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Transmission, Power Pools, and Competition in the Electric Utility Industry

By James F. Fairman* and John C. Scott**

Introduction

Congress has declared that the business of transmitting and selling electric energy for ultimate distribution to the public is affected with a public interest, and Federal regulation . . . of that part of such business which consists of the transmission of electric energy in interstate commerce and the sale of such energy at wholesale in interstate commerce is necessary in the public interest.1

The Federal Power Commission has been charged with the responsibility of promoting and encouraging interconnection and coordination to assure "an abundant supply of electric energy throughout the United States with the greatest possible economy and with regard to the proper utilization and conservation of natural resources."2 The Federal Power Act,3 the Atomic Energy Act,4 and the so-called "preference" laws relating to the marketing of federal power5 all bear on the question whether and to what extent transmission of electric energy and power pooling can be a matter of private agreement or public mandate. Competition, coordination, and regulation all play a role6 in the nation's

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2. Id. § 824a(a) (1970).
5. A list of federal preference statutes is set forth in note 110 infra.
6. See D. Penn, J. Delaney & T. Honeycutt, Coordination, Competition, and Regulation in the Electric Utility Industry (1975) (unpublished, unofficial report pre-
largest industry which "provides essentially one single standard product—
electric power on instant demand."  

Background of the Problem

The structure, growth, technological changes, and future trend of
the electric utility industry have been thoroughly examined by the FPC
in its national power surveys of 1964 and 1970. Two of these ele-
ments—structure and technology—are of specific importance to the
subject under consideration. Access, by agreement or mandate, to
power pools and transmission services directly affects the traditional
marketing practices within the industry structure.

In its 1964 survey, the FPC emphasized the national concern that
planning and construction of generation and transmission facilities be
carried forward by all segments of the industry as part of the develop-
ment of large, coordinated power networks to gain the economies of
scale and the advantages of load diversities, declaring:

These considerations point up the Nation's interest in encouraging
every power generating system to look far beyond its own service
areas in its planning of new capacity and of interconnections for
capacity savings. . . . The Nation can afford no less.

However, the 1964 survey acknowledged that the industry's
pluralistic institutional structure inhibits the goal of coordinated op-
erations, since

rivalries and controversies between segments of the industry
[have] frequently resulted in economically meaningless boundaries
for utility system planning and operation which undoubtedly cost
the power consumers of this country millions of dollars every year
in wasted opportunities for cost reduction.
The survey identified areas of controversy in the industry, including "territorial integrity" of retail marketing areas, yardstick competition afforded by public power programs, dissimilarities in tax, financing and earning requirements, and statutory preference to public and cooperative power distributors in the sale of federal power. The FPC felt these problems were not "insuperable barriers," declaring that "[t]he opportunities afforded by our technology are not the special province of any segment of the industry."12

This juxtaposition of a declared national policy—shared technology—and the countervailing rivalries within the institutional structure of the utility industry13 is the background against which to examine the role of power transmission and pooling. The issues to be addressed are: (1) how do systems obtain and coordinate power supplies; (2) how do existing federal laws, policy, and regulatory supervision relate to power pools and transmission services; and (3) what lies ahead—is the availability of transmission and power pool services to be a private contractual matter or an obligation required by national objectives?

The Need for Competition

Before examining whether existing pooling and transmission arrangements allow sufficient competition in the electric utility industry, it is important to consider whether real competition is feasible or desirable. Because the electric power industry is subjected to considerable regulation,14 it has been argued that there is no possibility of competition.15 However, the feasibility of competition in the electric utility in-

12. Id. A comparable view has been codified in the Atomic Energy Act, which declares the policy of the United States to be "the development, use and control of atomic energy" so as to "improve the general welfare, increase the standard of living, and strengthen free competition in private enterprise." 42 U.S.C. § 2011(b) (1970). The Nuclear Regulatory Commission has stated the act's intention to be "that the original public control should not be permitted to develop into a private monopoly. . . ." Louisiana Power & Light Co., 6 A.E.C. 619, 620 (1973).


15. "[C]ertain industries were originally subjected to government regulation in the belief that effective competition was neither economically feasible nor socially de-
Industry has been demonstrated. While opportunities to compete for residential and commercial retail customers are almost entirely limited to an occasional new housing development or shopping center accessible to two or more utilities, \(^{16}\) competition for retail industrial customers is not at all uncommon. \(^{17}\) More significant for purposes of this study is the feasibility of competition at the wholesale level—in the sale to other utilities of the several types of power supply services whose exchange is essential to realization of the economies associated with interconnection and coordination of systems.

Another type of competition capable of serving the public interest through efficient use of resources has been called "yardstick" competition. This term is meant to identify the competitive pressure felt by a utility as a consequence of lower rates or superior service of a neighboring utility even when the two systems are legally or practically prevented from competing for customers. \(^{18}\) Its survival depends to

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16. Two commentators disagree with the prevailing view that there could be no competition in distribution, and discuss the values in those cities served by two competing distribution utilities. See Primeaux, *A Reexamination of the Monopoly Market Structure for Electric Utilities*, in *Promoting Competition in Regulated Markets* 175 (A. Phillips ed. 1975); Hellman, Government Competition in the Electric Utility Industry of the United States (1966) (on file with the authors).

17. Most industrial competition is an attempt to attract industries to an area. Industries that use vast amounts of electricity may locate in or relocate to areas providing low cost electric power. Industries with lower electrical needs, however, comprising the vast bulk of utility customers, do not, as a rule, make locational decisions on the basis of the availability of more or less expensive energy. Pace, *Relevant Markets and the Nature of Competition in the Electric Utility Industry*, 16 *Antitrust Bull.* 725, 734-44 (1971).

18. Three types of electric utilities distribute electricity at retail: investor owned utilities, local publicly owned utilities, and rural electric cooperatives. The 405 investor owned utilities range from the largest to the smallest in the nation. Two hundred of the largest own and operate more than 75% of the generating capacity and serve about 80% of the customers in the country. Local publicly owned electric utilities include state chartered public utility districts, often coinciding with county lines, and municipally
some degree on survival of small systems, especially municipally and cooperatively owned systems. Technological advancement has allowed large systems to take advantage of economies of scale, often to the disadvantage of their smaller neighboring utilities. Application of antitrust principles to insure access to economies of scale and technology offer small systems an opportunity to survive and provide the industry with the stimulus of competition by comparison. Lower rates of municipal and cooperative systems have frequently encouraged investor owned electric utilities to reduce their rates, partially to prevent their retail customers from voting to establish a municipally owned electric utility. Thus, the freedom of a political choice as to the nature of the serving utility has encouraged the type of increased con-

owned electric utilities. They generate approximately 9% of total industry production and serve about 13% of retail customers. Most of the municipally owned electric utilities are small, distribution-only utilities, with 75% serving cities with populations of under 10,000. Rural electric cooperatives range from less than 100 members to as many as 35,000. They serve approximately 4.5% of retail electricity consumers and generate about one percent of the national total. 1970 POWER SURVEY, supra note 7, pt. II, ch. 2, at 3-5.

19. The advisability of continuing small systems has been disputed. Inefficiencies of operation, waste, and expensive duplication of effort are potential hazards to a purely local utility. A classic example of the problems inherent in the operation of a municipal utility arose when the village of Elbow Lake, Minnesota decided to pull out of the regional network, run by the Otter Tail Power Company, and establish its own system. Otter Tail at first refused to deal with the new company. The FPC ultimately ordered the larger utility to interconnect with the new local, but commented: "[W]e cannot disagree with the Examiner's view that Elbow Lake has engaged in 'an ill-advised excursion into the power business.' Given the facts of record before us, it is plain that Elbow Lake's effort has not brought it the rewards it expected; indeed, its first year of operations, during which it perpetuated the rates formerly charged by Otter Tail, resulted in a financial loss. Unlike Otter Tail's earlier service to Elbow Lake, Elbow Lake's own system is of doubtful reliability, as evidenced by its presence before us now . . . All who have been involved—Otter Tail, Elbow Lake, and the customers of each—have been the losers. While it is our responsibility to take all possible steps to insure to Elbow Lake's customers a high standard of service reliability, our terms and conditions must not invite improvident ventures elsewhere." Village of Elbow Lake v. Otter Tail Power Co., 46 F.E.P. 675, 677-78 (1971), quoted in Otter Tail Power Co. v. United States, 410 U.S. 366, 393-94 (1973) (Stewart, J., dissenting).

20. Competition between local publicly owned electric utilities and investor owned systems sometimes leads to attempts by the nearby investor owned utility to purchase the local system or to attempts by cities to purchase investor owned facilities and establish municipal systems. There were seventy-two takeovers of municipal systems and twenty-three new municipal systems formed between 1960 and 1969. The threat of public ownership or examples of lower cost public ownership has encouraged lower electric rates in a number of cities served at retail by investor owned electric utilities. See Hellman, Government Competition in the Electric Utility Industry (1966) (on file with the authors); Meeks, Concentration in the Electric Power Industry: The Impact of Antitrust Policy, 72 COLUM. L. REV. 64 (1972) [hereinafter cited as Meeks].
sumer benefits that are the purpose behind the national economic policy favoring competition.

Ability to compete is directly related to ability to minimize cost. By far the largest portion of an electric utility's costs are incurred in procuring bulk power supply. A utility may obtain bulk power supply by constructing its own generation and transmission facilities, by joining with other utilities to construct generation and transmission facilities, or by purchasing power from another utility.21

While a large utility can realize economies of scale by building a generating unit to serve only its own needs, small utilities must rely on less efficient and less economical small generating units if they build to serve their own needs. They can, on the other hand, realize both cost and reliability benefits through interconnection of transmission facilities, pooling of generation facilities, and regional coordination and planning. However, it is difficult for many small utilities to obtain access to these cooperative activities.22

A competitive problem may also arise when utilities which are unable to obtain benefits of power pooling seek to purchase power at wholesale from other utilities. When a wholesale supplier is dominant in an area, a purchaser is limited in choice of suppliers unless the dominant supplier will agree to transmit electric power from another source. If he will not so agree, the purchaser may be forced to accept contractual restrictions or wholesale prices that thwart its future ability to compete with the wholesale supplier.

Thus, the small system problem of access to low-cost bulk power supply is most easily met by allowing utilities access to power pools or to transmission services. The former would permit joint ownership and decisionmaking. The latter would permit a choice among wholesale suppliers.

**Electric Power Transmission:**

**Will the Function and Service Become an Obligation?**

**An Essential Function**

Transmission is one of the three distinct functions in supplying

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21. Meeks suggested three methods of taking advantage of economies of scale: (1) smaller utilities could discontinue generation and purchase from a few large generating utilities; (2) systems could jointly construct generation and transmission facilities; or (3) all utilities could merge to form a few giant utilities. *See Meeks, supra* note 20, at 75.

22. Utilities of like size tend to plan together because of anticipated mutuality
electricity to the ultimate consumer, the other two being generation and distribution. Transmission is defined as the “transportation of electrical energy at high voltage from generating plants to bulk delivery points” over transmission lines. A large group of such facilities is generally referred to as a transmission system. A transmission system's purpose is to augment, integrate, or tie together sources of power supply. If utility systems are interconnected (or “intertied”) and coordinate their power supply operations to serve their combined loads, such cooperation is described as a power pool.

Transmission—transportation of energy—when provided by utility A to move energy produced by utility B for utility C is sometimes described as “wheeling.” Thus wheeling, as contrasted with the electrical process of transmission, includes the concept of service performed for another by the owner of transmission facilities. When reduced to contractual terms such service will be circumscribed by limitations on the quantity of power or energy wheeled, the period during which service will be rendered, the compensation to be paid the utility providing the service, and the points of receipt from and delivery to the utilities involved in the transaction.

of benefits. See, e.g., Hearings on Electric Power Reliability Before the Subcomm. on Communications and Power of the House Comm. on Interstate and Foreign Commerce, 91st Cong., 1st & 2d Sess., pt. 1, at 261-70 (1969-70) (memorandum summarizing antitrust problems of New England electric industry) [hereinafter cited as Power Reliability Hearings]. It should be pointed out that, since these hearings were held, and after much litigation and negotiation, the various segments of the New England power industry have joined into a common power pool.

23. See Penn, Delaney & Honeycutt, supra note 6, at 1; 1964 POWER SURVEY, supra note 8, at 12.

24. 1964 POWER SURVEY, supra note 8, at 12.

25. If several systems are interconnected at high transmission voltages the complex is often described as an area or regional network or grid. A bulk delivery point is an electrical connection either to a distribution center (or load center) or a wholesale delivery point. The term “wholesale delivery point” refers to an electrical tie to interconnect one utility with another's transmission lines or distribution system. “Distribution point” is used more specifically to describe a point of power delivery into the distribution system of the utility owning the transmission line or lines so connected (i.e., vertically integrated).


28. “Transportation of electricity by a utility over its lines for another utility also includes the receipt from and delivery to another system of like amounts but not necessarily the same energy.” Id. at 8.

29. By way of example: utility A (seller) and utility C (buyer) do not have a transmission line directly connected to each other; an electrical path is available
These parameters are separate and distinct from the electrical behavior accompanying interconnected utility system operation. As the FPC has correctly observed, a transmission system or grid "does not differentiate between types of power from the point of view of physics"; rather, such distinction is made by contract. Thus transmission is the functional integration of the production of electricity (generation and its distribution to consumers; the contractual arrangement whereby energy is transported for others—suppliers or purchasers for resale—is denominated as transmission service or, alternatively, wheeling.

A Strategic Service

The pluralistic structure of the electric utility industry, in terms of geography and buyer-seller relationships, typically follows a pattern involving a relatively large and vertically integrated utility serving an extensive geographic area. Within that area are several smaller systems—private, cooperative, or municipal—existing as "islands" within the larger systems' sphere of operation. Frequently, such small systems are purchasers at wholesale from the vertically integrated system. Constituting the bulk of this group of island systems are the approximately 70 percent of the utility systems in the industry which operate solely as distributors. The 1964 National Power Survey acknowledged that the "strategic importance of transmission" more than justifies its expense. It is the interconnection of such facilities among utility systems which makes possible the most efficient use of area or regional power supply facilities. The need for such coordination is not restricted to major utility systems.

through utility B's transmission system. B, the intervening utility, will prescribe the conditions under which it will transport energy from A to C. Use of the nonstatutory term "wheeling" has been criticized as introducing ambiguities. See, e.g., Western Mass. Elec. Co., 39 F.P.C. 723, 756-58 (1968) (White, J., concurring). It implies a point-to-point transfer, drawing on analogies to the transportation industry where the service rendered is physical movement. Electric energy in utility system operations is not functionally analogous, but can be contractually described.

32. 1964 Power Survey, supra note 8, at 27. In 1962 transmission represented 9.9% of the actual cost of electricity to the ultimate consumers. Id., Table 7, at 26. In 1968 this figure had risen to 13%. 1970 Power Survey, supra note 7, Table 1.8, pt. I, ch. 1, at 34.
33. 1964 Power Survey, supra note 8, at 27.
34. Id. at 170.
The stated prerequisites for full coordination are (1) the existence of adequate “transmission line interties and associated equipment to permit an uninterrupted and economic flow of electric energy throughout the electric network,” and (2) “intersystem planning and the formulation of agreements between the interconnected systems to take full advantage of all of the economic opportunities for the construction and operation of facilities that will result in the lowest overall cost of power, with equitable sharing of costs and benefits.” The two foregoing prerequisites can be conveniently described as the electrical path and the contractual path, respectively. To perfect and perform any proposed transaction there must be available both an “electrical path” and a “contractual path” linking buyer and seller. The former presumes the existence of transmission facilities and interconnections of sufficient electrical capacity to accommodate the desired transportation and delivery of energy. The latter presumes the contractual authorization of the utility owning the transmission lines over which the transfer is to occur. The FPC has been careful to distinguish electric facilities (generation and transmission) to be operated under interconnected conditions from marketing and pricing policies which utilities “may adopt in selling electric power and energy in bulk at the wholesale level.”

The availability of transmission services circumscribes the market place to which willing buyers and sellers can look to insure reliable and efficient operation of their utility system, and transmission line ownership can be “crucial in determining the competitive possibilities of the industry.” If the seller is also the transmission facility owner, then the willingness to sell includes the willingness to make the transmission facilities available for the transfer and delivery to the buyer. It is typical, in this situation that the buyer and seller both market power at retail in contiguous or overlapping areas. Thus, the seller, utility A, participates in a market in which it is both supplier at retail and supplier at wholesale for its buyer and retail competitor.

35. Id. at 169. FPC and judicial analysis of costs and benefits as related to interconnection and utility responsibilities were set forth in Gainesville Utils. Dep't v. Florida Power Corp., 40 F.P.C. 1227 (1968), aff'd, 402 U.S. 515 (1971), rev'd 425 F.2d 1196 (5th Cir. 1970).


37. Weiss, supra note 9, at 145.

38. See Conway Corp. v. FPC, 510 F.2d 1264 (D.C. Cir. 1975), aff'd, 426 U.S. 271 (1976). It is exactly this result—wheeling for a competitor in order to obtain retail competition in electricity—which is sought by the National Retail Merchants As-
If, on the other hand, the buyer, utility $B$, is able to arrange for a power supply purchase from more distant utility $C$, or for participation in a generation project with $C$, the buyer must secure wheeling across $A$'s intervening transmission facilities in order to have a contractual path for the transfer and delivery of this power and energy. Should utility $A$ decline to wheel, utility $B$ would be foreclosed from proceeding with the intended $B$-$C$ transaction.\textsuperscript{39} Should utility $A$ agree, but offer $B$ the transmission services under terms and conditions so as to eliminate any prospective economic advantage to $B$ contemplated in the transaction with $C$, the result will be the same.\textsuperscript{40} Utility $B$ must continue to rely on $A$, unless $B$, or $B$ and $C$ together can economically justify the construction of its (their) own transmission facility to accomplish the transaction. It is in this area—the contractual path—that the rivalries and controversies which persist within the pluralistic institutional structure of the electric utility industry operate to erect economically meaningless boundaries, wasting opportunities for cost reduction.

**Power Pools and Interconnected Operations**

As "the coordinating medium"\textsuperscript{41} of adjoining systems, transmission facilities necessarily serve also as the indispensable means by

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\textsuperscript{39} See, e.g., Otter Tail Power Co. v. United States, 410 U.S. 366 (1973); Village of Elbow Lake v. Otter Tail Power Co., 46 F.P.C. 675 (1972); City of Paris v. Kentucky Util. Co., 41 F.P.C. 45 (1969); Power Reliability Hearings, supra note 22, at 261-70. One problem besetting small utilities is the inability of utilities without transmission facilities to participate in large generating units being planned in their area. For example, Kansas rural electric cooperatives were unable to participate in planned nuclear generation facilities without assurance of peaking power to meet peak loads. Although the utilities were able to obtain assurances that they could purchase such peaking power, they were unable to obtain transmission services to deliver that power. See Electric Utility Rate Reform, supra note 38, at 1401 (testimony of Charles Ross).

\textsuperscript{40} For example, after the Supreme Court enjoined Otter Tail Power Company from refusing to wheel power for the municipal electric utility at Elbow Lake (Otter Tail Power Co. v. United States, 410 U.S. 366 (1973)), Otter Tail charged Elbow Lake five times its basic wheeling rate and twice the amount the company charged other utilities for a combination of transmission services. For a discussion of the Otter Tail-Elbow Lake history, see Brief for Petitioners at 2-12, Village of Elbow Lake v. FPC, Civil Nos. 74-2099, 74-2100 (D.C. Cir., Dec. 13, 1974).

\textsuperscript{41} 1964 Power Survey, supra note 8, at 27.
which those systems transact business with each other. Effective coordination requires the purchase and sale of a variety of services such as reserve generating capacity, temporary energy for emergency and scheduled maintenance, and seasonal exchange of low-cost energy. Much of this coordination is now effected through pools of electric utility systems.

“Pool” and “pooling” are not terms of art in the electric utility industry. They are used to identify a broad spectrum of multi-utility cooperative arrangements. At one end of the spectrum are such loosely knit organizations as the Florida Operating Committee, which coordinates interconnected operations among the major systems of peninsular Florida. At the other end is a more sophisticated type of arrangement among independent operating utilities that uses “centralized economy dispatch” to conduct their physical operations as a single system. Two leading examples are the Pennsylvania-New Jersey-Maryland Power Pool (PJM) and the New England Power Pool (NEPOOL). Other groups of utilities such as the Southern System (Georgia and Alabama) or Middle South Utilities (Mississippi, Louisiana, Arkansas) are still more closely tied together as operating subsidiaries of a parent holding company.

Each of these arrangements, to be effective, requires surrender by every individual company to the group of some decisionmaking functions and hence a certain degree of independence. With FPC encouragement, electric utilities have over the last half century—and particularly since World War II—demonstrated an increasing willingness to give up a measure of their independence for the advantages of concerted planning of expansion, joint management of production and transmission, concerted allocation of supplies, and joint determination of cost and price levels.42

The economic advantages of interconnecting facilities and pooling operations with neighboring electric power systems are considerable. By calling on each other for assistance in times of emergency, interconnected or pooled systems are able to reduce significantly their capital investments in reserve generation. They are able to install larger, more efficient generating plants either by joint construction of plants

42. This readiness to compromise the hallowed free enterprise system is not restricted to the utility industry, of course. During the decade from 1965 through 1974, over five hundred business enterprises in eighty industries or product lines were convicted in federal court (some companies four or five times) of violating section 1 of the Sherman Act by voluntarily surrendering their right of independent selection of prices, customers, or markets.
or through the sale and purchase of excess production when a new large plant is constructed by a single member of the pool. Joint or coordinated planning permits optimal location and use of new generating plants for the maximum advantage of all the interconnected systems, rather than any individual utility. Properly coordinated operation permits maximum use of the most efficient generating plants, selected on a pool-wide rather than a system-wide basis. All systems benefit, in terms of customer relations, from the increased reliability of service resulting from the availability of assistance from neighboring systems. Theoretically, at least, federal and state rate regulation sees that the economies are passed along to the consumer.43

Despite the advantages listed above, however, formal power pools are not strictly necessary. Each of these advantages is available among and between systems that are simply interconnected with adequately designed and properly engineered transmission facilities. Moreover, simple interconnection for mutual assistance purposes predated the formation of formal power pools in every section of the country. Indeed, for many years transmission networks capable of handling instantaneous area-wide emergency assistance and response have tied all the major utilities in the United States together in three interconnected networks—one covering all of the United States west of the Rockies, another comprising six investor owned and three publicly owned utilities operating throughout most of Texas, and the third covering all the utility systems east of the Rockies except those in the Texas group. Not content with the reliability enhancement and cost reduction associated with mere interconnection, the power companies have turned increasingly to formal pooling agreements. These agreements establish a mechanism for controlling not merely the physical operation of interconnected systems but also the allocation, terms, and rates of their transactions with each other. By 1970, when the FPC published the later of its two national power surveys, most of the United States was blanketed by a network of twenty-one power pools (including PJM and NEPOOL) established by formal pooling agreements. These formal agreements overlap another network of thirteen "informal coordinating organizations or power pools" (including the Florida Operating Committee).44 At least one of the informal pools—Mid-Continent Area

43. For an excellent description of the technological and economic features of the industry as they pertain to the purposes and effects of competition and regulation, see Meeks, supra note 20, at 69-100.
Power Planners (MAPP Planners)—has since been converted into a formal pool known as Mid-Continent Power Pool (MAPP).  

All this has been accomplished under the spur of section 202 of the Federal Power Act. Although that section does not use the words "pool" or "pooling," it does direct the FPC "to divide the country into regional districts for the voluntary interconnection and coordination of facilities for the generation, transmission, and sale of electric energy" and "to promote and encourage such interconnection and coordination within each such district and between such districts."

Sometimes pooling is used loosely to refer to the simple interconnection of two or more systems for the purpose of mutual assistance and joint planning. Used in that sense, pooling can be considered as representing the "interconnection and coordination of facilities" encouraged by section 202 of the Federal Power Act. When used with reference to modern formal contract arrangements, however, pooling has a meaning much broader than mere interconnection and coordination of facilities. Today's pooling agreement usually includes a comprehensive program for regulating business transactions among its signatories—a concept going well beyond the sort of joint and concerted activities expressly endorsed in section 202(a).

The Access Problem

The view that "the regulatory process should take full advantage of opportunities to assist competitive forces" is consistent with the need to enhance access to power pools and transmission services. If utilities, especially those operating as islands within the operational sphere of the larger, vertically integrated systems, are to have opportunities to choose from among the bulk power supply alternatives technologically available to other systems primarily because of their size, they must have contractual access to such alternatives. Access can be made available through voluntary arrangements to provide transmission or pool services, through legislative mandate to provide such services,
or through the introduction of new competitive sources of power supply.

The question remains whether the solution to the access problem will come from the industry or the public. That present limitations to access create a problem is well known. "On balance, the major factor limiting the development of wholesale competition, given the extent of vertical integration, is the widespread industry attitude of unwillingness to offer wholesale firm power outside existing service areas."50 As was pointed out in the 1964 National Power Survey:

The interests of the small systems are a matter of vital concern in this National Power Survey. Small systems must recognize the need for obtaining their power supply from low cost sources and there must be opportunity for them to do so.51

Moreover, the same survey expressed the concern that the enhanced integration stemming from this increased transmission capability of the larger utility systems "must provide attractive sources of power for the small systems, rather than serve as a threat to their existence."52 In retrospect this assertion has a prophetic quality; by 1970, data available to the FPC showed the number of small systems operating within the industry was reduced by over 10 percent, and of the small systems still existent, approximately 30 percent of those with generation capability remained "electrically isolated from major transmission networks."53 Not only was the FPC able to conclude in 1970 that the cost gap between large and small scale generation and transmission had widened but that smaller electric systems suffered a greater economic disadvantage than was the case in the late 1950's and early 1960's.54

50. Penn, Delaney & Honeycutt, supra note 6, at 20.
51. 1964 POWER SURVEY, supra note 8, at 267 (emphasis added).
52. Id. Statements by many witnesses before the Subcommittee on Energy and Power of the House Committee on Interstate and Foreign Commerce last year made apparent that this concern is both real and unabated and the trends in industry practice do not promise relief. See ELECTRIC UTILITY RATE REFORM, supra note 38 passim.
53. In the years from 1962 to 1968 the number of small systems (peak demands of 25 megawatts or less) dropped from 3,190 to "2,842, a reduction of 348, principally as a result of acquisitions and mergers. More than 800 of the remaining small systems owned generating facilities, and 243 were electrically isolated from major transmission networks." 1970 POWER SURVEY, supra note 7, pt. I, ch. 17, at 27. "Isolated" is defined as not interconnected with a network of at least 500 megawatts of generating capacity. Of these 243 isolated small systems, 229 were publicly owned utilities and 14 were privately owned. Nearly 95% of the isolated systems are publicly owned, and operate or own more than ten times the installed capacity of the privately owned but similarly "isolated" systems. Id. at 28-29.
54. Id. Approximately two-thirds of the systems defined by the FPC in 1970 as isolated are located in seven states: Kansas (49), Nebraska (28), Illinois (23), Texas (18), Ohio (17), Iowa (13), and Florida (13). The balance is distributed among
One current manifestation of this economic disadvantage is the so-called price squeeze between the large utility supplier and the small utility. Small systems are "under constant economic pressure to improve their bulk power supply situation," and recourse to joint plans for and construction of their own bulk power systems "may result in duplication of facilities unless suitable wheeling arrangements can be worked out with neighboring, and generally competing systems."

In a nutshell, the problem is to determine what means are available to permit small systems to achieve and maintain a competitive position vis-à-vis major neighboring utilities for the electric sales to the ultimate user. Where do the opportunities lie and what are the obstacles to be overcome? The major opportunity for the small systems to obtain low-cost bulk power lies with access to power pools, transmission facilities, or the availability of transmission services. The availability of such services, either by voluntary action or under pressure of law or public policy is the cutting edge of competition's knife.

The effects of the rivalries, controversies, and prejudices in this capital intensive, pluralistic industry are felt most acutely by small systems. The electrical and contractual pathways essential to maintain the competitive position of small systems in the face of increasing economic burdens affecting the entire industry hold the key to opportunities for improving their bulk power supply.

Federal Regulation and Policy

Access to voluntarily created contract paths for bulk power is limited by the natural reluctance of the utilities to aid a competitor.

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57. Id. at 27.

58. Project financing, fuel supply, site availability, environmental considerations, and other major factors can determine the feasibility of any program for bulk power supply. But these elements imply utilization of new resources and facilities. Wheeling, on the other hand, requires only greater utilization of existing facilities.

59. In testimony submitted to a congressional subcommittee, Georgia Power Company cited the "obvious reluctance on the part of a company to help its competitors" as one objection to a legislative provision which would have required utilities to make generating capacity in new units available to other utilities in a planning area.
Present statutory mandates for industry coordination, as interpreted by the regulators and the courts, have not produced a consistent blueprint for cooperation. Legislation proposed in the last Congress, however, offered contrasting clarity and could have imposed explicit statutory obligations on the industry to transmit power.

The Federal Power Commission

Parts I and II of the Federal Power Act both contain provisions related to transmission facilities and transmission service. The principal focus of Part I is water resource utilization. In Part I of the act, Congress, under its power over interstate commerce, has authorized the FPC "[t]o issue licenses ... for the purpose of constructing, operating, and maintaining dams, water conduits, reservoirs, power houses, transmission lines, or other project works necessary or convenient" to the development of hydroelectric power sources.

All licenses to build hydroelectric power plants are subject to various conditions. Some are set out by statute, and others can be established according to the discretion of the FPC. For instance, the Federal Power Act conditions licenses on adherence to a prohibition against "combinations, agreements, arrangements, or understandings, express or implied, to limit the output of electrical energy, to restrain trade, or to fix, maintain, or increase prices for electrical energy or service." FPC power to condition a license to require transmission serv-

Utility Rate Reform, supra note 38, at 1508 (Comments of Georgia Power Co. on H.R. 12461). The FPC Legal Advisory Committee noted that neighboring utility systems are likely to be hesitant to join a pool unless there is "assurance that it will not worsen established competitive positions." 1964 Power Survey, supra note 8, at 367. See note 201 infra.

60. See, e.g., S. 3311, 94th Cong., 2d Sess. § 201(g) (1976); H.R. 12461, 94th Cong., 2d Sess. § 302 (1976).
62. Access to generation and transmission has been considered in cases before the SEC under the Public Utilities holding Company Act of 1935, 15 U.S.C. §§ 79, 79(z)6 (1970). In one case, the District of Columbia Circuit required the SEC to hold an evidentiary hearing on alleged anti-competitive aspects of denial of access by municipally owned electric utilities to two nuclear powerplants being financed by stock issuances to participating utilities. Municipal Elec. Ass'n of Mass. v. SEC, 413 F.2d 1052 (D.C. Cir. 1969). In City of Lafayette v. SEC, the court limited its Municipal Electric decision to cases in which there is a "reasonable nexus between the matters subject to its surveillance and those under attack on anticompetitive grounds," differentiating between the limited SEC authority over utility securities and the broad regulatory jurisdiction over utility operations at the FPC. City of Lafayette v. SEC, 454 F.2d 941, 955 (D.C. Cir. 1971), aff'd sub nom. Gulf States Utils. Co. v. FPC, 411 U.S. 747 (1973).
64. Id. § 803(h).
ice in particular depends upon whether the transmission facility can be characterized as a "primary line." A primary line is defined as the line transmitting power from the hydroelectric project "to the point of junction with the distributing system or with the interconnected primary transmission system."  

In *Western Massachusetts Electric Co.*, the FPC said that in determining whether a line is "primary," it is necessary to examine the basic purpose of the line in relation to other facilities. In that case, the commission determined that two lines going directly from a hydroelectric project to a switching station were primary lines, but that lines going from the switching station to interconnected utilities were not. The FPC required that excess capacity from the Northfield Mountain pumped-storage project be sold and made available to other utilities "on a just, reasonable, and non-discriminatory basis," but found that the transmission lines beyond the switching station were "conceived and designed to function as an important segment of the regional transmission grid." This finding precluded the imposition by the FPC of a requirement that the license applicant make available transmission service across its system for delivery of power to those utilities not directly connected to the primary lines. In deciding the primary line question, the commission distinguished a case decided more than a quarter of a century earlier, *Montana Power Co. v. FPC.* In *Mon-
tana Power, the Ninth Circuit upheld an FPC decision that primary lines could include extensive transmission facilities that interconnected the applicant's service area when power from the licensed hydroelectric project was to be carried over the transmission lines to a utility's load center. The FPC distinguished Montana Power by noting that the transmission lines under consideration in Western Massachusetts were to be used to interconnect a regional transmission grid and would be built with or without the hydroelectric facility. In a concurring and dissenting opinion, Commissioner Charles R. Ross questioned the validity of such tests, although he agreed with the commission's classification of such lines as nonprimary. He suggested that in the power situation of today, both tests are unrealistic. Pointing out that most hydroelectric projects are integrated with other forms of generation, he suggested that the question whether transmission facilities would be built without the hydroelectric project is a "chicken and egg" question of which comes first—the transmission facility or the hydroelectric project.71

Part II of the Federal Power Act gives jurisdiction to the FPC over transmission facilities and transmission and sale of electric energy at wholesale in interstate commerce. It may by order

direct a public utility . . . to establish physical connection of its transmission facilities with the facilities of one or more other persons engaged in the transmission or sale of electric energy, to sell energy to or exchange energy with such persons.72

It likewise has plenary authority to determine rates, charges, or classifications pertaining to transmission or sales, as well as rules, regulations, practices, or contracts affecting such rate, charge, or classification.73

71. Western Mass. Elec. Co., 39 F.P.C. 723, 778 (1968). While the majority test limits the definition of "primary line," and makes questionable whether any meaningful transmission facility could be classified as a primary line, the definition appears to be consistent with the purpose of the primary line concept as described by FPC Chairman Lee C. White in his concurring opinion in Western Massachusetts. Id. at 753, 754-55. He suggested that the 1920 primary line concept was to insure a method of moving power from a remote site if the United States were to recapture the project at the end of its license period. He indicated that both the government and the private companies in 1920 wished to limit the definition of primary lines, the government because of increased recapture costs if more lines were classified as primary, and the private utilities because of a desire to maintain the integrity of their systems. Specifically, Chairman White stated: "I conclude and this, I stress, is material to any agreement with the majority on the primary line issue, that under our Part I licensing authority we can impose any reasonable condition upon the utilization of the project works by the licensee, including the power generated therefrom, as may be essential to insure that resource is put to optimum utilization. This of course, would include the power to order transmission of power to any other party over the facilities of a licensee's system." Id. at 756.


73. Id. §§ 824(d)-(e).
The only constraint on FPC authority is that its orders cannot compel the public utility to enlarge its generating facilities or impair service to its other customers. In the event of war or circumstances which the FPC deems to be an emergency, it can order temporary connections, and the "delivery, interchange, or transmission of electric energy as in its judgment will best meet the emergency and serve the public interest."

There have been challenges, of course, to the exercise of the FPC's jurisdiction. But in 1965 it was concluded that all sales at wholesale by a public utility which participates in an interstate power pool are jurisdictional sales. It was no longer necessary to trace power flows across state lines to establish federal jurisdiction. Because of the increasing trend toward interstate pooling for purposes of reliability and economy of operation this issue is currently of lesser importance. The FPC, however, determined in 1967 that its jurisdiction under Part II did not encompass cooperatively owned generation and transmission electric systems financed with Rural Electrification Administration funds.

There is one curious and important gap in the FPC's jurisdiction under Part II of the act. As stated above, section 202(b) gives the

74. Id. § 824a(b).
75. Id. § 824a(c).
78. 365 F.2d at 184. In previous cases, FPC had "traced" the energy to determine whether power used for a sale actually was in interstate commerce and therefore jurisdictional. See, e.g., City of Colton v. Southern Cal. Edison Co., 26 F.P.C. 223 (1961), aff'd, 376 U.S. 205 (1964), rev'd 310 F.2d 784 (9th Cir. 1962).
80. See Salt River Project Agricultural Improvement & Power Dist. v. Colorado-Ute Elec. Ass'n, 37 F.P.C. 68 (1967), aff'd, 391 F.2d 470 (D.C. Cir.), cert. denied, 393 U.S. 857 (1968); Dairyland Power Cooperative, 37 F.P.C. 12 (1967). In the Dairyland decision, however, the FPC acknowledged that legislation under which it could exercise jurisdiction over such cooperatives would be in the public interest. In passing, it is instructive to note that the FPC has allowed disparate rate treatment for cooperatives (as against rates for other wholesale purchasers from investor owned systems) in partial reliance on the fact that if such lower rates were not permitted, the resultant duplication of facilities would be detrimental to consumer interests. See St. Michaels Utils. Comm'n v. Eastern Shore Pub. Serv. Co., 35 F.P.C. 591, 1027 (1966), aff'd, 377 F.2d 912 (4th Cir. 1967); Southwestern Pub. Serv. Co., 33 F.P.C. 343, 34 F.P.C. 841 (1965). This rationale, while useful in the context of rate disputes, is, of course, the very heart of the matter when applied to the issue of transmission service.
81. See note 72 & accompanying text supra.
commission power to order "physical connection"—the construction of transmission facilities. This section does not, however, expressly provide for the ordering of transmission services. The FPC has noted the absence of an express provision and has narrowly construed its power under the section. When requested to order both an interconnection with and the provision of wheeling services for the city of Paris, Kentucky, the FPC declined to require wheeling by the Kentucky Utilities Company. The FPC determined that it was without authority to order Kentucky Utilities to transmit energy generated by a third party. The potential transporter of power to the city was ordered to continue to provide wholesale service in lieu of the arrangement contemplated.

Language in Otter Tail Power Co. v. United States apparently affirmed the FPC's lack of authority to order wheeling under section 202(b). The case involved efforts by a large investor owned electric utility to prevent newly formed, municipally owned electric utilities from obtaining any wholesale power. The cities were former retail customers of the investor owned system. Otter Tail refused to sell the cities wholesale power or to wheel power to the cities from the Bureau of Reclamation. In addition, Otter Tail sponsored harassing litigation which had the effect of preventing the cities from issuing revenue bonds to finance their own generation. In denying the existence of primary jurisdiction of the FPC in this situation, the court stated that the FPC has no authority under Part II of the Federal Power Act to order wheeling.

While FPC may not have authority, except in emergencies, to require wheeling under Part II of the act, there remains the question whether the commission may require wheeling if it finds an anticompetitive situation in a power pool. Power pools—more precisely power pooling agreements—produced by multi-party negotiation, have been tendered to the FPC for acceptance and approval under section 202(a) as voluntary interconnections. Transmission services in such agreements are generally restricted to pool transactions among the mem-

86. 410 U.S. at 375.
The agreements may disclaim an inferrable obligation to offer transmission services to others. The FPC has refused to add to the NEPOOL power pooling agreements any requirement for the wheeling of power, citing *Otter Tail* as authority for this position. Rather, the FPC declared that the only remedy for discriminatory treatment would be to eliminate the discrimination, not require additional transmission services to include the wheeling of power. The effect of the commission's ruling was that individual wheeling arrangements outside the pool would have to be negotiated as they had been in the past. Little comfort, indeed, for the small utility systems can be found in this regulatory view. The commission, however, did leave open the question whether it could condition a pooling agreement to require wheeling if it found the absence of wheeling to be anticompetitive.

The Nuclear Regulatory Commission

Just as the federal government has a stake in proper utilization of hydroelectric resources, it has a stake in proper utilization of nuclear


89. Nothing in the MAPP agreement is to "be construed as obligating any of the Participants to wheel power and energy for others not Participants under this Agreement." MAPP, supra note 88, § 19.08.


91. The commission's decision has been implemented by opening NEPOOL membership to all electric utilities in the area upon payment of five hundred dollars. Ownership of generation or transmission facilities is not required. New England Power Pool Agreement, No. E-7690, Op. No. 775, at 1 (FPC, Sept. 10, 1976). In comparison, the MAPP agreement requires that members own (or lease) and control a generating unit electrically interconnected with one or more parties to MAPP. To obtain pool services, it is necessary that: their system normally be operated directly interconnected with two or more electric systems, they own or control a transmission plant which is integral to the regional transmission network (operated at 115 kilovolts or higher), their system is important to the reliability of the interconnected systems operation, and they participate in operating a twenty-four hour network dispatch center. MAPP, supra note 88, at §§ 4.01, 4.02.

92. The commission stated: "Unless the absence of firm power wheeling from NEPOOL is in fact discriminatory or anticompetitive ... NEPOOL should not be changed to include it." New England Power Pool Agreement, No. E-7690, Op. No. 775, at 32 (FPC, Sept. 10, 1976). The commission concluded that it could eliminate a discriminatory wheeling provision but not order wheeling. It did not consider whether it could order wheeling if it found the pooling agreement to be anticompetitive.
power for the generation of electricity. The role of the Nuclear Regulatory Commission and, before it, the Atomic Energy Commission has, since 1970, supplemented what regulatory authorities are provided for in the Federal Power Act. The December 1970 amendment to the Atomic Energy Act provides for Department of Justice review and NRC hearings on antitrust issues before NRC approval of nuclear power plant construction or operation can be obtained. The NRC authority to condition licenses requires it to make the determination whether the granting of a license "would create or maintain a situation inconsistent with the antitrust laws." Upon such finding, the NRC can issue, continue, amend, rescind, or condition a license to the applicant utility. The scope of the review is not "automatically limited to the construction and operation of the facility to be licensed," but can include the nuclear plant's relationship to the applicant's total system or power pool. Transmission services are one of four general categories of an applicant's system operation to come under scrutiny.

Both formal and informal license conditions have been worked out between the Justice Department and the utilities to obviate the need for hearings before the NRC. In proceedings before the NRC, substantial modification of numerous utilities' commercial practices pertaining

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94. Such antitrust review of applications is separate and distinct from the simultaneously conducted safety and environmental reviews. The antitrust review provided under the Atomic Energy Act includes both mandatory prelicensing review and review subsequent to construction approval if significant changes occur following such approval. Id. §§ 2135(c)(1), (8).
95. Id. § 2135(c)(5).
96. Louisiana Power & Light Co., 6 A.E.C. 619, 620-21 (1973). However, this standard could be sharply limited if the decision of the Atomic Safety and Licensing Board in Consumers Power Co., 2 N.R.C. 29 (1975) is upheld. The board required a "nexus" between the anticompetitive activity and activities under the license being issued in order to "create or maintain a situation inconsistent with the antitrust laws" in violation of 42 U.S.C. § 2135(c)(5). In so doing, the board rejected an argument by the Department of Justice and by municipal and cooperative intervenors that the existence of a situation inconsistent with the antitrust laws and simultaneous activities under the license form a basis for a "nexus." The case has been argued before the Atomic Safety and Licensing Appeal Board and appeal from the decision of the appeal board is contemplated, since this is the first full-scale hearing on anticompetitive aspects of a nuclear powerplant license under the Atomic Energy Act Amendments of 1970.
97. The others are: participation in the unit(s) to be licensed; coordination (including interconnection, bulk power supply, and planning); and extant or prospective restrictive contractual provisions. D. PENN, J. DELANEY & T. HONEYCUTT, NRC ANTITRUST REVIEW OF NUCLEAR POWER PLANTS: THE CONDITIONING OF LICENSES 9-14 (1976) (report prepared by members of the Economic Analysis Section of the Office of Antitrust and Indemnity, Nuclear Regulatory Commission) [hereinafter cited as ANTITRUST REVIEW].
to the availability of transmission service has been obtained. As of July 30, 1975, the department had obtained from license applicants twenty-nine commitments for joint ownership of nuclear units, twenty-seven commitments to wheel power for other electric systems, and twenty-seven commitments to share reserves with other electric systems.\(^9\) In twenty-four applications approved from 1971 through 1975, fifteen required applicants to provide some sort of transmission service as a license condition.\(^9\) By the beginning of 1976, the Department of Justice, through its nuclear power plant license procedure, had subjected sixty-nine of the one hundred largest electric utilities—representing 76 percent of 1974 kilowatt hour sales—to direct antitrust review.\(^1\) In addition to requiring transmission services, many license conditions or informal agreements require access to regional pooling,\(^1\) thus limiting the incentive for utilities to refuse to wheel. When a competitor already has access to bulk power through pooling, there is little incentive to deny him access to bulk power through wheeling.\(^2\)

In determining whether activities under a license would maintain a situation inconsistent with the antitrust laws, the Department of Justice has examined the entire situation surrounding the applicant's system. In so doing, it has found and resolved various problems relating to transmission and wheeling of power. These problems include refusal to wheel power, contracts with another utility requiring the second utility to refuse to wheel power, and attempts to prevent preference customers from obtaining access to federal power. Two cases illustrate the problem to which antitrust inquiry is directed.

In examining an application by the Georgia Power Company for a license for Hatch Nuclear Plant, Unit No. 2, the department stated that the lack of applications for participation in the nuclear unit was due to the company's past exercise of monopoly power which "appeared to have left the other systems in the area in a position in which they [were] unable to directly obtain access to the advantages of


\(^10\) Id. at 2.

\(^11\) Id. at 16-39.

\(^12\) In NEPOOL, the single exception is the wheeling of firm power. Traditionally, firm power sales to distribution only systems have been made by the vertically integrated, large utility in whose area the distributor is an "island." New England Power Pool Agreement, No. E-7690, Op. No. 775, at 32 (FPC, Sept. 10, 1976).
large-scale nuclear power production." The department cited several examples of the company's abuse of monopoly power. It noted that the company had thwarted construction of Southeastern Power Administration (SEPA) transmission facilities by promising to wheel power to preference customers. It then imposed restrictions in its wheeling contracts that it would not wheel SEPA power unless preference customers promised not to install their own generation facilities and to purchase power only from the Georgia Power Company or from SEPA. The department pointed out that Georgia Power had instituted suit to prevent the TVA from serving two additional counties in Georgia and at the same time constructed transmission facilities into the area, effectively precluding the possibility that the TVA would construct transmission lines into the area. As a result, the department recommended a hearing on the anticompetitive aspects of the Georgia Power Company's applications. Subsequently, the department withdrew its request as a result of various concessions gained from the company, including transmission service over Georgia Power's facilities.

In its consideration of an application by the Pacific Gas & Electric Company for its Mendocino Power Plant, Units 1 and 2, the department determined that the utility had monopoly power and had abused it by various means. It found that PG&E had refused to wheel power, thereby precluding access to alternative bulk power supply, had contracted with the Bureau of Reclamation to limit preference customer access to bureau power, and had contracted with the Sacramento Municipal Utility District (SMUD) to limit SMUD's ability to resell or wheel power. The department concluded that a hearing should be held. Plans for the nuclear plant were subsequently dropped. Four years later, however, the utility and the Justice Department reached an agreement on another nuclear unit in which PG&E agreed to various license conditions, including providing transmission service for neighboring utilities.

Preference Power and Transmission

Water resource utilization by federal agencies coupled with a congressional mandate that preference be given to public bodies in the marketing of electric energy has also given rise to a so-called federal

transmission obligation. The means by which that obligation is discharged has created problems within the industry. Thirteen percent of the nation's electric energy is generated by the federal government through the Tennessee Valley Authority, the U.S. Army Corps of Engineers, and the Bureau of Reclamation.\textsuperscript{108} Both TVA and the bureau market their electric production. Three other federal power agencies—Southeastern Power Administration, Southwestern Power Administration, and Bonneville Power Administration—market electricity from hydroelectric projects constructed by the Corps of Engineers.\textsuperscript{109}

Preference in the sale of electricity generated at federal projects is given to public bodies (including municipally owned electric utilities) and to rural electric cooperatives.\textsuperscript{110} All federal agencies with marketing responsibility have an obligation to assure that power generated at federal projects in fact reaches preference customers. To fulfill this obligation, a power marketing agency may contract with private utilities to transmit power from federal facilities to preference customers or may construct its own facilities to transport power from federal projects to preference customers. The three power marketing agencies do not construct their own transmission facilities unless wheeling arrangements

\textsuperscript{108} The TVA is presently the nation's largest electric utility and serves customers throughout Tennessee and in several other adjacent states. It is the only federal agency authorized to develop electric power from sources other than water power and is the only federal agency authorized to fund its projects through issuances of bonds and without specific congressional appropriations. Most federal hydroelectric projects are developed by the U.S. Army Corps of Engineers as part of comprehensive river development plans. The Bureau of Reclamation constructs and operates hydroelectric projects and interconnects those projects with transmission in facilities in western states and in Alaska.

\textsuperscript{109} SEPA, SPA, and BPA, as well as the Bureau of Reclamation, are agencies of the Department of the Interior. SEPA operates in the southeastern part of the United States and has relied exclusively on contracts with nonfederal electric utilities for transmitting electricity from federal projects. SPA markets power in the south central states. BPA markets electricity from both Bureau of Reclamation and Corps of Engineers projects in the Pacific Northwest.

with nonfederal utilities are impractical.\textsuperscript{111} Two illustrations serve to describe the process of satisfying the transmission obligation.

The extent of the transmission obligation, as it relates to the preference clause, was discussed in the attorney general's opinion in \textit{Disposition of Surplus Power Generated At Clark Hill Reservoir Project}.

Power from a federal hydroelectric project had been sought by the Georgia Power Company, a private power company with transmission facilities, and by the Georgia Electric Membership Corporation, a group of rural electric cooperatives with no transmission facilities. The Department of the Interior had proposed a contract with the Georgia Power Company under which the company would purchase power from the federal project and would, in turn, sell a certain amount of power to preference customers. The cooperative objected, suggesting that a sale to Georgia Power would violate the preference clause in the Flood Control Act of 1944.\textsuperscript{113} Instead, the cooperative proposed to buy the power from the federal project and negotiate for transmission services from Georgia Power or, if negotiations failed, to apply to regulatory agencies to secure such service. The Department of the Interior noted past refusals of the company to deal with the cooperative and congressional refusals to appropriate funds for federal transmission facilities from the project. In refusing to approve the contract between the department and Georgia Power, the attorney general linked the preference clause to the need for transmission facilities:

\begin{quote}
Congress knew that public bodies or cooperatives whom it wished to benefit would hardly be likely to own or control transmission lines reaching out to a power project, and hence it could not have intended them, in order to contract for the power, to be possessed with those facilities in advance.\textsuperscript{114}
\end{quote}

The attorney general noted congressional rejection of an amendment

\begin{enumerate}
\item \textsuperscript{111} A provision originally adopted in the Interior Department Appropriation Act of 1952, ch. 375, 65 Stat. 248, and included in subsequent annual Interior Department Appropriations Acts through fiscal year 1955 and annual Public Works Appropriations Act through fiscal year 1977, contains such a restriction. Popularly called the "Keating Amendment" for its author, Senator Kenneth Keating of New York, the restriction states: "Provided, that no part of this appropriation shall be used to initiate the construction of transmission facilities within those areas covered by power wheeling service contracts which include provision for service to Federal establishments and preferred customers, except those transmission facilities for which construction funds have been heretofore appropriated, those facilities which are necessary to carry out the terms of such contracts or those facilities for which the Secretary of the Interior finds the wheeling agency is unable or unwilling to provide for the integration of Federal projects or for service to a Federal establishment or preferred customer. . . ." \textit{Id.} at 255.
\item \textsuperscript{112} 41 \textit{Op. Att'y Gen.} 236 (1955).
\item \textsuperscript{113} 16 \textit{U.S.C.} § 825(s) (1970).
\item \textsuperscript{114} 41 \textit{Op. Att'y Gen.} at 245.
\end{enumerate}
to the preference clause in the Flood Control Act that would have disallowed federal construction of transmission lines and, according to the then secretary of the interior, would have placed the federal government in a poor bargaining position in the sale of its power, and would have permitted the private utilities in the vicinity of each dam to monopolize the power produced at the federal project.\textsuperscript{115}

The attorney general concluded that the compromise bill, by which the department could construct transmission facilities only with congressionally approved funds, was not an attempt to circumscribe the preference provision and make it inoperable. He suggested that sale of federal power to a private power company with transmission facilities, coupled with a refusal to sell to a cooperative without present transmission facilities, would have just such an undesirable effect.

In addition to obtaining federal power preference, rural electric cooperatives may receive loans from the Rural Electrification Administration to construct transmission and generation facilities.\textsuperscript{116} This is part of an assumed federal obligation to make electricity available to rural customers. It is both a federal obligation to assure sufficient power is generated for use by rural systems and a federal obligation to assure such power is received by such systems—again a federal transmission obligation. However, the REA will not fund generation and transmission facilities unless alternative sources are unavailable or unreasonable.\textsuperscript{117} An example of the way in which REA transmission funds may be used to market power from federal hydroelectric projects is found in \textit{Northern States Power Co. v. Rural Electrification Administration}.\textsuperscript{118} Two privately owned electric utilities, Northern States Power Company and Otter Tail Power Company, had transmitted electricity from the Bureau of Reclamation to rural electric cooperatives in Minnesota and South Dakota. These cooperatives were members of the East River Electric Power Cooperative, a "supercooperative." East River applied to the REA for a loan to construct transmission facilities between the Bureau of Reclamation system lines

\textsuperscript{115} Id. at 247.
\textsuperscript{117} Present REA policy is to fund generation and transmission only where no other adequate and dependable source of power is available to consumers or where rates from existing sources would result in a significantly higher cost to consumers than rates from REA-financed facilities. See \textsc{Rural Electrification Administration}, U.S. DEP'T OF AGRICULTURE, BULL. No. 20-6, \textsc{Loans for Generation and Transmission}, May 7, 1969.
and the East River members. The REA had a published policy of refusing loans unless the REA administrator had certified to the secretary of agriculture that existing contracts to provide the service were unreasonable and that the REA had tried and failed to have such contracts made reasonable. After the REA found it was unable to obtain a satisfactory and reasonable wheeling contract with Northern States and Otter Tail, it approved a transmission facility loan to East River.

In addition to its general transmission obligations to make federal power available to preference customers and to make electricity available to rural customers, the federal government, at least in the Pacific Northwest, has assumed a responsibility to make excess capacity of federal transmission facilities available to other utilities.

Department of the Interior

While the federal government has a direct transmission responsibility when the relevant generation or transmission is paid for with federal funds, it has an indirect obligation when the question is one of proper comprehensive development of public lands or waterways. For example, the secretary of the interior may grant an easement for rights-of-way through public lands for transmission facilities. He may also promulgate appropriate regulations for such easements. In 1963, the secretary promulgated regulations requiring utilities acquiring rights-of-way for transmission facilities through public lands to allow the Department of the Interior to wheel power over surplus transmission capacity or, at the department's own expense, to increase transmission capacity to allow wheeling. A stated purpose of the regulation was to conserve the land by avoiding duplication of facilities. In 1969, Utah Power & Light Company applied to use two miles of federal vacant lands to construct a sixty-nine kilovolt transmission line and requested a waiver of the wheeling requirement. The Department of the Interior refused. The district court found, and the Ninth Circuit affirmed, that the wheeling regulations did not exceed the secretary's

119. After the district court granted a temporary injunction on the granting of the REA loan, the court of appeals dismissed the complaint on the grounds that the private power companies that initiated the suit had no standing to sue. 373 F.2d 686, 696 (8th Cir. 1967).
120. 248 F. Supp. at 619.
123. Id.
125. Utah Power & Light Co. v. Morton, 504 F.2d 728 (9th Cir. 1974).
authority, were not an unreasonable exercise of the secretary's authority, and did not deprive Utah Power & Light of property without due process of law.

Potential Modification of Historical Patterns

Although the federal government has certain authority to require wheeling or general transmission services, that authority is far from pervasive. Unless the transmission facility required for wheeling is a primary line of a hydroelectric project subject to FPC licensing, is owned by an applicant for a nuclear power plant, or crosses public lands, there is no assurance that any federal agency has authority to order wheeling across that line even if the utility owning that line engages in anticompetitive practices. With the increase in power pooling, access to transmission services may be less crucial than it has been in the past. However, extensive power pools do not exist in all sections of the country, and the FPC has exercised only limited use of its authority to make sure that existing power pools properly provide for all electric utilities in an area.

This lack of exercised federal authority makes retail distributors of electric power subject to the will of their vertically integrated competitor-supplier. Various proposals have been advanced to protect these retail distributors, including legislation to amend the Federal Power Act and to create state and regional authorities to assume the generation and transmission functions.

Legislation, proposed in 1976, reported out by the Senate Committee on Commerce, but never considered by the full Senate, would have provided two types of protection for smaller utilities. It would have granted the FPC explicit power to order wheeling or transmission services under Part II of the Federal Power Act. In addition it would have allowed small utilities to participate in regional power plans by requiring advance publication of plans for bulk power facilities followed by some type of participation by all electric utilities in an area on designated area planning councils. Legislation considered by the House Committee on Interstate and Foreign Commerce during the same year suggested that the FPC should reject any contract, agreement, tariff, or schedule which would result in unfair competition.

127. Id. § 201(b)(1).
128. Id. § 301(a), (b).
129. Id. § 301(c).
A more thorough and dramatic solution to the problem of a non-generating utility's ability to compete with a vertically integrated utility is to eliminate that vertical integration. This solution was recommended in a 1970 report to the New England Regional Commission.\(^{131}\) Citing efficiency in regional generation and transmission by a single utility rather than by multiple utilities,\(^ {132}\) lack of a need for vertical integration,\(^ {133}\) and economic and environmental difficulties in obtaining bulk power supply,\(^ {134}\) the report concluded that a regional agency with sole authority to construct generation and transmission facilities in New England would be appropriate.\(^ {135}\) Governors of seven northeastern states recently urged then President-elect Carter to consider the formation of a regional energy and development corporation which would provide capital for new industries and for the development of energy resources.\(^ {136}\)

A report to the governor of Michigan in August 1976 proposed formation of a Michigan Power Authority to construct generation facilities and sell the output on a cost to all electric utilities in the state.\(^ {137}\) Utilities, in turn, would sell to consumers at a Public Service Commission approved rate, with pass-through of any increase or decrease in wholesale rates from the state power authority.\(^ {138}\) The commission which made the recommendations was created in response to rising electric rates and increasing difficulties in financing construction of bulk power facilities.\(^ {139}\)

These proposals are radical, but are nonetheless gaining some acceptance. Another solution, one which accords with historical patterns, can be provided by power pooling, if access is afforded to all systems needing or desirous of enhanced opportunity for coordination and supplemental bulk power services. However, antitrust problems con-

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132. Id. at 16.
133. Id. at 18.
134. Id. at 17.
138. Id. at 59.
139. Id. at iii-v.
cerning the preservation of competition are raised by the concert of action or business activities permitted or condoned under such arrangements.

**Power Pooling: Public Interest Cooperation or Private Interest Government?**

**The Role of Competition**

To the extent they discourage free competition, the business regulating features provided by pooling agreements among systems already operating through interconnected and coordinated facilities may tend to represent a significant departure from the Federal Power Act's "purpose of assuring an abundant supply of electric energy throughout the United States with the greatest possible economy and with regard to the proper utilization and conservation of natural resources . . . ."¹⁴⁰ Court decisions based upon the Sherman Antitrust Act¹⁴¹ have explicitly declared concerted allocation of customers and supplies and concerted fixing of the terms and prices of sale to be illegal.¹⁴²

Pooling refinements in the use of transmission facilities raise fundamental issues. Can the organization of power pools that control price, terms of sale, selection of wholesale customers, and allocation of wholesale supplies be squared with the Sherman Act's ban on anti-competitive combinations of businessmen? Can the Federal Power Act, intended as it was to eliminate "great concentrations of economic and even political power,"¹⁴³ be read as encouraging the creation of industry committees to set prices and allocate purchases and sales in vast regional markets? Eventually, the answers to these questions may come from one of the FPC's first three litigated cases involving the status and terms of pooling agreements. One of these cases, involving the New England Power Pool, was decided by the commission on September 10, 1976,¹⁴⁴ and is on appeal before the United States Court of Appeals for the District of Columbia Circuit.¹⁴⁵ Another, involving the Mid-Continent Area Power Pool, is awaiting commission review of an administrative law judge's initial decision upholding all aspects of

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the pooling agreement. The third involves the Kentucky-Indiana Pool found by an administrative law judge to be lawful.

In part, at least, the answers to these questions depend upon the extent to which federal policy is to rely upon regulation rather than competition as a means of promoting "an abundant supply of electric energy . . . with the greatest possible economy." Certainly administrative regulation touches many activities of electric power companies. Their retail rates to consumers, their areas of retail service, and their dealings in each other's securities are subject to varying but substantial administrative control. Even at the retail level, however, power companies have traditionally competed, in rates and service, to attract new consumer businesses to their service areas and have frequently competed for the right to serve new developments constructed in former "dead zones" between their systems. All power companies remain free, moreover, to compete with each other in the generation, purchase, and sale of bulk power, the rendition and procurement of transmission services, and the sales of wholesale power to distribution (retailer) utilities. It is in these three areas of wholesale and bulk power activity that modern power pools have been busily eliminating all forms of competition.

Regardless of the degree of regulation to which they may be subjected, electric utilities are not exempt from the federal antitrust laws. Repeated attempts have been made in Congress to enact an antitrust exemption for the industry, but all have been rejected.

Unlike mere arrangements for coordination of the operation of physical facilities, modern pooling agreements establish rates and charges for services interchanged by pool members. Any such agreement

149. See United States v. Florida Power Corp., 1971 Trade Cas. ¶ 73,637 (M.D. Fla. 1971). Of the nearly 3500 operating electric utilities in the United States, 70% are engaged solely in retail distribution. But this 70% of the operating systems accounts for less than 20% of the retail sales. See 1970 POWER SURVEY, supra note 7, pt. I, ch. 2, at 2-8.
must therefore be filed with the FPC as a rate schedule under section 205 of the Federal Power Act\textsuperscript{152} and must survive any challenge under section 206 that it is "unjust, unreasonable, unduly discriminatory or preferential."\textsuperscript{153} In contrast with similar orders of certain other federal regulatory agencies,\textsuperscript{154} the FPC's approval of a rate filing confers no antitrust exemption.\textsuperscript{155}

The commission has had to be instructed repeatedly as to the nature and importance of its broad responsibilities. One court has stated:

The Commission, while it 'has no power to enforce the Sherman Act as such . . . [and] cannot decide definitely whether the transaction contemplated constitutes . . . an attempt to monopolize which is forbidden by that Act . . . ' nevertheless 'cannot without more ignore the [act].' Thus, if it appears that Texas Eastern's project would tend to produce monopolization of a petroleum products market, the Commission cannot ignore that fact merely because it is an antitrust factor and such factors have been placed within the ken of the Attorney General.\textsuperscript{156}

The Supreme Court has said:

Consideration of antitrust and anti-competitive issues by the Commission . . . serves the important function of establishing a first line of defense against those competitive practices that might later be the subject of antitrust proceedings.\textsuperscript{157}

In \textit{Northern Natural Gas Co. v. FPC},\textsuperscript{158} the court announced a "theory of complementary regulation," under which "the most efficient allocation of resources possible" is

the basic goal of direct governmental regulation through administrative bodies and the goal of indirect governmental regulation in the form of antitrust laws . . . . In short, the antitrust laws are merely another tool which a regulatory agency employs to a greater or lesser degree to give "understandable content to the broad statutory concept of the 'public interest.'"\textsuperscript{159}

\begin{flushleft}
153. Id. § 824e.
156. City of Pittsburgh v. FPC, 237 F.2d 741, 754 (D.C. Cir. 1956) (citations omitted).
158. 399 F.2d 953 (D.C. Cir. 1968).
\end{flushleft}
This "theory of complementary regulation" finds support in an observation by the Supreme Court:

[Frequently the entire scope of Congressional purpose calls for careful accommodation of one statutory scheme to another, and it is not too much to demand of an administrative body that it undertake this accommodation without excessive emphasis upon its immediate task.]

Wholesale Price Fixing

Application of this "theory of complementary regulation" offers an exacting test of the FPC's regulatory acumen as the commission passes on the propriety of the pooling agreements before it. These pooling agreements before it. These pooling agreements present a problem the commission has never before encountered in its rate filing proceedings under sections 205 and 206 of the Federal Power Act and sections 4 and 5 of the Natural Gas Act. Normally, a rate proceeding involves a rate set by a single selling utility for a class of customers or by contract with a specific buyer. But the rate schedules submitted with modern pooling agreements represent prices that a group of selling utilities have agreed to charge and a group of buying utilities have agreed to pay. They cover such interutility services as seasonal power interchange, emergency energy, scheduled-outage (for maintenance) energy, operating reserves, economy energy, transmission service, peaking power, and ordinary short term or long term wholesale power supply. If antitrust policy is to be implemented as part of the regulatory purpose of the Federal Power Act, some respect must be paid the rule of per se illegality for horizontal price fixing agreements.

On the other hand, if competition and regulation are truly to complement each other in this industry, a rule of per se illegality would seem inappropriate even for price fixing.

The nature and terms of the various pooling agreements themselves reveal the questionable merit of a per se rule. When a pool's dispatch of generation to load is controlled by computers programmed

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163. See notes 144-47 & accompanying text supra.
164. United States v. Trenton Potteries Co., 273 U.S. 392 (1927). See also Public Serv. Co. of Ind., Inc., 47 F.P.C. 1396 (1972), remanded sub nom. City of Huntingburg v. FPC, 498 F.2d 778 (D.C. Cir. 1974), where the FPC apparently divided on the regulatory significance to be given the per se rule against horizontal territorial agreements.
to use the most efficient sources (as is NEPOOL's, for example), there is arguably an effective substitute for competition which maximizes efficiency and minimizes cost and prices. As the use of electricity fluctuates throughout the pooled systems, automatic centralized economy dispatch starts up the most efficient idle generator to meet increases in demand and shuts down the least efficient when demand declines. Assuming effective, cost related regulation of rates, the public gets the benefit of the resulting improvement in fuel consumption efficiency. Such a system of private regulation to allocate supply insures that every buyer will turn to the least expensive source, even though prices are uniform on a pool-wide basis. Since it also works out that the most efficient producer in the market will make the most sales, this system in effect preserves an important element of competition among individual member systems. If a pool member wants to retain or increase his participation as a producer in the market, he must maintain and improve his efficiency. Hence normal competitive market incentives for careful management, research, and innovation are preserved.

Furthermore, preservation of wholesale price competition in such a pool—if possible at all—would serve no public interest. Price competition promotes efficiency only when buyers are free to choose among suppliers on the basis of price. Computerized pool-wide dispatch removes this choice from the buyer and makes the choice on the basis of cost, rather than price. If anything, this sort of market control is an improvement on competition, for it matches the performances of perfect competition, which rarely if ever prevails in any market. In other words, this device of the electric utility industry seems to create an exception to the axiom that "[t]he aim and result of every price-fixing agreement, if effective, is the elimination of one form of competition." 167

165. Indeed, this equalization of benefits feature of computerized economy dispatch may give it an advantage over wholesale price competition. Such competition would tend to impose higher prices on consumers of the systems that have the less efficient generation and of systems that have unfavorable load characteristics (i.e., high peak loads and low off-peak consumption), handicapping them in bidding for cheap wholesale power.
166. "If monopolies could be made to behave as if they were perfectly competitive, we would be able to enjoy the benefits both of large-scale efficiency and of the perfectly working price mechanism." Lerner, *Conflicting Principles of Public Utility Price Regulation*, 7 J.L. & ECON. 61-64 (1964); cf. Kahn, *Between Theory and Practice: Reflections of a Neophyte Public Utility Regulation*, 95 PUB. UTILS. FORTNIGHTLY Jan. 2, 1975, at 29.
But automated pool-wide economy dispatch involves a magnitude of capital investment and a degree of sophistication exceeding the capacity of some utilities. When such equipment is not used, establishment of pool-wide uniform prices cannot readily be justified. The threat of being undersold by another generating member of the pool is no longer present as an added incentive toward careful management and innovation.\textsuperscript{168} Even if rates are not set at uniform levels by the pooling agreement but are based on a formula related to each individual system's costs, there is an inhibition on price competition not permitted in other industries. A utility guaranteed by its neighbors that it will recover at least its costs whenever it happens to make a sale has a somewhat reduced incentive to cut its costs, even if those costs reach a level that diverts business to other generating systems.\textsuperscript{169}

Without automated pool-wide economy dispatch, diversion of trade to a more efficient utility is possible only when pool members are free to shop around for the cheapest source of supply. The trend in more recent pooling agreements is toward establishment of a designated pool committee to allocate available power supplies among the systems that need generation. This function of pool management is defended as vital to control of transmission line utilization to insure that all essential lines maintain enough unused capacity to handle emergencies.

This rationalization of combined price-fixing and customer allocation ignores or subordinates the essential purpose of power pooling. There is, in the first place, no public interest reason for pooling among a group of utilities which are interconnected with transmission facilities adequate to handle both emergency situations and scheduled transactions essential to realization of nonemergency pool benefits. If, subsequent to formation of the pool, transmission capacity in any part of the pool becomes inadequate, then the pool is not performing the essential planning and coordination functions that justify its existence and the inevitable impairment of competition it creates.

\textsuperscript{168} "In industries with certain technical characteristics—such as the electric power industry—regulation may be both necessary and desirable to insure an efficient allocation of resources. But, competition may still play an important role in insuring that such industries operate efficiently. After all, where there is regulation and no competition, firms may become lazy, for they may feel that they are, in effect, guaranteed a profit. On the other hand, if regulated firms also face some competition, they may work harder to keep costs down, to improve the quality of their service, or to devote sufficient resources to research and innovation." \textit{Hearings on S. 3136 Before the Senate Comm. on Commerce, 89th Cong., 2d Sess. 60} (1966) (statement of Donald F. Turner, Assistant Attorney General).

\textsuperscript{169} \textit{See Meeks, supra} note 20, at 85.
An adequate transmission network is lifeline of effective pooling. With the assistance of regional reliability councils sponsored by the FPC, however, the three major interconnected networks (MAPP, KIP, and NEPOOL) have proven themselves capable of dealing with emergency situations without the existence of pooling agreements. If an existing or contemplated pool's transmission facilities lack the capacity to permit the addition of nonemergency loads without simultaneous arrangements for collusive pricing and supplies allocation, it is extremely doubtful that the pooling agreement offers anything in the public interest over and above the reliability benefits of interconnection. In the absence of additional benefits, the resulting impairment of cost controlling competition cannot be justified, for here we are not talking about "complementary regulation" by a governmental agency but "complementary regulation" by the members of the industry.

Pool Membership Restrictions

Just as significant, probably, as the pooling arrangements' suppression of competition among pool members is their effectiveness as barriers to competition from nonmember systems operating within the general geographical area covered by the pool's network. Since section 202(a) of the Federal Power Act calls for voluntary interconnection and coordination, utilities establishing power pools feel free to avoid voluntary agreement with any system outside a selected list or class of partners. The Kentucky-Indiana Pool and the California Power Pool (Southern California Edison, San Diego Gas & Electric, and Pacific Gas & Electric Companies), for example, are simple agreements by their original signatories to form the pools, with no provision for the admission of, or participation by, any other utility. Others, like MAPP, which is intended to be a voluntary pool of only major generating utilities, offer full membership and participation to only such systems as can meet certain minimum requirements in the way of generation and transmission equipment. At least one major pool, NEPOOL, has been induced largely through agency and court litigation or threatened litigation to open its membership to any electric utility, regardless of size or degree of vertical integration, within its geographical area.

When membership is restricted to less than everyone in the industry, another set of antitrust problems arises. When satellite retail

170. "Those who control a dominant power pool or generation facility cannot refuse equal access to all systems. This is an application of the general antitrust rule that those who control an essential facility must grant reasonable access to it to all in the trade." Address by Donald I. Baker, Director of Policy Planning, Antitrust Division, Department of Justice, before the National Association of Regulatory Utility Commissioners, Seattle, Wash., Sept. 18, 1973.
distribution systems (often municipally or rural-cooperatively owned “islands” within the service area of larger competitors) are excluded from membership, an important potential source of new entrants into large scale generation and transmission are effectively shut off from any election to integrate vertically. At today’s fuel prices, the economies of large scale generation are indispensible to successful operation of a utility. Many electric utilities are too small to undertake independent construction of economically feasible generating projects without access to pool coordination.

Only two or three decades ago the economics of the electric utility industry could easily have accommodated well run municipal and rural cooperative systems. In that earlier and simpler age, the lower fuel consumption efficiency of a small, compact system’s generating units was offset by its lower transmission costs. While vertical integration offered advantages here, as it does in other industries, retail distribution systems with no generation were able to purchase wholesale power from larger neighboring utilities, who offered reasonable terms in order to discourage the construction of municipal or cooperative generation.

More recently, however, technological advances increasing both the size and relative efficiency of larger generators, coupled with unprecedented fuel price increases, have pushed the minimum feasible investment in generation well beyond the reach of the smaller systems. Moreover, the size of an economically attractive generating unit is now such that its installation will create, for any but a very few large systems, an immense amount of excess capacity. While demand on a system tends to increase at a consistent rate, this concentration of generation in large units means that supply on the system increases in large increments that must be planned from seven to ten years in advance. As already indicated, only a few of the very largest systems can absorb such generation increments smoothly into their systems. A group of suppliers organized into a pool, however, can aggregate their loads which in combination will grow in increments large enough to accommodate the large increment of supply represented by today’s economically sized generating units.

Pool membership is therefore essential to small systems’ continuation in the generation or production phase of the electric utility business. If the policy goal of shared technology is to remain viable small systems must be presented with opportunities to participate. The choice to avail themselves of such opportunities should be theirs. They should not be precluded by force of industry committee action which would preserve to a select few the advantages of technological benefits.
Mortality and longevity tables for small independent distribution systems suggest that the industry no longer provides a hospitable environment for such enterprises. Vertical integration offers at least as many advantages among electric utilities as it does in other industries.

Denial of pool membership to small distribution systems operates as an even stronger bar to small systems' entry into generation when, as is usually the case, pool membership is essential to procurement of the necessary backup or reserve for contemplated generation and to knowledge of and participation in the planning of the area's future generation. A system that is not informed of, and does not participate in, the area's planning never has a chance to have its own needs (except perhaps as a wholesale customer) taken into consideration or to bargain for a participation share.

The incentives toward exclusion of small systems, especially municipal and cooperative systems, from pool membership are therefore considerable. The large generating systems that generally form pools are naturally reluctant to allow the small systems to share in pooling advantages that will: (1) make it easier for the small systems to compete for new retail customers in previously undeveloped and unserved territories; (2) slow down or halt the larger utilities' campaign to induce the smaller systems to sell out; (3) facilitate vertical integration that will deprive a pool member of a direct wholesale customer; and (4) provide an incentive for cities now served by a pool member under a franchise to establish municipal systems.

It is a well established principle of antitrust law, however, that section 1 of the Sherman Act is violated by a concerted refusal of members of an industry to provide a product or service essential to market entry.\(^1\)

\(^1\)As the Supreme Court pointed out in *Associated Press v. United States*:\(^2\)

\[\text{[T]}\text{he Sherman Act was specifically intended to prohibit independent businesses from becoming "associates" in a common plan which is bound to reduce their competitor's opportunity to buy or sell the things in which the groups compete.}\] \(^3\)

Sometimes called the "bottleneck" principle of antitrust law, this line of reasoning has been applied to electric utilities. In *Municipal Electric Association of Massachusetts v. SEC*,\(^4\) a proceeding under the Public Utility Holding Company Act,\(^5\) the SEC had approved


\(^2\)326 U.S. 1 (1945).

\(^3\)Id. at 15.

\(^4\)413 F.2d 1052 (D.C. Cir. 1969).

stock ownership in two nuclear generating projects by the major systems that later formed NEPOOL. Approval was granted on the basis of a finding that the joint venture arrangements gave no sponsoring utility any control over any other sponsor. The SEC had summarily dismissed as irrelevant the complaint of a group of municipal electric systems that they had been systematically excluded from the New England industry's joint projects. On appeal, the District of Columbia Circuit reversed the commission's orders and directed the commission to consider the municipals' claim that "the plans of sponsors, with the strong economic position they would obtain by entitlement to the new low cost power involved, [would] tend toward a concentration of control of public utility companies." The court went on to advise the commission that it does have authority, if appropriate, to condition approval of the stock purchases upon availability to the municipals of an opportunity to purchase the nuclear generation at its source.\textsuperscript{176}

While the explicit exclusion of small utilities is an obvious "bottleneck" problem in pooling, similar problems are created where pool membership requirements are such that small utilities are actually unable to participate although theoretically eligible for membership. Competition may also be lessened when small utilities are able to participate in a pool but are less able to compete with the larger utilities because of restrictive participation requirements.

This latter situation was involved in a case recently decided by the FPC. In \textit{New England Power Pool Agreement},\textsuperscript{177} the commission considered four complaints by Massachusetts and Connecticut municipalities\textsuperscript{178} about the NEPOOL agreement. First, the agreement failed to allow the Massachusetts Municipal Wholesale Electric Company to participate as a "single entity." Single entity status would have enabled certain small utilities to have full, rather than partial benefits from the pool. The commission rejected this complaint, pointing out that Massachusetts Municipal was at least allowed to represent interests of small utilities so that small utilities obtain some, if not all, pool benefits.

\textsuperscript{176} of the Federal Power Act, [and] was concerned with 'restraint of free and independent competition'. . ." Otter Tail Power Co. v. United States, 410 U.S. at 374.


\textsuperscript{178} While a number of municipalities which had formerly protested the agreement withdrew their objections, the cities of Groton, Jewett City, Norwich, and Wallingford, Connecticut, and the Second and Third Taxing Districts of Norwalk, Connecticut continued their objections and the cities of Concord, Norwood, and Wellesley, Massachusetts petitioned to intervene.
Second, the municipalities complained that the agreement required small utilities to pay a proportionately higher deficiency charge than that paid by large utilities when they failed to meet specified reliability capacity. The commission required that the charge be amended so that both large and small utilities be paid a proportionately equal amount.

Third, municipalities objected to a requirement that a utility be charged if its entitlement to a single generating unit exceeded 30 percent of its annual peak. This requirement was placed into the agreement to prevent a utility from becoming too dependent on a single unit. The commission required deletion of this provision, holding that the 30 percent figure was an arbitrary one and citing lack of evidence that system reliability would be impaired if the 30 percent were exceeded.

Finally, the municipalities objected to omission of requirements for wheeling firm power over transmission facilities owned by pool members. The commission did not require any change in the NEPOOL agreement based on these omissions. It said that such omissions were not in fact discriminatory or anticompetitive, and the commission could not order the agreement changed unless it found discrimination or anticompetitiveness. The FPC failed to find discrimination because NEPOOL services are open to all participants. It based its finding that the NEPOOL agreement is not anticompetitive on three factors. First, NEPOOL does not preclude any participant from wheeling firm power over its own transmission facilities for any other utility. Second, NEPOOL does not alter the status quo ante as to how a wholesale customer negotiates for wheeling. Third, NEPOOL should increase available alternatives for access to generation and transmission by small utilities.

The FPC decision in New England Power Pool Agreement distinguished between FPC authority to alter discriminatory provisions and authority to alter anticompetitive provisions. While the commission deleted the 30 percent provision, which was clearly aimed at small systems, and required alteration of the clearly discriminatory deficiency charge system, it gave cursory treatment to the complaint that absence of a wheeling provision was anticompetitive. Rather than seeing its goal as maximizing competition within a pool, the FPC viewed its role as seeing that minimum competition is maintained. Thus, rather than examining the competitive possibilities of small non-inter-connected utilities, the commission noted first that no participant is prohibited from wheeling, and second that the agreement does not alter the status quo ante. The latter statement was made without a determination of
whether the status quo ante was in fact a competitive situation. Finally, the commission cited increased generation and transmission options because of the power pool. This benefit accrues to systems that are allowed to participate in a pool and goes to the fact of participation rather than to the terms of participation.

A Procompetition Trend

While the FPC has limited its scope of review to maintenance of minimal competitive requirements, the NRC has successfully injected competition into the electric utility industry.

In 1970, amendments to the Atomic Energy Act 179 expanded and strengthened the nuclear plant licensing role of the attorney general of the United States under section 105 of that act 180 to such an extent that a general revision of the utilities' policies vis-à-vis small systems is being compelled by the government. Numerous electric utilities have made commitments to the NRC and the Justice Department that they will make interconnection, reserve coordination, transmission, bulk power supply, and coordinated planning services available to any entity in their areas engaging in or proposing to engage in bulk power production. 181

When such a commitment is made by an important member of a power pool, it creates a whole new set of factors operative in pool planning. In at least one instance, involving nuclear plant license applications of the Duke Power Company and the Carolina Power & Light Company, negotiations with the Justice Department and the NRC (then the Atomic Energy Commission) over the necessity for a pre-licensing hearing on competitive practices coincided with complete dissolution of a pool.

That pool had been created on July 1, 1961 by agreement among Carolina Power & Light Co., Duke Power Co. the South Carolina Elec-

180. Id. § 2135. See notes 93-107 & accompanying text supra.
181. 37 Fed. Reg. 18047 (1972). See also 39 Fed. Reg. 3846 (1974); 37 Fed. Reg. 16218 (1972). Between the effective dates of the 1970 Atomic Energy Act amendments, the Department of Justice examined seventy-five applications for nuclear power plants. Among the practices the department found anticompetitive, and induced the utility to abandon, were refusals to deal, requirements contracts, resale restrictions in power supply contracts, refusals to coordinate or interconnect, denial of access to power pools, denial of access to particular facilities, territorial agreements, refusals to sell wholesale power on a unit basis, supply contract restrictions on use of other sources of power supply, and efforts to prevent the development of alternative power supply sources. See notes 93-107 & accompanying text supra.
The Carolinas-Virginias Power Pool (CARVA) agreement contained no provision for the admission of any additional members, and no provision foreclosing the addition of new members by agreement. As originally filed, it was essentially a generation planning pool, with each individual system retaining ownership of, and responsibility for, each facility "within its service area." By a set of appendices added to the agreement on December 31, 1963, however, the pool established procedures for allocating participation shares in new generation units and established rates the pool members were to pay each other in power supply transactions. When the pool was dissolved, its members reverted to bilateral contracts to handle intercompany transactions of this sort. There is no FPC record of any reduction of reliability, impairment of service, or disruption of coordination as a result of the pool's dissolution.

Pooling Standards in Other Industries

Actually, pooling is something that occurs in a number of industries in addition to electric utilities. Patent pools, for example, have been created in several industries. But considerable antitrust risks accompany their use. When a patent pool reaches the scope that that in essence gives its participants a monopoly, then it is generally agreed that the pool must license all applicants to use its patents without discrimination and at reasonable royalties.

Tobacco warehousemen are authorized by most tobacco growing states to coordinate their operations through tobacco boards of trade and, through such organizations, to actually allocate selling time among themselves. But they violate the Sherman Act if they exclude a competitor or would-be competitor from membership or otherwise discriminate against him.

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185. Id.
Pooling with the approval of a regulatory agency is commonplace in the transportation industry. Under the Shipping Act,\textsuperscript{188} and under sections 5(1) and (11) of the Interstate Commerce Act,\textsuperscript{189} the Federal Maritime Commission and the Interstate Commerce Commission, respectively, are given power to approve agreements that in effect pool freight operations. Once approved, the agreements are granted specific exemption from the antitrust laws.\textsuperscript{190} But antitrust concepts are an integral part of the standards these commissions are to apply in approving such pools.\textsuperscript{191}

The Federal Power Act's "interconnection and coordination" provisions, even if treated as authorization of pooling, create a cloudy area of the law falling somewhere between the outright exemption granted railroads and steamship lines and the fully liable status of patent pools and tobacco boards of trade. As already noted, it is clearly established that the FPC has no authority to grant any antitrust exemptions to a pooling agreement it approves as a rate schedule. Nor has the commission any explicit statutory authorization to regulate or even approve interconnection or pooling agreements as such. However, the commission is directed to pass on the reasonableness of rate agreements or rate schedules filed with it under sections 205\textsuperscript{192} and 206\textsuperscript{193} of the Federal Power Act and may order an interconnection under section 202(b).\textsuperscript{194} When an interconnection or pooling agreement is so filed, "[t]he Commission can evaluate whether specific provisions of a given interconnection agreement are consistent with the public interest without negating the general policy of promoting electric systems interconnections expressed in section 202(a)."\textsuperscript{195} This instruction leaves to the commission a number of troublesome issues, including which, if any, of the agreed upon conditions of interconnection and pooling can be considered to be "charges," "classifications," "rules," "regulations," or "practices" that can be fixed by an order under section 206(a).\textsuperscript{196}

Application of the full force of section 206(a) to interconnection and pooling agreements filed as rate schedules would give the commission the regulatory authority omitted from section 202(a).

\textsuperscript{193} Id. § 824e.
\textsuperscript{194} Id. § 824a(b).
\textsuperscript{195} City of Huntingburg v. FPC, 498 F.2d 778, 784 n.31 (D.C. Cir. 1974).
There are precedents suggesting that a close decision between competition and regulation should be resolved in favor of competition. This would appear to be particularly true when the regulation has been initiated by agreement among the parties to be regulated. Moreover, it may not be enough that the commission determine simply that a pooling agreement's deviations from antitrust policy are outweighed by benefits vindicating some other public interest. The commission may also be obliged to determine that there are not alternative courses of action that are less anticompetitive and yet will further that other public interest.

Conclusion

The transmission of power and energy between, across, and among electric utility systems has become a commonplace feature of the industry's operation today. Bilateral arrangements have been superseded or augmented by multiparty pooling agreements. By virtue of the importance of interconnected transmission facilities to reliability of service, integration of power supply, and efficient resource utilization, public policy and entrepreneurial interest have coincided in a common pursuit of the technological benefits. This common bond has not, however, been sufficient to transcend the rivalries, controversies, and industry structure which delay, frustrate, or preclude the small utility systems from protecting their competitive position. Access to bulk power supply, other than a unilateral proposal offered by a larger neighbor, can be obtained if transmission services are available from the neighboring intervening systems. Access to and meaningful participation in power pools is another and probably more desirable alternative. In order to obtain any competition in bulk power supply, it is essential that the small system be able to establish a path between its own system and power supply available beyond the physical dimensions of the neighbor's system. Such access or contractual path—the means to change or supplement power supply source—has not been made generally available on a voluntary basis. The economic disparities between large and small have increased. For the small system that either is not a pool participant or belongs to a pooling arrangement which does not encompass transmission services, the only options are moving against the acknowledged technological trend in the industry (installing

197. See, e.g., California Stevedore & Ballast Co. v. Stockton Port Dist., 7 F.M.C. 75, 84 (1962) ("Our national policy makes free competition the rule, and monopoly the exception which must be justified").

small generating units locally, or constructing partially or wholly duplicative transmission facilities for a limited purpose) or maintaining the status quo by accepting a unilateral offer from the only utility contractually available as a power source, its neighbor and likely competitor. The "voluntariness" embodied in the Federal Power Act does not reach the nonpool, biparty arrangement, which remains the primary means by which individual utilities can restrain their smaller rivals.

Forty years of experience under Part II of the Federal Power Act strongly suggests this approach is debilitating, marginally useful, and, under section 202(b), involuntary. A refusal to provide a contractual path, if based on a claim of technical inability, is cause to speculate on the wisdom of management as it relates to engineering foresight and competence. A refusal to offer transmission service or to provide access to power pools based upon economic self-interest reflects ignorance of the antitrust laws and their applicability to the electric utility industry. Policy and law continue to address the problems of reliability and resource utilization. Attention to the commercial practices prevalent within the electric utility industry as they pertain to bulk power supply have, unfortunately, fallen behind the industry's technological march into the last quarter of the 20th century.

If small systems are to remain a viable segment of the pluralistic industry structure, absent increased preferential treatment under state or federal laws to offset a deteriorating economic position and absent voluntary agreements, it is necessary either to mandate an obligation to wheel or to eliminate the vertical integration which has resulted in the disadvantageous position of small utilities. Full access by small systems to pooling agreements can be a useful means of achieving a shared technology without requiring a radical departure from the existing and prospective exercise of legitimate individual rights.

However, access alone may not be sufficient unless the wheeling or pooling arrangement itself is procompetitive rather than anticompetitive. The competitive nature of a pool should be resolved on an ad hoc basis for each pool challenged before the FPC. And it is of no assistance to the FPC to be reminded that the goal towards which it must strive "is the protection of the public interest, as distinguished from the private interests of the utilities," or that the public interest includes "both the broad purposes of the Act and fundamental national economic policy expressed in the antitrust laws."
If the commission should decide, as it has apparently been assuming, that power pooling is a form of "interconnection and coordination of facilities" under section 202(a) of the Federal Power Act, it may find itself in many instances discouraging, rather than promoting, such interconnection and coordination in order to give full effect to the public policy embodied in the antitrust laws. Some existing pools may decide to follow the example of CARVA and disband once it is made clear that their members must give up the competitive advantages pooling gives them over their excluded neighboring competitors at the retail level.201

Application of the "theory of complementary regulation" imposed upon it by the courts involves the commission in a rather peculiar balancing of values. It must do more than balance the efficiency promoting and cost reducing usefulness of competition against the economic benefits of interconnection and coordination. It must also recognize two other practical, nonlegal considerations: Do modern pooling agreements really add anything to the reliability and efficiency already accomplished through technology and interconnection arrangements that are not in any way dependent upon the more elaborate and sophisticated terms of pooling? Will the need for nuclear generation force so much of the industry into procompetitive commitments to the Justice Department and the NRC that protection against competition will disappear as a motive for pooling, regardless of what action the FPC takes?

A pooling agreement that sets the prices all pool members are to pay or receive for exchanges of power among pool members, establishes a committee to allocate power sales and purchases among the members, discourages or limits similar transactions with non-member systems, and excludes certain classes of competitors from the pool's planning, reserve sharing, and other services goes well beyond the sort of joint and concerted activity encouraged under section 202(a) of the Federal Power Act. Such a pooling agreement is not "coordination of facilities;" rather, it is coordination or rationalization of business deal-

201. "When systems from different segments of the industry attempt to organize a pool, however, all such systems may want to reach one or more formal agreements which have the effect of eliminating competition for loads. This is particularly the case where ever there is the possibility that a participant who is also a competitor may use the advantages derived from a pooling arrangement to undercut and take over the present or potential customers of one or more other participants. In such circumstances, there will necessarily be a hesitancy to enter into such a pooling arrangement unless there is assurance that it will not worsen established competitive positions." 1964 POWER SURVEY, supra note 8, at 367 (emphasis added).
ings and as such has no relationship to the reliability or economies sought by section 202. This is not a matter of antitrust law but a rational application of the Federal Power Act, a statute intended to eliminate "great concentrations of economic and even political power," written by legislators interested in promoting "competition between the privately and publicly owned utilities," and prompted in part by an industry practice of eliminating or absorbing municipal systems.

As has been shown, power pools do raise serious questions of the propriety of certain utility practices. This not to suggest that every aspect of power pooling, or even that every power pool, is necessarily unreasonably anticompetitive. Immediate, automatic, and involuntary response to an emergency on a neighbor's system is essential to the contribution interconnections make to system reliability. It is certainly reasonable to expect a system that has a breakdown to pay a predetermined rate for the replacement energy it needs for the first few hours of the emergency. But the rates to be paid for, and the source of, replacement energy needed beyond the period of the original emergency can be taken care of through bilateral contracts between a buyer and seller required to compete with other buyers and sellers for that trade.

Furthermore, as previously indicated, a group of systems prepared to make the necessary investment in the transmission and sophisticated control equipment needed for centralized economy dispatch of energy can reasonably be permitted to set a pool-wide price for all energy dispatched in that manner. Since such a pool makes its services even more important—even indispensible—to all members of the industry, membership restrictions become even less justifiable. It also seems likely that such a sophisticated approach to pooling is so automated and computerized that many of the administrative and management problems often cited as reasons for not broadening membership are eliminated.

Power pooling has gained industry acceptance as a means to improve reliability, economic benefits, and resource utilization. Other proposals are being made, however. The New England Region Commission Study and the Report of the Michigan Governor's Advisory Commission reflect the kind of regional and state concerns about the ability of the pluralistic industry structure, as it has developed historically, to meet the power needs of the consumer. Both recommendations, if endorsed and carried out, would have a significant impact on the status quo. So, too, would proposed legislative reform at the

203. 79 Cong. Rec. 10379 (1935).
federal level. These approaches, expanding present utility obligation to transmit power and energy, introducing new entities for production and transportation of electricity, or divorcing the distribution function from generation and transmission, must logically have two consequences. The electric utility industry may respond to these proposals by increasing, voluntarily, the availability of essential transmission and pooling services to smaller systems in order that such systems may “take full advantage of all the economic opportunities” which technological progress has to offer. If such response is found in the public view to be wanting, then enhanced obligations for transmissions services will be legislatively imposed or the consuming public will endorse the entry of new competitive entities in the market place of suppliers of bulk power.