F.2d 463, 465-68 (Wyo. 1980), enforcing a favored nations clause, to be instructive.

\textsuperscript{254} \textit{Kerr-McGee}, 673 F.2d at 325-27.

\textsuperscript{255} The court of appeals agreed with the decision reached by the majority in \textit{Superior Oil} and concluded that “[t]he actual value of a product is determined by what people will pay for it, not by what it costs to produce,” and noted that the NGPA “provides for a free market” in the long run. \textit{Kerr-McGee}, 673 F.2d at 328 n.9 (citing \textit{Superior Oil Co. v. Western Slope Gas Co.}, 604 F.2d 1281, 1291 nn.15-16 (10th Cir. 1979)).

\textsuperscript{256} The court pointed out that 18 C.F.R. § 270.205(b)(1) (1981) provided as follows:

Any contractual provision for a change in price may operate according to the terms of such provision except that such provision is not operative to authorize a seller to charge and collect an amount in excess of the highest applicable NGPA rate.

\textit{Kerr-McGee}, 673 F.2d at 326 n.6.

\textsuperscript{257} \textit{Id.} at 325-27.

\textsuperscript{258} 604 F.2d 1281 (10th Cir. 1979).
PRICE ESCALATION CLAUSES

vintaging to limit the effect of escalation clauses. In Superior Oil, the purchasing pipeline argued that the policy underlying federal natural gas regulation or, in the alternative, principles of contract interpretation found in Colorado law, required that the vintaging concepts applicable to the regulated interstate market be extended to the unregulated intrastate market. The court of appeals rejected the argument, finding that it reflected neither legislative policy nor the intention of the contracting parties. The court expressly rejected the argument that price should be tied to the cost of production, holding instead that, up to ceiling prices, value and hence price were to be determined by contracts made in the marketplace.

Superior Oil represents one view of the implied vintaging issue, a view that appears both legally and economically sound. Similar cases in other jurisdictions, however, have sometimes reached different results. For example, in Tuthill v. Southwestern Public Service Co., a Texas appellate court injected

259. See supra note 58 and accompanying text.
260. As do most such favored nations clauses, the one at issue in Superior Oil provided for adjustment of the index price in light of differences in “quality of the gas, bases of measurement, delivery pressure, and other conditions of sale. . . .” Superior Oil, 604 F.2d at 1282 (emphasis added). The purchaser argued that the phrase “other conditions of sale” included vintage, even if vintage were otherwise inapplicable to the transaction. The court rejected this argument, relying upon course of dealing, ejusdem generis, expressions of intent, and commercial purpose. Id. at 1288-91.
261. Id. at 1289-91.
262. Id. at 1291 nn.15-16; see supra note 255.
263. 614 S.W.2d 205 (Tex. Civ. App.—Amarillo 1981, writ ref’d n.r.e.). Tuthill concerned a price escalation clause that was triggered by any “applicable just and reasonable area ceiling rate . . . established by the Federal Power Commission.” Id. at 207 (emphasis added). The Court of Civil Appeals affirmed the decision of the trial court, which found that the escalating clause was triggered by FPC Opinion No. 742, 54 F.P.C. 853 (1975), and FPC Opinion No. 749, 54 F.P.C. 3090 (1975), thus entitling the appellant to a money judgment. Tuthill, at 208, 215. The court also held that the clause was unambiguous, and it therefore considered only the four corners of the instrument. Id. at 210-11. The trial court had found, as a fact, that “the parties” “intended that the price escalation clause . . . would mean that the maximum and highest rate set by the FPC for gas sold in the geographical area . . . would become the contract price. . . .” Finding of Fact No. 50, Record at 111, Tuthill, set forth in Petitioner’s Application for Writ of Error at 10. The appellate court’s implication of vintaging thus appears to have defeated the parties’ expectations.

In Amoco Prod. Co. v. Delhi Gas Pipeline Corp., 674 S.W.2d 469 (Tex. Ct. App.—Dallas 1984, writ ref’d n.r.e.), the court came to the same result without the presence of the word “applicable” because of a trial court finding that the parties intended to price the gas as though it were sold in interstate commerce, or in other words, to price it as though it were vintaged. Id. at 472; see also
vintaging limits into an intrastate contract by analogizing to legislation regulating interstate contracts. The court reached this result even though the trial court had expressly found that the parties did not intend to incorporate vintaging into the contract.264

A court’s finding of implied vintaging contrary to the parties’ expectation can have results similar to holding an escalation clause against public policy. It cannot be justified by principles of contract interpretation, and it is unsound economically for the same reasons that a general prohibition upon escalation clauses would be unsound.265 To the extent that the result is dictated by contract interpretation, however, vintaged price escalation may be appropriate. If the parties have genuinely adopted vintaged prices as their index,266 legitimate expectations are protected when that index is followed, and the assumption that the parties have appropriately adjusted the total consideration in light of all aspects of the sale may be justified. The difficulty with such reasoning is that, in many cases, a finding of implied vintaging is based upon diffuse evidence


264. The appellate court observed, “Naturally, the appellants desired to obtain the highest and best available price for their gas. . . . [T]he appellees wanted to obtain a long-term and reliable source of gas.” Tuthill, 614 S.W.2d at 210. These considerations contravene the holding.

265. The FPC itself referred to vintaging as “an anachronism” which “operates to discourage development of the full productive capacity of acreage committed to the interstate market.” Area Rates for the Appalachian and Illinois Basin Areas, Opinion 639, 48 F.P.C. 1299, 1309 (1972). In National Rates for Jurisdictional Sales of Natural Gas, Opinion 770, 56 F.P.C. 509, 521, 586 (1976), the Commission restated its awareness that vintaging was problematic and its elimination desirable, but retained it because of the need to prevent dislocation of purchasers, who had entered into transactions in apparent reliance on vintaging and were affected by unexpected increases.

266. Thus, for example, the Superior Oil opinion discloses that Western Slope Gas Company bargained for express provisions specifically incorporating vintaging in some of its contracts containing area rate clauses. Western Slope’s stated purpose was “to make absolutely clear that [vintaging] was to be a factor in the implementation of those clauses.” Superior Oil, 604 F.2d at 1284. In such a case, the intention to vintage should be honored as reflecting the bargained-for consideration. See also infra notes 281-282 and accompanying text.
concerning the intent of the contracting parties. This evidence contradicts the natural inference that parties under no compulsion to do otherwise would agree on prices approximating market levels.\(^267\) If a purpose to agree to prices far below market is lightly attributed to the producer, legitimate contract expectations may be defeated and inefficient allocation of resources may result—an outcome that is inconsistent with sound public policy.

C. AREA RATE CLAUSES AND NGPA PRICES

Some opponents of escalation clauses use the enactment of the NGPA in 1978 to argue that area rate or FPC price protection clauses should not be enforced.\(^268\) Area rate clauses index the contract price to governmental set price ceilings.\(^269\) By including reference to area rate regulation, the argument posits, the parties have agreed to be bound by the administrative process of FPC rate setting, including its cost-based elements. Enactment of the NGPA reflected a shift in public policy, the argument continues, and the NGPA-generated rates are different in nature from those set by the FPC under the NGA—or so it is claimed.\(^270\) These arguments, in turn, are followed by the conclusion that area rate clauses do not cause escalation to NGPA ceilings.\(^271\) The result, if this theory is accepted, is that prices are frozen at pre-NGPA levels for the duration of the contract term.

One obvious difficulty with this argument is that it results

\(^{267}\) See supra note 264.


\(^{269}\) See supra notes 31-37 and accompanying text.

\(^{270}\) See, e.g., Pennzoil Co. v. FERC, 645 F.2d 360, 367 (5th Cir. 1981) (because some aspects of NGPA regulation substantially differed from that of NGA, doubt arose as to NGPA’s effect upon area rate clauses in existing interstate contracts), cert. denied, 454 U.S. 1142 (1982).

\(^{271}\) Pennzoil, 645 F.2d at 368 (FERC initially announced in a policy statement that area rate clauses did not constitute contractual authority for collection of NGPA ceiling prices, but it later altered that interpretation).
in no escalation at all and thereby defeats the purpose behind tying prices to an index over the life of the contract. The low rates of early years are not followed by higher rates in later years even though market prices, and indeed governmentally regulated rates, continue to increase. This result defeats the legitimate contract expectations of the parties and creates economic inefficiencies.

Fortunately, the argument that area rate clauses were cut off by the NGPA has been rejected in the majority of cases. The FERC initially accepted this argument but then rejected it as a general matter of contract interpretation; the Fifth Circuit affirmed this latter holding in Pennzoil Company v. FERC.\footnote{272} The court noted that the vast majority of purchasers and sellers before the FERC concurred in interpreting area rate clauses as reaching NGPA levels. It concluded that the commercial purpose of escalation clauses justified a presumption that area rate clauses authorized escalation to NGPA prices.\footnote{273} This result is

\footnote{272} 645 F.2d 360 (5th Cir. 1981), cert. denied, 454 U.S. 1142 (1982). The Fifth Circuit affirmed FERC Order 23, 6 F.E.R.C. ¶ 61,229 (1979), as well as orders on clarification and rehearing following Order 23. Pennzoil, 645 F.2d at 365 n.3. In a policy statement preceding those orders, FERC had initially announced that "under a plain meaning construction, area rate clauses [did] not constitute contractual authority for the collection of NGPA ceiling prices." Pennzoil, 645 F.2d at 368. In Order 23 and its progeny, FERC concluded that this initial view was erroneous, and it instead looked to the legislative history of the NGPA, the purpose of escalation clauses, and other factors. It reversed its prior position and allowed a presumption of escalation to NGPA ceilings in otherwise ambiguous situations. Final Regulations Amending and Clarifying Regulations Under the Natural Gas Policy Act and the Natural Gas Act, 44 Fed. Reg. 16,895 (1979).

In Independent Oil and Gas Ass’n of West Virginia, 10 F.E.R.C. ¶ 61,214 (1980), the Commission further considered area rate clauses in an effort to determine which NGPA ceiling would be reached by a given escalation clause. Depending upon the language of the contract, an otherwise ambiguous clause could be construed to reach, on the one hand, sections 104 and 106(a) prices for old flowing or rollover gas, or, on the other hand, a level as high as the section 102 price for new gas. In essence, the difference would be found in whether the parties’ contract (or current interpretation) reflected a strong preference for the NGA-FPC approach and failed to contain “uncoupling” language contemplating a successor to the FPC such as the FERC or the Congress. In that event, the lower 104-106(a) rate would be presumed to carry out the parties’ intent. Otherwise, the presumption would favor the section 102 price. \textit{id.}

\footnote{273} 645 F.2d at 387-90. The presumption applies only when reliable evidence of intent and current agreement upon interpretation are lacking. Independent Oil and Gas Ass’n of West Virginia, 10 F.E.R.C. ¶ 61,214 (1980). The presumption can be overcome by evidence, \textit{id.}, and thus contracts with identical language can give different results. See Kansas Power & Light Co. v. Mesa Petroleum Co., 8 F.E.R.C. ¶ 61,155 (1979); Arkansas-Louisiana Gas Co. v. Frank F. Hall, 7 F.E.R.C. ¶ 61,175 (1979); see also Pennzoil, 645 F.2d at 386.
sound both legally and economically and is consistent with the legitimate contract expectations of the parties.

On the other hand, a few courts have reached the opposite result either as a matter of contract interpretation or through interpretation of the NGPA. If the parties have truly contracted with the intent to cut off the index, this result is appropriate; however, courts should not lightly infer that a producer would agree to such a commercially unwise approach. Furthermore, courts should not infer an intention to freeze price at below-market levels simply because the index has failed. The Uniform Commercial Code provides for the substitution of a new index, generally the market price, in such a situation. Finally, the NGPA itself does not support the argument that escalation clauses should be cut off below NGPA levels. The NGPA reflects a policy of phased deregulation, supports the enforcement of contracts, and is consistent with the use of market considerations in pricing.

D. PRODUCER ARGUMENTS FOR CEILING PRICES WITHOUT CONTRACT AUTHORITY

Producers have occasionally turned the tables and used the economic arguments in favor of escalation clauses as support for the contention that contract prices should be allowed to escalate to market or ceiling rates, even though their contracts have provided to the contrary. Thus, in Amoco Production Co. v. Western Slope Gas Co. the contract was expressly indexed to vintaged area rates, but the producer sought to avoid the vintaging qualification and to collect the highest ceiling price set for any gas. The court rejected the argument and enforced

---

Cf. Pennzoil Co. v. FERC, 645 F.2d at 372-79 (FERC argued and court held that NGPA provisions did not preclude escalation under existing contract to NGPA price ceilings and did not limit operation of area rate clauses). The FERC so disagreed with the Kansas Supreme Court's interpretation of the NGPA as precluding such escalation in Mesa that it took the unusual step of supporting Mesa's petition for certiorari, even though FERC itself was not a party to the dispute. Brief of FERC in Support of Petition for Certiorari at 4-8, Mesa Petroleum Co. v. Kansas Power & Light Co., 229 Kan. 631, 629 P.2d 190 (1981), cert. denied, 455 U.S. 928 (1982).
the contract as written with the vintaging requirement intact.\textsuperscript{279}

The producer might argue that such a result is economically unsound because below-market rates distort the function of the price system. Vintaging is itself economically unsound.\textsuperscript{280} Thus, if the contract is ambiguous and if there is no convincing evidence of an intent to vintage, the commercial purpose of the escalator should enable the producer to receive a non-vintaged price.\textsuperscript{281} On the other hand, the decision in favor of the pipeline purchaser in an express vintaging case such as \textit{Amoco Production Co. v. Western Slope Gas Co.} can be justified by the policy favoring accurate interpretation and enforcement of contracts. In a dynamic market, there will be some sales below as well as above market as buyers and sellers work toward the equilibrium point, and the concern for commercial stability and legitimate expectations is advanced when the intentions of the parties are carried out.\textsuperscript{282}

\textbf{E. Sound Economic Reasoning in a Gas Case: An Example}

Perhaps the best available example of the use of economic reasoning in a natural gas public policy case is the district court's opinion on remand in \textit{Superior Oil Co. v. Western Slope Gas Co.}\textsuperscript{283} The arguments against escalation clauses ranged from implied vintaging to unconscionability, and the evidence included extensive presentation of economic testimony. The district court's conclusion after remand appropriately summarized the economic and legal concerns:

\begin{quote}
In support of their contention that the clause is not contrary to public policy, Plaintiffs presented the testimony of three economic and energy-related experts. . . .

All three agreed that the purpose of price escalation clauses . . . is to keep the price of natural gas at approximately the competitive market level over the life of the long-term contracts. They were also strenuously in agreement that the value of natural gas is what the
\end{quote}

\textsuperscript{279} \textit{Id.} at 1308-09.

\textsuperscript{280} Vintaging is economically unsound because it ties price to historical cost. \textit{See supra} notes 173-177.

\textsuperscript{281} This result was reached, for example, in both \textit{Superior Oil Co. v. Western Slope Gas Co.}, 604 F.2d, 1281, 1289-91 (10th Cir. 1979), and \textit{Kerr-McGee Corp. v. Northern Util., Inc.}, 673 F.2d 323, 326-27 (10th Cir.), \textit{cert. denied}, 459 U.S. 989 (1982), in which purchasers attempted to imply vintaging into contracts that did not refer to it. \textit{See supra} notes 238-267 and accompanying text.

\textsuperscript{282} \textit{See supra} notes 84-129 and accompanying text.

\textsuperscript{283} 549 F. Supp. 463 (D. Colo. 1982), \textit{aff'd}, 758 F.2d 500 (10th Cir. 1985).
marketplace puts on it; the cost of production is not the basis of "value." In their opinions, the natural laws of supply and demand create the best reflection of the value of natural gas. When gas is artificially priced below the customer's expectation, as was felt to be the case throughout the FPC's tight regulation of the industry, the customer will demand more natural gas. However, low prices provide no incentive to the producers to explore and develop new natural gas reserves. Thus, in time, the proved reserves are depleted, resulting in the kind of natural gas shortage experienced in the United States in the mid-1970's.284

The court pointed out that these effects were not subject to serious challenge: "Even Western Slope's witnesses had to agree that higher prices would normally act as an incentive to produce new gas reserves."285 The court also accepted testimony to the effect that "higher prices also reduce the demand for the commodity."286 The result of higher prices would be the "balancing of supply and demand, with the value of the gas existing at the competitive market level."287

Finally, the court analyzed the economic function of escalation clauses in the industry:

In addition to such clauses not being against public policy, Plaintiffs maintained that such clauses were vital to the natural gas industry as presently structured. Long-term supplies of natural gas are necessary before a regulatory agency will issue a certificate of public convenience and necessity to a pipeline [that] desires to build or expand [its] transmission system. . . . Aside from the assurance of an adequate supply of natural gas, . . . [one witness] testified that the consumer benefits in another way from the utilization of price escalation clauses. . . . Without such a clause, the producer is in effect being asked to assume one hundred percent of the risk of the contract. That is a risk the producer will want to be compensated for in terms of a significantly higher contract price from the very beginning.288

Over the dissent of one judge who accepted the "one-way street" argument, the court of appeals affirmed the district court.289

284. Id. at 470-71.
285. Id. at 471.
286. Id.
287. Id.
288. Id.
289. Superior Oil Co. v. Western Slope Gas Co., 758 F.2d 500, 502-03 (10th Cir. 1985). The one-way street argument is discussed supra text accompanying notes 207-211, together with arguments for concluding that it is fallacious. The court of appeals' opinion is narrowly based, but the economic justifications discussed in this Article underlie the cases upon which it relies.
CONCLUSION

Natural gas escalators reflect an effort to cause prices roughly to follow market levels throughout the duration of long-term contracts. Purchasers require lengthy terms because they need assurance of adequate supplies, and the producers' reciprocal insistence upon contract provisions that relate prices to market levels is therefore understandable. Furthermore, it is economically desirable for prices to be related to market levels throughout the life of a long-term contract. Prices below market induce inefficient consumption of gas, discourage conservation of a depletable resource, and prevent producers from furnishing adequate supply. The predictable result of a policy that maintains gas prices at below-market levels is shortages.

The economic arguments against escalation clauses may be superficially appealing, but most are economically unsound. The monopoly argument fails because field prices are competitive. The economic rent or windfall argument is inapposite as producers do not receive rent, and a policy that reduces prices because of rent has undesirable effects on consumption in any event. The price inelasticity argument is unpersuasive, because conservation is the empirically observed response to price increases.

As for purchased gas allowances, they do enable pipelines to accommodate producers in the short run without adverse effects. Such concessions are reciprocated, however, and they may represent efficient long-run market behavior since pipeline incentives toward efficiency in the long run, though imperfect, do exist. The recognized difficulties of pipeline rate design may require reform, but they would not be solved by the imposition of the major disadvantages that would accompany abrogation of escalators.

Nor does the tendency of escalation clauses to increase price justify a refusal to enforce them since the industry exhibits declining returns to scale and hence must reflect increasing prices in the long run. Sometimes the indexes used in escalators produce inappropriate results, particularly owing to quirks of regulation or to take-or-pay clauses. These dysfunctional effects may provide the context in which escalators should be interpreted, but they do not justify their abrogation. Finally, distributive justice is a valid concern, but it should not be achieved by means of distortion of the price-signalling mechanism for all consumers.

In general, the response of the courts to these economic ar-
Price escalation clauses has been appropriate. Refusal to recognize unconscionability or public policy doctrines as rationales for invalidating escalation clauses is today the prevailing view, and this result is sound. On the other hand, the application of the doctrine of contract interpretation to escalation clauses produces mixed results. Some courts have lightly attributed to producers an improbable intention to agree to long-term prices significantly below market levels and regulated price ceilings. Most courts, however, have recognized the economic function of escalation clauses and have refused to construe them in a manner that would thwart their function.

In the future, there will continue to be great public interest in natural gas price escalation clauses as declining supply places upward pressure on prices. While this effect will prompt further efforts to invoke the authority of courts and legislatures to invalidate escalation clauses or defeat their function, it is to be hoped that such efforts can be resisted. Invalidating escalation clauses would reward consumers in the short run with the golden egg, but at the cost of having killed the goose.