Government Regulation and Monopoly Power in the Electric Utility Industry

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Notes

GOVERNMENT REGULATION AND MONOPOLY POWER IN THE ELECTRIC UTILITY INDUSTRY

Both government regulation and the antitrust laws apply to the electric utility industry despite their seemingly incompatible goals. Regulation, based on the traditional assumption that the industry is inherently noncompetitive, imposes artificial controls to prevent the exercise of monopoly power. Antitrust, in contrast, manifests an equally deep-rooted national commitment to free market competition. This Note analyzes and reconciles government regulation and antitrust in the electric utility industry in the context of monopoly power. Although the Note largely discredits the effectiveness of regulation and its underlying assumption, it proposes that regulation continue in phases of the industry truly incapable of sustaining competition. The author also maintains that the antitrust laws must continue to apply to electric utilities to compensate for the deficiencies of regulation.

INTRODUCTION

THE UNDIMINISHED VITALITY of the Sherman Act reflects the national commitment to a competitive, free market economic system. In the Sherman Act's aftermath, however, came the recognition that certain industries defy market control, requiring instead some degree of government regulation. The electric utility industry exemplifies this phenomenon. To compensate for the absence of control exerted by the "invisible hand" of competition, federal and state government intervened to protect the consumer from monopoly prices and minimal services. Electric utility regulation takes essentially the same form today as

2. See, e.g., Berkey Photo, Inc. v. Eastman Kodak Co., 603 F.2d 263, 272 (2d Cir. 1979) (Sherman Act "engraved in law a firm national policy that the norm for commercial activity must be robust competition").
3. See infra notes 47-99 and accompanying text.
5. See infra notes 50-86 and accompanying text.
6. See infra notes 87-99 and accompanying text.

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originally enacted. The rational picture of regulation and antitrust existing side by side, however, does not portray reality. The Supreme Court has applied both antitrust and regulation to the electric utility industry,\(^7\) notwithstanding the apparently contradictory goals of each—competition on the one hand and control to compensate for lack of competition on the other. The need, then, is rational reconciliation.

This Note examines the relationship between antitrust and government regulation in the electric utility industry through the narrow window of monopoly power. The impetus for the Note is derived from *City of Cleveland v. Cleveland Electric Illuminating Co.*\(^8\) (*CEI*), where a jury found that the Cleveland Electric Illuminating Company had neither monopolized nor attempted to monopolize the retail electricity market in Cleveland, Ohio.\(^9\) The facts and history of the case illustrate the difficulty of fitting the monopoly power concept within the confines of the electric utility industry.

Part I of this Note briefly examines the structure of the electric utility industry,\(^10\) since appreciating the problem of applying antitrust to the industry requires some understanding of how electricity is produced. Part I then discusses the traditionally espoused reasons for regulating the electric utility industry, and surveys the federal and state regulatory schemes.\(^11\)

Part II describes the present coexistence of antitrust and regulation in the industry. Using *CEI* as an example, the Note sketches a typical scenario in which a utility is charged with monopolizing a local retail electric power market.\(^12\) Aside from examining the mechanics of bringing a monopolization claim against an electric utility,\(^13\) Part II exposes misconceptions commonly attached to electric utility regulation. Stated simply, the misconceptions center on two issues—whether an electric utility is a natural monopoly,\(^14\) and whether present regulatory schemes

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\(^10\) See infra notes 22–46 and accompanying text.

\(^11\) See infra notes 47–99 and accompanying text.

\(^12\) See infra notes 117–205 and accompanying text.

\(^13\) Id.

\(^14\) See infra notes 149–85 and accompanying text.
Part III reconciles government regulation with antitrust in the electric power industry. Specifically, it addresses two questions: (1) whether regulation should become more pervasive, replacing the interstitial application of the antitrust laws, or whether regulation should be repealed to allow the free reign of antitrust enforcement; and (2) whether antitrust and its monopoly power concept should employ essentially neutral economic criteria instead of more subjective criteria in the electric power industry of the future.

This Note concludes that only certain aspects of the electric power industry tend toward natural monopoly and that government regulation at all levels is minimally successful in preventing monopolistic pricing. Application of the antitrust laws is therefore essential to protect consumers from the evils of monopoly power. Furthermore, government regulation of aspects of the industry exhibiting natural monopoly characteristics is essential to promote competition as well as efficiency throughout the industry.

I. THE ELECTRIC UTILITY INDUSTRY

The basic operations and structure of the electric utility industry consist of three distinct phases—generation, transmission, and distribution. This tripartite structure is largely responsible for the industry's pervasive regulation and thus requires careful examination. This section also describes the federal and state regulatory schemes in some detail.

A. How Electric Power Is Made

Unlike most businesses, "the electric power system must equate supply with demand on an instantaneous basis." Moreover, it must accommodate wide demand fluctuations which occur without notice during the day, week, month, or year. Failure to

15. See infra notes 186–215 and accompanying text.
16. See infra notes 216–24 and accompanying text.
17. See infra notes 225–31 and accompanying text.
18. See infra notes 149–85 and accompanying text.
19. See infra notes 186–215 and accompanying text.
20. See infra notes 237–43 and accompanying text.
21. See infra note 244 and accompanying text.
23. Id.
respond to such demand shifts will cause a power outage within minutes because transmission and distribution facilities contain no storage capacity.\textsuperscript{24} Thus, generating facilities must always be prepared to increase output. This high level of preparedness dictates that the system's three components be synchronized and operated as a unit.\textsuperscript{25} The following discussion is separated by component merely to facilitate understanding of the unit itself.

1. \textit{Generation}

An electric power system must provide for several types of power needs: base load (the level below which demand never falls), peak load (varying amounts of power needed for demand in excess of base load), and reserve requirements for all contingencies.\textsuperscript{26} Electric power is generated chiefly by hydroelectric and thermal plants.\textsuperscript{27} Although a hydroelectric system has high startup costs—building a dam to create a reservoir requires large capital outlays—it has low operating costs, since it needs no fuel.\textsuperscript{28} Reservoir water flows through a turbine, causing it to turn and convert energy into electricity.\textsuperscript{29}

The four primary types of thermal systems are coal, natural gas, oil, and nuclear.\textsuperscript{30} In each, fuel is burned to create steam which is released through a turbine to produce electricity.\textsuperscript{31} The fossil fuels vary in expense and efficiency, and the plants they fire must operate at or near capacity to enjoy economies of scale.\textsuperscript{32} Because of this lack of output flexibility, fossil fuel plants usually

\begin{itemize}
\item \textsuperscript{24} Id. at 70.
\item \textsuperscript{25} Id. A system is synchronized when all generators turn at the same speed and produce exactly the amount of power the system is using. A nonsynchronized situation occurs when the high and low wave points of an alternating current produced by one generator do not match those produced by another generator. For this reason, a firm supplied with electricity over a nonsynchronous interconnection cannot send both the power it generates and the supplied power over the same distribution system at the same time. Kellman & Marino, City of Cleveland v. CEI: \textit{A Case Study in Attempts to Monopolize by Regulated Utilities}, 30 CLEV. ST. L. REV. 5, 11-12 n.38 (1981) (citing O. Elgerd, \textsc{Basic Electric Power Engineering} 245-94 (1977)).
\item \textsuperscript{26} Meeks, supra note 22, at 70-71.
\item \textsuperscript{27} Id. at 71.
\item \textsuperscript{28} Id.
\item \textsuperscript{29} Id. Hydroelectric plants are well-suited to supply peak demand since the amount of power generated can be increased merely by allowing more water to flow through the turbine. Id.
\item \textsuperscript{30} Id.
\item \textsuperscript{31} Id.
\item \textsuperscript{32} Id. at 72.
\end{itemize}
are used to supply base loads.\textsuperscript{33}

Nuclear systems, though more flexible than fossil fuel plants, have higher capital costs and thus are competitive only in large units.\textsuperscript{34} Their major advantages over fossil fuel plants are potential fuel cost savings and the lack of air pollution. Two major disadvantages are the danger of accidental radiation release and problems with waste disposal.\textsuperscript{35}

2. \textit{Transmission}

Transmission links generation with ultimate delivery to the consumer. Originally, transmission lines were short and had relatively low voltage capacity.\textsuperscript{36} Manifold increases in capacity and distance have created greater operating economies; while transmission over low voltage lines is expensive due to power loss, as voltage increases power loss decreases.\textsuperscript{37} Further economies are achieved by increasing voltage because capital and operation costs increase in direct proportion to voltage, while capacity increases as the square of voltage.\textsuperscript{38}

3. \textit{Distribution}

The final link in the production chain carries electricity to the consumer. Although distribution has very high fixed costs in lines and equipment, the incremental cost of carrying an additional unit over the line is negligible.\textsuperscript{39} Thus, economies are based on load demand per mile of line.\textsuperscript{40} In other words, the more consumers per given area, the greater the economies.

B. \textit{The Industry Structure}

Electric utilities are either investor-owned, government-owned, or cooperatively owned.\textsuperscript{41} Generation, transmission, and distribution typically are integrated vertically—one firm controls the entire production sequence—regardless of the type of

\textsuperscript{33} Id.
\textsuperscript{34} Id. at 73.
\textsuperscript{35} Id.
\textsuperscript{36} Id. at 74.
\textsuperscript{37} Id.
\textsuperscript{38} Id.
\textsuperscript{39} Id.
\textsuperscript{40} Id.
\textsuperscript{41} Id. at 67. Investor-owned systems serve the greatest number of customers, publicly owned utilities (mostly small municipal systems) are next in size, and rural cooperatives have the fewest customers. Id. at 67–68.
ownership.\textsuperscript{42}

The majority of generation facilities are investor-owned. Many smaller private firms and most government and cooperative systems, which once generated power locally, now buy wholesale power from these large nonintegrated firms, thus taking advantage of economies of scale.\textsuperscript{43} Similarly, transmission facilities usually are owned by large private concerns. Indeed, one commentator notes that "[g]iven the increasing reliance upon wholesale purchases by many of the smaller systems of all three varieties, control over transmission becomes a most important factor in analyzing the wholesale market."\textsuperscript{44} Geographic isolation is the norm with respect to distribution facilities since more than one system rarely serves the same area.\textsuperscript{45} The overall picture, therefore, is one of "a relatively large, vertically integrated system [serving] an extensive geographic area, with several smaller private, cooperative and municipal systems existing as islands within the larger system's sphere of operation and frequently purchasing their power at wholesale from the larger system."\textsuperscript{46}

C. Regulation

The electric utility industry, due to its size, composition, and importance, is subject to federal and state regulation. The federal scheme controls interstate wholesale prices and grants express authority to set rates. In general, state regulation similarly controls retail prices, although its scope varies among the states.

1. The Need for Regulation

Legislatures have determined that the electric power industry requires regulation, recognizing that the industry is capital-intensive and possesses extensive economies of scale.\textsuperscript{47} In economic terms, the industry is most often labeled a natural monopoly.\textsuperscript{48}

\begin{itemize}
  \item \textsuperscript{42} Id.
  \item \textsuperscript{43} Id. at 68.
  \item \textsuperscript{44} Id.
  \item \textsuperscript{45} Id. The existence of direct retail competition between Cleveland's municipal system and CEI is unusual. \textit{See infra} note 127 and accompanying text.
  \item \textsuperscript{46} Meeks, \textit{ supra} note 22, at 68–69.
  \item \textsuperscript{47} "Local utility services . . . are marked by such pronounced capital intensity and economies of scale that conventional competition is essentially unknown. . . . These industries are regulated precisely because it has been determined that competition either cannot or should not prevail there." Watson & Brunner, \textit{Monopolization by Regulated "Monopolies": The Search for Substantive Standards}, 22 \textbf{ANTITRUST BULL.} 559, 566 (1977).
  \item \textsuperscript{48} Commentators generally agree that the traditional rationale for regulation was the
\end{itemize}
defined as
monopoly resulting from economies of scale, a relationship between the size of the market and the size of the most efficient firm such that one firm of efficient size can produce all or more than the market can take at a remunerative price, and can continually expand its capacity at less cost than that of a new firm entering the business.  

The assumption that electric utilities are natural monopolies is a subject of debate and is explored in Part II of this Note. Notwithstanding the questionable validity of this assumption, it is a historical reality that has fostered widespread government regulation.

2. The Federal Regulatory Scheme

The following discussion outlines the federal regulatory structure as originally enacted in 1935 and as it exists today. Significant amendments in 1978 merit special attention because they greatly broadened the scope of federal power to regulate electric utilities.

a. The Federal Power Act. Congress first exercised power over the electric utility industry in 1935 by passing the Federal Power Act. As the Supreme Court stated in Gulf States Utilities...
Co. v. FPC.\[^{52}\] "[t]he [Public Utility] Act had two primary and related purposes: to curb abusive practices of public utility companies by bringing them under effective control, and to provide effective federal regulation of the expanding business of transmitting and selling electric power in interstate commerce."

Federal regulation became necessary because the electric utility industry had transcended state boundaries,\[^{54}\] and the Supreme Court, in Public Utilities Commission v. Attleboro Steam & Electric Co.,\[^{55}\] had ruled that interstate wholesale transactions were beyond the states' reach. Section 201(a) of the Act set forth: "It is declared that the business of transmitting and selling electric energy for ultimate distribution to the public is affected with a public interest, and that Federal regulation . . . is necessary in the public interest . . . ."\[^{56}\]

In section 201(b), the Act was made applicable to interstate transmission and sale of electric energy at wholesale, giving the Federal Power Commission (FPC)\[^{57}\] jurisdiction over all transmission and sale facilities.\[^{58}\] Whereas the FPC lacked jurisdiction to prescribe rates for retail sales,\[^{59}\] it could order a public utility to interconnect with another utility upon finding such action "necessary or appropriate in the public interest."\[^{60}\] Interconnection could not be ordered if it would require a firm to enlarge its gener-

\[^{53}\] Id. at 758.
\[^{54}\] See S. REP. No. 621 pt. 1, supra note 50, at 17.
\[^{55}\] 273 U.S. 83 (1927).
\[^{60}\] Federal Power Act § 202(b), 16 U.S.C. § 824a(b) (1976). "Interconnection" is the physical attachment of one firm's power lines to another's and is necessary when different firms operate different stages in the production and delivery of electric power. For example, firm A might be a retail electric power distributor with no generating capacity, and thus must purchase electricity at wholesale from either a generation or transmission facility. If firm B agrees to sell power to A, A can use this power only if its distribution lines are physically connected to B's transmission lines.
ating capacity or impair its ability to render adequate service.\textsuperscript{61} Thus, Congress' goal was that the Commission would encourage voluntary interconnection and coordination of facilities.\textsuperscript{62}

As originally conceived, the Act was to impose upon public utilities within the FPC's jurisdiction the duty of a common carrier with respect to interconnections.\textsuperscript{63} The Senate Committee on Interstate Commerce dropped the common carrier provision, however, in favor of one providing for voluntary coordination of facilities,\textsuperscript{64} observing: "While imposition of these duties may ultimately be found to be desirable, the committee does not think that they should be included in this first exercise of Federal power over electric companies."\textsuperscript{65} A provision enabling the FPC to require one utility to "wheel" power to another met the same fate.\textsuperscript{66} Again, Congress deemed voluntary action the most desirable course.

The Federal Power Act required that all utility rates and charges be "just and reasonable."\textsuperscript{67} Upon finding any rate unjust or unreasonable, the FPC could determine a proper rate and substitute it for the existing one.\textsuperscript{68} Moreover, Congress gave the FPC authority to determine and impose service standards if it found service to be inadequate,\textsuperscript{69} but denied it the power to compel the

\begin{footnotes}
\footnotetext[61]{Id.}
\footnotetext[62]{Id. § 202(a), 16 U.S.C. § 824a(a) (1976).}
\footnotetext[63]{S. Rep. No. 621 pt. 1, supra note 50, at 19. The bill that became the Federal Power Act was originally S. 1725, but was so amended that S. 2796 was substituted for it, becoming the basis of the report. Id. pt. 2 at 1. "Section 202(a) of S. 1725 imposed upon each public utility the duty to furnish energy to, exchange energy with and transmit energy for any person upon reasonable request." Id. pt. 1 at 19.}
\footnotetext[64]{Id. pt. 1 at 19.}
\footnotetext[65]{Id.}
\footnotetext[66]{Id.}
\footnotetext[67]{Id.}
\footnotetext[68]{Id. § 207, 16 U.S.C. § 824f (1976).}
\footnotetext[69]{Wheeling refers to transmission by one firm of energy generated by another firm and delivered to a third party—that is, the generating company inputs energy into the transmission system of the intermediate utility, which delivers the same amount of energy to the third firm. The generating company is paid by the customer for the power, and the intermediate firm receives a wheeling charge for the use of its transmission lines.}
\footnotetext[67]{Federal Power Act § 205(a), 16 U.S.C. § 824d(a) (1976). The section further requires that utilities file a rate schedule with the FPC, that no rate changes take effect until after 30 days' notice to the Commission (subsequently increased to 60 days by the Public Utility Regulatory Policies Act of 1978, Pub. L. No. 95–617, § 207(a), 92 Stat. 3117, 3142 (codified at 16 U.S.C. § 824d(d) (Supp. V 1981)), and that the utility has the burden of proving the proposed changes were reasonable.}
\footnotetext[68]{Id. § 207, 16 U.S.C. § 824f (1976).}
\end{footnotes}
enlargement of generating facilities or the sale of energy if either action impaired the adequacy of existing service.\textsuperscript{70}

Ratemaking is not an exact science. In \emph{FPC v. Conway Corp.},\textsuperscript{71} the Supreme Court stated that "there is no single cost-recovering rate, but a zone of reasonableness: 'Statutory reasonableness is an abstract quality represented by an area rather than a pinpoint. It allows a substantial spread between what is unreasonable because too low and what is unreasonable because too high.'"\textsuperscript{72} The "zone of reasonableness" concept led to the development of a ratemaking aid called "yardstick competition,"\textsuperscript{73} defined as the effect of one utility on the ratemaking determinations of a neighboring utility. The presence of yardstick competition requires that the regulatory commission compare relative costs. It thus acts as a downward or moderating influence on rates.\textsuperscript{74}

\textbf{b. The 1978 Amendments.} The powers of the FPC (now the Federal Energy Regulatory Commission (FERC)),\textsuperscript{75} expanded considerably with the passage of the Public Utility Regulatory Policies Act of 1978.\textsuperscript{76} Title I of the Act establishes a national policy governing retail electric ratemaking, an area formerly left exclusively to state control.\textsuperscript{77} State regulatory authorities and nonregulated electric utilities must consider (but not necessarily adopt) specific federal ratemaking standards.\textsuperscript{78} The primary re-

\footnotesize
\textsuperscript{70} Id.
\textsuperscript{71} 426 U.S. 271 (1976).
\textsuperscript{72} Id. at 278 (quoting Montana-Dakota Util. Co. v. Northwestern Pub. Serv. Co., 341 U.S. 246, 251 (1951)).
\textsuperscript{73} Fairman & Scott, supra note 48, at 1162.
\textsuperscript{74} Kellman & Marino, supra note 25, at 32-33.
\textsuperscript{75} See supra note 57.
\textsuperscript{78} Id. § 111(a), 16 U.S.C. § 2621(a) (Supp. V 1981). Title I states three purposes: "[T]o encourage—(1) conservation of energy supplied by electric utilities; (2) the optimization of the efficiency of use of facilities and resources by electric utilities; and (3) equitable rates to electric consumers." Id. § 101, 16 U.S.C. § 2611 (Supp. V 1981). The amendments set out six standards to be considered by state commissions and nonregulated utilities in setting their rate policies. Id. § 111(d), 16 U.S.C. § 2621(d) (Supp. V 1981). The standards, however, are not mandatory: "Nothing in this subsection prohibits any State regulatory authority or nonregulated electric utility from making any determination that it is not appropriate to implement any such standard, pursuant to its authority under otherwise applicable State law." Id. § 111(a), 16 U.S.C. § 2621(a) (Supp. V 1981). Moreover, "[i]n]othing in this title prohibits any State regulatory authority or nonregulated electric utility from adopting, pursuant to State law, any standard or rule affecting electric utilities which is
The responsibility to set retail rates remains with state regulatory authorities. 79

The most important additions to FERC's powers involve its increased authority to require interconnections 80 and wheeling, 81 and to exempt electric utilities from state law to allow formation of power pools. 82 The 1978 amendments extend interconnection authority to cogenerators and small power producers, 83 and grant wheeling authority when FERC finds that wheeling is in the public interest, conserves energy, promotes efficiency, or improves reliability. 84 However, FERC cannot order interconnection or wheeling unless it determines: (1) that no uncompensated economic loss is likely to result for any utility; (2) that no undue burden would be placed on any utility; (3) that the reliability of any utility will not be unreasonably impaired; (4) that the ability of any utility to render adequate service to its customers will not be impaired; and (5) that the applicant for an interconnection or wheeling order is ready, willing, and able to reimburse the subject firm for costs, including enlargement of transmission facilities. 85 The foregoing powers are in addition to and not in lieu of FERC's powers under the Federal Power Act. 86

79. H.R. CONF. REP. No. 1750, 95th Cong., 2d Sess. 67, reprinted in 1978 U.S. CODE CONG. & AD. NEWS 7797. The principal federal concern was the structure of the rates charged to different classes of consumers. Id. at 81, reprinted in 1978 U.S. CODE CONG. & AD. NEWS at 7815.


82. Id. § 205, 16 U.S.C. § 824a-1 (Supp. V 1981). A power pool is the coordination of several electric systems to supply power to a given geographic area. Its purpose is twofold—to provide increased reliability on a day-to-day basis, and to take full advantage of cost savings due to joint planning and economies of scale. Meeks, supra note 22, at 100–01.


85. Id. § 204(a), 16 U.S.C. § 824k(a)-(b) (Supp. V 1981).

3. State Regulation

State and local governments have regulated the electric utility industry since its inception in 1879. Historically, a utility needed two franchises to operate: a primary franchise for incorporation from the state, and a secondary franchise from the city permitting the utility's use of the streets. Initially, municipalities exercised exclusive control over utilities. In 1907, New York and Wisconsin enacted the first state commission laws, and many states soon followed suit.

Local regulation traditionally has been rationalized as a response to market imperfections caused by extensive economies of scale—the natural monopoly argument. Indeed, the natural monopoly concept explains the movement from municipal to state control beginning in 1907. The goal of early municipal regulators was to promote competition among local utilities. Hence, cities granted franchises to virtually anyone, assuming that widespread competition would foster greater efficiency and lower rates. This goal was unattainable, however, because the industry gravitated toward consolidation, and the remaining competition was duplicative and chaotic. The response to ineffective local control was to shift regulation to the state level, where regulators would be centralized, better educated, more principled, and unaffected by local political interests.

Some form of state regulation of electric utilities now exists in all states. However, ratemaking authority is statutorily restricted to retail sales. States regulate the installment of generation, transmission, and distribution facilities through the use of

88. Id. The primary franchise was required of all corporations wishing to conduct business in a state, whereas the secondary franchise was unique to utility companies. Id.
89. Id.
90. Id. Prior to 1907, Massachusetts had a weak state commission which regulated electric utilities. Id.
91. Id. at 273. See supra notes 47–49 and accompanying text.
93. Id. at 274.
94. Id. at 274–75.
96. FERC lacks authority to set retail electric rates, see supra notes 77–79 and accompanying text, and the Supreme Court prohibited the states from exercising authority over
licensing powers.\textsuperscript{97} Many states also impose territorial restrictions by requiring utilities to obtain a certificate of public convenience and necessity or a franchise from local authorities to serve a given area.\textsuperscript{98} Frequently, these restrictions have the unintended effect of excluding all but a single firm from the territory.\textsuperscript{99}

II. ANTITRUST AND REGULATION: FUNDAMENTAL MISCONCEPTIONS

"The challenge of applying antitrust in the electric utility industry is to accommodate the national policy in favor of competition and at the same time protect the efficiency and reliability of an industry second to none in the importance of our national life."\textsuperscript{100} This Note responds to that challenge by examining the argument for implied antitrust immunity for electric utilities, the CEI litigation, the assumption that electric utilities are natural monopolies, and the assumption that regulation effectively prevents monopoly prices and output.

A. The Issue of Implied Immunity

Utilities sued under the antimonopolization provisions of the Sherman Act\textsuperscript{101} typically assert the threshold defense of implied antitrust immunity due to government regulation. While the immunity defense has several forms, its basic tenets are: (1) since the goals of antitrust and regulation are irreconcilable, one or the other must prevail;\textsuperscript{102} and (2) since regulation of the subject industry has been deemed the proper course, it must displace the antitrust laws.\textsuperscript{103}

\begin{thebibliography}{99}
\bibitem{97} Meeks, \textit{supra} note 22, at 66 n.8.
\bibitem{98} \textit{Id.} at 95.
\bibitem{99} \textit{Id.} at 96.
\bibitem{100} Shenefield, \textit{Antitrust Policy Within the Electric Utility Industry}, 16 \textit{ANTITRUST BULL.} 681, 723 (1971).
\bibitem{101} 15 \text{U.S.C.} § 2 (1976).
\bibitem{102} The alleged irreconcilability is that the antitrust laws seek to preserve a market structure based on vigorous competition among producers, while government regulation acts as a substitute for competition in a market where it does not exist.
\bibitem{103} Writing in 1977, Watson and Brunner noted that "[t]o date, courts and administrative agencies have usually resolved cases in which such allegations are made on threshold issues of antitrust immunity or primary jurisdiction and therefore have seldom squarely confronted the merits of this seeming anomaly." Watson & Brunner, \textit{supra} note 47, at 560.
\end{thebibliography}
1. Primary Jurisdiction

One form of the antitrust immunity defense invokes the doctrine of primary jurisdiction, which evolved to reconcile the functions of administrative agencies with the functions of courts.\textsuperscript{104} The doctrine holds that issues within the particular expertise of an agency "should be dealt with in the first instance by those especially familiar with the customs and practices of the industry and of the unique marketplace involved in [the] case."\textsuperscript{105} Nevertheless, as two leading commentators aptly note, the doctrine is not a vehicle for immunity but merely allocates issues among forums.\textsuperscript{106} Indeed, the absence of antitrust immunity for the electric utility industry was specified in the legislative history of section 4 of the Public Utility Regulatory Policies Act of 1978: "[I]t is not intended that the courts defer actions arising under the antitrust laws pending a resolution of such matters by the Federal Energy Regulatory Commission. . . . [Instead,] the courts have jurisdiction to proceed with antitrust cases without deferring to the Commission for the exercise of primary jurisdiction."\textsuperscript{107}

2. Federal Regulatory Exemptions

The Supreme Court has been reluctant to grant implied exemptions from the antitrust laws simply because a federal regulatory scheme exists. In \textit{Gordon v. New York Stock Exchange},\textsuperscript{108} the Court stated that "[r]epeal of the antitrust laws by implication is not favored and not casually to be allowed. Only where there is a 'plain repugnancy between the antitrust and regulatory provisions' will repeal be implied."\textsuperscript{109} The \textit{Gordon} Court found a plain repugnancy between section 19(b) of the Securities Exchange Act of 1934 and section 2 of the Sherman Act, and held that the requirements for implied antitrust immunity were met.\textsuperscript{110}

\begin{itemize}
  \item \textsuperscript{104} Mississippi Power & Light Co. v. United Gas Pipeline Co., 532 F.2d 412, 417 (5th Cir. 1976).
  \item \textsuperscript{105} Ricci v. Chicago Mercantile Exch., 409 U.S. 289, 305 (1973).
  \item \textsuperscript{106} Watson & Brunner, \textit{supra} note 47, at 562.
  \item \textsuperscript{108} 422 U.S. 659 (1975).
  \item \textsuperscript{109} \textit{Id.} at 682 (quoting United States v. Philadelphia Nat'l Bank, 374 U.S. 321, 350-51 (1963)).
  \item \textsuperscript{110} \textit{Id.} at 685-86. "Implied repeal of the antitrust laws is, in fact, necessary to make the Exchange Act work as it was intended." \textit{Id.} at 691. Under section 19(b), the Securities and Exchange Commission (SEC) regulated the fixing of sales commissions on the national exchanges. Application of the antitrust laws to these practices would bar them as \textit{per se}
The Court also recognized immunity in *United States v. National Ass’n of Securities Dealers* (NASDAQ), noting: "[W]e have implied immunity in particular and discrete instances to assure that the federal agency entrusted with regulation in the public interest could carry out that responsibility free from the disruption of conflicting judgments that might be voiced by courts exercising jurisdiction under the antitrust laws." The Court held that the Sherman Act was displaced by the pervasive regulatory scheme established by Congress. Beyond these two examples—"repugnancy" in *Gordon* and "pervasive regulation" in *NASDAQ*—the Supreme Court has been unwilling to extend implied antitrust immunity based on federal regulation.

The claim of implied immunity for the electric utility industry under the Federal Power Act was squarely rejected in *Otter Tail Power Co. v. United States*. The Court found no evidence of a legislative purpose to insulate the electric power industry and noted the elimination of common carrier provisions regarding interconnection and wheeling, stating: "Congress rejected a pervasive regulatory scheme for controlling the interstate distribution of power in favor of voluntary commercial relationships."

violations of the Sherman Act and prevent the operation of the Exchange Act as envisioned by Congress and the SEC. *Id.* at 685, 691.

111. 422 U.S. 694 (1975). In *NASDAQ* the question was whether federal regulation shielded an alleged conspiracy among members of the National Association to prevent growth in the secondary mutual fund market. *Id.* at 730.

112. *Id.* at 734.

113. *Id.* at 735. The court stated that "[t]he SEC's supervisory authority over the NASD is extensive." *Id.* at 732. The SEC could require registered associations to submit any proposed rule changes for approval and request (and if necessary, order) changes in association rules, all under the congressional command to protect the interests of the public and shareholders. *Id.*


115. *Id.* at 373–74. Congress reexamined the validity of this rationale in 1978, when it gave FERC expanded interconnection authority, new wheeling authority, and the power to override state law to permit pooling arrangements. *See supra* notes 80–86 and accompanying text. In essence, FERC now has all the authority granted to it in the original Senate bill with the exception of the common carrier provision. *See supra* notes 63–65 and accompanying text. This posed the obvious question: was the regulatory scheme now pervasive enough to come within the *NASDAQ* doctrine of implied exemption? *See supra* notes 111–13 and accompanying text. The Act itself answered the question in the negative. Section 4 states: "Nothing in this Act or in any amendment made by this Act affects—(1) the applicability of the antitrust laws to any electric utility or gas utility . . . ." Public Utility Regulatory Policies Act of 1978, Pub. L. No. 95–617, §4, 92 Stat. 3120 (codified at 16 U.S.C. § 2603 (Supp. V 1981)). Indeed, to ensure a proper reading of the amendments, the House Conference Committee stated in its report: "The conferees intend that the provisions of the conference substitute be strictly neutral and not add or subtract from the immunities and defenses available under such laws nor add or subtract from authorities contained in such
Court stated an additional test for regulatory immunity: "[W]hen these relationships are governed in the first instance by business judgment and not regulatory coercion, courts must be hesitant to conclude that Congress intended to override the fundamental national policies embodied in the antitrust laws."  

B. CEI: The Typical Case

City of Cleveland v. Cleveland Electric Illuminating Co. (CEI), provides a recent example of a typical monopolization case involving an electric utility. Analysis of this case illuminates the major problems in applying a standard section 2 analysis to a regulated industry.

1. Background: Otter Tail Revisited

Since the electric utility industry is not immunized from the antitrust laws, courts must reconcile the federal regulatory scheme with the Sherman Act. After settling the immunity issue, the Otter Tail Court addressed the alleged violation of section 2 of the Sherman Act. Otter Tail was an integrated investor-owned utility supplying retail electricity to numerous towns in its service area. The municipalities it served had attempted at various times to set up their own facilities when Otter Tail's franchises expired, but were met by the utility's refusal to sell or wheel wholesale power to the proposed systems. The district court held that Otter Tail had monopolized the retail electric market in violation of section 2 and enjoined the company from refusing to sell power at wholesale or to wheel power. The Supreme Court...
affirmed. 122

The Court's opinion in Otter Tail, however, provides little guidance for applying antitrust in the regulatory setting,123 since it analyzed a regulated industry under conventional monopolization principles. The Court thereby fostered the notion that antitrust principles apply regardless of differences in circumstances.124

2. CEI: The Factual Setting

CEI, an investor-owned utility, has been operating in the City of Cleveland and surrounding areas since the 1890's.125 The Cleveland Municipal Electric Light & Power System (MUNY) has been owned and operated by the City of Cleveland since 1906.126 The two companies compete directly in the same retail market.127

In 1958, MUNY embarked upon an aggressive campaign to expand its customer base,128 relying on a new generating facility then under construction.129 The facility became operational in 1967, but was plagued by breakdowns.130 In early 1970, MUNY commenced efforts to obtain a permanent interconnection with CEI.131 CEI entered into an interconnection agreement with MUNY in 1973 but, according to the City, avoided interconnection through various ploys.132 Ultimately, the FPC ordered CEI

Watson & Bruner, supra note 47, at 571. "As a statement of one form of monopoly power, the 'bottleneck' principle appears to be no more than a specific application of the well-settled general principle that monopoly power exists when 'a product is controlled by one interest, without substitutes available in the market.'" Id. at 572 (quoting United States v. E.I. du Pont de Nemours & Co., 351 U.S. 377, 394 (1956)).


123. Watson & Bruner, supra note 47, at 565.

124. Id.

125. Austin, supra note 117, at 611.

126. Brief for Appellant, supra note 9, at 8.

127. Principal Trial Memorandum of Defendant the Cleveland Electric Illuminating Company at 1, City of Cleveland v. Cleveland Elec. Illuminating Co., No. C75-560 (N.D. Ohio verdict Oct. 8, 1981), appeal docketed, No. 82-3053 (6th Cir. Dec. 2, 1981). Only ten municipalities in the United States have such retail competition, of which Cleveland is the only major city. Id. Nevertheless, CEI is a typical case because the issues raised are similar to those found in most monopolization cases against electric utilities.

128. Id. at 62.

129. Id. at 61.

130. Id. at 61-62.

131. Austin, supra note 117, at 614.

132. Id.
to establish a permanent interconnection, which became operational in 1975.

Meanwhile, MUNY pursued interconnection with other utilities. In 1973, the Power Authority of the State of New York agreed to supply MUNY with power, but CEI refused to wheel the power from the Ohio border to MUNY even though it had the capacity to do so.

3. The Litigation

In 1975, the City of Cleveland sued CEI for monopolization and attempt to monopolize in violation of section 2 of the Sherman Act, alleging damages caused by CEI's refusal to interconnect or wheel power. The United States District Court for the Northern District of Ohio addressed the legal issues raised in every section 2 case—namely, the relevant market and the defendant's share of that market.

a. The Relevant Market. As in Otter Tail, the relevant product market in CEI was easily identified as the sale of retail electric

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133. Id.
134. Id. at 614 n.7.
135. Brief for Appellant, supra note 9, at 25.
136. Determining the presence of monopoly power involves three steps: defining a relevant market, determining the defendant's share of that market, and deciding whether that market share is large enough to infer that the defendant has the requisite degree of market power to create liability. The term "relevant market" comprises two ideas: a product market and a geographic market. United States v. Otter Tail Power Co., 331 F. Supp. 54, 58 (D. Minn. 1971), aff'd, 410 U.S. 366 (1973).


Market share is that portion or percentage of total sales of the relevant product in the relevant market attributable to the defendant. Traditionally, judges and lawyers assume a high correlation between market share and market power. Id. at 19,207; Landes & Posner, Market Power in Antitrust Cases, 94 Harv. L. Rev. 937, 952 (1981). Landes and Posner argue that reliance solely on market share to determine market power can be misleading. Id. at 947. Instead, they propose an inquiry into three factors: market share, elasticity of market demand, and elasticity of market supply:

[A] given market share is neither necessary nor sufficient for a firm to be able to raise prices above the competitive level. The lower the market elasticity of demand and the lower the elasticity of supply of the competitive fringe, the smaller is the market share that will enable a firm to raise price substantially above the competitive level.

Id. at 952-53.
power. The relevant geographic market, however, presented problems. The City of Cleveland contended that the relevant geographic market was CEI's 1700-square-mile service area, the area in which there might have been actual or potential competition but for CEI's actions. CEI, on the other hand, claimed that the relevant geographic market was the thirty-square-mile area in which MUNY and CEI actually competed. The court ruled as a matter of law that the relevant market was smaller than CEI's 1700-square-mile service area, but permitted the jury to consider a geographic area larger than the City of Cleveland. The difference between the two possible geographic markets was significant because CEI's market share, and thus the likelihood that it wielded monopoly power, decreased considerably as the geographic market approached the thirty-square-mile mark. The jury found the thirty-square-mile area to be the relevant geographic market.

b. Market Share. Many courts look only to market share data to determine the presence of monopoly power. A market share greater than seventy to eighty percent raises an inference of such power. In a regulated industry, however, firms commonly defend by asserting that regulation precludes the exercise of power over prices, and hence even a large market share raises no inference of monopoly power. CEI raised this defense to the City's charges.
The United States Court of Appeals for the Fifth Circuit recently stated that “controlling a predominant share of the relevant market cannot infer the traditional monopoly power associated with an entity outside the regulated field.”\textsuperscript{145} Similarly, commentators have argued that in cases involving regulated electric utilities a firm’s market share should at most be a point of departure for an analysis of monopoly power.\textsuperscript{146}

The defense that regulation negates the inference of market power from market share rests upon the crucial assumption that regulation is effective. If regulation in fact prevents monopoly pricing and the exclusion of competition, the defense appears valid.\textsuperscript{147} Unfortunately, the crucial underlying assumption is rarely challenged in litigation. Indeed, the CEI court instructed the jury to assume that regulation had been effective.\textsuperscript{148}

C. The Natural Monopoly Assumption

Traditionally, legislators have assumed that electric utilities are natural monopolies. This section of the Note examines that assumption and demonstrates that components of the electric utility industry exhibit strong competitive tendencies which are often impeded by single-firm control of transmission facilities.

1. The Traditional View

Electric utility regulation traditionally has been justified by the premise that utilities are pure natural monopolies\textsuperscript{149} which, left to their own devices, would set marginal cost equal to marginal revenue, charge a monopoly price, and reduce output accordingly.\textsuperscript{150}

\textsuperscript{145} Almeda Mall, Inc. v. Houston Lighting and Power Co., 615 F.2d 343, 354 (5th Cir. 1980).

\textsuperscript{146} Watson & Brunner, supra note 47, at 567.

\textsuperscript{147} Id. at 569. \textit{But see infra} notes 187–215 and accompanying text.

\textsuperscript{148} \textit{See infra} text accompanying note 186.

\textsuperscript{149} \textit{See supra} notes 48–49 and accompanying text.

\textsuperscript{150} \textit{See infra} note 180.
Although monopoly is taken for granted in the local electric utility industry,\(^{151}\) no attempt has been made to differentiate between the generation, transmission, and distribution phases of the industry. Instead, all are assumed to possess the same natural monopoly characteristics. Moreover, “[while] the idea that a single electric utility firm operates at lower costs than it would if other firms existed permeates the public utility literature . . . such a view is based more on opinion than on confirmed evidence.”\(^{152}\) When electric service became feasible in the late 1800’s, no institutional means existed to force budding utilities into the public service mold.\(^{153}\) The corporate structure, however, “was highly developed and capable of absorbing the new technology. Thus, it was a disparity in institutional development that was a decisive factor in the emergence of private monopoly as the dominant form of organization in public service industries.”\(^{154}\)

2. **Breaking Down the Monolith**

Not all phases of electricity production and delivery are naturally monopolistic. Rather, only the transmission phase exhibits true natural monopoly tendencies. At the generation and distribution levels, actual competition now exists along with potential increased competition.

a. **Generation.** Commentators almost universally agree that generation facilities currently engage in moderate competition with the potential for greater competition. That potential, however, hinges on a restructuring of the electric utility industry.\(^{155}\)

Generation of electric power is similar to other basic production industries in which competition serves as the chief regulator.\(^{156}\) In those industries, however, production and distribution generally are not vertically integrated.\(^{157}\) The electric utility industry exhibits a pervasive tendency toward integration despite the lack of opportunities for greater economies of scale.\(^{158}\) At present, “competition among generating companies is impeded by

\(^{151}\) Primeaux, *supra* note 48, at 175.

\(^{152}\) Id. at 176 n.4.

\(^{153}\) Id. at 175.

\(^{154}\) Id.


\(^{156}\) Meeks, *supra* note 22, at 82.

\(^{157}\) Id.

\(^{158}\) Id. at 81–82.
the ownership of transmission and distribution systems by individual generating firms."\textsuperscript{159} Thus, to promote competition among electric utilities, the common industry practice of vertical integration must be reformed.\textsuperscript{160}

Competition at the wholesale generation level takes two forms: (1) intermodal competition from other fuels, particularly gas,\textsuperscript{161} which is likely to increase due to new technology in the gas industry and the high cross-elasticity of residential demand;\textsuperscript{162} and (2) indirect competition for industrial loads.\textsuperscript{163} Industrial users usually pay low rates by locating in low-rate areas and taking advantage of special rates for high-load users.\textsuperscript{164} Here again, elasticity of demand is significant.\textsuperscript{165}

b. Transmission. The transmission function is a classic natural monopoly.\textsuperscript{166} Duplication of facilities on any scale would be both economically and aesthetically wasteful.\textsuperscript{167} Yet, the pervasive vertical integration of the industry, and the fact that transmission capability is a prerequisite to wholesale power transactions, have artificially chilled both wholesale and retail competition.\textsuperscript{168} In other words, due to present ownership patterns, the natural monopoly characteristics of electric power transmission have had an unnaturally anticompetitive impact on wholesale and retail power sales. It has been noted that "on balance, the major factor limiting the development of wholesale competition, given the effect of vertical integration, is the widespread industry attitude of unwillingness to offer wholesale firm power outside existing service areas."\textsuperscript{169} Failure to break the pattern of private transmission

\textsuperscript{159} Weiss, supra note 66, at 138.
\textsuperscript{160} Meeks, supra note 22, at 81–82.
\textsuperscript{161} Weiss, supra note 66, at 139.
\textsuperscript{162} Id. at 139–40.
\textsuperscript{163} Id. at 145.
\textsuperscript{164} Id.
\textsuperscript{165} Id.
\textsuperscript{166} Id. at 144.
\textsuperscript{167} Id. at 139–40.
\textsuperscript{168} Id. at 87.
\textsuperscript{169} Id. at 86.

Under present circumstances, the system that controls transmission controls wholesale power in the area, and it is usually the large, vertically integrated, investor-owned system that retains this control. These large systems generally maintain their position as the only source of wholesale power to smaller systems within the area by refusing to 'transport' power from potentially competing sources to the region's wholesale purchasers.

\textit{Id.}

\textsuperscript{169} Fairman & Scott, supra note 48, at 1172.
facility ownership will hinder future competitive impulses in the industry.

The transmission bottleneck can be mitigated or eliminated in three ways. One solution is to require separate ownership and control at each level of the industry.\(^\text{170}\) Divestiture is a drastic remedy, however, with no guarantee that the desired benefits would outweigh the costs of rebuilding the industry.\(^\text{171}\) A practical alternative is to designate transmission facilities as common carriers and thus require that they be made available to all to the extent that excess capacity exists.\(^\text{172}\) This is not a new idea—as originally conceived, the Federal Power Act contained a common carrier provision for transmission facilities.\(^\text{173}\) "When one views the transmission function as simply that of the long-distance carrier in the electric power industry, equivalent to railroads or trucks in other industries, it is not difficult to conclude that the same rules should apply."\(^\text{174}\) The third and least disruptive solution is to utilize FERC’s powers to order interconnections and wheeling to assure that transmission facilities would function as true conduits for power. The major drawback to this approach is its burdensome procedural requirements. Only those willing to endure administrative proceedings will obtain results, and then only if FERC makes the requisite findings.\(^\text{175}\)

c. Distribution. Commentators disagree as to the status of competition in the retail distribution market. According to one view, distribution, like transmission, is considered a natural monopoly.\(^\text{176}\) Competition, such as that between CEI and MUNY, is considered impracticable because of enormous inefficiencies created by duplicate facilities.\(^\text{177}\) In contrast, one analyst presents empirical data to show that the presence of competition in the retail distribution market has caused utilities to operate at lower average cost levels.\(^\text{178}\) While this downward effect on average cost was somewhat offset by the fact that marginal costs were higher

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170. Meeks, supra note 22, at 87.
171. Id.
172. Id. Public ownership of transmission facilities offers an alternative possibility. Weiss, supra note 66, at 145.
173. See supra notes 63–65 and accompanying text.
174. Meeks, supra note 22, at 89.
175. See supra notes 83–85 and accompanying text.
176. Meeks, supra note 22, at 100.
177. Id. at 94.
178. Primeaux, supra note 48, at 192.
for competitive firms than for noncompetitive ones, the ultimate effect was that added competition steepened the total cost curve. The study concluded that competition provided tangible cost benefits at relatively lower levels of output.

Most authorities agree, however, that the greatest potential benefits result from yardstick competition. The presence of a comparative standard acts as a check on the "necessarily less-than-perfect regulatory control exercised by the responsible agencies." The efficacy of yardstick competition depends on the survival of smaller firms, whose survival, in turn, depends on gaining access to economies of scale enjoyed by the larger firms. Thus, the transmission bottleneck becomes relevant at the distribution level. Only by freeing transmission facilities from present ownership patterns will retail electric power distribution remain competitive.

D. The Assumption of Effective Regulation

Along with the natural monopoly assumption is the equally ingrained assumption that government regulation effectively prevents monopoly prices and output. This section of the Note exam-

179. Id.
180. Id. at 194. The author noted:

While it is perhaps correct that monopoly firms could, ceteris paribus, produce at lower costs than competitive firms, the present data show that they sometimes fail actually to do so. . . . To the extent that competition results in a net cost advantage over monopoly within some output range, however, policy must be based on actual rather than possible cost levels.

Id. at 195-97 (emphasis in original).
181. See supra notes 73-74 and accompanying text.
182. Meeks, supra note 22, at 77.
183. The present trends in the electric power industry decrease the effectiveness of yardstick competition as a measure of efficiency. Meeks, supra note 22, at 78. The nature of electric power generation is such that increased size brings about a concomitant increase in economies of scale. Such economies dictate that it is in the public interest to demand growth. Id. at 74. Yet, creation of new generating capacity produces excess capacity for the firm installing the new system, since demand grows at fairly constant rates. Id. at 75. In order to take full advantage of economies of scale, firms can do three things: (1) less efficient generating firms can purchase power wholesale from the larger, more efficient firms; (2) firms can join power pools to plan new generation facilities; or (3) firms can merge into giant utilities for the same purpose. Id.
184. Fairman & Scott, supra note 48, at 1162-63.
185. Meeks, supra note 22, at 79. "Proliferation of ownership is essential to yardstick competition, and there may be great merit, in order to hold each system's monopoly power in check, in protecting systems from unfair practices and trying to give all systems access to pools or competitive sources of wholesale power." Id. Indeed, "[t]he availability of such services, either by voluntary action or under pressure of law or public policy, is the cutting edge of competition's knife." Fairman & Scott, supra note 48, at 1173.
ines this second assumption in the context of the CEI litigation, and discusses several theoretical and practical criticisms of regulatory effectiveness. The picture painted by critics shows that the assumption of regulatory effectiveness is at best questionable and at worst patently incorrect.

1. Assumed Effectiveness

In CEI, the utility defended against the City's monopolization charge by claiming that regulation negated the inference of monopoly power from a large market share. Such a defense necessarily hinges on the validity of the assumption of regulatory effectiveness. In the CEI litigation, however, the validity of the assumption was not questioned. Instead, the court charged the jury: "In considering the effect of regulation upon CEI's power to control prices, the Court instructs you that you must assume that the specific authority of the [Public Utility Commission of Ohio] to regulate rates as I have explained that authority [sic] to you was properly and effectively exercised." 186

2. Criticisms of Regulation

Criticism of the assumption of regulatory effectiveness emanates from the entire political/economic spectrum, and reaches consensus on one point: "[T]he alphabet regulatory agencies are at best ineffectual and at worst counter-productive." 187 Moreover, "[m]ost regulated industries have become federal protectorates, living in a cozy world of cost-plus, protected from the ugly specters of competition, efficiency and innovation." 188

Lack of resources is a major cause of regulatory ineffectiveness. 189 For example, the Utah Public Service Commission, a typical state regulatory body, "has no economists, no auditors, no hearing examiners or administrative law judges, no rate analysts, no public utilities specialists, no environmental specialists, and no public relations specialists." 190 This regulatory incapacity is magnified by the wealth of expertise at the disposal of private utilities. Another phenomenon drains regulatory vigor: regulators, after extended exposure to an industry through the regulatory process,

186. Record at 19,204-05 (emphasis added).
188. Id. § 4.10 (quoting Wall St. J., Oct. 9, 1974, at 1, col. 1).
190. Id.
tend to sympathize with the industry point of view, despite their statutory obligation to represent the public interest. A third malady is "regulatory lag"—the interval of months or even years over which rate cases extend. During a period of decreasing industry costs, the lag often means excess profits for utilities. During inflationary periods, however, the lag adversely affects the industry.

More fundamental criticisms of regulation question its use in theory. For example, critics charge that regulation is wasteful and inefficient. While competition creates an incentive to reduce costs, regulation has the opposite effect. Since a firm's earnings depend on its capital investment or "rate base," it will be eager to invest. Improved technology reduces costs and further presses firms to spend increasing amounts on research and development to sustain high profits. The result is a negligible incentive to economize. In fact, regulatory lag may provide the sole incentive to improve firm technology, and even then, only in periods of increasing industry costs. Critics also have charged that due to its sheer complexity, the electric utility industry defies regulation. Moreover, regulation may be crippled by the lack of a standard for setting rates. "It is particularly difficult for regulation to ensure efficiency and progressiveness because the benchmarks supplied by competitive firms in comparable positions are typically absent."

Two empirical studies of regulatory effectiveness reveal additional weaknesses in the system. The first study focused on the impetus for state regulation and concluded that the evidence supported a "positive theory of regulation"—that regulators are

191. Id. at 796.
192. Id.
193. Id.
194. Id. at 797.
195. Id. In Smyth v. Ames, 169 U.S. 466 (1898), the Supreme Court held that calculations to determine the reasonableness of rates must be based on the "fair value method." Most states adopted this standard for their own ratemaking procedures. In FPC v. Hope Natural Gas Co., 320 U.S. 591 (1949), the Court overruled Smyth, holding that no specific formula need be used and outlining several factors as key ratemaking considerations. Note, supra note 189, at 793-94.
196. Note, supra note 189, at 797-98.
197. Id. at 798.
198. C. Kayser & D. Turner, supra note 49, at 192. Utility commissions can make yardstick comparisons between neighboring firms, but not with any degree of precision, since situations in other firms usually vary significantly. Id.
199. See supra notes 87-99 and accompanying text.
200. Jarrel, supra note 87, at 293.
"captured" by the regulated and serve private industry instead of the public interest. According to the positive theory, "regulation is demanded when it can confer upon the politically powerful interest group some benefit or advantage that the group could not secure as cheaply on its own." Applied to the electric utility industry, this suggests that "if producers were politically more effective than consumers in dealings with state regulators, competitive electricity markets would generate the greatest demand for state regulation."

To test the positive theory, the study, which covered several states, examined data from 1912, the eve of state regulatory legislation. The data was run through an economic model in which high prices and profit margins before regulation support a proconsumer theory, while low prices and profits support the positive theory. The results indicated that preregulation prices in states which first regulated utilities were considerably lower than in states which regulated much later. After regulation was instituted in the early-regulated states, prices and profits rose to levels approaching those in the later-regulated states. The study thus supports the proposition that competitive electricity markets created the demand for state regulation because utilities could reap higher profits in a regulated setting, not because competition was inherently unworkable or duplicative.

A second study analyzed the effectiveness of regulation with regard to controlling monopoly power and eliminating price discrimination. The study concluded that regulation had no significant effect on the average level of rates. As for the structure of rates, assuming that regulation was effective, the authors of the study expected to find a reduction in rates for domestic consumers of small amounts of electricity because of the potential political popularity of low rates. The authors also compared charges to domestic and industrial users in regulated and unregulated states,

201. Id. at 280.
202. Id. at 281.
203. Id. at 282.
204. Id. at 286–87.
205. Id. at 287. "Taken together, the evidence on price, output, and profit seems more consistent with the hypothesis that state regulation was in greatest demand, and thus was established earliest, in states with the more competitive markets for electricity." Id. at 289.
207. Id. at 8.
208. Id.
expecting to find lower rates for domestic users in regulated states.\textsuperscript{209} In both cases, however, the data belied the expectations—regulation had no discernable effect.\textsuperscript{210}

The study traced regulatory ineffectiveness to two factors. First, individual utilities did not possess long-run monopoly power,\textsuperscript{211} but instead faced competition from alternative energy sources and rival utility systems.\textsuperscript{212} Second, the regulatory bodies were "incapable of forcing the utility to operate at a specified combination of output, price, and cost."\textsuperscript{213} The study concluded that the basis for regulation was the assumption that without government intervention firms would exercise exorbitant monopoly power.\textsuperscript{214} Were that assumption true, regulation might have had a tangible effect. Electric utilities, however, do not possess such power.\textsuperscript{215}

Given the questionable validity of the dual assumptions of regulation, the need for both antitrust and regulation is apparent. Since regulation has failed to prevent monopoly pricing and output in the industry, antitrust should step in. Yet regulation must be preserved to eradicate monopoly power at the transmission stage—the only stage to exhibit true natural monopoly characteristics. Thus, the controlling hand of regulation and the invisible hand of free market competition must work together to ensure an efficient, responsive electric utility industry.

III. VISIONS OF THE FUTURE: REGULATION AND ANTITRUST RECONCILED

By Supreme Court mandate, both antitrust and pervasive state and federal regulation apply to the electric utility industry.\textsuperscript{216} The challenge is to reconcile the apparently conflicting goals of each in some workable fashion, or to determine which goal is to prevail. Given the industry structure,\textsuperscript{217} the regulatory schemes,\textsuperscript{218} and the

\textsuperscript{209} Id. at 9.
\textsuperscript{210} Id. at 8–9.
\textsuperscript{211} This observation supports the stance of other commentators who have disputed the basic assumption that the electric utility industry is a natural monopoly. See supra notes 155–85 and accompanying text.
\textsuperscript{212} Stigler & Friedland, supra note 206, at 11.
\textsuperscript{213} Id. at 12.
\textsuperscript{214} Id.
\textsuperscript{215} Id.
\textsuperscript{216} Otter Tail, 410 U.S. at 372–75.
\textsuperscript{217} See supra notes 41–46 and accompanying text.
\textsuperscript{218} See supra notes 47–99 and accompanying text.
questionable validity of the assumptions underlying regulation,\textsuperscript{219} neither goal should prevail. Instead, practical, positivist considerations dictate that both policies should guide the industry. Yet, certain normative assumptions must also enter the equation which will shape the industry's future.

Any assertion that electric utilities are immune from antitrust attack due to the recent broadening of the federal regulatory scheme contravenes the express intention of Congress that the new provisions be neutral in their effect on antitrust law.\textsuperscript{220} Moreover, espousal of increased regulation ignores the pervasive theoretical and practical difficulties in the regulatory process outlined above. Heightened regulation would only create inefficiencies and thus higher costs for the consumer.\textsuperscript{221}

Nevertheless, the inability of federal and state agencies to regulate the electric power industry at price and output levels found only in a theoretical model of perfect competition does not mandate massive repeal of regulatory authority. While the characteristics of the industry do not support the pure natural monopoly theory that originally fostered regulation,\textsuperscript{222} there are aspects of the industry, particularly the transmission function, that exhibit a need for control.\textsuperscript{223} Total deregulation would realize the worst fears of those who recognize that the transmission function is a true natural monopoly. Applying antitrust to the transmission function would also miss the mark, however, by imposing a competitive structure upon a phase of the industry which can efficiently support only one participant.\textsuperscript{224}

Normative assumptions about the future of the electric utility industry harken back to the original goals of antitrust policy. "[A]ntitrust is firmly anchored in Jeffersonian socio-political commitments which form part of the broad philosophical statement justifying the Sherman Act's intrusion into the marketplace."\textsuperscript{225} One commitment was that competition was a desirable end in itself.\textsuperscript{226} When competition serves as a legitimate end as well as a means to efficient resource allocation, its preservation is doubly important.

\textsuperscript{219} See supra notes 149-215 and accompanying text.
\textsuperscript{220} See supra note 126.
\textsuperscript{221} See supra notes 187-215 and accompanying text.
\textsuperscript{222} See supra notes 47-49 and accompanying text.
\textsuperscript{223} See supra notes 155-85 and accompanying text.
\textsuperscript{224} See supra note 49 and accompanying text.
\textsuperscript{225} Austin, The Emergence of Societal Antitrust, 47 N.Y.U. L. Rev. 903, 904 (1972).
\textsuperscript{226} C. Kayser & D. Turner, supra note 49, at 14-16.
The future of the electric utility industry can be characterized by one word—bigness. Economies of scale in power generation are seemingly infinite, and consumer needs are certain to grow steadily.\(^2\) The optimum efficiency outlook is one of massive generation facilities, huge power pools, and perhaps colossal mergers.\(^2\) The dual functions of competition, the synthesis of conflicting antitrust goals, is apparently unworkable here. Industrial giantism breeds concentration of wealth and power, and the normative function of competition is brushed aside.

Perhaps this is the proper result in an industry of such national importance. For some, socio-political niceties are merely bothersome and ephemeral roadblocks in the path of ultimate efficiency. But for others, competition for its own sake is no insignificant goal. Smaller electric utilities are more likely to respond to consumer and local interests and less likely to wield overbearing political influence.\(^2\) Firms of equal size allow for effective comparison, and thus more efficient regulation.\(^2\) Finally, the presence of numerous firms permits diversity, experimentation, and healthier development.\(^2\)

Satisfying the conflicting desires for competition and efficiency in the electric utility industry may be possible. The key is altering the transmission bottleneck,\(^2\) whether by forced separate ownership,\(^2\) declaration of common carrier status,\(^2\) or vigorous use of FERC's interconnection and wheeling authority.\(^2\) As a middle path between disruptive industry reorganization and haphazard assertion of regulatory authority, granting the transmission facility common carrier status is the best approach.\(^2\) This would allow free access to the transmission level, thus encouraging efficiency and competition. By giving smaller firms a choice between buying wholesale power from a variety of efficient generation sources and forming power pools with similarly sized utilities, common carrier status would enable utilities to provide both efficient and responsive service to customers.

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227. See supra note 183.
228. Id.
229. Meeks, supra note 22, at 80.
230. Id. See supra notes 181–85 and accompanying text.
231. Id.
232. See supra notes 166–75 and accompanying text.
233. See supra notes 170–71 and accompanying text.
234. See supra notes 172–74 and accompanying text.
235. See supra note 175 and accompanying text.
236. See supra text accompanying notes 170–75.
IV. Conclusion

This Note shows through analysis of monopoly power that antitrust has an essential function in the electric utility industry. As CEI illustrates, working with the monopoly power concept in the regulated utility context is quite difficult.\textsuperscript{237} Indeed, scrutiny of the concept in this setting challenges the soundness of the assumptions that the industry is a natural monopoly and that regulation is effective in preventing monopoly prices and output levels.\textsuperscript{238} The electric utility industry, while traditionally characterized as a natural monopoly by legislators, is potentially competitive at the generation and distribution levels.\textsuperscript{239} The realization of such competition, however, depends upon clearing the transmission bottleneck.\textsuperscript{240} In addition, the longstanding assumption of the effectiveness of regulation, exemplified by the jury instructions in \textit{CEI},\textsuperscript{241} is suspect.\textsuperscript{242} For both practical and theoretical reasons, regulation has had only minimal success in replacing traditional market controls.\textsuperscript{243}

As a result of the inadequacies of regulation, antitrust policy has a vital role to play in the electric power industry—to shield consumers from the heavy hand of monopoly power. This Note, however, does not support massive repeal of electric utility regulation. Rather, regulation designating transmission facilities as common carriers is critical to clearing the transmission bottleneck and promoting competition and efficiency.\textsuperscript{244} Thus, antitrust and government regulation, although seemingly conflicting in their aims, can and must continue to coexist in the electric utility industry.

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\textsuperscript{237} See supra notes 117–48 and accompanying text.
\textsuperscript{238} See supra notes 149–215 and accompanying text.
\textsuperscript{239} See supra notes 149–85 and accompanying text.
\textsuperscript{240} See supra notes 155–85 and accompanying text.
\textsuperscript{241} See supra text accompanying note 186.
\textsuperscript{242} See supra notes 187–215 and accompanying text.
\textsuperscript{243} Id.
\textsuperscript{244} See supra notes 232–36 and accompanying text.