CHAPTER 2

Definition of Integration

THE Public Utility Holding Company Act of 1935 defines an "integrated public-utility system" in this manner: "(A) As applied to electric utility companies, a system consisting of one or more units of generating plants and/or transmission lines and/or distributing facilities, whose utility assets, whether owned by one or more electric utility companies, are physically interconnected or capable of physical interconnection and which under normal conditions may be economically operated as a single interconnected and coordinated system confined in its operations to a single area or region, in one or more States, not so large as to impair (considering the state of the art and the area or region affected) the advantages of localized management, efficient operation, and the effectiveness of regulation; and (B) As applied to gas utility companies, a system consisting of one or more gas utility companies which are so located and related that substantial economies may be effectuated by being operated as a single coordinated system confined in its operations to a single area or region, in one or more States, not so large as to impair (considering the state of the art and the area or region affected) the advantages of localized management, efficient operation, and the effectiveness of regulation: Provided, That gas utility companies deriving natural gas from a common source of supply may be deemed to be included in a single area or region.

One of the earliest problems which arose under this definition of integrated systems was whether electric utility prop-

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erties and gas utility properties could be combined in one integrated system. In the American Water Works & Electric Company case it appeared that electric utility operations were carried on by the system in Pennsylvania, West Virginia, Ohio, Maryland, and Virginia, covering a territory approximately 300 miles north and south, and 300 miles east and west. The electric properties were physically interconnected for the most part, and those not so connected were capable of physical interconnection, and further interconnections were being made. Gas utility operations were carried on by the system in West Virginia, Pennsylvania, and Maryland, part of the territories served by the system with electricity. The gas operations were small compared to the electric operations. There was evidence to the effect that substantial economies resulted from the joint use of personnel and facilities by the electric and gas operations. This combination of electric and gas facilities was held to be one integrated utility system. The Commission reasoned as follows:

"No specific mention is made in the definition of an integrated public-utility system concerning a combined gas and electric system. We believe, however, that it is proper to regard such a combined property as a single integrated system, provided that all of the electric properties are integrated and all of the properties, both gas and electric, are in fairly close geographic proximity and are so related that substantial economies may be effectuated by their coordination under common control."

It was further pointed out in this case that the question of policy as to the common ownership of electric and gas facilities in the same territory was left to the states by Section

45 Id. at 983.
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8 of the Act. The decision in this case was no doubt colored by the fact that it was a voluntary proceeding under Section II(e) of the Act and further that it was the first integration decision handed down by the Commission. The Commission had not yet completely oriented itself and was subsequently forced to retract the broad rule laid down in this case.

Three years later substantially the same issue was presented in the Section II(e) application of Columbia Gas & Electric Corporation. Here the applicant owned gas service companies in Ohio, Pennsylvania, West Virginia, Kentucky, New York, Maryland, Virginia, and Indiana. It also owned electric service companies in Ohio, Kentucky, and Indiana. The electric service area was smaller than, but included within, the general boundaries of the gas service area. The gas facilities were for the most part interconnected and derived their gas from a common source. The electric operating companies were interconnected, with one exception. Both the electric and the gas operations constituted substantial activities, as contrasted with the situation in the American Water Works case where the gas operations were small in comparison with the electric operations. Columbia contended that the combined electric and gas facilities constituted a single integrated utility system and cited the American Water Works

86 Section 8 of the Act provides as follows:

"Whenever a State law prohibits, or requires approval or authorization of, the ownership or operation by a single company of the utility assets of an electric utility company and a gas utility company serving substantially the same territory, it shall be unlawful for a registered holding company, or any subsidiary company thereof, by use of the mails or any means or instrumentality of interstate commerce, or otherwise,—

"(1) to take any step, without the express approval of the State commission of such State, which results in its having a direct or indirect interest in an electric utility company and a gas utility company serving substantially the same territory; or

"(2) if it already has any such interest, to acquire, without the express approval of the State commission, any direct or indirect interest in an electric utility company or gas utility company serving substantially the same territory as that served by such companies in which it already has an interest."
The Commission held to the contrary. The decision states that the American Water Works case was merely an advisory opinion regarding compliance with Section 11(b) of the Act which should be narrowly construed. Although the American Water Works involved a voluntary plan for compliance under Section 11(e), the opinion appears to be final on the integration question. It was further noted that no specific definition appears in the Act with reference to an integrated public-utility system operating both gas and electric utilities. Section 8 of the Act was rejected as a controlling consideration. The principal point of distinction between the two cases lay in the fact that the gas facilities of American Water Works were small in comparison with the electric facilities, whereas both were substantial operations in the Columbia case. The Commission advanced the suggestion that the opinion in the American Water Works case should be construed to mean that the gas utility system was retainable as an additional system along with the integrated electric utility system. This was certainly not the decision in that case. In any event, the Commission rejected the American Water Works decision as controlling in the Columbia case.

A short time later the American Water Works decision was laid to rest in the United Gas Improvement Company (U.G.I.) case. Here the company contended that its principal system was located in the Pennsylvania-Delaware-Maryland area, and that such system included both its electric and gas operations in that area. The Commission again rejected this contention. The company relied upon the American

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67 Columbia Gas & Electric Corporation, 8 S.E.C. 443 (1941).
68 Cf., comment, "Geographic Integration under Section 11(b)(1) of the Public Utility Holding Company Act," 36 ILL. L. R. 662 (1942).
69 The United Gas Improvement Company, 9 S.E.C. 52 (1941).
70 The opinion states that the "principal utility assets" of U.G.I. in this area were electric utility assets, but that gas properties were also included in the same area. No comparative figures were given. The United Gas Improvement Company, 9 S.E.C. 52, 77 (1941).
Water Works case as an authority, but was confronted with the Columbia case. The Commission noted the anomalous position of U.G.I., which was requesting the Commission, on the basis of *stare decisis*, to overrule its latest decision on the point. The bothersome language in Section 8 of the Act was explained away by emphasizing the fact that one company might own both electric and gas facilities under the Act, when one was considered the principal integrated system and the other met the statutory test for an additional system or systems. The company contended that the word "and" connecting the two definitions in Section 2(a)(29) of the Act indicated that a combination of both gas and electric properties was contemplated within a single system. The phrase "(B) As applied to gas utility companies," in that section and the use of the term "single system" in both clauses (A) and (B) thereof led the Commission to the conclusion that a single integrated utility system might be composed of electric or gas properties, but not both.

The principal shortcoming of the position taken by U.G.I. was that the Act contained no standards which could be applied by the Commission to the combination of electric and gas properties in a single system. There was no over-all standard which might be applied to a combination of both.

U.G.I. further contended that joint gas and electric operations in the same area met the requirements of the concept of a single integrated system, as contemplated by Congress, on the grounds that a severance of gas and electric properties would be unnatural and wholly inconsistent with engineering and economic facts. The Commission pointed out that the assumption that unless the two functions might be combined in a single system, they might not be combined at all, was fallacious. A company may, of course, hold both types of properties, one as the principal system and the other as an additional system or systems, if the statutory standards are met.
U.G.I. argued that the legislative history of the Act indicated that Congress intended that both gas and electric properties might be embraced in a single integrated system. The answer was that the early Congressional discussion of the bill did indicate that both gas and electric properties were to be included in one single integrated system, but such discussion occurred before the provision for "additional systems" was put into the bill. U.G.I. cited further the Conference Report which indicated that the definition of an integrated public utility system was intended to carry the same meaning as the earlier language.\(^71\) The Conference Report evidenced the fact, however, that under the provisions of Section 2(a)(29) gas and electric properties were intended to comprise separate systems.\(^72\)

The conclusion was, therefore, that a "single integrated system" may not include a combination of both electric and gas properties. This holding is supported by the weight of reason. It would not have caused the Commission so much difficulty had it not been for the early contrary decision in the American Water Works case. Although not bound by the doctrine of *stare decisis*, the Commission exerted some effort in that direction in the Columbia Gas & Electric Corporation case, but abandoned its earlier ruling completely in the U.G.I. case.

This holding in the Columbia Gas & Electric Corporation and U.G.I. cases has been consistently adhered to in later decisions.\(^73\) It does not matter whether the gas properties


\(^{72}\) Id. at 66.

\(^{73}\) Eastern Utilities Associates, Release No. 9784 (April 4, 1950); Philadelphia Company, Release No. 8242 (June 1, 1948); The Commonwealth & Southern Corporation, Release No. 7615 (August 1, 1947) (gas utility operations small in comparison with electric utility operations); Peoples Light & Power Company, 20 S.E.C. 357 (1945) (electric utility operations small in comparison with gas utility operations); Columbia Gas & Electric Corporation, 17 S.E.C. 494 (1944); Laclede Gas Light Company, 16 S.E.C. 26 (1944);
are large or small in relation to the electric properties; the American Water Works case has been completely discarded on this issue.

The Commission has been affirmed in this matter by the Court of Appeals for the District of Columbia in the Philadelphia Company case. The court stated its position as follows:

"... Plainly there are two defined types of 'integrated public-utility system' and the requirements of the gas type differ from those of the electric type. Just as plainly there is no third type. The Commission rightly refused to formulate a third definition. . . ."

With reference to the provisions of Section 8 of the Act relied upon by the company to support its contentions, the court pointed out that, although Section 8 did not prohibit a holding company from acquiring interests in both electric and gas companies serving the same territory unless the acquisition would violate the law of a state, such section did not authorize the acquisition of any property, and such acquisition had to meet the tests of Section 10(c), which in turn led back to Section 11(b).

It should be noted at this point that the application of the integration standards of the Act has been varied by the Commission, depending upon whether the problem involves the extent of a presently existing system or whether it involves additions thereto. It has been held that a proceed-


75 Id. at 723.
ing under Section 11(b)(1) to delimit the spheres of existing control is different from one in which the processes of the Act are sought to be used to extend control. For example, under Section 11(b)(1) utility properties may be retained even if they are not integrated with a principal retainable unit, but form a permissible additional system under the ABC clauses of the section. But under Section 10 of the Act an acquisition of securities or utility assets of a public utility company can be permitted only if it can be affirmatively found that such acquisition will tend towards the creation of an integrated system as defined in Section 2(a)(29), and the acquisition must be disapproved if it is found that it will tend towards the concentration of control of public utility companies of a kind or to an extent detrimental to the public interest or the interest of investors or consumers. The position of the Commission is that the difference is not an accident of rhetoric, but inheres in the difference between Section 11, as a compromise of the policy of "elimination" of holding companies to which the Act is basically directed, and the "new acquisition" standards of Section 10 which were designed to be a more restrictive check on the further growth of holding companies and the extension of their control. Unless the Commission is appraised of the precise context in which the integration question is presented, it will refuse to act because it will not be certain which set of standards is applicable. The policy is, therefore, to forgive past "mistakes" to a certain extent but to apply a strict rule to future action. It appears to be a natural development under the

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7 Section 10(c)(2).
6 Section 10(b)(1).
5 Cf., Section 1(c) of the Act.
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circumstances; however, it will lead to numerous inequities, as pre-existing systems will be allowed a greater degree of scatteration than new systems.

Selection of the Principal System

The nucleus of the utility properties which may be retained under the provisions of Section 11(b)(1) of the Act is referred to therein as the "single integrated public-utility system." The need for a shorter name for this group of properties is obvious, and the term that has been adopted is "principal system." Although this term does not appear in the Act, it is commonly used with reference to the "single integrated public-utility system" permitted by Section 11(b)(1), and it was used by Congress before the Act became law.

Where there are two or more utility systems controlled by one holding company the problem of designating the "principal system" often arises in proceedings under Section 11(b)(1). The various holding companies have generally been reluctant to designate a principal system, endeavoring not to commit themselves prematurely to any one particular system. The Commission has likewise been hesitant to issue final orders delimiting principal systems, and yet neither the holding companies nor the Commission has ever conceded

82 Engineers Public Service Company, 12 S.E.C. 41 (1942), 9 S.E.C. 764 (1941).
84 The holding company may designate the principal system in a plan filed pursuant to Section 11(e). Section 11(e) provides, in part, as follows:
"In accordance with such rules and regulations or order as the Commission may deem necessary or appropriate in the public interest or for the protection of investors or consumers, any registered holding company or any subsidiary company of a registered holding company may, at any time after January 1, 1936, submit a plan to the Commission for the divestment of control, securities, or other assets, or for other action by such company or any subsidiary company thereof for the purpose of enabling such company or any subsidiary company thereof to comply with the provisions of subsection (b)...."
that the other had the right to designate the principal system. In an early Section 11(b)(1) case this question as to whether the Commission or the holding company had the sole right or duty to select the principal system arose, but the Commission did not decide the question squarely at that time, holding that if it was the right of the holding company to make the selection, then the holding company had the duty of making the selection promptly. The issue was settled in this case by the Commission giving its consent to the issuance of an advisory opinion with reference to the principal system, which opinion would set forth the alternatives open to the holding company. The case contains this language:

“The Act does not expressly state whether the selection of the ‘single integrated public-utility system’ retainable as the principal system is for the holding company to make solely on the basis of its own wishes, or for us to make on the basis of evidence and with due regard to the public interest and the protection of investors or consumers. An intermediate position might be that the holding company may make the selection subject to our approval or disapproval based upon evidence and judged in the light of the foregoing standards.”

On appeal the position of the Commission in the Engineers Public Service Company case was affirmed. The holding was to the effect that it was reasonable to assume that the holding company rather than the Commission had the right of choice,

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85 Engineers Public Service Company, 9 S.E.C. 764 (1941).
86 Id. at 788. In The North American Company, 11 S.E.C. 715 at 716 (1942), the Commission stated that “It may very well be that the ultimate responsibility for designating the principal system rests with us, but in making that designation we would certainly give considerable weight to the expressed desires of the respondent holding company.”
since the holding company was the lawful owner of the properties and the public interests were protected by the Commission's powers under the Act. This interpretation also avoided the contention that the delegation of arbitrary power to the Commission to select the principal system without Congressional standards to guide it would be unconstitutional. The court pointed out that the holding company could not unduly delay the selection of a principal system and thereby impede enforcement of the Act, and if the holding company did not act seasonably, then it was the duty of the Commission to make the selection. The court further sanctioned advisory findings where a selection could not be made intelligently by the holding company until the permissible composition of alternate systems had been determined.88

In the proceedings involving The North American Company, that company was requested by the Commission on several occasions to specify its principal system.89 North American refused to do so, contending that it should be free to dispose of its non-retainable properties as circumstances permitted without being bound in advance to determine which system would be retained. North American requested that alternative findings be made as to its principal system. The Commission rejected the first contention and also declined to issue an advisory opinion on the ground that a complete record had been made in the case and the issuance of an advisory opinion would only result in unnecessary complications and delay. The Commission then selected one group of North American properties as the principal system, stating

that North American had "indicated" that it would prefer this group as its principal system, and that in the opinion of the Commission the retention of this group as the principal system was appropriate. In effect, therefore, the Commission decided that North American should select this group and then proceeded on the assumption that that selection had been made. North American protested against this mode of procedure on appeal, but the Commission was sustained. North American argued that it could not then tell which two of its three systems would be most marketable, that Section 11(c) of the Act gave it at least one year for compliance with the divestment order, and that therefore it could select its principal system at any time within the period allowed for compliance. This argument was rejected on the grounds that such procedure would result in unnecessary delays and that it was the Commission's duty to act under Section 11(b) "as soon as practicable." If any changes occurred during the period allowed for compliance with the order, the Commission would have the power to revoke or modify its order.

Cities Service Power & Light Company likewise failed to indicate which of its utility systems it preferred as its principal system, contending that it should be free to dispose of properties without being a forced seller. The contention was again rejected, the Commission noting that sale is only one of the many means of divestiture which may be used in compliance with orders of disposition. The procedure adopted

91 Section 11(c) provides as follows:
"Any order under subsection (b) shall be complied with within one year from the date of such order; but the Commission shall upon a showing (made before or after the entry of such order) that the applicant has been or will be unable in the exercise of due diligence to comply with such order within such time, extend such time for an additional period not exceeding one year if it finds such extension necessary or appropriate in the public interest or for the protection of investors or consumers."
92 Cities Service Power & Light Company, 14 S.E.C. 28 (1943).
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in this case was to define all possible principal systems and then to issue an order of divestment based upon a principal system designated by the Commission, with a reasonable time being given the holding company to indicate a different choice. The time set by the Commission was 15 days, after which time the order was to become final. The Commission will not, however, spell out the limits of all possible principal systems where it is reasonably clear what properties constitute the principal system and the holding company indicates that it desires to retain such properties as its principal system. And where the holding company proposes to divest itself of all of its utility subsidiaries, or proposes to dispose of all of its subsidiaries and dissolve, both the Commission and the holding company are relieved of the burden of selecting a principal system.

INTEGRATION AS APPLIED TO PARTICULAR ELECTRIC UTILITY SYSTEMS

The definition of an integrated electric utility system, as contained in Section 2(a)(29)(A) of the Act, has already been stated. The basic elements requisite to such a system are as follows:

(1) Physical interconnection or capability thereof;
(2) Economical operation as a single interconnected and coordinated system;

(3) Confinement of operations to a single area or region; 97

(4) (a) Not so large as to impair the advantages of localized management, (b) efficient operation, and (c) the effectiveness of regulation, considering the state of the art and the area or region affected.

The relative weight given by the Commission to these various elements will be revealed in the following study of the integration decisions.

Standard Power & Light Corporation

The Standard Power & Light Corporation and Standard Gas & Electric Company and their subsidiary companies in 1941 operated in 20 states and Mexico. 98 The Commission remarked that Standard typified the kind of “scatteration” and tendency toward undue concentration of ownership which Section 11(b)(1) was designed to eliminate. 99 Standard proposed to limit itself to its Philadelphia Company properties, operating in and around Pittsburgh, Pennsylvania, and no attempt was made to correlate any of the other widely scattered properties unto the utility system of the Philadelphia Company. The electric utility assets were owned by Duquesne Light Company, a subsidiary of Philadelphia Company, and consisted of generating plants, transmission lines, and distribution facilities, with a book value of approximately $218,598,000.00 on December 31, 1940, serving approximately 374,000 customers of a total population of 1,400,000 in Pittsburgh and environs, being physically interconnected.

97 There is conflict of opinion as to whether this is a separate element, or an integral part of element (4). This conflict will be discussed below.

98 The electric utility properties of these companies were concentrated mainly in the States of Pennsylvania, Minnesota, Wisconsin, Oklahoma, Colorado, Wyoming, Montana, Oregon, and California.

and functioning as a single coordinated system. The area served did not exceed 50 miles east and west or north and south, the total being approximately 817 square miles. These properties were held to be an integrated electric utility system.\textsuperscript{100} There was no special analysis of the system with reference to the size requirements three and four above; however, from what has already been shown it is clear that all of these requirements were met.

\textit{The United Gas Improvement Company}

The operations of The United Gas Improvement Company were fairly well concentrated in the northeastern part of the United States, except for its subsidiary, Arizona Power Corporation, located in the central portion of Arizona.\textsuperscript{101} The most extensive U.G.I. electric utility operation was carried on in the southeast portion of the state of Pennsylvania and in the adjoining northern portions of the states of Maryland and Delaware. This system covered an area approximately 80 miles by 30 miles with a population of 3,000,000 persons. U.G.I. conceded that this constituted its primary or principal system.\textsuperscript{102} The Commission in its statement of tentative conclusions with reference to U.G.I. held that the Pennsylvania-Maryland-Delaware electric utility properties constituted a single integrated system.\textsuperscript{103} The Commission has subsequently proceeded upon the assumption that the principal electric utility system of U.G.I. lies within the 3-state area, but has not defined its exact limits.\textsuperscript{104} U.G.I. complained of this method of procedure in its appeal to the Third

\textsuperscript{100} Ibid. See also, Philadelphia Company, Release No. 8242 (June 1, 1948).
\textsuperscript{101} Divestment of the Arizona Power Corporation properties was ordered in The United Gas Improvement Company, 9 S.E.C. 52, 63-64 (1941).
\textsuperscript{102} The United Gas Improvement Company, 9 S.E.C. 52 (1941).
\textsuperscript{103} The United Gas Improvement Company, Release No. 2500 (January 18, 1941).
Circuit of Appeals. That court rejected the complaint, observing that there might be circumstances in which the determination of a holding company's single integrated utility system is necessary, but that such circumstances were not presented in this case. The properties in question served a very compact area. In the absence of some unusual circumstance not yet revealed in any of the opinions of the Commission, these properties undoubtedly constitute an integrated electric utility system. The procrastination of the Commission in making a final decision in this regard is difficult to understand.

American Water Works & Electric Company

The electric operations of American Water Works and Electric Company were carried on in Pennsylvania, West Virginia, Ohio, Maryland, and Virginia, covering an area approximately 300 miles north and south and 300 miles east and west. The electric properties were mostly physically interconnected, and those not so connected were capable of physical interconnection and interconnections were proceeding apace.

With no discussion of the other requirements of integration, the Commission held that these properties constituted a single integrated electric utility system.

Engineers Public Service Company

Engineers Public Service Company operated electric utilities in 15 widely scattered states. The electric properties

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106 American Water Works & Electric Company, 2 S.E.C. 972 (1937). This case held that the electric and gas properties combined constituted an integrated utility system, a principle which the Commission later repudiated.
107 See map of Engineers Public Service Company electric utility systems on page 42. The source of this map is Engineers Public Service Company, 9
in Virginia and North Carolina served an area of 13,500 square miles, extending 240 miles north and south, and 140 miles east and west. The population of this area was 830,000 of which 170,000 were customers of the electric system. The system was physically interconnected or capable of such interconnection, and was subject to regulation by state commissions in Virginia and North Carolina. The Commission held this system to be integrated. The small interconnected system serving the city of Savannah, Georgia, was also held to be integrated. Engineers' properties in southeast Texas and southern Louisiana (Gulf States Utilities Company) extended approximately 350 miles east and west, and from 50 to 125 miles north and south, serving an area of 27,000 square miles with 92,000 customers out of a population of 405,000. The utility system was subject to municipal regulation in Texas and state regulation in Louisiana. The properties of this system were physically interconnected or economically capable thereof. This system was found to be integrated.

The properties of Engineers located at Alvin, Texas, were held not to be integrated. This system was not physically interconnected with the other properties belonging to Engineers and was not economically capable of such interconnection. Its electric energy was purchased from a non-affiliated company. Engineering, accounting, purchasing, billing, rates, taxes, etc. were handled by a general office of Engineers in Beaumont, 112 miles distant. The system served less than 1,000 customers. Alvin was obviously an orphan. Engineers

S.E.C. 764 (1941). The enclosures indicating the integrated areas have been added.

111 Engineers Public Service Company, 12 S.E.C. 41, 82-83 (1942).
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also owned a small electric utility system at Jasper, Texas, 73 miles from Beaumont. Like Alvin, it was not connected with the main Engineers properties and was not economically capable thereof. The Beaumont offices furnished the same overhead services that were rendered for Alvin. The two properties differed only in the fact that Jasper derived its power from its own diesel generating plant. The Jasper properties were held to be an integrated electric utility system.112

The electric system of Engineers in west Texas and southern New Mexico, the El Paso system, served an estimated population of 169,000 in an area of 700 square miles. Its territory followed the Rio Grande Valley for a distance of 220 miles, rarely exceeding 5 miles in width. The region served was surrounded by mountains and desert, and was geographically isolated. With the exception of electric utility properties serving the city of Sierra Blanca and Van Horn, Texas, the system’s properties were entirely interconnected. The Sierra Blanca properties were in the process of being interconnected with the main system. The Commission found that with the exception of the Van Horn properties these electric utility properties constituted an integrated public utility system.113

The Van Horn properties, mentioned above, served 200 customers in a small isolated area. These properties were not economically capable of interconnection with the other properties of Engineers in the region. The latter system assisted Van Horn with production, distribution, and engineering. Van Horn generated its own energy from a diesel plant. The system was held to be integrated.114 This is the smallest integrated system yet defined by the Commission.

112 Id. at 84.
113 Id. at 86.
114 Id. at 90.
The most comprehensive of the early integration decisions of the Commission was rendered in The North American Company case. The North American Company system was comprised of 80 companies operating in 18 states serving 3 million customers over an area of some 165,000 square miles. Upon the failure of the company to designate its principal system within this vast empire, the Commission selected the electric utility system of the Union Electric Company of Missouri and its subsidiaries as such system, on the grounds that North American had indicated that it would prefer that choice and that the Commission would regard the retention of that system as appropriate if called upon to pass on the choice of this system by North American. This Commission-selected principal system operated an electric utility system in Missouri, Illinois, and Iowa. Its operations were centered around St. Louis, Missouri, East St. Louis, Illinois, in an area surrounding a large hydroelectric plant at Keokuk, Iowa, and in and around a hydroelectric plant at Osage, Missouri. Note that the Keokuk and Osage properties were each approximately 100 miles from the main concentration of properties around St. Louis. The total area served contained 3,100 square miles with a population of 1,500,000 of which 351,565 were customers. All electric production facilities of the group were physically interconnected and centrally controlled, and were coordinated without reference to differences in corporate ownership. The system was subject to state regulation in Missouri and Illinois and to municipal regulation in Iowa. This group of properties was held to be

116 See map of The North American Company electric utility systems on page 45. The source of this map is The North American Company, Release No. 3405 (April 14, 1942). The enclosures indicating the integrated areas have been added.
a single integrated electric utility system.\textsuperscript{117}

With practically no discussion of the controlling factors, the Commission held that the electric utility systems of The North American Company centered around Washington, D.C., Cleveland, Ohio, Detroit and southeastern Michigan, and in the Wisconsin-Michigan region\textsuperscript{118} were each single integrated electric utility systems.\textsuperscript{119} The map of The North American Company system substantiates this holding with reference to the Washington, Cleveland, and southeast Michigan properties. However, the Wisconsin-Michigan system would seem to justify a more searching analysis by the Commission. This system consisted of three concentrations of electric properties extending from the southern border of Wisconsin into the northern reaches of Wisconsin and into the northern peninsula of Michigan, a distance of 300 miles. In northern Wisconsin and Michigan the properties extended 175 miles east and west. There were substantial gaps in the service areas of these properties. No doubt the proper integrational factors existed, but they did not appear on the surface and the opinion does not provide further enlightenment.

This system was held to be non-retainable as an additional system to the Union Electric Company, and perhaps this induced the Commission to consider the question of integration only briefly. Since the issue of integration becomes of paramount importance with regard to each system sooner or later, it seems unfortunate that so little emphasis should be placed upon it in this particular case.\textsuperscript{120}

\textsuperscript{117} The North American Company, 11 S.E.C. 194 (1942).
\textsuperscript{118} See map on page 45.
\textsuperscript{119} The North American Company, 11 S.E.C. 194 (1942). Appendix B of this decision sets forth the area, population, and number of customers served by each company in these areas. Counsel for the Public Utilities Division of the Commission had conceded that these properties were integrated.
\textsuperscript{120} See Wisconsin Electric Power Company, 9 S.E.C. 941 (1941), which indicates the presence of economical, efficient, and coordinated operation of these properties.
The subsidiaries of Illinois Traction Company, in turn a subsidiary of The North American Company, operated two large electric utility systems and several smaller electric properties. One of the larger systems, located in northern, central, and southern Illinois, was operated by Illinois Iowa Power Company, and Kewanee Public Service Company. The other was operated in south central Iowa by Des Moines Electric Light Company and Iowa Power & Light Company. North American contended that all of these properties constituted a single integrated electric utility system. Illinois Iowa Power Company and Kewanee Public Service Company operated in an area of 15,333 square miles with a population of 750,000 including 223,338 customers. Their properties extended 250 miles north and south, and 180 miles east and west. Des Moines Electric Light Company and Iowa Power & Light Company served 65,955 customers out of a population of 290,000 in a compact area of 3,240 square miles, extending 102 miles east to west, and 52 miles north to south. The Iowa properties combined with those in Illinois extended 330 miles from east to west, with a substantial gap between them. The Commission held that the electric operations in the main service territories in northern, central, and southern Illinois, including those of Kewanee, all of which were physically interconnected by means of lines owned or leased for joint use, constituted a single integrated system, the principal system for Illinois Traction Company.\textsuperscript{121} Electric operations in four small isolated areas adjacent to this main system were held not to be a part of such system. They were not interconnected with each other or with the main system. It was claimed by North American that the operation of the electric facilities in these areas was thoroughly coordinated and efficiently carried on. The Commission conceded that perhaps

\textsuperscript{121} The North American Company, 11 S.E.C. 194 (1942).
this was true with respect to the corporate management, but it did not believe that these electric facilities were or could be operated physically as a single interconnected and coordinated system. The position of the Commission was stated in this manner:

"... In determining the boundaries of an integrated electric utility system under Section 2(a) (29), we must find that the utility assets included therein are physically interconnected or are capable of such interconnection, and that these utility assets under normal conditions may be 'economically operated as a single interconnected and coordinated system.' ... We think it clear that the quoted language refers to the physical operation of utility assets (not the management of the company or companies owning them) as a single interconnected and coordinated system; that is, a system in which (inter alia) the generation and/or flow of current within the system may be centrally controlled and allocated as need or economy directs, and which is operated as a unit. Thus, even though we find physical interconnection exists or may be effected, evidence is necessary that in fact the isolated territories are or can be so operated in conjunction with the remainder of the system that central control is available for the routing of power within the system. We can make no such finding with respect to the four smaller areas...."

The Commission found, however, that each of these four isolated units constituted a single integrated electric utility system, despite the fact that all of them took their power from Central Illinois Public Service Company, a non-affiliated company, and only one of them had a generating station. Although the Act does not require the existence of generating facilities within a single integrated system, it would seem that

122 Id. at 242.
they normally should be present,¹²³ and therefore the decision as to the three properties wholly dependent upon an outside source of power would appear to be questionable.

With reference to the inclusion of the Iowa properties with the main facilities in Illinois as a single integrated system, it was stipulated that these properties were capable of physical interconnection, but the evidence indicated that they were separately operated and that there was then no physical interconnection between them except through facilities owned by other companies and running through foreign service territories. Physical connection of the two properties by means of their own facilities was not contemplated, nor was it possible within the reasonably near future. There was no showing that the Illinois and Iowa properties were operated as a "coordinated" system, or that such operation under "normal" conditions was possible. Consequently, the combination of the Illinois and Iowa properties was held not to be a single integrated electric utility system. The Iowa properties by themselves, however, being interconnected and operated as a unit, were held to be a single integrated system.¹²⁴

The Union Electric Company system of The North American Company was subsequently enlarged by the addition of the electric properties of Missouri Power & Light Company, a system subsidiary. Missouri provided electric and other services in three non-contiguous areas in the northern half of Missouri. The bulk of the electric system of Missouri was interconnected with that of Union at three points, and Missouri purchased approximately 40% of its electric energy requirements from Union. Missouri was also engaged in the electric distribution business at Clinton, Missouri, some 55 miles from

¹²³ Compare the treatment of the Alvin, Texas, properties of Engineers Public Service Company in Engineers Public Service Company, 12 S.E.C. 41 (1942). See pages 41, 43, supra.
the nearest electric properties of Union. The entire requirements at this town were purchased from a nonaffiliated company. The Union system and Missouri combined served an area extending from East St. Louis, Illinois, to Excelsior Springs, Missouri, a distance of about 260 miles, practically spanning the state. The total property and plant of the Union system at June 30, 1950, was $359,837,811, with net tangible property of $273,673,869. Its electric operating revenues for the 12 months ended June 30, 1950, amounted to $65,878,963. The gross plant account of Missouri at the same date was $28,448,188, with net tangible property amounting to $23,780,571. The electric operating revenues of Missouri for this period were $6,606,700. North American presented evidence to show that the acquisition of the control of Missouri through stock ownership by Union would facilitate the coordination of future power demands and would extend to the Missouri electric operations the benefits of the extensive experience of the Union staff with regard to engineering and other problems. In addition, it appeared that Union would be able to furnish financial aid to Missouri, particularly in obtaining new equity capital. The record also indicated that certain operating economies would result from integrating the Union system with Missouri's electric business. The acquisition of the stock of Missouri by Union was approved by the Commission under the provisions of Section 10(c)(2) and the combination of the electric properties of Missouri, except those at Clinton, with those of Union was held to constitute an integrated electric utility system. The Commission felt that this combination of properties was not so large as to defeat the size requirements of Section 2 (a) (29)(A) of the Act, in view of the comparatively small size of the Missouri electric properties as contrasted with those

DEFINITION OF INTEGRATION

of Union and in consideration of the fact that Missouri's electric operations were conducted in the same general area as those of Union.

_Cities Service Power & Light Company_

Cities Service Power & Light Company and its subsidiary companies carried on electric utility operations in 14 states and Canada, extending from coast to coast. In general, the properties of the system were geographically divided into four sectional groups. The first was located in Ohio, and consequently referred to as the "Ohio group." The second, or "Mid-Continent group," was located in Arkansas, Kansas, Missouri, and Oklahoma. The third was the "Rocky Mountain group," operating in Arizona, Colorado, New Mexico, and Wyoming. The fourth consisted of scattered properties located in Connecticut, Michigan, North Carolina, Tennessee, Virginia, Washington, and Canada.

The Ohio group consisted of generating plants, transmission lines, and distributing facilities in a compact strip of territory in northern Ohio and in four smaller territories in the northeastern portion of the state. The properties of this group in the smaller areas were physically interconnected by means of group-owned transmission lines with each other and with the main service areas. The entire service area was approximately 200 miles from east to west, and was irregular in width. The properties were operated as a unit with respect to economical power interchange, and were amenable to regulation within a single state. The Ohio properties were accordingly held to be an integrated electric utility system. 127

126 See map of Cities Service Power & Light Company electric utility systems on page 52. The source of this map is Cities Service Power & Light Company, Release No. 4489 (August 17, 1943). The enclosures indicating the integrated areas have been added.

CITIES
(Integrated systems indicated by enclosures. Also, the combination of systems designated A and B, or B, C, D and E constitutes a single integrated system.)
The major electric utility service area in the Mid-Continent territory lay in the southwestern part of Missouri and overlapped into southeastern Kansas, northeastern Oklahoma, and northwestern Arkansas. The system also served two smaller areas in the Mid-Continent section, one in central Missouri surrounding the city of Sedalia, and the other in northwestern Missouri and northeastern Kansas surrounding the city of St. Joseph, Missouri. The southwestern Missouri area was served by group-owned and interconnected generation, transmission, and distribution facilities. Its service area was compact, but irregular in shape, 150 miles long and 150 miles wide at its extremes. The properties situated in and around Sedalia, Missouri, owned by the City Light & Traction Company, were separated from the main service area in southwest Missouri by about 65 miles. They were, however, physically connected with the larger system by a high-tension transmission line belonging to these two systems. City Light & Traction Company relied upon the generating facilities of the southwest Missouri properties for its power, and its physical operations were coordinated with those in the main service area. The Commission held that the combination of the southwest Missouri properties and the Sedalia properties constituted a single integrated electric utility system. Cities Service also contended that the properties in St. Joseph, Missouri, were a part of this same single system. The St. Joseph area was physically separated from all of the other system properties in the Mid-Continent territory, being over 100 miles from Sedalia, the nearest service center in the main integrated area of the system. This proposed system would have extended over 250 miles north to south. The St. Joseph properties had no operating relationship to the main system. Cities Service relied upon the decision in

128 Id. at 44.
The North American Company case with reference to the Wisconsin-Michigan system and to the Union Electric Company system previously discussed. The Commission pointed out two distinguishing features in The North American Company case, however. First, in that case there were physical interconnections by means of transmission facilities; and second, the outlying properties were not, in the main, distribution centers, but contained large hydroelectric resources capable of supplying extremely economical power over long lines into the main part of the system. Further, even though Cities Service had given some thought to the interconnection of the St. Joseph properties with those of the main system in order to meet increasing power demands of the former, the Commission was of the opinion that such interconnection was not a natural geographical development and was too remote a possibility to be given any weight in these proceedings. Accordingly, the St. Joseph facilities were held not to be a part of single integrated system in Missouri. By themselves, however, they were held to be a single integrated system.

The Rocky Mountain group was spread over a territory stretching from northern Wyoming to southern Arizona, with a concentration of properties in Colorado and northern and central New Mexico. The distance between the northern and southern extremes was 900 miles. Substantial portions of these properties were physically isolated from other properties in the section, and in several instances in which there was physical interconnection between properties, it was by means of lines not owned or controlled by the system. The largest operating company in the Rocky Mountain group was Public Service Company of Colorado. It operated in two sectors. One covered the northern part of Colorado,

130 Cities Service Power & Light Company, 14 S.E.C. 28, 46 (1943).
reaching to Cheyenne in southern Wyoming, and stretching almost to the extreme eastern and western ends of Colorado, a distance of 320 miles, its densest portion centering around the city of Denver. The other sector, the Salida-Alamosa division (designated “B” on the map), extended north and south from Salida in central Colorado, through Alamosa and down to the southern border of the state, a distance of 110 miles. Both operating sections contained combined steam and hydroelectric production units, and interconnected transmission and distribution facilities, with minor exceptions.

However, the two sets of properties were not physically connected, and each was operated as a coordinated, separate physical unit. Each set of properties was held to be a separate integrated electric utility system.

Cities Service forecast that by 1945 the Salida-Alamosa sector would need additional sources of power. It was proposed to procure the additional energy either by installing new generating units in the area, by interconnection with the Public Service Company properties to the north, or by interconnection with the properties to the east and south (Trinidad). Even though both such interconnections should be

131 The northern portion of the Public Service Company properties contained two small areas which were not physically interconnected with the remainder of the system. These were at Estes Park, in the central part of Colorado, and at Sedgewick and Ovid in the extreme northeastern part of the state. The Estes Park properties were managed as an integral part of the Public Service Company properties; the Estes Park region contained local generation and distribution facilities, was extremely close to the remainder of the system, and could easily be interconnected therewith. Consequently, the Estes Park properties were held to be a part of the integrated system of Public Service Company. The properties at Sedgewick and Ovid, however, were about 25 miles from the nearest Public Service Company properties, contained no generating facilities, and received their entire power supply from outside sources. They did not form any natural part of the system of Public Service Company. Therefore, these properties were excluded from the integrated system of Public Service Company, and were further found not to be one or more integrated systems standing by themselves. Cities Service Power & Light Company, 14 S.E.C. 28 (1943).

made, there was no evidence showing that there would be routing and central allocation of power as between Public Service and Trinidad, or that it would be possible. Therefore, it was impossible for the Commission to find that the three sets of properties, Public Service, Salida-Alamosa, and Trinidad, together formed a single system which could under normal conditions be economically operated as a coordinated system. The proposed plans did not contemplate that kind of unitary, coordinated operation between the properties of either end of the chain which must exist under normal conditions before such properties could be found to be integrated, according to the Commission. However, the Commission held that either interconnection would result in the integration of the Salida-Alamosa properties with the properties to the north or to the east and south respectively. 133 Thus, the Salida-Alamosa properties formed a possible part of two systems.

Between Walsenburg in southern Colorado and Wagon Mount in northern New Mexico, in a narrow strip of service area, were the interconnected properties of Trinidad and the Dawson division of New Mexico Power Company (designated “C” on the map). They extended 110 miles north and south. The properties, although in separate corporate ownership, were operationally and managerially closely linked. There was energy interchange and central load dispatching for both properties. These properties were held to constitute a single integrated system. 134

Another set of Rocky Mountain properties was located at the city of Las Vegas, about 40 miles southwest of the southern terminus of the Trinidad-Dawson system. The Las Vegas Light & Power Company was relatively small and was physically unconnected with the other system properties.

133 Id. at 54.
134 Id. at 56.
It served 2,000 customers. The Las Vegas properties were found to be a single integrated electric utility system.\textsuperscript{135}

South and west of Las Vegas lay a group of properties extending southward along the Rio Grande River from Santa Fe through Albuquerque, New Mexico, to Belen, New Mexico. The properties were interconnected by transmission lines running 90 miles north and south. This chain of properties was operated jointly, in spite of varying corporate ownership. They were designated as a single integrated system.\textsuperscript{136}

Cities Service contended that it would be profitable to interconnect these three separate systems just described by a line running from the southern end of the Trinidad-Dawson system via Las Vegas to the northern end of the Albuquerque properties. This required a 93-mile transmission line with extensive repairs on existing lines to recondition them for higher capacity. It was estimated that the total installation costs would amount to $465,000. Because of lower costs at the Dawson plant, savings in operation would be effected, yielding a return on the investment of $59,269 per year. There was no plan for undertaking these interconnections in the near future, but the Commission believed that these properties were capable of interconnection and coordinated operation as a single system, and therefore held that the electric utility properties of Trinidad, Las Vegas, and Albuquerque (shown as "C" "D" "E" on the map) constituted a single integrated system.\textsuperscript{137} The Commission also pointed out that although the Salida-Alamosa properties could be considered a part of the northern Colorado system or as a part of the properties to the south and east, as shown above, the latter combination would be more economical, efficient and

\textsuperscript{135} Ibid.

\textsuperscript{136} Ibid.

\textsuperscript{137} Id. at 57.
feasible, and therefore more desirable.

Cities Service took the position that all of the properties of the Rocky Mountain system described thus far constituted one integrated system. This was rejected because the evidence did not show that this entire group of properties was or could be capable of the kind of unitary, economic operation comprehended by the Act, and because these properties combined exceeded the size limitations of Section 2(a)(29)(A) of the Act. On this latter issue the Commission made these observations:

"Section 2(a) (29) (A) in terms requires limitation to a single area or region. The mandate that we have regard for the "area or region" affected by retention of systems in combination in Section II(b)(1)(C) points to the existence of highly similar standards in that section. . . . The statute and its legislative history make it clear that, consistently with geographic conditions (in the broad sense of that term) as much compactness should be achieved in outlining the spheres of holding company influence as physical facts permit.

"The standard of localized management cannot be met by any combination of properties (as one or more systems) spread over a territory as vast as that covered by the States of Wyoming, Colorado, New Mexico and Arizona. We have noted that the north-to-south extremes of the system properties in this territory are 900 miles apart. From Sheridan County in northern Wyoming to the nearest Public Service properties (in Cheyenne) is 240 miles. At the other end of the system it is sought to retain properties in Deming, N.Mex., and Tucson, Ariz. From Tucson to the nearest of the compact properties in the system is 320 miles; from Deming to the same point is 200 miles; and from Deming to Tucson is approximately 200 miles. The outlying properties at Sheridan, Deming, and Tucson are not physically con-
nected with any other property in the system, or with each other. All the intervening stretches between these properties are mountainous and sparsely settled.

* * *

"... Read as respondents wish the Act to be read, it would comprehend hegemonies of holding-company control so vast that (under the area or region standard) the Act would permit a few holding companies to divide the country. The language of the Act does not permit, and Congress did not intend, such a result."

Although the system properties in Sheridan, Deming, and Tucson were held not to be in the same area or region with the remainder of the system properties or with each other, each was held to be a separate integrated utility system. The small set of properties at Rawlins, Wyoming, was also held to be a single integrated system.

In a subsequent proceeding, Cities Service endeavored to show that the Deming and Tucson systems were an integrated part of the Trinidad-Las Vegas-Albuquerque system of its subsidiary, Federal Light & Traction Company (hereinafter called the "New Mexico system").

Evidence was adduced to prove that the United States Bureau of Reclamation (U.S.B.R.) intended to interconnect the Deming and Tucson properties, and also to interconnect the Deming properties with the New Mexico system. The completion of these proposed lines would therefore result in interconnection of all three systems. The Commission held, however, that physical interconnection, standing alone, was not enough, and that this combination of properties was not capable of economic operation as a coordinated system. The 375 miles of line between Tucson and Deming, to be constructed by the

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138 Id. at 59.
139 Cities Service Power & Light Company, 15 S.E.C. 675 (1944).
U.S.B.R., would have been out of system control. The U.S.B.R. lines might have provided additional sources of power for these properties, but they could not be used for intra-system power conveyance, and consequently coordinated use thereof by the Cities Service subsidiaries was impossible. There was further testimony that interconnections of the Tucson, Deming, and New Mexico properties were being considered independently of the U.S.B.R. program. Such a program was considered to be highly uneconomical by the Commission. Therefore, the Commission again arrived at the conclusion that the Tucson and Deming properties did not form an integrated system along with the New Mexico properties.

The Commonwealth & Southern Corporation

In the tentative conclusions of the Commission with reference to The Commonwealth & Southern Corporation holding company system, the only properties held to be integrated were those located in eastern Ohio and western Pennsylvania. These properties were interconnected and extended 110 miles east and west, and 100 miles north and south. However, this decision gave small consolation to Commonwealth & Southern, which operated large systems elsewhere, particularly in Michigan and in five southern states, Mississippi, Alabama, Georgia, Florida, and South Carolina. In a plan submitted under Section 11(e) of the Act, Commonwealth & Southern proposed to group the properties in Mississippi, Alabama, Georgia, and Florida together as its principal integrated electric utility system. These properties

140 The Commonwealth & Southern Corporation, Release No. 2626 (March 19, 1941). See map of The Commonwealth & Southern Corporation electric utility systems on page 61. The source of this map is The Commonwealth & Southern Corporation, Release No. 1956 (March 6, 1940). The enclosures indicating the integrated areas have been added.

were operated by four different subsidiaries, one in each of these states. The service areas of the four companies were geographically contiguous and their electric facilities were interconnected at various points over heavy duty high voltage electric transmission lines. The Georgia and Alabama companies practically blanketed the states in which they operated. The service areas of the four companies extended 550 miles east and west, and 390 miles north and south.

Pertinent statistics for the four companies combined for the fiscal year 1946 were as follows:\textsuperscript{142}

<table>
<thead>
<tr>
<th>Area served, sq. miles</th>
<th>94,159</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population of area served</td>
<td>4,700,000</td>
</tr>
<tr>
<td>Customers</td>
<td>653,726</td>
</tr>
<tr>
<td>Gross property accounts</td>
<td>459,729,103</td>
</tr>
<tr>
<td>Net property accounts</td>
<td>373,357,728</td>
</tr>
<tr>
<td>Capacity (kw)</td>
<td>1,477,980</td>
</tr>
<tr>
<td>Sales (kwh)</td>
<td>6,204,428,000</td>
</tr>
<tr>
<td>Gross electric revenues</td>
<td>77,570,768</td>
</tr>
<tr>
<td>Net electric revenues</td>
<td>21,504,840</td>
</tr>
</tbody>
</table>

The evidence further showed that the four companies had a history of common planning, development and operation commencing in the middle 1920's. A central load dispatching office in Birmingham, Alabama, had closely coordinated the use of the generating capacity and the power interchange among the companies. Interchanges of electric energy had been substantial. The large size and different types of hydroelectric facilities in Alabama and Georgia required that there be close coordination of such facilities among themselves and with the fuel generating plants in order to achieve maximum generation from the available water supply. There were substantial savings in operating costs and fixed charges resulting

\textsuperscript{142} Id. at mimeo. pages 9, 14 and Appendix. Compare with similar statistics for American Gas & Electric Company at page 89, infra.
from such coordinated planning and operations. Power supply economies were achieved through sharing of reserve capacity and through joint planning of generating facilities so as to stagger construction and cause facilities to be erected at the sites of cheapest operation irrespective of corporate limits. Further power supply economies resulted from central load dispatching whereby, by the control of reservoirs, run of river and fuel-electric plants, substantial amounts of water which might otherwise be wasted were conserved and thereby the need for additional generating facilities with accompanying fixed charges was averted or delayed. The Commission held that the combination of the electric properties of the four companies constituted an integrated utility system within the meaning of the Act.\footnote{Id. at mimeo. page 21.} It was noted in this decision that the large size of the properties, coupled with the lack of state regulation in Mississippi and Florida, was indicative of the difficulties in attaining the most satisfactory "localized management" and "effectiveness of regulation" in the territory served. The factors of interconnection, coordination, and relatively economic operation outweighed these objections. In effect, therefore, elements (1), (2), and (4)(b) of integration, as listed above, prevailed over elements (3), (4)(a), and (4)(c). The Commission commented upon the marked industrial growth of the territory served by the four companies in recent years, which tended to reduce their comparative economic size. The Commission was of the opinion, however, that this combination of properties approached the maximum size consistent with the standards of localized management, efficient operation, and effectiveness of regulation contained in Sections 2(a)(29)(A) and 11(b)(1).

The properties of The Commonwealth & Southern Corporation in South Carolina, which adjoined the integrated 4-
The South Carolina properties were physically connected with the Georgia properties and there was a minor interchange of power between the two. However, the Commission was of the opinion that there was lacking the integral operating relationship which Congress intended must exist before the combined properties could be held to be economically operated as a coordinated system; that it was doubtful whether the electric properties of South Carolina were in the same "area or region" as the other four companies; and that the combination of the five groups of properties would be in violation of the size standards of Section 2(a)(29)(A).

The Middle West Corporation

The Middle West Corporation controlled a vast utility empire in the central part of the United States. Its subsidiaries operated in fifteen states, and also in Canada and Mexico. Substantial electric operations were carried on by Middle West in Illinois, Kentucky, Tennessee, and Virginia. The electric properties in Illinois were completely interconnected, and they were also interconnected with the electric

144 Id. at mimeo. page 24.
145 "... We do not, in applying particular size standards, lose sight of the objectives of other criteria. There must be a reconciliation of all objectives to the end of accomplishing a satisfactory administration of the Act. Thus we do not disregard operating efficiency in our determination of whether size is excessive from the view point of localized management or effectiveness of regulation. We have carefully considered the lack of an integral operating relationship between South Carolina Power and the other four companies, as described above. While we have been moved to permit the continuance of the proposed large combination of electric properties under the common control of Southern, in the main so as not to disturb their present and historical coordination and efficiency, there is no such justification for permitting the continued joinder of South Carolina Power." The Commonwealth & Southern Corporation, Release No. 7615 (August 1, 1947), mimeo. p. 24.
146 See map of The Middle West Corporation electric utility systems on page 65. The source of this map is The Middle West Corporation, Release No. 4846 (January 24, 1944). The enclosures indicating the integrated areas have been added.
THE MIDDLE WEST CORPORATION
ELECTRIC UTILITY SYSTEMS
(Integrated systems indicated by enclosures)
properties in western Kentucky. Power was interchanged among these facilities. The area served was irregular, but extended 300 miles from north to south and 200 miles east to west at its widest point. The Illinois and western Kentucky properties were held to be an integrated system.\(^{147}\) The electric properties of Middle West in central and eastern Kentucky, western Virginia, and northeastern Tennessee were interconnected with each other, but not with the Illinois and western Kentucky system. The central and eastern Kentucky, Virginia, and Tennessee properties were held to constitute another integrated electric utility system.\(^{148}\) Middle West contended that both of these systems together formed one integrated system. The Commission did not pass upon this contention because it recognized that in the reorganization of the Midland United Company, which blanketed Indiana, Middle West might acquire substantial interests therein, and the larger combination of properties resulting therefrom would materially change the relationship of the Illinois and Kentucky properties.

Wisconsin Power & Light Company, a Middle West subsidiary operating in southern and central Wisconsin, served an irregular area extending 190 miles from north to south and 140 miles east to west. With a minor exception, the properties in this area were interconnected. They were found to be a single integrated system.\(^{149}\) The properties of Lake Superior District Power Company, another Middle West subsidiary, in northern Wisconsin and upper Michigan were described as an integrated electric utility system, although there was no analysis given of the determinative elements.

Central and South West Utilities, an intermediate holding

\(^{147}\) The Middle West Corporation, 15 S.E.C. 309, 316 (1944).

\(^{148}\) Ibid.

\(^{149}\) Id. at 318.
company in the Middle West system, was the parent of Central Power & Light Company ("Central Power"), West Texas Utilities Company ("West Texas"), Southwestern Light & Power Company ("Southwestern Light"), Public Service Company of Oklahoma ("Public Service"), Southwestern Gas & Electric Company ("Southwestern Gas"), Pecos Valley Power & Light Company ("Pecos Valley"), and Oklahoma Power & Water Company ("Oklahoma Power"). Middle West contended that all of these properties combined constituted one integrated electric utility system. They formed a huge crescent swinging north from the southern tip of Texas, into Oklahoma, and east and southward into Louisiana and northeastern Texas.

Central Power was an interconnected system covering practically all of south Texas below San Antonio and Houston, extending from the Gulf of Mexico to the western part of Val Verde County, a distance of 350 miles. Its greatest distance north to south was 300 miles. The area served was about one-third the size of Texas, and was sparsely populated. This system was interconnected with that of West Texas at two points, and there was a small interchange of power between the two systems.

West Texas operated an interconnected electric utility system in west central Texas, north of the Central Power area. It served a territory of 42,000 square miles, extending 340 miles north to south and 210 miles east to west. This area was also sparsely settled. At the northern end of the West Texas system were two interconnections with Southwestern Light, through which West Texas supplied substantial amounts of power to Southwestern Light.

Southwestern Light, the third link in the chain, was an interconnected electric system serving southwestern Oklahoma. It extended about 140 miles north to south and 130 miles east to west. Again, the service area was lightly popu-
lated. It was connected with Public Service on the east.

Public Service operated in eastern Oklahoma, serving an area 180 miles from north to south and 120 miles east to west. Its main system was interconnected and covered a lightly settled area. In 1941 Public Service and Southwestern Light were connected by transmission lines 106 miles long, passing through the area of a non-affiliated company. Because of the load growth of Southwestern Light and the availability of cheaper generation in Public Service, this line was intended as a conveyor for power from east to west.

Southwestern Gas was an electric utility system located in western Arkansas, northeast Texas, and northwest Louisiana. Its main properties extended 150 miles north to south and 140 miles east to west. Including the isolated Fayetteville properties, the north-south stretch was approximately 350 miles. A transmission line connected the main properties of Southwestern Gas with those of Public Service.

These five companies extended to four states. The managements of these companies were generally separate; each had its own operating staff, and each acted as a self-contained unit. Their dealings with each other were not substantially different from their dealings with non-affiliates. The staff of the Public Utilities Division contended that each of the five companies operated a single integrated system. The Commission concluded that there were two large integrated systems in the group. One consisted of the properties of Southwestern Light, Public Service, and Southwestern Gas; the other consisted of the properties of West Texas and Central Power. The Commission indicated that it would have "great difficulty" in finding that the combined utility assets of the southwest groups could under normal circumstances be economically operated as a single interconnected

150 Id. at 334. The division of the southwestern properties is shown by the broken lines on the map, page 65.
and coordinated system. The reasons given were manifold. The various companies were stretched end on end; the transmission lines from one end to the other extended over 1,200 miles, and the properties ranged 800 miles north to south, and 680 miles east to west covering 175,500 square miles in four states; in the hollow between the south and west Texas properties on one hand, and the Oklahoma and northeast Texas properties on the other were large unaffiliated companies, which effectively separated the ends of the properties. A break in the operating relationship among the companies anywhere along the line would completely isolate all the companies on one side of the break from all on the other side. It appeared that such a break existed at the dividing line between West Texas and Southwestern Light. Studies made of this group of properties in 1940, relative to future sources and allocation of power, indicated that the flow of power from West Texas north to Southwestern Light should be minimized in order to achieve the most economical operation. Further, the Commission was of the opinion that the southwestern group as a whole was not confined in its operations to a "single area or region," in view of the large distances and areas covered by these properties. And finally, the Commission could not come to the conclusion that the effectiveness of localized management would not be impaired by a continuance of all of these properties under common control.

The combination of Public Service, Southwestern Light, and Southwestern Gas as one integrated system was accepted with hesitancy by the Commission. Southwestern Light and Public Service, although connected by a transmission line, were separated by unsettled territory under the general control of a non-affiliated company. The answer was, however, that the mere existence of non-affiliated territory lying between parts of a claimed system did not compel the conclusion that the system was not integrated. In this case the interven-
ing territory was sparsely settled and it appeared highly unlikely that the two service areas would ever be joined into a single compact area. Southwestern Light relied upon Public Service for power that could not be supplied by the intervening nonaffiliated company. Southwestern Gas also relied upon Public Service for power. The economies arising from joint operation of these three companies as a single system were estimated to be about $4,500,000 for the period 1942-50. The territory served by the three companies extended 400 miles north to south and 350 miles east to west, an area of 53,350 square miles which was similar throughout, relying largely on oil and other minerals, agriculture, and light industry for its subsistence. The Commission made the following finding:

"... The rendition of satisfactory service in arid and sparsely-settled areas frequently requires the stretching of lines over long distances to connect small population centers with generating facilities strategically placed near suitable water and fuel supplies. In view of these facts we believe that the properties in question lie within a single area or region."

In view of the sparsely-settled area served, the necessity of increased spread to encompass a sufficient number of customers to warrant adequate service, and the difficulty of finding suitable generation sites to serve highly local areas, the Commission further found that the combination of these properties was not so large as to impair (considering the state of the art and the area or region affected) the advantages of localized management, efficient operation, and the effectiveness of regulation.

The Commission also encountered difficulty in reaching its

151 The Middle West Corporation, 15 S.E.C. 309, 336 (1944).
decision that the West Texas and Central Power properties were integrated. The problems of these two companies were much the same as those of the three companies to the north, although they were even more aggravated. They covered an area of 120,000 square miles, much greater than the area of Southwestern Light, Public Service, and Southwestern Gas. However, they only served about half as many customers. There was evidence of economies arising from closely coordinated operation and joint planning of the two companies. Because of differences in the timing of agricultural load demands, there was substantial peak diversity as between the two. Applying the reasoning used with reference to the Southwestern group properties to the north, the Commission arrived at the conclusion that the properties of West Texas and Central Power formed one integrated electric utility system.152

Middle West was permitted to introduce further evidence to show that all of the southwestern group of properties together constituted a single system, and as a result the decision of the Commission was altered in a subsequent opinion.153 The original opinion that there were two systems within this group was principally motivated by the fact that, notwithstanding interconnections, normal operations did not require substantial coordination of both systems. Additional evidence demonstrated that there was substantial operational coordination between the properties of both systems, that this coordination was essential to the internal operations of all companies in each system, and that there would not be a substantial future decrease in the operational coordination

152 The Middle West Corporation, 15 S.E.C. 309, 339 (1944). Certain properties of West Texas and Central Power were excluded, however. These were the Dalhart and Texline properties of West Texas, and the Big Bend, Zapata, Pleasanton, and Mexican properties of Central Power.
153 The Middle West Corporation, 18 S.E.C. 296 (1945).
between the systems and in resulting economies. The assets of Southwestern Light had been acquired by Public Service, and it was shown that there was substantial interchange of power between the new "Western Division" of Public Service and West Texas. The anticipated decreases in such interchange had not occurred. Meanwhile, a central load dispatcher had been appointed who worked in connection with committees composed of representatives of system companies. He had the entire generating system under his control and was able to coordinate the facilities so as to route power from place to place within the system as need and economy dictated. Thus the two requirements of interconnection and economical operation contained in Section 2(a)(29)(A) were met.

The Commission referred to its original decision in connection with the other basic requirements of Section 2(a)(29)(A). Briefly, they were found to be satisfied by virtue of the sparsely settled and arid region involved and the disadvantages of lack of coordination, in spite of its tremendous size. Consequently, the major electric utility properties of Middle West in the southwestern area were found to be a single integrated system.

It further appeared that interconnection with the Pleasanton area of Central Power was planned as soon as supplies were available, and that such interconnection would result in

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154 The Middle West Corporation, 15 S.E.C. 309 (1944).
155 The Middle West Corporation, 18 S.E.C. 296 (1945). The Commission said: "In our prior opinion we discussed the size and geophysical conditions of the territory. The territory is a large one. However, as we have noted, it is unique in various respects. Limited supplies of adequate water, small and scattered population localities, the generally dispersed industrial and agricultural locations require relatively high concentrations of generating capacity and long transmission lines. Neither localized management nor efficient operation nor the effectiveness of regulation (considered as relative standards depending for their content on the state of the art, the area or region affected, and the demonstrated disadvantages of lack of coordination) is impaired in the sense which we believe was intended in Section 2(a)(29)(A) particularly in the light of demonstrated disadvantages of lack of coordination in this case." 18 S.E.C. 296, 299.
additional economies and increased coordination of the Central Power system. It was therefore found that the Pleasanton properties, previously excluded, were a part of the principal integrated system of which Central Power was a part.\footnote{The Middle West Corporation, 18 S.E.C. 296 (1945).}

Middle West was not content to let the matter rest here. It will be recalled that the Big Bend electric properties of Central Power were not included in the large integrated system of which Central Power was a part.\footnote{See footnote 152, \textit{supra}.} These properties served eight communities north and east of the Rio Grande River in West Texas. Power was supplied by diesel generating units for six of these communities, and the other two purchased power from a non-affiliated company. West Texas Utilities Company proposed to acquire all of the Big Bend properties and to interconnect all of them, except those in Presidio, through the construction of approximately 75 miles of transmission line, and to interconnect such properties with the main interconnected electric transmission system of West Texas through the construction of approximately 45 miles of 66 kw. line. It was not then planned to interconnect Presidio, which was 50 miles from the nearest system property. West Texas intended to supply the power needs of the Big Bend area from its steam generating station at Girvin, Texas, which had a capacity of 18,000 kw., as compared with the 5,000 kw. capacity of the diesel plants in the Big Bend area. At the date of the original divestment order, January 24, 1944,\footnote{The Middle West Corporation, 15 S.E.C. 309 (1944).} the Girvin station was used for standby purposes only, due to high fuel oil costs. However, in 1944 a source of natural gas for boiler fuel was located about 20 miles from the Girvin station, and West Texas obtained a ten year contract for the output of the field and constructed a pipeline from the field to the Girvin plant. The fuel costs at the Girvin
station thus became the cheapest of any station in the West Texas system, and the fuel supply was estimated to be adequate for 15 to 20 years. The cost of generating power in the existing Big Bend diesel plants was about five times the cost of power at the Girvin station. The Big Bend area was the logical market for the output of the Girvin station, owing to its location. The evidence showed that the Big Bend area would receive improved service and reduced rates through the proposed interconnection.

The Big Bend properties extended 110 miles east to west, and 70 miles north to south. However, the same consideration of sparse population, limited supplies of fuel and water, and other factors applied to the Big Bend properties as well as to the main system. The Commission concluded that these properties when connected were a proper part of the larger integrated system of which West Texas was a part. Even though the Presidio properties were not interconnected with the other Big Bend properties and there was no proposal to make such an interconnection, it appeared that there was no other nearby utility system to which they could be sold and no one was interested in purchasing the property, and therefore the Commission allowed West Texas to acquire and retain them along with the other Big Bend properties.

Middle West further pointed out a change of conditions with reference to the Zapata, Texas, properties, previously held to be non-retainable. Zapata was 38 miles distant from the nearest properties of Central Power in south Texas. It was 200 miles from any other domestic electric utility com-

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159 West Texas Utilities Company, Release No. 6320 (December 20, 1945).
160 The only apparent justification for the retention of the Presidio properties, which were not interconnected with those of West Texas and were not shown to be economically capable thereof, was the difficulty of disposing of them. The Commission has often held that this is not a valid reason for permitting the retention of non-integrated properties. See, e.g., Associated Gas & Electric Corporation, 11 S.E.C. 1115 (1942).
161 See footnote 152, supra.
pany and was served with electric energy by an oil engine generating station. Since the entry of the original order of divestment on January 24, 1944, Central Power had commenced the construction of its lines toward Urebino, 4 miles north of Zapata. The four-mile extension to Zapata would cost $6,000, and Central Power proposed to make such an extension if permitted to retain the Zapata system. The results of such an interconnection would be lower rates to the 155 Zapata customers and an estimated profit of $4,784, instead of a loss of $2,096 to Central Power. In view of the characteristics of the territory served by Central Power, described above, the construction of the transmission lines and the other considerations just noted, including the relatively small size of the Zapata properties, the Commission found that Zapata could be retained by Central Power in the larger integrated electric system of which Central Power was a part.

This series of decisions with reference to the southwestern properties of Middle West constitutes the most liberal application and interpretation of Section 2(a)(29)(A) of the Act yet rendered by the Commission. The presentation of the case by the attorneys for Middle West was evidently adroitly handled. The Commission permitted the retention of a chain of properties whose transmission lines extended 1,200 miles from one end to the other, almost equal to half the distance across the United States. One set of properties was not interconnected or economically capable thereof. Operations were conducted in four states, Texas, Oklahoma, Arkansas, and Louisiana, and no careful inquiry into the effect of the retention of the entire system on effective state regulation was evident. Localized management was obviously impossible. The principal businesses in the areas served ranged from

162 The Middle West Corporation, 15 S.E.C. 309 (1944).
163 The Middle West Corporation, Release No. 6414 (February 18, 1946).
coastal shipping, light industry, and dry land farming along the Gulf of Mexico, to irrigated farming along the Rio Grande, to sheep and cattle grazing and the production of petroleum in west Texas, to dry land farming, light industry, and petroleum production in Oklahoma and western Arkansas, to lumbering, light industry, and petroleum in northeast Texas and northwest Louisiana. The principal considerations linking these diversified and distant areas were the fact that all of them were more or less arid, which meant that generating stations were spaced far apart and were required to transmit power over long distances, and the fact that they were sparsely populated. The same argument would be valid with reference to the extension of this system through New Mexico, Arizona, and Southern California. The Commission would no doubt not permit such a combination of properties, but the Middle West cases do not set forth a rule by which it can be determined when a particular system exceeds the size limitations of the Act. There is no reason to believe that the retention of the southwestern properties of Middle West as a single integrated electric utility system was not, on the whole, a desirable combination; to the contrary, the record indicated that it would benefit investors and consumers alike. The Commission has not always been so generous in its interpretation of the integration provisions of the Act, and for this reason the Middle West cases stand as a landmark of liberality in this respect.

Turning now from the southwestern properties of Middle West, we find that there was still another integrated electric utility system in the empire of Middle West. This was Arkansas-Missouri Power Corporation, located in northeastern Arkansas and southeastern Missouri. Besides the compact and interconnected main operating area, there were two isolated

164 Cf., Cities Service Power & Light Company, 14 S.E.C. 28 at 59 (1943).
service areas to the north in southeastern Missouri.\(^{165}\) The area served was about 11,030 square miles with a population of approximately 71,000. The Commission held that the main operating area of Arkansas-Missouri constituted a single integrated system, but that the two isolated areas were not a part thereof.\(^{166}\)

**American Gas & Electric Company**

American Gas & Electric Company was a registered holding company and a subsidiary of Electric Bond & Share Company, also a registered holding company. The latter owned, at June 30, 1945, 17.51% of its outstanding voting securities. However, Electric Bond & Share had filed a series of plans with the Commission pursuant to Section 11(e) which proposed, among other things, the divestment by it of all its interests in American Gas & Electric Company.\(^{167}\) Therefore, the relation of American Gas & Electric Company to the remainder of the Electric Bond & Share Company system will not be considered herein.

As of March 1, 1945, American Gas & Electric Company had 23 subsidiaries, of which 12 were electric utility companies operating in the states of Ohio, Indiana, Michigan, Virginia, West Virginia, Kentucky, Tennessee, New Jersey, and Pennsylvania.\(^{168}\) The properties of the system were divided into three sectional groups, none of which was interconnected with any other, as follows: (1) the Central System

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165 One of them supplied its own power, and, the other relied upon purchases from non-affiliates for power.
166 The Middle West Corporation, 15 S.E.C. 309 (1944).
167 Electric Bond & Share Company, Release No. 5970 (August 3, 1945). Electric Bond & Share Company proposed to dispose of all of its utility holdings in the United States and to limit itself to its service company and to its foreign subsidiaries.
168 See map of American Gas & Electric Company electric utility systems on page 78. The source of this map is Electric Bond and Share Company, 9 S.E.C. 978 (1941). The enclosures indicating the integrated area have been added.
which consisted of utility and nonutility properties operating in the states of Michigan, Indiana, Ohio, Virginia, West Virginia, Tennessee, and Kentucky; (2) the Northeast Pennsylvania System which consisted of utility and nonutility properties in the state of Pennsylvania; (3) the South Jersey System which consisted of utility and nonutility properties in the state of New Jersey.


American Gas & Electric Company indicated that the Central System was its principal integrated system under Section 11(b)(1). This was an obvious choice, as this system embraced 85.67% of the consolidated gross utility plant accounts of American Gas & Electric Company, and produced 85.29% of the consolidated gross operating revenues of the company.¹⁰⁹

The extremities of the Central System as of January, 1945, were as follows: Benton Harbor, Michigan, at the northwest end; Steubenville, Ohio, on the northeast; the North Carolina-Tennessee state line near Newport, Tennessee, on the southwest; and the Virginia-North Carolina state line near Danville, Virginia, on the southeast end. The area encompassed within the termini of the system’s high voltage transmission lines was approximately 90,000 square miles. The population of the area served was 3,018,000. The system companies did not, however, sell electricity at retail throughout the entire area and a number of other important electric utility companies operated in the territory. The system was completely interconnected. There were substantial and frequent power interchanges between the Central System companies, and their operation as a single system was shown

to be economical. The electric utility companies comprising the Central System were subject in varying degrees to regulation by the commissions of the various states in which they operated and were also subject to the jurisdiction of the Federal Power Commission. The Commission held that the Central System constituted a single integrated electric utility system, making these observations:

“The size and extensive area of the utility operations of the Central System, as previously described, present in serious form the question whether we can approve it as retainable in its entirety by AG&E. The Central System, however, has a long historical record of having been planned, developed, and operated as a highly coordinated system under AG&E’s control. Moreover, it does not appear to be so large in any of the states in which it operates as to impair the effectiveness of regulation. We note also that we are not being asked to approve the creation of a new holding company over the Central System but merely to determine whether, pursuant to the provisions of Section 11(b)(1), the status quo is required to be affected. In the instant case, the relatively high degree of coordination of the system’s utility facilities and their relatively economical operation, which, in part, appeared to be due to common control, and the other factors noted above, have led us to conclude that the system, as presently constituted, constitutes a single integrated utility system within the meaning of Section 2(a)(29)(A) of the Act. . . . We are of the opinion, however, that the Central System approaches the maximum size which we believe is consistent with the standards of localized management, efficient operation and effectiveness of regulation contained in Sections 2(a)(29) and 11(b)(1).”

The above comments with regard to the size of the Central System returned to plague American Gas & Electric Company at a shortly later date. American Gas & Electric Company made application with the Commission for permission to bid on the purchase of 99% of the common stock of Columbus & Southern Ohio Electric Company, an electric utility company operating in Ohio, from a subsidiary of United Light & Railways Company. Columbus & Southern Ohio served a total area of 9,800 square miles with a population of 450,000, of which 168,000 were electric customers. Its service area lay in the south central portion of Ohio, and was contiguous with that of The Ohio Power Company, one of the major companies in the Central System of American Gas & Electric Company. The lines of the two companies were interconnected. American Gas & Electric Company proposed, if the acquisition were approved, to spend over $9,000,000 to rehabilitate the Columbus & Southern Ohio system and to integrate it with the Central System. The major item of rehabilitation proposed was a transmission ring around the city of Columbus to strengthen and improve service to that city, and the major items of coordination involved the addition of high tension interconnections between Columbus & Southern Ohio and Ohio Power facilities. Substantial improvements in the quality of service and substantial savings, both capital and operating, amounting to $1,505,015 per year, were claimed as the probable result of the program. The Commission assumed that some such savings would occur, but did not accede to the total amount.

\[\text{American Gas & Electric Company, Release No. 6639 (May 17, 1946). Such application was subject to the requirements of Section 10 (c)(2) of the Act, which provides that "the commission shall not approve... the acquisition of securities or utility assets of a public-utility or holding company unless the Commission finds that such acquisition will serve the public interest by tending towards the economical and efficient development of an integrated public-utility system." Therefore, the question of the integration of the Columbus & Southern Ohio properties with those of the Central System was raised.}\]
In the opinion of the Commission the size requirements of Section 2(a)(29)(A) presented an insurmountable barrier to the proposed acquisition. Although the area served would not have been increased by the proposed combination, the total population served would have been increased 19.2%, customers increased 21.4%, gross electric revenues increased 14.1%, electric utility plant increased 12.9% and miles of line increased 17.9%. The conclusion of the Commission was that the acquisition of Columbus & Southern Ohio would not be merely the addition of a spur or connecting link to the system, but would represent a major extension into new territory which very materially and substantially enlarged the system. It therefore took the system beyond the maximum limit permissible under Section 11(b)(1). A further consideration was the fact that the Central System, by itself, was increasing its load 5% each year, and therefore the additional properties would increase the normal growth of load proportionately. The essence of the decision was that the combination of these properties could not be found to be "not so large as to impair . . . the advantages of localized management and the effectiveness of regulation."

In American Gas & Electric Company, Release No. 6639 (May 17, 1946), at mimeo. pp. 6-7, the Commission stated: "It is not an accident of rhetoric that size is made an independent factor in this legislation. The Congress regarded localization of operations, per se, as an important aim to be achieved in this legislation. The Senate Report, for example, said: 'An operating system whose management is confined in its interests, its energies, and its profits to the needs, the problems, and the service of one regional community is likely to serve that community better, to confine itself to the operating business, to be amenable to local regulation, to be attuned and responsible to the fair demands of the public, and more often, to get along with the public to mutual advantage . . . and essentially local enterprise is far less likely to accumulate a disproportionate amount of political and economic power.' (Report of the Committee on Interstate Commerce, 74 Cong., 1st Sess., Rep. No. 621, May 13, 1935, p. 12). See too, The North American Company, 11 S.E.C. 194 (1942)."

The Commission here pointed out that the requirements of Section 10(c) of the Act are even more rigorous than those of Section 11(b)(1). American Gas & Electric Company, Release No. 6639 (May 17, 1946), mimeo. p. 9. See discussion of this subject at pp. 31-33, supra.
In answer to the assertion of American Gas & Electric Company that the proposed acquisition would result in substantial savings and increased efficiency, the Commission pointed out that such benefits were not entirely dependent upon joint ownership of the properties, citing the history of certain power pools by independent companies during the war and previously. It was noted that Columbus & Southern Ohio was not a small company, unable to operate effectively and finance a sound utility system by itself. And the concentration of control of the proposed enlargement at the executive offices of American Gas & Electric Company in New York City was also decried. The Commission took the position that the estimates of savings and economies presented by the company should be offset by some indeterminate amount arising out of the disadvantages inherent in absentee management of vast utility empires.174

The majority opinion in the Columbus & Southern Ohio case was rendered by Chairman Purcell and Commissioner McConnaughey. Commissioner Healy did not participate, and Commissioner Caffrey dissented.175 The latter was impressed by evidence of annual capital and operating savings of at least $1,500,000, estimated to arise from the proposed combination. His argument was twofold: first, the proposed acquisition would not carry the Central System into any essentially new territory, as the Central System already embraced the area served by Columbus and Southern Ohio; and second, he contended that the “size” standard of Section 2(a)(29) did not exist in a vacuum, but should be considered in the light of the state of the art and with especial reference to impairment of the advantages of localized management,

efficient operation, and effective regulation. The Commissioner pointed out that "localized management" does not mean complete neighborhood control; that the Central System had been held not to impair the advantages of such management, and the coordination into the system of properties lying within its general territory had no perceptible tendency to impair those advantages as they then existed. It might possibly have augmented such advantages, since the evidence indicated that within the American Gas & Electric Company system a high degree of discretion in the handling of purely local problems of relationships with local communities was left to district management and that participation of local management in general community affairs was encouraged by the system. Commissioner Caffrey did not dwell on the question of "efficient operation," as he believed ample evidence had been adduced to prove that the proposed acquisition would enhance efficiency of operations in the Central System. And finally, he did not believe that the combination of these properties would be so large as to impair the "effectiveness of regulation." The Commission would retain its jurisdiction over both sets of properties; the Central System would remain subject to the jurisdiction of the Federal Power Commission, and Columbus & Southern Ohio would become subject to such jurisdiction. The Ohio State Commission would retain the full measure of its jurisdiction over both Columbus & Southern Ohio and Ohio Power. The latter commission had, in fact, stated that it deemed the acquisition advisable. The dissenting Commissioner's argument was summed up as follows:

"I believe the principal fallacy involved in the majority's approach is that it tends to assume that the standard relating to the advantages of localized management has a significance independent of the other standards. From my point of view of the past administration
of the integration provisions of the Act, it is clear that the Commission has always weighed that standard together with the other standards. It has permitted the retention as a single integrated system of properties stretching over vast areas in the States of Texas, Oklahoma, Arkansas and Louisiana because it believed the geographical necessities of the territory required that such a conclusion be reached. It has sanctioned the retention in compact areas of large aggregates of utility properties serving essentially urban communities. It has, in fact, sanctioned the joint retention of all the companies in AG&E's Central system, even though those companies operate in a vast area stretching over 90,000 square miles. (The Middle West Corporation, et al., ——S.E.C.——, Holding Company Act Release 5606 (1944); The North American Company, et al., 11 S.E.C. 194 (1942); American Gas & Electric Company, —— S.E.C. ——(1945), Holding Company Act Release 6333.)

"In each of these cases, size, per se, was not considered as a limiting factor on retainable properties, and in none of these cases was size regarded as a limiting factor in considering the standard relating to the advantages of localized management. Unless the Commission has abandoned the spirit of approach inherent in its past decisions and is now affirming that the standard of localized management is to be considered independently of other incontrovertible and manifest physical and operational advantages, there is no reason why, in my opinion, this application cannot be approved."

Considering the overlapping territories involved, the favorable evidence as to the degree of coordination and the extent of the benefits resulting therefrom, all placed upon

the background of the Middle West and Commonwealth & Southern cases discussed above, it would seem that the dissent had the better of the argument.

The Commission subsequently relented to a certain extent. American Gas & Electric Company filed an application relative to the purchase of the stock of Indiana Service Corporation from Midland Utilities Company, a non-affiliate. Indiana Service was an electric utility company operating in northern, central, and northeastern Indiana, including the City of Fort Wayne, where it operated in competition with a municipally-owned electric utility. The company served a total area of about 1,600 square miles with a population of 200,000, including 28,471 customers. It was interconnected with Indiana & Michigan Electric Company, a Central System subsidiary, from which it obtained 75% of its power. The service area of Indiana Service, with the exception of a spur extending westward along the Wabash River, was flanked on the north, northeast, and south by contiguous service areas of Indiana & Michigan, there being substantially no gaps in the total area served by both companies. The facilities of the two companies were physically connected and coordinated, and the evidence showed that further interconnections would result in improved and more economical service for the entire area served by the companies.

The Commission differentiated this proposal from the Columbus & Southern Ohio case on the ground that the acquisition of Indiana Service would increase the size of the Central System only minutely. For example, the area served by Indiana Service was 5.2% of that served by the Central System, while that of Columbus & Southern Ohio was 18.5%; populations served were 6.4% and 19.2%, respectively; customers were 3.6% and 21.4%, respectively; utility plant accounts were 2.8% and 12.9%, respectively; and gross
revenues were 4.9% and 14.1%, respectively.\textsuperscript{177} It is difficult to see how this acquisition could be considered minute from the above data, but at least it was substantially smaller than the one previously proposed. At any rate, the Commission found that the acquisition of Indiana Service was not so large as to make the resultant size of the Central System a controlling obstacle, and the acquisition was approved under Section 10 of the Act.\textsuperscript{178}

American Gas & Electric Company was given permission to enlarge its Central System further. United Public Utilities Corporation proposed to sell to American Gas & Electric Company the shares of common stocks of ten electric and gas utility subsidiaries operating in Indiana and Ohio owned by it. The extent of the operations of these ten companies was not given in the opinion and was no doubt small. American agreed to divest itself of the gas utilities, and proposed to operate the electric utilities as part of its integrated Central System. The proposed acquisition was approved under Section 10(c)(2) of the Act.\textsuperscript{179}

The Central System of American Gas & Electric Company was again enlarged by the addition of the electric properties of Central Ohio Light & Power Company. The Commission approved the acquisition of the stock of the latter company by American Gas & Electric Company under Section 10(c) of the Act.\textsuperscript{180} Central Ohio was engaged in the generation,
transmission, distribution, and sale of electric energy in Ohio. The territory served by it was divided into two geographical divisions 100 miles apart, which were not interconnected. Principal operations in the western division centered about the city of Findlay, with a population of about 20,000. The eastern division centered about the city of Wooster, with a population of 11,500. Electric service was rendered to 23,679 customers in 19 municipalities and 21 unincorporated communities. The gross utility plant of Central Ohio as of August 31, 1950, amounted to $12,588,577. Operating revenues for the year ended August 31, 1950, were $4,086,661. Central Ohio generated all of its electric energy requirements for its western division and it was not interconnected with the American Gas system. However, its service area was contiguous to the service area of a subsidiary of American Gas. Central Ohio had no generating facilities in its eastern division and purchased all of its requirements from a non-affiliate. The service area of this division was contiguous on the south to a subsidiary of American Gas. Both divisions were capable of being physically interconnected with the American Gas System. It was estimated that gross savings in power supply for both divisions of Central Ohio resulting from interconnection would reach $840,000 by 1953, and further economies amounting to $250,000 would be achieved by complete coordination of the operating staffs and personnel of the two companies. With reference to the size requirements of Section 2(a)(29)(A) the Commission pointed out that the acquisition would result in a relatively minor increase in the size of the American Gas System. The percentage increases involved in this acquisition are shown by the following table, which also sets forth the percentage increases contemplated in the Indiana Service Corporation and the Columbus & Southern Ohio Electric Company proposals:281

281 Ibid., mimeo. pages 12-13.
The Commission thus sanctioned the continuation of the Central System of American Gas & Electric Company as a single integrated electric utility system. It is the largest of such systems yet defined, except for total square miles of area served. The following statistics for the year 1950 relative to the Central System, including the Indiana Service Corporation, Central Ohio, and United Public Utilities Corporation properties, indicate the gigantic scope of its operations:

<table>
<thead>
<tr>
<th>Item</th>
<th>Central Ohio</th>
<th>Indiana Service</th>
<th>Columbus &amp; Southern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Plant</td>
<td>1.9%</td>
<td>2.8%</td>
<td>12.9%</td>
</tr>
<tr>
<td>Revenues</td>
<td>2.6</td>
<td>4.9</td>
<td>14.1</td>
</tr>
<tr>
<td>Total kwh Sales</td>
<td>2.0</td>
<td>4.2</td>
<td>8.1</td>
</tr>
<tr>
<td>Customers</td>
<td>2.1</td>
<td>3.6</td>
<td>21.4</td>
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<tr>
<td>Net Dependable Capacity</td>
<td>2.3</td>
<td>1.7</td>
<td>1.6</td>
</tr>
<tr>
<td>Peak Load</td>
<td>2.1</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Pole Miles of Line</td>
<td>1.5</td>
<td>4.9</td>
<td>17.9</td>
</tr>
<tr>
<td>Population Served</td>
<td>1.9</td>
<td>6.4</td>
<td>19.2</td>
</tr>
<tr>
<td>Communities Served</td>
<td>1.9</td>
<td>5.4</td>
<td>—</td>
</tr>
<tr>
<td>Area Served</td>
<td>—</td>
<td>5.2</td>
<td>18.5</td>
</tr>
</tbody>
</table>

Population Served 4,095,000
Line Miles 59,712
Customers 1,152,409
Gross Plant Account 681,708,912
Capacity (kw) 2,460,000
Sales (kwh) 11,006,665,091
Gross Revenue 162,991,331

As Commissioner Caffrey has observed, it would appear to be obvious that size, *per se*, is not a limiting factor in the determination of what constitutes an integrated electric utility system.

182 This distinction belongs to the Southwestern properties of Middle West, as has been shown above.

American Gas & Electric Company was also the parent company of The Scranton Electric Company, which operated an electric utility system in northeast Pennsylvania. The population served amounted to 344,000, including 78,469 electric customers in 57 communities. This system was 240 miles away from the nearest extremity of the Central System, and was not interconnected therewith. It was held to be a separate integrated electric utility system.

3. The South Jersey System of American Gas & Electric Company

Electric operations were carried on by subsidiaries of American Gas & Electric Company in southern New Jersey. Electric service was rendered to 225 communities having a population of 308,000, of which 104,805 were customers. The operations of the company were subject to the jurisdiction of the Board of Public Utility Commissioners of the State of New Jersey. Although completely interconnected within itself, this system was not interconnected with either of the other two American electric systems, nor was it capable of such interconnection. It was held to constitute a single integrated utility system.

General Public Utilities Corporation

The most recent integration decision of the Commission concerned the system of General Public Utilities Corporation ("GPU"), successor to Associated Gas & Electric Company. GPU contended that the electric properties of its subsidiaries Pennsylvania Electric Company ("Penelec"),

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184 See map, page 78.
186 Ibid.
DEFINITION OF INTEGRATION

Metropolitan Edison Company ("Meted"), New Jersey Power & Light Company ("NJP & L"), and Jersey Central Power & Light Company, the Penn-Jersey System, constituted an integrated electric utility system retainable as its principal system.

The Penn-Jersey System covered the midwestern and southeastern portions of Pennsylvania and the northwestern and east central portions of New Jersey. At its extremities it extended in an east-west direction from the Ohio-Pennsylvania boundary line to the New Jersey coast line, approximately 375 miles; and in a north-south direction it extended from Lake Erie to below the Maryland-Pennsylvania boundary line, a distance of 185 miles. The service area of Penelec at its southeastern boundary was contiguous with that of Meted at its southwestern boundary for a distance of eight miles. Adjacent to Meted’s eastern service area but separated by the Delaware River was the service area of NJP & L located in the northwestern part of New Jersey. Adjacent to the eastern boundary line of NJP & L’s service area was the electric service area of Jersey Central’s northern division.

The combined gross electric property account, at original cost, of the companies in the Penn-Jersey System as at December 31, 1950, totaled $384,000,000, and the consolidated electric operating revenues of such companies for the calendar year 1950 aggregated about $101,000,000. The electric territory served covered approximately 19,650 square miles, having an estimated population of 2,700,000. At the end of 1950 some 770,000 electric customers were served by the system.

Prior to July 2, 1950, the electric properties of Penelec were not interconnected with the electric properties of the other companies in the Penn-Jersey System. The properties

187 Omitted from the Penn-Jersey system was the system of Northern Pennsylvania Power Company, another GPU subsidiary, operating in the northeastern portion of the State of Pennsylvania.
of Meted, NJP & L, and Jersey Central were also interconnected among themselves. The properties of the latter three companies were known as the "ME-NJ-JC System." The electric properties of Penelec were operated as a separate system, with a central load dispatcher located at Johnstown, Pennsylvania; and the electric properties of the ME-NJ-JC System were operated together as a single system, with a central load dispatcher located at Reading, Pennsylvania. On July 2, 1950, the transmission system of Penelec was interconnected with that of ME-NJ-JC by means of a 29 mile line which was subsequently increased in capacity to 60,000 kw. In addition, central load dispatching for the entire Penn-Jersey System was transferred to Reading. GPU estimated that the net annual savings from the installation of this interconnection would average $150,000. After July 2, 1950, the ME-NJ-JC and Penelec systems were operated together on a coordinated basis.

GPU was obliged to revise its expansion plans because of the greatly increased demand for power arising after the outbreak of the Korean conflict. It was estimated by GPU that annual savings totaling $3,235,000 would result from its revised expansion plans for the consolidated systems as follows: $1,130,000 in coal costs; $990,000 in construction costs; $430,000 from greater efficiency in the use of fuel; and $685,000 in labor and maintenance costs for the larger size generating units. From this amount there was deducted $495,000 to cover annual fixed charges on the new transmission line which was contemplated in the plans, leaving estimated net annual savings of $2,740,000. The Commission was of the opinion that the foregoing estimates of savings were overstated, except for the item of coal costs. However, it was convinced that the properties of the Penn-Jersey System would be efficiently operated in a fully coordinated manner so as to produce substantial savings. It was indicated that
the electric properties of NJP & L and Jersey Central were under the jurisdiction of the state public utility board of New Jersey and that the electric properties of Meted and Penelec were under the jurisdiction of the Pennsylvania Public Utility Commission. Finally, it was noted that this combined system did not appear to be so large as to impair the advantages of localized management, efficient operation, and the effectiveness of regulation. The Commission therefore found that the Penn-Jersey System was a single integrated electric utility system within the definition of Section 2(a)(29)(A) of the Act and retainable by GPU under Section 11(b)(1).\textsuperscript{188} The Commission further found that the electric properties of GPU subsidiary Northern Pennsylvania Power Company and its subsidiary, The Waverly Electric Light & Power Company, which served north-central and northeastern Pennsylvania and Waverly, New York, were not economically capable of physical interconnection with the Penn-Jersey System and could therefore not be included as part of the latter system.\textsuperscript{189}

\textit{Summary of Electric Utility Integration}

From this survey of the decisions defining integrated electric utility systems under the Act may be drawn a number of important conclusions. In the first place, the primary requisite of such a system is physical interconnection or economical capability of such interconnection. This was indicated in the hearings held before the proposed Public Utility Holding Company Act became law and is amply demonstrated in the foregoing cases.\textsuperscript{190} In most instances the other integrationa-l factors seem to follow as a matter of course, if the properties under consideration are interconnected. In the

\textsuperscript{188} General Public Utilities Corporation, Release No. 10982 (December 28, 1951).

\textsuperscript{189} Ibid.

\textsuperscript{190} House Hearings on H. R. 5423, 74th Congress, 1st Sess., p. 1572 (1935).
second place, it appears that the application of the Act has expanded with technological advances in electrical interconnection. At the date of enactment of this law the maximum distance for the transmission of large quantities of power was 300 miles, and the average distance that electricity moved was 18 to 25 miles.\textsuperscript{191} It has been shown that in the southwestern system of the Middle West Corporation transmission lines extended from one end of a 1,200 mile system to the other. Ten years after the passage of the Act this system was held to be integrated, although power was being transmitted four times the maximum distance of 1935. Third, even though electric systems may be physically interconnected, such interconnections must be employed to effect substantial interchanges of power. The proof of such interchanges became the determinative factor in the case of the southwestern system of Middle West, whereas the lack of such proof defeated the contentions of Cities Service Power & Light Company with reference to the overall integration of its Rocky Mountain group of properties. The presence of a central load dispatcher for such a combination of systems is another important factor tending to prove the required element of economical operation as a single interconnected and coordinated system. This requirement contemplates operational coordination, and coordination of corporate management is not enough. Fourth, the decisions are conflicting as to whether size, \emph{per se}, is a limiting factor. Systems ranging in geographical size from about one square mile to 175,500 square miles have been held to be integrated. The decision in the American Gas & Electric Company-Columbus & Southern Ohio Electric Company case indicates that size alone is one of the tests that must be met in order for a system to be integrated. The holding in the case of the Rocky Mountain

\textsuperscript{191} House Hearings on H. R. 5423, 74th Congress, 1st Sess., pp. 270, 915 and 2225 (1935). However, technological advances in this field were predicted. \textit{Id.}, at pp. 1917-1918.
properties of Cities Service Power & Light Company is similar. On the other hand, there is the decision in The Middle West Corporation case relative to its southwestern properties. This case obviously considered the size of the system only in connection with the other tests for integration and subordinated size to such other tests. A less exaggerated example of the application of this rule appears in The Commonwealth & Southern Corporation case. The conflicting interpretations were carefully considered in the dissent to the Columbus & Southern Ohio case and the conclusion was reached by Commissioner Caffrey that size alone is not a limiting factor. This appears to be the sounder interpretation of the two. Fifth, the factors of localized management, efficient operation, and effective regulation are often glossed over, except in the cases of very large systems. If economical operation as a single interconnected and coordinated system is proved, then efficient operation is generally assumed. As to local regulation, the Commission does not inquire closely into the degree of effectiveness of such regulation and is satisfied even when the system under consideration spreads across several states with varying degrees of regulation in each. More attention is paid to localized management. The Commission appears particularly to dislike absentee management in a financial center, such as New York City, for a far-flung utility empire. It favors a high degree of local control over each operating utility. However, it is obvious that this objective cannot be attained by some of the larger systems which have been permitted to survive.

**Integration as Applied to Particular Gas Utility Systems**

An integrated gas utility system is defined in much the same manner as an integrated electric utility system, except that the requirement of interconnection is omitted. This is of
course due to the nature of the manufactured gas business, where the gas is transmitted for only short distances. Under the provisions of Section 2(a)(29)(B) of the Act the basic essentials of an integrated gas utility system are as follows:

(1) Companies so located and related that substantial economies may be effectuated by their being operated as a single coordinated system;

(2) Such system to be confined in its operations to a single area or region, in one or more states; provided, however, that gas utility companies deriving natural gas from a common source of supply may be deemed to be included in a single area or region;

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192 See House Hearings on H. R. 5423, 74th Congress, 1st Sess., p. 802 (1935). It is cheaper to build another plant than to pipe manufactured gas for long distances.

193 The bill in its original form made no provision for natural gas utility companies. The latter contended that natural gas has to be taken where it exists in the earth and transmitted from there to population centers for consumption, and that they therefore could not confine their operations to a single area or region. House Hearings on H. R. 5423, 74th Congress, 1st Sess., pp. 1710, 1746-1747 (1935); Senate Hearings on S. 1725, 74th Congress, 1st Sess., pp. 148, 673, 947, 949, and 958 (1935). In the House Hearings, p. 2280, the Electric Bond & Share Company argued as follows:

"It is submitted that few, if any, natural gas systems could be grouped according to this conception. While the place of discovery and production of natural gas is limited by nature, the place of delivery and use is limited only by the state of the art of transmission, and it is in the public interest to extend the service as far as it may be done on a basis which is financially and economically sound. At the present time, for example, gas is being carried by one of the systems in the natural gas industry more than 1000 miles across 6 states from the Amarillo field in Texas to the Chicago markets and to many intervening markets. The conception of 'economically integrated' may be applied to such a system but it does not seem possible to apply to it the conception of 'geographically integrated.' Since natural gas must go by continuous movement and operation of facilities from the reservoir underground in the field to the burner tips in the home where it is used, it is obvious that such a system could not be broken up, merged with other natural gas lines, and operated as parts of the newly constituted geographical or regional units.

"... It is submitted that a serious attempt to graft such a conception of a theoretical grouping on the natural gas industry would inevitably bring the industry into a general state of demoralization, wreck the value of operating company as well as holding company securities, impair service, increase rates to existing customers, and retard further extensions of service."

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(3) Not so large as to impair the advantages of (a) localized management, (b) efficient operation, and (c) the effectiveness of regulation.

The application of these requirements by the Commission is demonstrated in the subsequent cases.

Engineers Public Service Company

A subsidiary of Engineers Public Service Company, Virginia Electric & Power Company, operated a gas manufacturing and distribution system in Norfolk, Virginia, serving an area of approximately 35 square miles. The system furnished gas to 29,363 customers out of a total population of 157,000 persons in the area served, and was the second largest gas system in the state serving retail customers. This system was held to be an integrated gas utility system within the meaning of Section 2(a)(29)(B) of the Act. Another Engineers subsidiary, Gulf States Utilities Company, distributed natural gas to customers in Baton Rouge, Louisiana, and environs, a territory of about 15 square miles in area, with a population of 70,000, of which 12,542 were customers. Gulf purchased its gas from a non-affiliated company. This system was also held to be integrated.

Standard Power & Light Corporation

The gas operations of Philadelphia Company, a subsidiary of Standard Power & Light Corporation, were conducted prin-

The bills were accordingly amended to include the proviso relative to gas utility companies deriving natural gas from a common source of supply, and it became part of the law.

The problem of large geographical size, so apparent in the cases of the electric utility systems previously discussed, is noticeably absent in the case of manufactured gas systems, such as that of Virginia Electric and Power Company.

Engineers Public Service Company, 12 S.E.C. 41 (1942).

Ibid.
cipally by three companies. Kentucky West Virginia Gas Company was a natural gas producing company operating in eastern Kentucky. It sold the major portion of its output to Pittsburgh & West Virginia Gas Company, which operated in West Virginia as a transmission company and supplied natural gas to its subsidiary, Equitable Gas Company. Equitable was the primary distributing company of the system and distributed natural gas at retail in the Pittsburgh area. In addition, Equitable operated certain production, transmission and distribution facilities owned by Philadelphia Company and leased to Equitable. Equitable served 200,000 customers in an area with an aggregate population of about 1,500,000. Obviously, the three companies were interconnected, and most of the gas used by these companies was obtained from common sources of supply. Pittsburgh & West Virginia Gas Company was subject to regulation by the West Virginia Public Service Commission and the Federal Power Commission; Equitable was subject to regulation by the Pennsylvania Public Utility Commission; Philadelphia Company was not subject to regulation by the Pennsylvania Public Utility Commission. The facilities of these gas utility companies were found to constitute an integrated gas utility system. 197

Community Gas & Power Company

American Gas & Power Company, a subsidiary of Community Gas & Power Company, was the parent of seven operating gas utility subsidiaries doing business in the states of Minnesota, Alabama, Georgia, Florida, Massachusetts, and Maine. 198 The largest of these was Minneapolis Gas Light Company which served an area with a population of

197 Philadelphia Company, Release No. 8242 (June 1, 1948).
198 Each of the gas utility subsidiaries of Community Gas & Power Company was subject to the direction and control of the parent company in New York City, a highly objectionable feature from the point of view of the Commission.
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543,000 and had, as of September 30, 1942, a gross plant account of $28,347,357, net plant of $14,644,422, gross annual revenues amounting to $6,975,830, and net annual income of $1,039,099. The other six companies were much smaller and combined did not equal Minneapolis in financial size. The Commission held that each of the seven operating companies constituted a separate integrated gas utility system. However, no two of them derived natural gas from a common source of supply or were operated together as a single coordinated system. The gas utility properties operated by Minneapolis Gas Light Company constituted the major utility system controlled by American Gas. It sold almost half of the gas sold by the entire system and produced approximately 60% of the system’s revenues. American Gas agreed that Minneapolis Gas constituted its principal integrated system and consented to dispose of the other properties.

_Columbia Gas & Electric Corporation_

The major operations of the Columbia Gas & Electric Corporation system were carried on by 15 subsidiaries which owned or operated facilities for the production, transmission, and distribution of natural, artificial, and mixed gas for heat and power. These subsidiaries rendered gas service in more than 1,200 communities located in Kentucky, Maryland, Ohio, New Jersey, New York, Pennsylvania, Virginia, and West Virginia. Retail gas service was provided in each of these states except New Jersey. Ninety per cent of the operations of these subsidiaries was carried on in a relatively compact area in the adjoining states of Ohio, Pennsylvania, and West Virginia, the remaining operations being conducted in adjacent areas of Kentucky, western Maryland, and eastern

Pennsylvania. In the major area 842,000 customers were served out of a total population of more than 3,600,000. The distribution properties of the gas utility companies were for the most part interconnected by a network of lines which were connected with the producing properties of certain of the companies. From a management standpoint, the gas utility companies were segregated into three groups, namely, the Charleston, West Virginia, group; the Pittsburgh, Pennsylvania, group; and the Columbus, Ohio, group. Each group had its principal executive office in the city by which it was designated, and each had its own complement of executive and operating personnel. In general, the companies in each group were jointly operated as a group unit without regard for corporate boundaries. The executive, managerial, and operating personnel consisted, for the most part, of men residing in the communities served. A local office with a local manager was maintained in all communities of substantial size in the operating territories of the group. Each of the three groups maintained central dispatcher offices on a 24-hour basis for the purpose of assuring adequate deliveries of gas to the distribution outlets of the several companies. In addition, the facilities of the groups were so designed as to effectuate a substantial degree of operating coordination between their production and transmission facilities and the distribution systems of the various companies. The management of each group was responsible for the problems of local operation and policy, but they obtained certain statistical, accounting, tax, and other technical services from Columbia Engineering Corporation, the system service company. Further, the overall problems of policy, financing, protection of future gas supplies, and major engineering, legal, and tax questions were subject to the direct supervision of Columbia Gas & Electric Corporation. The gas utility companies were subject to the jurisdiction of the regulatory commissions in the
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states in which they operated, and most of them were subject to the jurisdiction of the Federal Power Commission under the Natural Gas Act.

The distribution facilities of the Charleston group were with one minor exception connected with, and received their gas from, an interconnected transmission system owned and operated by companies in the group. Retail gas service was rendered in northwestern and central West Virginia, western Kentucky, and to a minor extent in southern Ohio. The population of this area was approximately 600,000.

The companies in the Pittsburgh group distributed gas in eastern, western, and southern Pennsylvania, in adjacent portions of northern West Virginia and eastern Ohio, and in western Maryland. Customers totaled approximately 318,000. The distribution facilities of each of the companies in the group were directly or indirectly connected through a network of transmission lines owned and operated by companies in the group.

The Columbus group rendered gas service to over 400,000 customers in central, northern, and eastern Ohio, an area with a population of 1,275,000. All of its distribution facilities were directly or indirectly connected through a network of transmission lines. These lines were also connected with the lines of the Charleston and Pittsburgh groups, as indicated above.

There was a substantial degree of operating coordination between the production and transmission facilities of the Charleston group and the production, transmission, and distribution operations of the Columbus and Pittsburgh groups, and also with respect to the exploration and drilling for gas, conservation of gas supplies, purchase of equipment, as well as an interchange of ideas in respect of common operating problems.

From the foregoing description of the gas utility subsidiar-
ies of Columbia Gas & Electric Corporation represented by the Charleston, Pittsburgh, and Columbus groups it would appear fairly obvious that these three groups together constituted a single integrated gas utility system under the statutory definition. The Commission, however, did not so hold. Instead, it concluded that the distribution properties of the three groups were retainable together under the standards of Section 11(b)(1)(A), (B), and (C) of the Act pertaining to the retention of a principal system and one or more additional systems. Although the result was the same, the Commission had made a careful study of the operations of the Columbia Gas & Electric Corporation system and was in a position to pass upon the more difficult question of whether all three groups constituted one integrated system. It is unfortunate that the decision was not made. It must be said, at this point, however, that the Commission does not make a practice of side-stepping major issues.

Prior to this decision it had been determined that Panhandle Eastern Pipe Line Company could not be retained in the Columbia Gas & Electric Corporation system. Panhandle Eastern was engaged in the business of producing, transmitting, and selling natural gas which it obtained from the Amarillo and Hugoton gas fields. Its pipe lines extended through Texas, Oklahoma, Kansas, Missouri, and Illinois to a point on the Indiana-Illinois border where a connection was made with a subsidiary, which in turn delivered the gas to a non-affiliated distribution system in Detroit. Another subsidiary sold gas obtained from Panhandle Eastern to customers at retail in Michigan and Indiana to approximately 1,800 customers. There were no connections between the lines of Panhandle Eastern and its subsidiaries with those

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201 Columbia Gas & Electric Corporation, 17 S.E.C. 494 (1944).
of any other company in the Columbia Gas & Electric Corporation system, except for a connection with the Columbus group in Ohio. The connection was separated by a valve which was normally kept closed and the interchange of gas was negligible. There were no billings for such interchange. Panhandle Eastern and its subsidiaries bought no gas from, sold no gas to, and had no operating interrelationship with any other company in the Columbia Gas & Electric Corporation system. The entire capacity of Panhandle Eastern was required for its own customers.\textsuperscript{203} Columbia Gas & Electric Corporation agreed with the Commission that Panhandle Eastern had to be divested from the system under the requirements of the Act.

\textit{Pennsylvania Gas & Electric Corporation}

The Pennsylvania Gas & Electric Corporation ("Penn Corporation") was the parent of nine gas utility subsidiaries operating in the states of New York, Pennsylvania, Rhode Island, and Massachusetts. The Commission had tentatively held that there were four separate public utility systems in the Pennsylvania Gas & Electric Corporation holding company system, namely, (a) the natural gas operations carried on in the northern Pennsylvania-southern New York area, (b) the mixed and natural gas operations in southern Pennsylvania, (c) the manufactured gas operations in Rhode Island, and (d) the manufactured gas operations in Massachusetts.\textsuperscript{204} It was shown that Penn Corporation had no intention of interconnecting any of the four systems, and that the operations in northern Pennsylvania-southern New York constituted the principal system of the company. Of this

\textsuperscript{203} Such capacity was in fact insufficient for its own customers, as will be shown in the American Light & Traction Company case, discussed \textit{infra}.

\textsuperscript{204} Pennsylvania Gas & Electric Corporation, Release No. 8025 (March 9, 1948).
latter group, the two largest properties were North Penn Gas Company and Allegany Gas Company. North Penn served 10,800 natural gas customers in northern Pennsylvania, and Allegany served 2,180 customers in the same area and also in southern New York. The facilities of the two companies were interconnected at numerous points, and intercompany sales of gas were substantial. Both companies jointly owned and operated underground gas storage facilities in northern Pennsylvania and both obtained large portions of their gas requirements from a common source of supply. Allegany supplied all the natural gas requirements of two other subsidiaries of Penn Corporation, Crystal City Gas Company and Addison Gas & Power Company. Crystal served approximately 5,903 customers in southern New York and Addison served about 570 customers in a neighboring community. Crystal City and Addison shared a common business office and the personnel of the two companies was virtually identical. The other two subsidiaries in this region were Alum Rock Gas Company and Dempseytown Gas Company. The facilities of these two companies were interconnected and were located about 30 miles south of the distribution system of the North Penn and Allegany properties. Alum Rock served about 425 customers and Dempseytown served about 360 customers. Dempseytown obtained a portion of its natural gas requirements from the same source as North Penn and Allegany. The offices of North Penn, Allegany, Dempseytown, and Alum Rock were located in the same building at Port Allegany, Pennsylvania, and the duties of virtually every member of the staff employed at such offices involved more than one of those companies. All maintenance work of these companies was directed from the office at Port Allegany and a central staff of employees from the office there actually engaged in the major repair work in connection with all the
New York-Pennsylvania properties. The Commission held that those properties were an integrated gas utility system within the meaning of the Act. None of the other groups of properties were located close to or were interconnected with the New York-Pennsylvania facilities and there was no operational relationship between them. The Commission did not pass upon the question whether each of them was integrated, since they were not retainable in any event.

**Southern Union Gas Company**

Southern Union Gas Company operated a small but scattered group of gas utility and other properties in Arkansas, New Mexico, and Texas. The Arkansas subsidiary served 6,000 gas customers in the northwestern part of the state. New Mexico Gas Company operated natural gas transmission and distribution facilities in northwest New Mexico, serving 3,500 customers at retail in and around Santa Fe, and 10,000 customers in Albuquerque at wholesale. New Mexico Eastern Gas Company operated natural gas transmission facilities and distribution properties in east central and southeastern (Clovis and Carlsbad) New Mexico and in west Texas. The company served 9,900 retail customers and 2,900 wholesale. Texas Southwestern Gas Company operated natural gas transmission and distribution properties in four geographically separate districts in southwest Texas, southeast Texas, central Texas, and central Oklahoma, serving 8,700 customers. With minor exceptions, Southern Union and its subsidiaries had constructed all of the physical properties and utility plants of the system, locating them in scattered communities in which natural gas had not previously been made available.

Under Section 11(e) of the Act, Southern Union proposed,
inter alia, to merge itself with New Mexico Gas Company, and New Mexico Eastern Gas Company with Texas Southwestern Gas Company. Southern Union proposed to retain the gas utility properties of New Mexico Gas Company, New Mexico Eastern Gas Company, located in New Mexico, and the southwest Texas properties of Texas Southwestern Gas Company, located in the Pecos Valley, as its principal system. The Commission held that such properties did constitute a single integrated gas utility system within the meaning of Section 2(a)(29)(B) of the Act. The Commission justified this decision as follows:

"... This conclusion is reached on the particular facts here applicable although we recognize that the properties extend over a rather wide geographical area. The record shows, among other things, that the territory served has a relatively sparse population and that the properties are of such size and are so situated as to permit efficient operation under a single management responsive to local public feeling and local needs."

In view of the wide extent of these properties (more than 300 miles north to south and more than 200 miles east to west), the lack of a common source of supply, and the consequent absence of coordinated operations, the decision is hard to defend on any ground other than that the properties involved were small. The Act itself, of course, makes no special provision for small operations. The Commission also fell back on its "sparse population" doctrine which has already been examined at length in the discussion of The Middle West Corporation.

Southern Union Gas Company, 12 S.E.C. 116 (1942). The southeast Texas, central Texas, and central Oklahoma properties of Texas Southwestern Gas Company, located 350, 250, and 300 miles respectively from the nearest point of the principal system, were held in this opinion not to be a part of the principal system.

Southern Union Gas Company, 12 S.E.C. 116, 142 (1942).
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Cities Service Company

There were three important groups of gas utility properties in the Cities Service Company system. The largest group (considering gross operating revenues) was located in the states of Oklahoma, Missouri, Kansas, and Nebraska, and will be referred to herein as the “Mid-Continent” gas properties. The next largest system was that operated by Arkansas Louisiana Gas Company in Texas, Louisiana, and Arkansas. And the third group, which was much smaller, consisted of properties in New York and Canada, and will be referred to as the “Northern” group.

1. The Mid-Continent Properties

The Mid-Continent gas properties consisted of the distributing systems of Kansas City Gas Company, The Wyandotte County Gas Company, and The Gas Service Company. The service area of these companies comprised about 50,000 square miles, principally in eastern Kansas. Gas service was rendered in Kansas City, Missouri; Kansas City, Kansas; the environs of these two cities; and 159 communities in eastern Kansas, southwestern Missouri, northeastern Oklahoma, and southeastern Nebraska. Of a total population of 1,204,600, there were 272,000 customers. The gas distributed by these companies was purchased from a common source of supply, Cities Service Gas Company, a system company. The various retail outlets of the three companies were connected by the lines of Cities Service Gas Company, and all three were coordinated as to load increase or decrease by a department of that company. The three companies had substantially the same management. The central offices of Gas Service and Kansas City Gas were located in the same building in Kansas City, Missouri, while the central offices of Wyandotte were in Kansas City, Kansas, three miles away.
In purchases, construction, advertising, and exchange of ideas, the companies were operated as a single enterprise. The Commission accordingly found that these three companies formed an integrated gas utility system.  

2. Arkansas Louisiana Gas Company System

Arkansas Louisiana Gas Company, hereinafter referred to as "Arkansas Gas," produced and transmitted natural gas and distributed it at retail and wholesale in Arkansas, Louisiana, and Texas. The area served formed a triangle, encompassing approximately 31,000 square miles, with the base of the triangle in northern Louisiana and its apex in lower Arkansas. Lines ran west into east Texas and north into upper Arkansas. Within this area, which had a population of over 1,500,000, the company had 103 distribution plants, all coordinated with the production and transmission properties so that at all times the requirements of each outlet were anticipated and could be satisfied. The distributing system was divided into 33 field offices, each possessing local control, but all subject to general coordinating authority from the company's main offices located at Shreveport, Louisiana. It was held that Arkansas Gas operated a single integrated gas utility system.  

3. The Northern Properties

The companies in the Northern group of gas properties were Republic Light, Heat & Power Company, Inc., Penn-York Gas Company, and Dominion Natural Gas Company, Ltd. (and its subsidiaries). These companies operated in Pennsylvania, New York, and Canada. Republic distributed both natural and manufactured gas in western New York, serving natural gas to 49 small communities in three areas with a population of 132,000, and manufactured gas to nine...

208 Cities Service Company, 15 S.E.C. 962, 967 (1944).
209 Id. at 996.
communities in the Niagara Falls area with a population of 169,000. The two divisions of the company were so coordinated that if the supply of natural gas should fail, Republic could mix manufactured gas with natural gas. Republic was found to constitute a single integrated gas utility system.\textsuperscript{210} The Commission did not pass upon the status of Penn-York Gas Company and Dominion Natural Gas Company under Section 2(a)(29)(B).

\textit{Lone Star Gas Corporation}

Through its operating subsidiaries, the Lone Star Gas Corporation produced, purchased, transmitted, and distributed natural gas in Texas and southern Oklahoma, and also distributed natural gas in the city of Council Bluffs, Iowa.\textsuperscript{211} Council Bluffs Gas Company purchased its gas requirements from Northern Natural Gas Company. Northern Natural had been organized in 1930 by North American Light & Power Company, United Light & Railways Company, and Lone Star Gas Corporation, each of which held approximately one-third of the Northern Natural common stock. United Light & Railways disposed of its interest in Northern Natural by sale to underwriters for public distribution.\textsuperscript{212} The Commission in 1942 ordered North American Light & Power Company to sever its relationship with Northern Natural.\textsuperscript{213} Northern Natural was both a registered holding company and a non-utility operating company. It produced and purchased natural gas in Texas and Kansas, and operated a pipeline for transporting such gas from those states to Nebraska, South Dakota, Iowa, and Minnesota,

\textsuperscript{210} Id. at 990.
\textsuperscript{211} The properties of Lone Star Gas Corporation were concentrated in north central Texas and south central Oklahoma.
\textsuperscript{212} The United Light & Power Company, 10 S.E.C. 17 (1941).
where it sold the gas for industrial use and at wholesale for redistribution. Through its wholly-owned subsidiaries, Peo­ples Natural Gas Company and Argus Natural Gas Company, it distributed natural gas in Kansas, Nebraska, Iowa, and Minnesota.

Pursuant to Section 11(e) of the Act, Lone Star Gas Corporation proposed to retain the subsidiaries operating in Texas, to sell Council Bluffs Gas, and to distribute the common stock of Northern Natural owned by it to its stockholders. Lone Star contended that all of its distribution properties in Texas and Oklahoma were retainable as a single integrated system. Excluding the distribution systems at El Paso and Galveston, Texas, the utility properties which would remain after the disposition of Northern Natural and Council Bluffs Gas were all situated and compactly grouped in northern and north central Texas, and a small adjoining portion of southern Oklahoma. These properties will be referred to herein as the "Central System." No single distribution system was located more than 47 miles from another Lone Star distribution system, and the average distance between the cities and towns served by the Central System was less than ten miles. As may also be noted, this area was located primarily in a single state, Texas. The utility operations of the Central System consisted of the distribution of natural gas in and around 291 cities and towns and the retail sales of gas to individual customers along the pipe lines of Lone Star Gas Corporation. All of the distribution properties of the Central System were connected with, and received their gas from, the interconnected transmission system of Lone Star Gas Corporation, with one minor exception. All operations of the Lone Star System in Texas and Oklahoma were managed from the system's main office in Dallas, centrally located in the Central System area, thus facilitating localized management of the properties.
Although the Central System was large, in general it had common physiographical and economic characteristics. Furthermore, the area served was sparsely populated, having a population of only 1,300,000. The Central System served an average of 285,787 customers in 1941. Most of the communities served were small, and it was unlikely that they could support independent gas distribution systems.

There was a considerable degree of operating coordination between the companies owning distribution properties in the Central System. This portion of the Lone Star system was divided into seven operating divisions, and four of these divisions were subdivided into operating districts. These operational partitions were arranged without reference to the corporate ownership of the individual properties. Within each district and division, operations were coordinated by the respective district and division offices, and as between the divisions there was additional coordination of operations.

The operations of the system in Texas were subject to regulation by the Railroad Commission of Texas and were subject to rate regulation by the cities served. Operations in Oklahoma were subject to regulation by the Corporation Commission of that State.

The Commission found that the distribution operations of the Central System could be retained as the single integrated public utility system of Lone Star under Sections 11(b)(1) and 2(a)(29)(B) of the Act.214

Neither the Galveston nor the El Paso properties were connected with the pipelines of Lone Star Gas Corporation. Natural gas for distribution in those cities was purchased at wholesale from companies not affiliated with the Lone Star system. Both El Paso and Galveston were located a considerable distance from the Central System. Galveston was 250 miles from Dallas and 125 miles from College Station,

214 Lone Star Gas Corporation, 12 S.E.C. 286 (1942).
the nearest town served by the Central System. El Paso, which was 700 miles from Galveston, was 575 miles from Dallas and 350 miles from the town of Colorado, the nearest served by the Central System. Several other companies not affiliated with the Lone Star system distributed gas in the territories around El Paso and Galveston, and in the areas between those two cities, and between those cities and the Central System. There appeared to be very little operating coordination, as distinguished from management or control coordination, between the properties in El Paso and Galveston and those in the Central System. Although the distribution systems at El Paso and Galveston were operated subject to the authority of the management of the system’s main office in Dallas, each was operated as a separate division, each having a complete and self-sufficient staff of qualified operating personnel. In view of this, and since it appeared that the El Paso and Galveston properties were not in the same “area or region” as the properties of the Central System, within the meaning of Section 2(a)(29)(B), the Commission held them not to be a part of the retainable single integrated public utility system.\footnote{ibid.}

Accordingly, the Section 11(e) plan of Lone Star was approved, except that the retention of the El Paso and Galveston properties was not permitted.\footnote{See Lone Star Gas Corporation, 15 S.E.C. 166 (1942), for a review of the steps taken by this system to integrate itself.}

\textit{The United Light & Railways Company}

The United Light & Railways Company and its subsidiary, American Light & Traction Company, filed a joint plan under Section 11(e) of the Act for compliance with Section 11(b) thereof. As to its integration features, the plan provided for the continuation of American as a holding company over
Michigan Consolidated Gas Company, Milwaukee Gas Light Company, and Michigan-Wisconsin Pipe Line Company, and their subsidiaries, and for the disposition by American of its investments in The Detroit Edison Company and Madison Gas and Electric Company. The United Light & Railways Company, which became a top holding company upon the dissolution of The United Light & Power Company, owned 51.94% of the voting stock of American Light & Traction Company. The plan proposed to divorce American from United, and we are here concerned with the integration of the American system.

American Light & Traction owned all of the common stocks of Michigan Consolidated, Madison, and Michigan-Wisconsin; approximately 99.5% of the common stock of Milwaukee; and approximately 20.3% of the common stock of The Detroit Edison Company.

Michigan Consolidated Gas Company was engaged in the purchase, distribution, and sale of natural gas in Detroit, Grand Rapids, Muskegon, Ann Arbor, Mt. Pleasant, Greenville, Belding, and Big Rapids, Michigan, and adjacent areas. It was also engaged in the production, distribution, and sale of casing-head gas in Muskegon and of manufactured gas in Ludington, Michigan. At the time of the hearing, natural gas for sale in Detroit and Ann Arbor was secured by contract from the Panhandle Eastern Pipe Line Company. This supply was supplemented by manufactured gas. Michigan Consolidated also owned gas wells and had gas rights in west central Michigan, the output of which was used to service the other Michigan communities. Its business was conducted entirely within the state of Michigan. Its service area had an

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estimated aggregate population in 1940 of 2,345,600, of which 1,959,600 were in the Detroit district. Approximately 81% of its operating revenues for 1946 was derived from the sale of gas in the Detroit district. Michigan Consolidated was under the jurisdiction of the Michigan Public Service Commission, which had broad regulatory powers over the company, including jurisdiction over the fixing of rates and charges, and the issuance of securities.

Milwaukee Gas Light Company was a gas utility company, furnishing manufactured gas to the city of Milwaukee and the surrounding metropolitan area, having a combined population of about 800,000. During 1946 approximately 31.77% of its gas requirements was supplied from the company’s own manufacturing equipment, and the remainder was purchased from Milwaukee Solvay Coke Company, a wholly owned subsidiary of Milwaukee. Milwaukee was under the jurisdiction of the Public Service Commission of Wisconsin, which had extensive regulatory powers, including jurisdiction over the fixing of rates and charges, and the issuance of securities.

Milwaukee Solvay Coke Company was a non-utility company operating in the city of Milwaukee. It manufactured and sold coke and coke by-products, and furnished Milwaukee Gas Light with a substantial portion of its requirements of manufactured gas. It was expected that when natural gas should be introduced into Milwaukee, Milwaukee Solvay would continue in business but would reduce its supplies to Milwaukee Gas Light to a stand-by basis.

Madison Gas & Electric Company was a combined electric and gas utility company engaged in the production, distribution, and sale of electricity and manufactured gas in Madison, Wisconsin, and adjacent territory.

Michigan-Wisconsin Pipe Line Company was organized
in 1945 for the purpose of constructing and operating a natural gas pipe line from Texas to Michigan and Wisconsin. It was a non-utility company. At the close of the hearings in this case, construction of the pipe line had not commenced, but contracts for raw materials, construction, engineering and gas supply had been entered into.

Austin Field Pipe Line Company was a Michigan corporation organized for the purpose of constructing a pipe line extending from the Austin storage field in Michigan to Detroit, and connecting certain of Michigan Consolidated's distribution systems with the Austin field. When constructed, the line would be temporarily operated under lease by Michigan Consolidated and later acquired by Michigan-Wisconsin. It was a non-utility company.

The United Light & Railways Company had previously been ordered to dispose of its interest in American Light & Traction Company, and American had in turn been directed to dispose of its interest in all properties outside of Michigan or states which adjoin Michigan, and also to dispose of its investment in Detroit Edison. At the date of this hearing, Railways had not disposed of its interest in American, nor had American disposed of its investment in Detroit Edison. The question was still open whether the remaining properties of American constituted integrated systems and other businesses retainable under Section 11(b)(1). One of the premises of the Section 11(e) plan was that Michigan Consolidated and Milwaukee would form such an integrated system which could be retained by American. As part of this plan it was proposed to construct the interstate natural gas pipe line joining Michigan Consolidated and Milwaukee, described above. American was to continue in existence as a registered

218 The United Light & Power Company, 9 S.E.C. 833 (1941).
219 As the main line passed through Missouri and Iowa, certain small communities were to be served with gas.
holding company over Michigan Consolidated, Milwaukee, Milwaukee Solvay, Michigan-Wisconsin, and Austin. During the year 1948, American proposed to pay quarterly dividends on its common stock in shares of Detroit Edison stock. The resources and credit of American were to be used to provide the common stock equity for the proposed pipe line system. The pipe line was to be financed, primarily, from the sale of large blocks of Detroit Edison stock owned by American. All of American’s Detroit Edison stock was to be disposed of prior to December 31, 1948. The common stock of Madison Gas & Electric Company was to be distributed pro rata to the common stockholders of American. Railways was to dispose of all shares of preferred and common stocks of American held by it, and all shares of Detroit Edison and Madison received by it in distribution from American. The Commission was not called upon nor did it have the power to determine the merits of the pipe line as such, for that matter lay wholly within the jurisdiction of the Federal Power Commission and had already been decided in the affirmative.

Natural gas was being obtained by Michigan Consolidated from Panhandle Eastern Pipe Line Company under a contract entered into in 1935. Panhandle produced and purchased gas in the states of Texas, Oklahoma, and Kansas, and owned and operated a transmission pipe line system extending from those states through portions of Missouri, Illinois, Indiana, Ohio, and Michigan. By separate contract, Panhandle delivered gas to Michigan Consolidated for distribution in the Ann Arbor area. Ann Arbor also received natural gas produced in Michigan. The communities in western Michigan served by Michigan Consolidated, with the exception of Ludington, which used manufactured gas, obtained their supply from natural gas fields in Michigan. An additional

supply of natural gas was essential to continuance of service in those communities. There had also been a rapidly expanding demand for gas in the heavily industrialized area around Detroit served by Michigan Consolidated. Restrictions on the construction of new facilities during World War II, the limited availability of materials since the termination of hostilities, and the heavy gas demands in other regions served by Panhandle had made it impossible for Panhandle to keep pace with the growth of the Detroit market. As a result, that area was suffering from an acute shortage of natural gas, and Michigan Consolidated had been compelled during peak periods to supplement its receipts from Panhandle with manufactured gas at greatly increased expense. It had also been necessary to discontinue gas service to certain industrial customers in Detroit during brief periods of extraordinary demand, to suspend acceptance of additional space heating customers, and to restrict the amount of additional gas sold to industrial customers. The send-out of Michigan Consolidated in the Detroit area exceeded the 125,000 Mcf. provided by the Panhandle contract on five days in 1942, 14 days in 1943, 13 days in 1944, 32 days in 1945, 97 days in 1946, and 108 days in the first four months of 1947, demonstrating vividly the growing shortage. On occasions Panhandle had been unable to deliver the quantities of gas called for in the contract.

Michigan Consolidated had plants in Detroit, Grand Rapids, Ann Arbor, and Muskegon equipped to produce carburetted water gas, which resembled natural gas in quality and could be used as a temporary substitute for, or in simultaneous distribution with, natural gas. In Detroit the company had recently installed a new liquefied petroleum gas manufacturing plant. These facilities were insufficient to supply the full gas demands of the system and were used only for stand-by purposes to level peak demands or in case of temporary curtailment or failure of the natural gas supply.
The gas supply situation of the Wisconsin companies was somewhat different but also indicated an urgent need for new sources of supply. Both Milwaukee and Madison used only manufactured gas. The record indicated that Milwaukee had been unable to earn its allowable return and that, as a consequence of the rapidly increasing expense of manufacturing gas, it had been compelled twice in the previous year to apply to the state commission for an increase in rates, which were granted to the extent of $1,575,000 per year. In addition, the demand in Milwaukee had increased to a point where either additional manufacturing facilities had to be installed to maintain service or some other source of supply had to be provided.

As has been indicated, on November 30, 1946, the Federal Power Commission granted a Certificate of Convenience and Necessity to Michigan-Wisconsin to construct and operate a natural gas pipe line from the Hugoton gas fields to points in Michigan and Wisconsin. A second certificate was granted on November 13, 1947, to Austin to operate the Austin field and to build a line from that field to Detroit and other points in Michigan. The main pipe line to be constructed by Michigan-Wisconsin was to be a 24-inch line from a point in Hansford County, Texas, extending for 810 miles in a northeasterly direction to a point near Millbrook, Illinois, referred to as “Wisconsin Junction.” From that point a 22-inch line was to extend 259 miles through Indiana and Michigan to the Austin Field, where the line would terminate. From Wisconsin Junction another 22-inch line would extend 101 miles to a point near Milwaukee referred to as “Milwaukee Junction.” An 18-inch line was to extend from there to the Milwaukee area, and a 14-inch line was to extend 59 miles to a point near Appleton. Branches from the 14-inch line were to extend to Sheboygan, Fond du Lac, Oshkosh, Manitowoc, Two Rivers, Appleton, and Green Bay. A 12-inch branch was to extend
from Milwaukee Junction to Racine, and a 10-inch line to Madison, with further branches. The branch lines serving Wisconsin were to total 422 miles.

At the Austin and Reed City gas storage fields, Austin Field Pipe Line Company proposed to install additional wells and gathering lines, and was to construct a 24-inch line approximately 140 miles long connecting the Austin storage field with Michigan Consolidated's distribution system in the Detroit area. A branch line of approximately 25 miles was proposed to connect the Austin-Detroit line with Ann Arbor.

Construction of the Austin-Detroit line was to start immediately, with completion expected by April 1, 1948. Initially, the line was to be used for transporting to and from the storage fields gas delivered from Panhandle to Michigan Consolidated, the contracting parties having agreed to such storage, which would enable Michigan Consolidated to build up reserves for the winters of 1948-1949 and 1949-1950, before the Michigan-Wisconsin line went into operation. It was expected that natural gas from the main line would enter the Detroit area by January 1, 1950. The underground storage fields would permit the main line to be operated at full capacity all of the time, the amounts not immediately consumed during slack periods being directed into storage and available to meet peak demands. Practically the entire peak demands of Detroit, Ann Arbor, and Mt. Pleasant could be met from storage. The capacity of the storage fields was enough to meet peak requirements for an uninterrupted period of approximately 100 days. This storage system could double the designed capacity of the main transmission line. Michigan-Wisconsin had entered into a gas supply contract with Phillips Petroleum Company to supply the natural gas for the line.

In considering whether the operation of the properties of Michigan Consolidated and Milwaukee would be coordinated, and, if so, whether such coordination would result in substan-
tial economies, the Commission pointed out that the utilization of underground storage would enable the proposed pipe line to operate at full capacity the year round and permit significant economies in operation and cost.\footnote{221} The proposed method of operation would make for close coordination between the operations of Michigan Consolidated and Milwaukee, with central control synchronizing these operations to assure maximum use of the lines, adequate pressures in the lines and in the storage fields, and allocation of gas to new customers in terms of line capacity and mutual needs. The record indicated that substantial economies would result from the pipe line. An adequate supply of additional natural gas to Michigan Consolidated would save the large expenditures for manufactured gas then required during peak periods and would assure adequate supplies to the western districts of Michigan which were threatened with a severe shortage. Conversion to natural gas by Milwaukee would make additional expansion of manufacturing capacity by that company unnecessary and would bring in gas at a price which would enable it to earn a fair return, while the consumers in Wisconsin would be benefited by a reduction in gas rates. And the availability of additional gas would permit natural expansion of demand. The Commission found that this coordinated operation of Michigan Consolidated and Milwaukee would result in substantial economies.\footnote{222}

\footnote{221} The Federal Power Commission found that:

"The proposed project has a distinct and readily recognizable advantage over the ordinary interstate natural-gas transmission pipe line system. The advantage lies in the fact that the project combines the operations of a high-pressure pipe line with the utilization and operation of large gas fields for underground storage purposes. This combination of transport and large scale storage facilities makes possible important economies in operation, permits flexibility and superior reliability of service, and enables a high load factor operation of the main pipe line system." F.P.C. Opinion No. 147 at mimeo. p. 11, quoted in The United Light & Railways Co., Release No. 7951 (December 30, 1947), mimeo. p. 25.

\footnote{222} The United Light & Railways Company, Release No. 7951 (December 30, 1947).
The next problem was whether the proposed system was located in a "single area or region." Section 2(a)(29)(B), of course, provides that companies deriving natural gas "from a common source of supply" may be deemed to be in a single area or region. The Michigan-Wisconsin pipe line would provide Michigan Consolidated and Milwaukee with a common source of supply. If Panhandle Eastern should agree to continue to serve Michigan Consolidated after the expiration of the contract described above, Michigan Consolidated would then obtain its gas from two sources, one of which would not be available to Milwaukee. The Commission met this problem as follows:

"... However, the statute does not require the companies to obtain all their gas from a common source of supply and since Michigan Consolidated will obtain most (67%) of its gas from Michigan-Wisconsin, we need not determine whether the quoted provision of Section 2(a)(29)(B) would be applicable if the situation were reversed. Under the circumstances presented, we think that Michigan Consolidated and Milwaukee would derive gas 'from a common source of supply' and that their operations might properly be regarded as confined to a 'single area or region.'" 223

The final question was whether the size of the area or region served by this system was so large as to impair the advantages of localized management, efficient operation, or the effectiveness of regulation. Detroit, the principal market of Michigan Consolidated, was 249 airline miles and 368 railroad miles from Milwaukee. Their combined utility plant amounted to $133,488,241. Total operating revenues for the two companies for the twelve months ending April 30, 1947, were $45,550,679. The population in 1940 of the region served by Michigan Consolidated was estimated at 2,345,600,

223 Id. at mimeo, pages 26-27.
of which 603,089 were customers of the company. The areas served by Milwaukee had a population of approximately 800,000, of which 203,433 were customers. No objection had been made that the system would be so large as to impair efficiency of operations, although it is the largest gas utility that has yet been considered as integrated.

Michigan Consolidated would remain subject to regulation by the Michigan Public Service Commission and Milwaukee would remain subject to regulation by the Public Service Commission of Wisconsin. Michigan-Wisconsin would be under the jurisdiction of the Federal Power Commission, and American Light & Traction would remain a registered holding company subject to the jurisdiction of the S.E.C. The Commission concluded that the area or region to be served by the proposed coordinated operations was not so large as to impair the effectiveness of regulation.\textsuperscript{224}

The Commission pointed out that the management of Michigan Consolidated and Milwaukee had always resided in the communities served and had had continuous responsibility for operating and managing the properties, adding that:

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. . . While it is true that instances may arise in the coordinated operation of the proposed system in which the immediate interests of a particular territory may not be fully satisfied, such an eventuality is characteristic of the very nature of coordination which is conducted with the overall and long run needs of all system properties in mind. Moreover, any such instances are more than offset by the advantages to be derived by the consumers of the territories from such proposed coordination, and they need not necessarily result in impairment of local management to an extent which would be in-
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\textsuperscript{224} \textit{Id. at mimeo. page 27.}
consistent with the standards of Section 2(a)(29)(B).”

The conclusion naturally followed that the combination of the properties of Michigan Consolidated and Milwaukee constituted an integrated gas utility system within the meaning of the Act.

This decision of the Commission was attacked by Panhandle Eastern Pipe Line Company upon appeal. Panhandle Eastern maintained that the evidence did not support the Commission's findings that Michigan Consolidated and Milwaukee could be retained by American as an integrated gas utility system, that the Commission was without power to anticipate the construction of the Michigan-Wisconsin or the Austin lines in determining whether an integrated system would exist, but should deal with the holding company system as it then existed, and that the economies found by the Commission would result from savings accomplished by the use of natural gas and not from the coordinated operation of the system as required by Section 2(a)(29)(B) of the Act. Each of these contentions was overruled and the decision of the Commission was affirmed.

The North American Company

It will be recalled that the Commission found that the electric utility operations of Union Electric Company of Missouri constituted the principal integrated utility system of The North American Company. The gas operations in the Union group territory were conducted by Union Electric

Id. at mimeo. pages 27-28. It thus plainly appears that coordination over a wide area appealed more to the Commission than localized control, and the provisions of the Act calling for local management were relegated to a position of minor importance.


Company of Illinois in Alton, Illinois; by Iowa Union Electric Company in Keokuk, Iowa; and by St. Louis County Gas Company in an area surrounding the city of St. Louis. The first two companies were subsidiaries of Union Electric Company of Missouri, and the last was a direct subsidiary of North American. The gas operations of the three companies were located within the electric service territory of the Union group. Although the gas operations of the Iowa and Illinois companies were relatively small, the total assets of the St. Louis County Gas Company amounted at May 31, 1940, to the substantial sum of $9,944,909. Without further analysis of the question, the Commission held that the gas operations of these three companies constituted those of three integrated gas utility systems.

North American Light & Power Company, a subsidiary of The North American Company, owned 35% of the common stock of Northern Natural Gas Company. Northern owned transmission lines and sold natural gas at wholesale for redistribution and for industrial use. Its transmission lines, which constituted the major portion of its assets, tapped fields in Texas and Kansas, and ran for a distance of 2,783 miles through Oklahoma, Kansas, Nebraska, South Dakota, Iowa, and Minnesota. Northern was not a "gas utility company" within the meaning of Section 2(a)(4) of the Act. However, Northern owned all of the common stock of Peoples Natural Gas Company and Argus Natural Gas Company which maintained facilities for the sale of natural gas at re-

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228 The gas utility subsidiaries of The North American Company system were all concentrated in the mid-western states, with the exception of one subsidiary in California.

229 Sec. 2(a)(4) of the Act defines a "gas utility company" as "any company which owns or operates facilities used for the distribution at retail . . . of natural or manufactured gas for heat, light, or power . . ." (Italics added.)
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tail and were gas utility companies within the meaning of the Act.

Peoples sold natural gas at retail in 66 cities and towns in three separate areas located in eastern Nebraska, central Iowa, and southern Minnesota, which latter area overlapped into northern Iowa. In 1940 Peoples served a total of 19,513 customers with over 3,500,000 mcf. of gas. All of Peoples' gas supply was derived from its parent, Northern.

Argus' properties were located in southwestern Kansas. It sold natural gas in 15 communities and seven counties in that part of the state, and in 1940 served 5,575 gas customers, to whom 2,337,860 mcf. of gas were sold. Argus owned about 151 miles of gas transmission lines, 73 miles of branch lines, and 24 miles of gathering lines. It purchased its gas requirements principally from non-associated producers in the Kansas Hugoton field and to a small extent from its parent, Northern.

Northern, Peoples, and Argus, in combination, served areas aggregating 25,000 square miles, containing a population of 850,000 persons. On a consolidated basis as of December 31, 1940, the group had fixed assets with a book value of $55,384,707 and total operating revenues for 1940 of $12,857,002. During 1940 the group sold 55,873,808 mcf. of gas.

North American contended that the operations of Northern, Peoples, and Argus constituted those of a single integrated gas utility system. The Commission pointed out a number of objections to this proposition. It was emphasized that Argus purchased almost all of its gas from non-affiliated sources, while Peoples acquired its gas from Northern, and that the operations of the Argus properties had a much less important relationship to those of Northern than did the operations of Peoples. Furthermore, there were important differences in their methods of operation. The Commission was unable to
find that there were substantial economies, or any economies, resulting to Argus from joint ownership and control of its properties together with Peoples, and in its original opinion on the subject held that Argus could not be regarded together with Peoples and Northern as part of a single integrated gas system.\textsuperscript{232}

It was suggested that the transmission lines of Northern might be considered, together with the properties of Peoples, as a single integrated gas utility system. Northern, however, was not a gas utility company within the meaning of the Act, as has been noted, and the Commission doubted whether the facilities of companies which were not gas utility companies could be regarded as part of an integrated gas utility system as defined in Section 2(a)(29)(B), which refers exclusively to "gas utility companies." This exclusive reference possibly precludes any intention to comprehend within an integrated gas utility system companies which were not gas utilities under the Act. However, the Commission did not decide this question, since it found that, in any event, Northern could retain the transmission lines along with Peoples under the "other businesses" clauses of Section 11(b)(1).\textsuperscript{233} The inference was that Peoples constituted a single integrated gas utility system, although the Commission did not make a specific finding to this effect.

North American succeeded in getting the Commission to reopen the hearings with reference to Northern's retention of the transmission lines and facilities of Argus. Proof was adduced to the effect that Northern's supply of natural gas was becoming more and more dependent upon Argus. About half of the gas requirements of Northern were produced in the Texas Panhandle field, the remainder being produced in the Hugoton, Otis, and Orth fields in Kansas. In 1940,

\textsuperscript{232} The North American Company, 11 S.E.C. 194 (1942).

\textsuperscript{233} Ibid.
38% of this remainder was taken from the Hugoton field. The Otis field was relatively small and was in a decadent stage. Northern obtained only a minor portion of its requirements from the Orth field by purchase from non-affiliated interests. The Panhandle field had begun to show some drop in rock pressure, but there was no indication that material diminution of flow was imminent. The Hugoton field was only partially developed, and in Northern's opinion constituted its sole reserve source.

Northern owned leaseholds on 182,000 acres in the Hugoton field, 8,310 acres of which were producing through 13 wells, 12 of which were connected to Argus lines. Of this total acreage, 114,300 acres or 63% was traversed by, or adjacent to, the Argus pipelines. With the diminution of flow from the Otis field, Northern expected to accelerate development in the Hugoton field to compensate for this loss of supply and to meet increasing demands. Northern's demands had been constantly increasing and among its industrial consumers were several concerns engaged in substantial and important war production work. Northern contended that if such development was carried out in the acreage adjacent to the Argus lines, the use of such lines would constitute the logical and least expensive method of delivering the output to the Northern system, and that regulatory and defense agencies had indicated that no new facilities would be authorized where facilities were already available. It further appeared that Northern, to a considerable extent at that time and to an increasingly greater extent in the future, did and would depend upon the transmission facilities of Argus for the transmission to Northern's directly owned pipe lines of substantial amounts of gas from Northern's gas leaseholds.

In the light of these circumstances, the Commission held that the pipe line transmission facilities of Argus could logically be considered an integral part of the pipe line assets
directly owned by Northern and which had previously been found to be retainable in the system. These assets, of course, were retainable for the same reason that the Northern transmission facilities were retainable, i.e., as an "other business" reasonably incidental or economically necessary or appropriate to the operations of the integrated public utility system of Peoples. It is not the purpose of this section to discuss the "other business" aspects of the Act; however, this background is essential to an understanding of the ultimate complete reversal by the Commission of its original position.

Not content with this state of affairs, Northern, Peoples, and Argus sought permission to retain the Argus distribution properties within Northern's integrated system. At the same time, Northern proposed to merge Argus into Peoples. The basis of this application was a change in conditions, as described below.

The Commission found that Peoples and Argus were physically interconnected by the Northern pipe line system, and that as a result major transmission policies affecting supply and regulation thereof were jointly determined for both companies. Consequently, the companies were operated as a coordinated system.

With reference to the "single area or region" requirement of Section 2(a)(29)(B) of the Act, as applied to this system, the Commission made these remarks:

"In spite of the wide intervening territory lying between them we think that Argus and Peoples may be deemed to lie in a single area within the meaning of the Act. Our conclusion is reached with especial reference to the problems of the natural gas industry. Concern was expressed before the Committees of Congress with regard to area limitations in the natural gas industry, because of the necessity of bringing the fuel

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from its natural location to areas in which it could be economically sold, even though they lay great distances away. . . . Under all the circumstances we think the conclusion that Peoples and Argus operate in a single area or region (is) consistent with the purposes intended by the Act.”

Relative to the “size” standards of the Act, it was shown that the combined facilities of Peoples and Argus served approximately 28,000 customers in 81 communities with a population of about 135,000. The combined net plant accounts of the companies was about $2,750,000. Compared with other systems which had been held to be in compliance with Section 2(a)(29)(B), the system of Peoples and Argus was quite small. The system was found not to be so large as to impair the efficiency of operations. Although the combined operation of the two companies would not facilitate local regulation, the Argus properties would remain subject to the Kansas State Commission, and the system would remain subject to all federal regulation then applicable to it.

Significant new evidence was adduced to show that the combined operation of Peoples and Argus under Northern control resulted in substantial economies which would be un-

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237 In the North American Company, 11 S.E.C. 194 (1942), the Commission noted that the combined control of Argus and Peoples did not leave Argus subject to localized management. In the decision under consideration the Commission made these observations on the subject:

“... However, like all other standards of Section 2(a)(29)(B) the standard of localized management must be read in connection with the other provisions of the section. The extent of coordination, the relatively small size of the companies and communities involved, the necessity of widespread operations all tend to diminish the significance of the spread of the area as it affects localized management. Although there is little change in the evidence as to divisional operations and local determination of policy in the Argus territory the weight of that evidence increases when it is viewed in the light of the other factors.” The North American Company, 18 S.E.C. 459, 463-464 (1945).
available upon separation. A large portion of the claimed increase in Argus' operating expenses which would result from divestment was attributable to administrative and general expense, such as the salaries of the president and general manager, vice-president and assistant general manager, secretary-treasurer-comptroller, and clerks; legal fees; general office rent; and insurance premiums. Northern's estimate of savings was $29,840 per year, and the Public Utility Division staff's was $17,100. The Commission was of the opinion that the proper amount lay somewhere between the two amounts.

Studies of operating costs on a per customer basis were introduced, and they tended to show that Argus was operated more economically than the average of the independent natural gas companies included in the studies. However, the Commission expressed its doubt as to the relevance of such studies to this case, pointing out that the unique problems of operation of individual companies made comparability a difficult matter at best, and that the relevant issue was always whether the particular company would do better if independent.\(^{238}\)

The conclusion was therefore to the effect that Peoples and Argus, whose natural gas system extended 700 miles between extremities, could be retained together in compliance with Section 11(b)(1) as a single integrated gas utility system.\(^{239}\)

Des Moines Electric Light Company and Iowa Power & Light Company, also North American subsidiaries, served eight communities in central Iowa with natural and manufactured gas. In 1940 these companies served 39,900 gas

\(^{238}\) "The very existence of Section 11(b)(1) shows that Congress has already concluded that, unless special evidence as to the special company before us warrants it, disposition must be ordered. In a sense, the broad issue dealt with by the staff has already been resolved by Congress." The North American Company, 18 S.E.C. 459, 465 (1945).

\(^{239}\) The North American Company, 18 S.E.C. 459 (1945).
customers. Of these customers, 93% resided in the city of Des Moines. Total operating gas revenues for the year 1940 were $1,697,158. The gas operations of these two companies were found to be those of a single integrated gas utility system.\textsuperscript{240}

The Mission Oil Company

The Mission Oil Company proposed to retain as its principal integrated gas utility system its subsidiaries Amarillo Gas Company, Clayton Gas Company, Dalhart Gas Company, Red River Gas Company, Amarillo Oil Company, and West Texas Gas Company. These companies produced, purchased, transported, and distributed natural gas in an area approximately 400 miles north and south by 125 miles east and west, located in the western portion of the Texas Panhandle and northeastern New Mexico. The first four companies named were gas utilities and they served 92,921 meters in 53 communities with an estimated population of 300,000 as of December 31, 1950. The gross property accounts of all of these companies as of April 30, 1951, totaled $24,301,174, and the operating revenues of these companies for the 12 months ended that date amounted to $8,677,620.

Substantially all of Red River's gas production was delivered in the field to West Texas, and this accounted for almost 50% of the requirements of West Texas in 1950. The natural gas purchased by Amarillo Oil was transported through its gas transmission lines from the field to Amarillo Gas, with a small part thereof being sold to industrial consumers in the area. Amarillo Gas depended entirely upon this source of supply except for an emergency connection with West Texas and Red River. The facilities of Amarillo Gas and West Texas were physically interconnected through the transmission lines of Amarillo Oil.

\textsuperscript{240} The North American Company, 11 S.E.C. 194 (1942).
The allocation and transmission of natural gas in the system was under the control of a dispatcher who directed the production, purchase, and transmission of gas by Amarillo Oil and Red River to the gas utility companies. There were frequent exchanges of meters, regulators, and other supplies and materials between Amarillo Gas, Clayton, and Dalhart. Operating economies were achieved in the system's operations by virtue of centralized machine billing and bookkeeping and other administrative services conducted by Amarillo Gas. The executive officers and operating management of these subsidiaries were generally located in the service areas of the respective companies. The Commission concluded that the gas utility operations of Mission Oil constituted an integrated system retainable under Section 11(b)(1).241

**General Public Utilities Corporation**

In another recent case it appeared that Jersey Central Power & Light Company, a subsidiary of General Public Utilities Corporation, supplied manufactured, mixed, and natural gas in three separate areas of New Jersey. The population of the combined service areas was 295,000 and the average number of gas customers for the year 1950 was about 72,000. The cost basis of these gas properties was $18,275,000 at December 31, 1950, with a net book value of $13,322,000. Gas operating revenues for 1950 were $5,456,000, and operating income before federal income tax was $474,000. None of the three service areas was interconnected with either of the other two. Jersey Central had entered into contracts with Algonquin Gas Transmission Company with respect to its northern division, with Texas Eastern Transmission Corporation with respect to its Coast division, and with South Jersey Gas Company (itself a purchaser from Transconti-

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nental Gas Pipe Line Corporation) with respect to its southern division for the daily purchase of natural gas. Upon completion of the necessary pipe lines, the company would then serve straight natural gas in all its systems. The conversions were expected by 1952.

The Commission observed that the definition of a gas utility company in Section 2(a)(29)(B) of the Act did not require that the gas properties of the three divisions be interconnected or that they be capable of economic interconnection. Although each division would obtain its natural gas from a different source of supply when the pipe line connections were made, they were all located in the same state and were not widely separated from each other and it appeared that their joint operation would result in substantial economies. Accordingly, the gas properties of Jersey Central were held to be an integrated utility system.\(^{242}\)

*Summary of Gas Utility Integration*

On the whole the question of gas utility integration has not been as troublesome as electric utility integration. This is true because of the localized nature and small extent of most gas systems, especially those distributing artificial gas. It is cheaper to manufacture artificial gas at each population center than to pipe it for long distances. The advent of natural gas systems has changed this situation considerably, however. Natural gas, which is found in only relatively few places in the country, can be transported long distances from those places in an economical manner. The natural gas industry was careful to see that such operations were not stifled by a definition of gas utility integration based upon a concept of manufactured gas operations. The results of the foresight of this group are clearly demonstrated in the American Light

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& Traction Company and The North American Company cases. The "sparse population" theory with reference to size, which has been discussed at length under integration of electric utilities, was also applied to gas utility integration in the Southern Union and Lone Star Gas Corporation cases. Gas properties extending 300 miles north and south and 200 miles east and west were held to be integrated. This theory may well prove of benefit in the expansion of gas systems in the western sections of the country. It is important to note that in the American Light & Traction Company case it was held that the phrase in Section 2(a)(29)(B), "deriving natural gas from a common source of supply," did not require that all of the gas of each company involved be derived from the same source, and held that a company deriving 67% of its supply from a common source met the test.

The Commission has not shown an inclination to adopt a strict interpretation of the Act with reference to localized management, efficient operation, and effective regulation. Although these requirements have not been wholly disregarded they have not played an important part in the gas utility integration decisions.