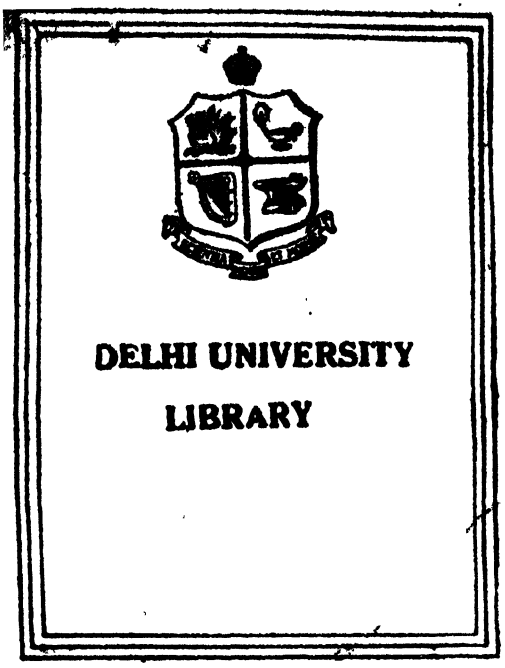
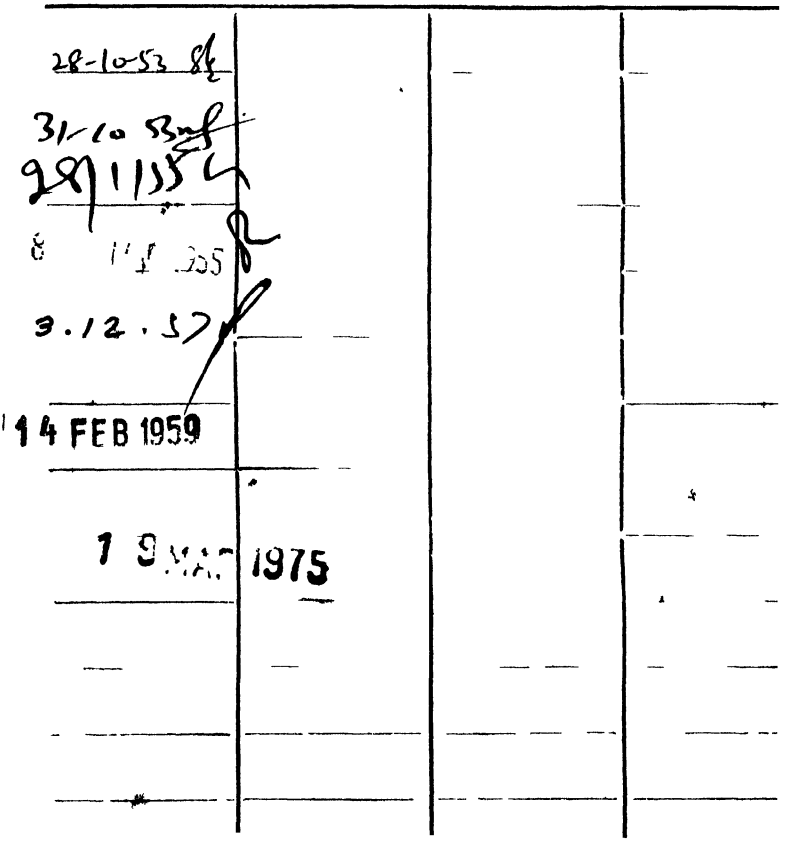

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PROBLEMS IN PUBLIC UTILITY ECONOMICS AND MANAGEMENT

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PROBLEMS IN PUBLIC UTILITY ECONOMICS AND MANAGEMENT

BY

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GEORGE F. BAKER FOUNDATION
HARVARD UNIVERSITY

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PREFACE

During the early development of public utilities it was logical that attention should have been focused upon the engineering and technical aspects of these industries. And though the technical problems must continue to receive serious consideration, the time has been long overdue for more careful study of the economic and business problems in these fields.

The accomplishments of utility engineers, in turn, created many of the urgent business problems that have not been given the attention they deserve. This condition has been reflected for some time in the curricula of our higher educational institutions. But with the increasing demand for men with a better understanding of the economic and business problems of utilities, such institutions have evidenced greater recognition of the importance of these aspects of the utilities. Men with an understanding of these problems are needed not only as public utility executives, but also as consulting engineers, accountants, attorneys, legislators, and members of commissions and courts. The development of the utility industries has been so rapid within the past generation that inevitably many men in all these groups have lacked an adequate understanding of the economic and business problems of public utilities, and the need for intelligent and effective regulation was not recognized as soon as it should have been. It is obvious that the effectiveness of our regulation of public utilities will depend upon our understanding of the problems involved in such regulation.

The problems presented in this volume for analysis and possible solutions are concerned primarily with economic and business issues. Technical and legal matters have received consideration only as it has been necessary to furnish an adequate understanding of the economic and business issues involved. The rapid shift from small-scale operations to large utility systems with great complexity of intercorporate relationships calls for careful examination of problems created by such developments.

The historical material of the first edition, mainly included in Section 1, has been somewhat condensed to provide for more emphasis upon some of the issues in the field which have taken on new significance within the past five years. Of the problems in the other six sections of the book, somewhat more than 20 per cent were not in the first edition; about 70 per cent have either been revised or were not included in that edition.

Only actual problems have been used, but some of them have been given assumed names. In cases where data from which the problems have been prepared are not available in published form, and hence are not cited in definite references, they are based upon field-work studies and information secured at first hand from public utility and other business executives, public utility commissioners, city officials, consulting engineers, accountants, attorneys, and others. Grateful acknowledgment is made to persons in all these groups for their cooperation and assistance.

Grateful acknowledgment is also made to the Dean's Office and to the Director of Research for the financial assistance which made the field work possible; the Bureau of Business Research aided in the checking of statistical exhibits.

Several individuals as members of the Research Staff rendered valuable assistance in the preparation of cases. Messrs. Esty Foster, M.E., and A. Ross Eckler, Ph.D., assisted in the preparation of a few of the cases dealing primarily with production and finance; Mr. J. B. Lackey, Jr., M.B.A., rendered substantial and valuable assistance on all sections of the volume. The burden of the preparation of the manuscript and proofreading was carried by Misses Laura Slocomb and Catherine C. Ellsworth. Miss Margaret C. Williams assisted in proofreading and prepared the index.

C. O. RUGGLES.

CAMBRIDGE, MASSACHUSETTS,
October, 1938.

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SECTION I

ECONOMIC CHARACTERISTICS OF PUBLIC UTILITIES

1. Influence of Economic Factors on Early Regulation

Price regulation is the most important single feature in the control of a business as a public utility. It is true that, in the history of Europe and in the early history of America, there were numerous instances of price control which were not based upon the assumption that the businesses involved were public utilities, as that phrase is usually understood. During our colonial period the prices of numerous food products, articles of clothing, and many other commodities were regulated. Probably most of this legislation was based upon the theory that there could be a virtual control over a limited supply of such commodities because of the lack of adequate transportation and marketing agencies, and that, in the absence of price control, unfair prices might be charged to consumers. Within a few years after their enactment these laws all appear to have been repealed, "partly because there was no machinery adequate to enforce them, partly because of resentment that a few of the states did not take part in the movement."[1] The development of transportation and marketing agencies and the growing emphasis upon the economic and political philosophy of *laissez faire* were fundamental reasons for the abandonment of price regulation and for reliance upon competition to determine fair prices.

Indeed, our faith in competition was carried over into the field of "full-fledged" public service industries, such as gas utilities, railroads, street railways, and the like. We assumed for some time that the best results could be attained by granting franchises to competing utilities and depending upon competition among those utilities to bring about fair prices for their services. It was the rule, not the exception, to find competing gas companies and street railways in the same community. There was no federal control over the construction of railroads until the passage

[1] From a note in 33 *Harvard Law Review* 838, 839 (April, 1920), on the state regulation of prices. A list of these colonial laws is given.

of the Transportation Act of 1920. In that law it was provided that no railroad which was to engage in interstate commerce could be built without a certificate of public convenience and necessity from the Interstate Commerce Commission.[1] Curiously enough, the need for such a requirement had practically disappeared by 1920, for, several years prior to that time, more miles of railway were torn up than were laid down.[2]

It would not be possible within the limits of this book to present even a summarized statement of the important cases concerned with the economic characteristics of a public utility. But it will be helpful to present certain aspects of selected cases and to consider the economic and business background of the earliest of these cases before making a more intensive study of recent important attempts to extend the field of public utilities.

There have been selected for consideration in this section: (1) *Munn* v. *Illinois* and (2) *Brass* v. *North Dakota*, cases raising the issue whether grain elevators were public utilities; and (3) the German Alliance Insurance case, concerned with the regulation of the fire insurance business as a public utility.

Munn v. *Illinois*, the leading early American case concerned with what constitutes a business "affected with a public interest," had its origin in the Middle West in the seventies. State regulation of the charges made by grain elevators in Chicago was the issue. Before this case is considered, *the economic and business conditions* out of which the controversy arose deserve careful consideration.

In view of the prosperity of the Middle West ten years before the case of *Munn* v. *Illinois* reached the court, it would doubtless have been impossible to have secured the passage of a law through a middle western state legislature regulating the charges of grain elevators. It would be tedious indeed to present even a fractional part of the evidence of the prosperity of the farmers in the Middle West during the Civil War and for almost five years following that conflict. The status of agriculture was summed up as follows in the *Report of the U. S. Department of Agriculture* in 1866:

---

[1] *Interstate Commerce Act*, Revised to April 1, 1920, p. 15.

[2] In 1916 there were 254,037 "miles of road owned in the United States." Ten years later there were but 249,138. In 1930 the corresponding figure was 249,052. In other words, there were about 5,000 less miles of railways in the United States in 1930 than in 1916. See *Forty-Fifth Annual Report of the Interstate Commerce Commission*, 1931, p. 153.

The agricultural condition of the northern states was never more flourishing. High prices, accessible markets, and crops of average abundance have insured good profits, and as a result mortgages have been paid, farm buildings erected, permanent improvements accomplished, farm implements and machinery obtained and in thousands of instances a surplus invested in government funds.[1]

Statements concerning the prosperity of farmers in general for almost ten years following 1860 are borne out by a careful examination of the evidence in an important agricultural state. In the *Iowa Agricultural Report* for the year 1863, the following statement was made:

During the past year our farmers have had a season of financial prosperity, seldom equaled, and the times have been good for making money, everything bringing a good price. During the past fall [the report continued] many of our farms have been released from under the pressure of the money lenders' mortgages, and those just starting, partly on borrowed capital, feel relieved and breathe much easier than before at the enlarged prospects now spread out before them.[2]

In 1864 the reports from various parts of the state were equally buoyant.[3] In the report of the secretary of the Iowa State Agricultural College, written in 1864, the following statement was made:

Whether our figures of production are correct or not, within the past five years our people have recovered from the pressure of heavy indebtedness and are now in a position generally of comfort and ease. Those who were borrowers of money five years ago, in many instances now have money to loan. . . . Our people are comfortable and prosperous and with a prospect in the future not excelled by any people on the face of the globe.[4]

[1] *Report of the United States Department of Agriculture*, 1866, p. 5; see also *Cultivator and Country Gentleman*, March 1 and April 1, 1866. The *Prairie Farmer* observed in 1864 that "there must be something radically wrong with the farmer that does not now free himself from debt. Never in the life-time of the present generation will such another opportunity present itself. Every cultivated product of the temperate latitude bears a highly remunerative price" (*Prairie Farmer*, September 10, 1864). See also *Cultivator and Country Gentleman*, March 10, 1864. For much detailed evidence see "*The Economic Basis of the Greenback Movement in Iowa and Wisconsin*," by C. O. Ruggles, in *Proc. Mississippi Valley Historical Assn.*, 1912–1913, pp. 142–165.

[2] *Iowa Agricultural Report*, 1863, pp. 12, 359, 409, 414.

[3] "Every element of prosperity seems to flourish here in this land of freedom." *Ibid.*, 1864, p. 314.

[4] *Fifth Annual Report of the Iowa State Agricultural College and Farm*, p. 63. A similar view was expressed by an Iowa correspondent in the *Cultivator and Country Gentleman* in 1868 (issue of March 19), in the following statement: "In these latter days it seems very difficult to so overstock the markets of the world with any descrip-

While Iowa was enjoying prosperity its legislature was not interested in any proposed legislation even for the regulation of such a full-fledged public utility as the railroad. In 1866 a resolution was introduced into the Iowa legislature to determine whether the state had the power to regulate freight rates and passenger fares. The attorney general was asked for an opinion and he submitted an elaborate argument in which he maintained that the state of Iowa had no power to regulate the rates of railroads within the state.[1] In 1869, in a case concerning local taxation in aid of railroads, the Iowa Supreme Court said:

> It is to be remembered also that railway corporations are not organized for the purpose of developing the material prosperity of the state; this is a mere incident of the business they prosecute. But they are organized solely to make money for their stockholders, and the legislature has no more power over their property and rights than it has over the like property and rights of natural persons or other private corporations.[2]

Even as late as 1870, a bill introduced into the Iowa legislature to regulate freight rates failed to pass.[3] An analysis of the vote by counties showed that in general the older eastern counties in the state supported the legislation, apparently on the theory that reliance could no longer be placed upon competition among the carriers to insure fair rates and adequate service. Generally speaking, those opposing the legislation came from the newer counties of the state having inadequate railroad facilities. These votes were recorded on the theory that railroad building should not be discouraged by restrictive legislation; that the building of

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tion of the farmer's products, either in kind or amount, as to deprive the working farmer of that strongest possible incentive to labor—high prices. Demand seems to follow so close upon the heels of supply that it seems almost impossible to accumulate in any section of even our own country any great amount of surplus grain or food of any kind. I think that old Pharaoh would have had very hard work indeed to gather a stock of seven years' provisions if he had lived in our day." The same correspondent in the same journal, October 1, 1868, said: "It seems impossible with all our improved machinery to satisfy the hungry stomachs of the people of this wide world." See also *ibid.*, March 11, 1869; February 27, 1868; December 7, 1871.

[1] "The conclusion to which I arrive is that the General Assembly has no power to restrict and regulate the tariff of prices for passage and freight over the several railroads in this state." For the opinion in full see *House Journal* (Iowa), 1866, pp. 124–129, especially p. 129.

[2] *Hanson* v. *Vernon*, 27 Iowa 28, 53 (1869).

[3] The bill passed the House but failed in the Senate. *House Journal* (Iowa), 1870, pp. 442, 443; *Senate Journal* (Iowa), 1870, pp. 378, 465, 482, 615.

additional railroads should be encouraged and that more railroads with competition among them were essential to the prosperity of the newer sections of the state.[1]

It seems clear that an important reason why the Iowa legislature refused to regulate railroad rates in 1870 was because prices of agricultural products had not then fallen to the ruinous level which prevailed when *Munn* v. *Illinois* came before the courts. When prices began to drop abruptly in the latter part of the decade ending in 1870, the farmers of the Middle West considered the slump but temporary, and, on the strength of the prosperity they had enjoyed for five or six years, they did not hesitate to go into debt for land after the choice homesteads had been taken.[2] The receipts of grain in Chicago and Milwaukee during the latter part of that decade show that the farmers were withholding their wheat from market in the hope that prices would again reach their former high level.[3] As one correspondent said: "In 1866 and 1867 wheat sold for $3.50 and is not the prospect as good for that price in 1868?"[4] A similar view was expressed by an Iowa correspondent of the *Cultivator and Country Gentleman*[5] and by the *Milwaukee*

[1] In 1868 the Iowa legislature in a memorial to Congress concerning the Fox-Wisconsin river improvement maintained that "the products of the Northwest for exportation" had "increased beyond example"; that "the capacity of the present channels of commerce" was insufficient (*Laws of Iowa*, 1868, p. 299). The same sentiment was expressed at a convention in Dubuque in November, 1869 (Wisconsin joined Iowa in this), and again in a memorial of the Iowa legislature to Congress on the need of additional water transportation facilities to the Atlantic Coast, in 1870 (*Laws of Iowa*, 1870, pp. 258, 278. See also *House Misc. Doc.* 23, 38th Cong. 2d Sess.; also *Iowa Doc.*, 1868, Vol. II, for a memorial of 23 pages on water transportation).

[2] *Cultivator and Country Gentleman*, March 13, 1879; *Prairie Farmer*, March 2, June 1 and 22, 1867; *Iowa Agricultural Report*, 1870, p. 400; *Wisconsin Farmer*, February 27, 1869; *Transactions Wisconsin Agricultural Society*, 1871, pp. 13, 14; *Milwaukee Trade and Commerce Report*, 1871, p. 144. Under the Homestead Law of 1862, one could secure title to a homestead of 160 acres practically free of charge, provided he lived on the homestead for five years. Credit was given to soldiers for the time they had served in the war. Obviously, such a liberal federal land policy was in fact a bounty to agriculture. This policy and the high prices of the Civil War period increased the number of persons engaging in agriculture.

[3] Although the wheat crop of the United States for 1868 exceeded that of 1867 by over 12,000,000 bushels (*Bulletin* 57, U. S. Department of Agriculture, Division of Statistics, *Wheat Crops of the United States*, 1866–1906, p. 35), and the crops of Wisconsin, Minnesota, Iowa, and other states tributary to the Chicago market were greater, the receipts of wheat in Chicago from harvest to January 1 were less in 1868 than during the same period in 1867. (For grain receipts from harvest to January 1 and January 1 to harvest for a series of years, see *Chicago Board of Trade Report*, 1880, p. 43. See also *Cultivator and Country Gentleman*, February 27, 1868; March 11, 1869; December 7, 1871; and January 25, 1872.)

[4] *Western Rural*, September 7, 1867.

[5] *Cultivator and Country Gentleman*, March 19, 1869.

Trade and Commerce Report.[1] The *Prairie Farmer*[2] maintained in 1870 that there were many Wisconsin farmers still holding $2.50 wheat and that most of them had been in debt ever since that wheat had been harvested. In January, 1870, on the Chicago market, wheat was worth but 77 cents per bushel.[3]

With the slump in the prices of agricultural products about 1870 there was a marked change in the economic and political philosophy of the legislatures of such states as Iowa, Wisconsin, and Illinois, and legislation regulating freight rates and the charges made by grain elevators was the result. In fact, when the case of *Munn et al.* v. *The People* came before the Illinois Supreme Court the prices of agricultural products were so much deflated that there was great discontent throughout the Middle West. The farmers themselves, having violated a fundamental economic law, were in part to blame for their condition. They had engaged almost exclusively in grain farming which required a minimum of capital and they had, therefore, glutted the market with staple grain products. There was little dairy farming at that time.[4] Moreover, while the *aggregate* production of staple grains was greater when *Munn* v. *Illinois* came before the courts than it had been in previous years, the *yield per acre* was much less than when Civil War prices were at their peak, for these farmers had practiced little, if any, rotation of grain crops. Obviously, this meant a drastic reduction of the farmers' income, and they tried three different means to improve their condition. First, they passed laws reducing freight rates and the charges of grain elevators; second, they attempted to eliminate the middleman by cooperative buying and selling through the Grange; and, third, they demanded through a new third party that the government increase the volume of paper money.[5] In fact, the fight against the railroads and grain elevators, the so-called "Granger activities," and the Greenback movement were all phases of one large movement that reached a climax about the time that corn was selling in Des Moines, Iowa, at 8 cents per bushel.[6]

[1] *Milwaukee Trade and Commerce Report*, 1869, p. 6.
[2] *Prairie Farmer*, April 16, 1870.
[3] *Chicago Board of Trade Report*, 1870.
[4] The lack of balance in the agricultural production of the period is reflected in the fact that in Sioux City, Iowa, in 1868, the price of two bushels of corn was the equivalent of but one pound of butter.
[5] This was the Greenback party, which was organized in the middle seventies and nominated a candidate for the presidency in 1876.
[6] *Iowa Agricultural Report*, 1878, p. 7.

2. Aspects of Selected Cases Extending Public Utility Concept

A. Grain Elevators as Public Utilities

1. MUNN *v.* ILLINOIS

The Constitution of Illinois, adopted in 1870, contained a provision (Article XIII, Warehouses) which authorized the legislature to regulate the rates for the storage of grain in public warehouses. In 1871 the legislature passed such a law, and in 1872 Messrs. Munn and Scott were charged with the unlawful operation of a warehouse. They had neither taken out a license nor given bond and they were charging rates for the storage and handling of grain which were in excess of those established by the law.[1]

The Munn case was argued twice before the Illinois Supreme Court. On the first argument the court, after much deliberation, was unable to reach an agreement. In the meantime, two new members were elected to the court, and, in the words of the court, "it was deemed expedient and proper" that these new members should take part in the decision; hence a reargument was ordered. A decision was then handed down upholding the law. The views of the people of Illinois in the seventies concerning competition as a means of rate regulation and the condition of agriculture at that time are reflected in the following excerpts from the majority opinion of the Illinois Supreme Court.[2]

> The whole legislative power is vested by the constitution in the General Assembly. . . . they would have an undoubted right, knowing that a large proportion of our cereals, to reach the markets of the world, were compelled to pass through certain warehouses, called elevators, and subjected to such charges as their owners might see fit to impose, to take up this whole subject as one legitimately within their domain; and if, in their examination of it, they find the owners and managers of these warehouses are an organized body of monopolists, possessing sufficient strength in their combination, and by their connection with the railroads of the state, to impose their own terms upon the producers and shippers of these cereals, to the great detriment of

[1] *Munn et al.*, v. *The People*, 60 Ill. 80 (1873).
[2] *Ibid.*, pp. 80, 88–91, 93 (1873).

the latter, who are under a kind of moral duress in resorting to them, can it be said to be an usurpation of power on the part of the legislature to bring them in subjection to law, so to regulate their conduct and charges by law, as to prevent oppression and extortion? Can there be a more legitimate subject for the action of a legislative body? We think not. Shall it be said an interest so vast as this is does not deserve governmental care, and is not a proper subject of some kind of governmental control? And if, in the means provided by the legislature to that end, some reduction in their monthly or annual receipts may be the result, can it be said the owners are thereby deprived of their property?

. . . It is idle to talk about the consent of their customers to higher rates of charges than this law allows them to receive. Their customers, before this law was enacted, had no protection against these monopolists. They had no consent to give. They were obliged to have their grain taken to these warehouses, and be subjected to such charges as the organized combination, shutting out all competition, might choose to demand. The producer and shipper had no alternative but submission. They were completely in the power of this combination, and it did not fail to demand and exact the highest charges. It is this state of things the law is designed to remedy. One of the first and most imperative duties of the law making power is to enact all necessary laws to remedy existing evils, taking care, in so doing, not to transgress any constitutional limitation. The means by which to do it most effectually is, in the discretion of the legislature, keeping in view the provisions of the organic law.

. . . . . .

That body could not withstand the appeals that went up to them from the producers and shippers of the great and indispensable wants of man, and forming the most valuable portion of our staple productions, to provide some remedy against the oppression and extortions to which they were subjected by this organized combination of monopolists, already such a formidable power, with but one heart, and that palpitating for excessive gains.

. . . . . .

There is no taking or damaging private property here, and devoting it to public use. It is an expression of the will of the people through their representatives in the General Assembly, that these seats of oppression and extortion should be brought into subjection, to the great relief of the people.

Two justices dissented from the majority opinion.[1] In the dissenting opinion, it was said that Messrs. Munn and Scott did not carry on their business under "any grant of the legislature in

[1] Mr. Justice McAllister wrote the dissenting opinion in which Mr. Justice Scott concurred.

the nature of a franchise or privilege."[1] Among other things, the minority opinion said:[2]

> Our government is one of the people, and its functions subject to disturbance by popular excitements, by which one class of men with certain particular interests or prejudices, either political or otherwise, may come into power, displace all against whom those prejudices run, and oppress them with unfriendly legislation. . . .
>
> The act singles out from all the establishments of the state of a similar character the grain warehouses in Chicago. It arbitrarily fixes the maximum rates of hire or reward to be received by the proprietors, and forbids them from contracting with customers for any higher rate. . . .
>
> The majority of the court seem to place their conclusion, in part, upon the ground that these parties exercised a public employment, and were therefore subject to the police power of the state.
>
> But these parties did not exercise a public employment. Such was not the character given to their business by the common law. . . . Warehousemen are bound only to take common and reasonable care of the commodities entrusted to their charge, *id.*, Sec. 444, while common carriers and inn keepers are insurers, because they exercise a public employment.
>
> . . . Besides, the constitution, as amended by the introduction of the article concerning warehouses, in nowise contemplated or authorized the assertion of the power of suppression.

While the U. S. Supreme Court upheld the Illinois law, two justices dissented.[3] Chief Justice Waite in the majority opinion emphasized the significance of a seventeenth-century opinion of Lord Hale. In his manuscripts *De Juris Maris* and *De Portibus Maris*, Lord Hale had considered the threefold rights of the proprietor, the public, and the king in highways, bridges, rivers, and ports and had indicated under what circumstances these agencies might be affected with a public interest.

One legal writer, McAllister, has maintained that while there was a certain plausibility in the application of Lord Hale's principle to the Illinois law, Chief Justice Waite stated Lord Hale's principle in language broad enough to cover any form of private property.[4] Chief Justice Waite in the Munn case said that "when private

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[1] *Munn et al.* v. *The People*, 60 Ill. 80, 94 (1873).

[2] *Ibid.*, 97, 98, 100, 101.

[3] *Munn.* v. *Illinois*, 94 U.S. 77 (1877).

[4] See "Lord Hale and Business Affected with a Public Interest," by Breck P. McAllister, in 43 *Harvard Law Review* 759 (March, 1930). See also "The Public Utility Concept in American Law," by G. H. Robinson, 41 *Harvard Law Review* 277 (January, 1928).

property is 'affected with a public interest it ceases to be juris privati only'" and quoted Lord Hale as authority. But, according to McAllister, Lord Hale said something quite different; namely, "now that *the wharf and crane and other conveniences* are affected with a publick interest *they* cease to be juris privati only."[1] McAllister contends that by translating the particulars—"the wharf and crane and other conveniences"—into the generic term "private property," Chief Justice Waite transformed the whole course of the American law of price regulation.

In the majority opinion, Chief Justice Waite said in part:[2]

> Common carriers exercise a sort of public office, and have duties to perform in which the public is interested. . . .
>
> Their business is, therefore, "affected with a public interest," within the meaning of the doctrine which Lord Hale has so forcibly stated.
>
> But we need not go further. Enough has already been said to show that, when private property is devoted to a public use, it is subject to public regulation. It remains only to ascertain whether the warehouses of these plaintiffs in error, and the business which is carried on there, come within the operation of this principle.
>
> For this purpose we accept as true the statements of fact contained in the elaborate brief of one of the counsel of the plaintiffs in error. From these it appears that "the great producing region of the West and Northwest sends its grain by water and rail to Chicago, where the greater part of it is shipped by vessel for transportation to the seaboard by the Great Lakes, and some of it is forwarded by railway to the eastern ports. . . . In this way the largest traffic between the citizens of the country north and west of Chicago, and the citizens of the country lying on the Atlantic coast north of Washington, is in grain which passes through the elevators of Chicago. In this way, the trade in grain is carried on by the inhabitants of seven or eight of the great states of the West with four or five of the states lying on the seashore, and forms the largest part of interstate commerce in these states. . . . It has been found impossible to preserve each owner's grain separate, and this has given rise to a system of inspection and grading, by which the grain of different owners is mixed, and receipts issued for the number of bushels which are negotiable, and redeemable in like kind, upon demand. This mode of conducting the business was inaugurated more than 20 years ago, and has grown to immense proportions. The railways have found it impracticable to own such elevators, and public policy forbids the transaction of such business by the carrier; the ownership has, therefore, been by private individuals, who have

[1] McAllister, *op. cit.*, p. 768. McAllister's italics.
[2] *Munn* v. *Illinois*, 94 U.S. 85–88 (1877).

embarked their capital and devoted their industry to such business as a private pursuit."

In this connection it must also be borne in mind that, although in 1874 there were in Chicago 14 warehouses adapted to this particular business, and owned by about thirty persons, nine business firms controlled them, and that the prices charged and received for storage were such "as have been from year to year agreed upon and established by the different elevators or warehouses in the city of Chicago, and which rates have been annually published in one or more newspapers printed in said city, in the month of January in each year, as the established rates for the year then next ensuing such publication." Thus it is apparent that all the elevating facilities through which these vast productions "of seven or eight great states of the West" must pass on the way "to four or five of the states on the seashore" may be a "virtual" monopoly.

Under such circumstances, it is difficult to see why, if the common carrier, or the miller, or the ferryman, or the innkeeper, or the wharfinger, or the baker, or the cartman, or the hackney-coachman, pursues a public employment and exercises "a sort of public office," these plaintiffs in error do not. They stand, to use again the language of their counsel, in the very "gateway of commerce," and take toll from all who pass. Their business most certainly "tends to a common charge, and is become a thing of public interest and use." Every bushel of grain for its passage "pays a toll, which is a common charge," and, therefore, according to Lord Hale, every such warehouseman "ought to be under public regulation, *viz.:* that he . . . take but reasonable toll." Certainly, if any business can be clothed "with a public interest, and cease to be juris privati only," this has been. It may not be made so by the operation of the Constitution of Illinois or this statute, but it is by the facts.

We also are not permitted to overlook the fact that, for some reason, the people of Illinois, when they revised their Constitution in 1870, saw fit to make it the duty of the General Assembly to pass laws "for the protection of producers, shippers, and receivers of grain and produce," Art. XIII, Sec. 7; and by Sec. 5 of the same article, to require all railroad companies receiving and transporting grain in bulk or otherwise to deliver the same at any elevator to which it might be consigned, that could be reached by any track that was or could be used by such company, and that all railroad companies should permit connections to be made with their tracks, so that any public warehouse, etc., might be reached by the cars on their railroads. This indicates very clearly that during the twenty years in which this peculiar business had been assuming its present "immense proportions," something had occurred which led the whole body of the people to suppose that remedies such as are usually employed to prevent abuses by virtual monopolies might not be inappropriate here. For our purposes we must assume that, if a state of facts could exist that would justify such legislation, it actually did exist when the statute now under

consideration was passed. For us the question is one of power not of expediency. If no state of circumstances could exist to justify such a statute, then we may declare this one void, because in excess of the legislative power of the state. But if it could, we must presume it did. Of the propriety of legislative interference within the scope of legislative power, the legislature is the exclusive judge.

Neither is it a matter of any moment that no precedent can be found for a statute precisely like this. It is conceded that the business is one of recent origin, that its growth has been rapid, and that it is already of great importance. And it must also be conceded that it is a business in which the public has a direct and positive interest. It presents, therefore, a case for the application of a long known and well established principle in social science, and this statute simply extends the law so as to meet this new development of commercial progress. There is no attempt to compel these owners to grant the public an interest in their property, but to declare their obligations, if they use it in this particular manner.

. . . . . .

It is insisted, however, that the owner of property is entitled to a reasonable compensation for its use, even though it be clothed with a public interest, and that what is reasonable is a judicial and not a legislative question.

As has already been shown, the practice has been otherwise. In countries where the common law prevails, it has been customary from time immemorial for the legislature to declare what shall be a reasonable compensation under such circumstances, or, perhaps more properly speaking, to fix a maximum beyond which any charge made would be unreasonable.

. . . . . .

We know that this is a power which may be abused; but that is no argument against its existence. For protection against abuses by legislatures the people must resort to the polls, not to the courts.

. . . . . .

We conclude, therefore, that the statute in question is not repugnant to the Constitution of the United States and that there is no error in the judgment. In passing upon this case we have not been unmindful of the vast importance of the questions involved. This and cases of a kindred character were argued before us more than a year ago by the most eminent counsel, and in a manner worthy of their well earned reputations. We have kept the cases long under advisement, in order that their decision might be the result of our mature deliberations.

Mr. Justice Field in his dissenting opinion (in which Mr. Justice Strong concurred), interpreted Lord Hale's opinions to the effect that a business "affected with a public interest" included

only such private property as had been "actually dedicated" in a strict legal sense to the public use. In his opinion Mr. Justice Field said:

> There is nothing in the character of the business of the defendants as warehousemen which called for the interference complained of in this case. Their buildings are not nuisances; their occupation of receiving and storing grain infringes upon no rights of others, disturbs no neighborhood, infects not the air, and in no respect prevents others from using and enjoying their property as to them may seem best. The legislation in question is nothing less than a bold assertion of absolute power by the state to control, at its discretion, the property and business of the citizen, and fix the compensation he shall receive. The will of the legislature is made the condition upon which the owner shall receive the fruits of his property and the just reward of his labor, industry and enterprise. . . .
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> . . . . . .
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> . . . If the power can be exercised as to one article, it may as to all articles, and the prices of every thing, from a calico gown to a city mansion, may be the subject of legislative direction.

While neither the majority nor the minority opinion emphasized the element of monopoly as significant, the Munn case was cited in later decisions of the court as authority that a practical monopoly justified regulation as a public utility.[1]

2. BRASS *v.* STATE OF NORTH DAKOTA ex rel. STOESER

A similar case to that of *Munn* v. *Illinois* arose in North Dakota about 20 years later and under economic conditions quite similar to those which obtained in Illinois when the Munn decision was made. In *Brass* v. *State of North Dakota*, the regulation of the rates of grain elevators in that state was before the court.[2] The decision, handed down in the year following the panic of 1893, upheld the North Dakota law by a decision of five to four. With reference to monopoly as a factor in this case, Mr. Justice Shiras, delivering the majority opinion of the court, stated that that was a matter for legislative determination. On this point he said:

> . . . And great stress is laid upon expressions used in our previous opinions, in which this business, as carried on at Chicago and Buffalo[3] is spoken of as a practical monopoly, to which shippers and owners of grain are compelled to resort. The surroundings in an agricultural

[1] On this point see McAllister, *op. cit.*, pp. 769–770.

[2] *Brass* v. *State of North Dakota ex rel. Stoeser*, 153 U.S. 391 (1894).

[3] Reference is here made to *Munn* v. *Illinois*, 94 U.S. 113 (1877); and to another grain elevator case, *People* v. *Budd*, 117 N. Y. 1 (1889) and 143 U.S. 517 (1892).

state, where land is cheap in price and limitless in quantity, are thought to be widely different, and to demand different regulations.

These arguments are disposed of, as we think, by the simple observation, already made, that the facts rehearsed are matters for those who make, not for those who interpret, the laws. When it is once admitted, as it is admitted here, that it is competent for the legislative power to control the business of elevating and storing grain, whether carried on by individuals or associations, in cities of one size and in some circumstances, it follows that such power may be legally exerted over the same business when carried on in smaller cities, and in other circumstances. It may be conceded that that would not be wise legislation which provided the same regulations in every case, and overlooked differences in the facts that called for regulations. But, as we have no right to revise the wisdom or expediency of the law in question, so we would not be justified in imputing an improper exercise of discretion to the legislature of North Dakota. . . .

The dissenting opinion contended that the conditions in North Dakota in no way involved the question of monopoly. Speaking for the minority, Mr. Justice Brewer said:

I dissent . . . because the facts show . . . no "practical monopoly, to which the citizen is compelled to resort, and by means of which a tribute can be exacted from the community." Along the line of this single road, within the limits of this state, there are about 600 of these elevators, owned and operated by over 125 different persons, varying in cost of construction from $500 to $5,000. At every station there is land purchasable by any one at prices varying from $1.25 to $40 per acre, and a granary sufficient to store the average product of an ordinary Dakota farm can be erected at a cost of not exceeding $150. So it is that when any farmer or other individual can, at a cost of less than $200, provide himself with all the facilities for storing and shipping the entire product of an ordinary farm; when, along the line of a single railroad, there are 600 elevators already constructed, owned, and operated by 125 different persons; when at every station at which grain is marketed, there are from 2 to 10 such elevators—it is held that there exists a monopoly such as justifies control by the public of the prices at which grain shall be stored in any one of these many elevators. If this be a monopoly, justifying public control of prices for service, I am at a loss to perceive at what point the fact of monopoly will cease, and freedom of business commence; for, obviously, elevators along the line of that road were as plentiful as other institutions of industry, and as easily and cheaply constructed, and therefore savoring no more of monopoly.

Why should the regulation of grain elevators as public utilities have been inaugurated in the early seventies rather than ten years earlier?

How do you account for the fact that the Illinois Supreme Court placed much emphasis on the element of monopoly in the grain elevator business while the U. S. Supreme Court said there "may be a 'virtual' monopoly?"

Is it at all significant that the Munn case was argued twice before the Illinois Supreme Court and held by the U. S. Supreme Court for more than a year after it was argued before that tribunal, before a decision was rendered? Would economic and business conditions between 1873 (date of the Illinois Supreme Court decision) and 1877 (date of U. S. Supreme Court decision) have any bearing on the issues involved?

Should the U. S. Supreme Court have made a distinction between the city of Chicago and the state of North Dakota in determining the justification for the regulation of grain elevators?

Is there any significance in the relationship between economic conditions of the seventies and the regulation of grain elevators as public utilities and the agitation following the panic of 1929 for regulation of the coal and oil industries as public utilities?

B. Regulation of Fire Insurance Business as a Public Utility

3. GERMAN ALLIANCE INSURANCE CO. *v.* LEWIS

The German Alliance case was concerned with a Kansas law passed in 1909 regulating fire insurance rates.[1] This law required every fire insurance company to file with the superintendent of insurance, "general basis schedules" showing "the rates on all risks insurable" in the state; also "all the conditions" which affected "the rates or the value of the insurance to the assured."[2] The law also provided that no change should be made in the schedules except after 10 days' notice to the superintendent. The superintendent was given power to determine when any rate was excessive, or not adequate to the safety or soundness of the company. The law authorized him to direct the company to publish and file a higher or a lower rate which should, in his opinion, be commensurate with the character of the risk. No company was permitted to write insurance at a rate different from that stated in its schedules, to refund or remit "in any manner or by any device" any portion of the rates. All discrimination in rates on like risks was prohibited. All rate schedules were to be open to public inspection. Farmers' mutual insurance companies, organized and doing business under the laws of the state and insuring only farm property, were exempt from all provisions of the law.

The German Alliance Insurance Company, incorporated in New York in 1879, had been doing business in Kansas for many years. At the time this case arose its business was being conducted in that state by 72 resident agents. A large number of the fire insurance policies issued by the company were written upon farm buildings, thus bringing the company into direct competition with various farmers' mutual companies which were exempt from the provisions of the law.

In the autumn of 1909 the superintendent of insurance made certain reductions in insurance rates. In response to this action,

[1] *German Alliance Insurance Co.* v. *Lewis*, 233 U.S. 389 (1913).
[2] *Kansas Laws*, 1909, Chap. 152.

the German Alliance Insurance Company sought an injunction, contending that the Kansas law was unconstitutional. The U. S. District Court[1] upheld the law and appeal was taken to the U. S. Supreme Court. The law was declared constitutional by the U. S. Supreme Court. This decision was likewise rendered by a divided court, five to three. With reference to the power of Kansas to regulate the fire insurance business, Mr. Justice McKenna, delivering the opinion of the court, said:

We may put aside, therefore, all merely adventitious considerations and come to the bare and essential one, whether a contract of fire insurance is private, and as such has constitutional immunity from regulation. Or, to state it differently and to express an antithetical proposition, is the business of insurance so far affected with a public interest as to justify legislative regulation of its rates? And we mean a broad and definite public interest. In some degree the public interest is concerned in every transaction between men, the sum of the transactions constituting the activities of life. But there is something more special than this, something of more definite consequence, which makes the public interest that justifies regulatory legislation. We can best explain by examples. The transportation of property—business of common carriers—is obviously of public concern, and its regulation is an accepted governmental power. The transmission of intelligence is of cognate character. There are other utilities which are denominated public, such as the furnishing of water and light, including in the latter gas and electricity. We do not hesitate at their regulation nor at the fixing of the prices which may be charged for their service. The basis of the ready concession of the power of regulation is the public interest. This is not denied, but its application to insurance is so far denied as not to extend to the fixing of rates. It is said that the state has no power to fix the rates charged to the public by either corporations or individuals engaged in a private business, and the "test of whether the use is public or not is whether a public trust is imposed upon the property, and whether the public has a legal right to the use which cannot be denied," or, as we have said, quoting counsel, "Where the right to demand and receive service does not exist in the public, the correlative right of regulation as to rates and charges does not exist." . . . The complainant . . . so contends, . . . that the test it applies excludes the idea that there can be a public interest which gives the power of regulation as distinct from a public use, which, necessarily, it is contended, can only apply to property, not to personal contracts. The distinction, we think, has no basis in principle (*Noble State Bank* v. *Haskell*, 219 U.S. 104) nor has the other contention that the service which cannot be demanded cannot be regulated.

. . . . . .

[1] 189 F. 769.

Against that conservatism of the mind which puts to question every new act of regulating legislation, and regards the legislation invalid or dangerous until it has become familiar, government—state and national—has pressed on in the general welfare; and our reports are full of cases where in instance after instance the exercise of regulation was resisted and yet sustained against attacks asserted to be justified by the Constitution of the United States. The dread of the moment having passed, no one is now heard to say that rights were restrained or their constitutional guaranties impaired.

Referring to the decision in *Brass* v. *North Dakota*, the court said:

The case is important. It extended the principle of the other two cases [*Munn* v. *Illinois* and *Budd* v. *New York*] and denuded it of the limiting element which was supposed to beset it—that to justify regulation of a business the business must have a monopolistic character. That distinction was pressed and answered.

. . . . . .

"The underlying principle is that business of certain kinds holds such a peculiar relation to the public interest that there is superinduced upon it the right of public regulation." Is the business of insurance within the principle? It would be a bold thing to say that the principle is fixed, inelastic, in the precedents of the past, and cannot be applied though modern economic conditions may make necessary or beneficial its application. . . . We proceed, then, to consider whether the business of insurance is within the principle.

A contract for fire insurance is one for indemnity against loss, and is personal. The admission, however, does not take us far in the solution of the question presented. Its personal character certainly does not of itself preclude regulation, for there are many examples of government regulation of personal contracts, and in the statutes of every state in the Union superintendence and control over the business of insurance are exercised, varying in details and extent.

. . . . . .

Those regulations exhibit it to be the conception of the law-making bodies of the country without exception that the business of insurance so far affects the public welfare as to invoke and require governmental regulation. A conception so general cannot be without cause. The universal sense of a people cannot be accidental; its persistence saves it from the charge of unconsidered impulse, and its estimate of insurance certainly has substantial basis.

. . . . . .

Contracts of insurance, therefore, have greater public consequence than contracts between individuals to do or not to do a particular thing whose effect stops with the individuals. We may say in passing

that when the effect goes beyond that, there are many examples of regulation.

We have shown that the business of insurance has very definite characteristics, with a reach of influence and consequence beyond and different from that of the ordinary businesses of the commercial world, to pursue which a greater liberty may be asserted. The transactions of the latter are independent and individual, terminating in their effect with the instances. The contracts of insurance may be said to be interdependent. . . . It is, therefore, essentially different from ordinary commercial transactions, and, as we have seen, according to the sense of the world from the earliest times—certainly the sense of the modern world—is of the greatest public concern. It is therefore within the principle we have announced.

With reference to objections as to the scope of business activities which might be regulated as public utilities under its decision in this case, the court said:

But it is said that the reasoning of the opinion has the broad reach of subjecting to regulation every act of human endeavor and the price of every article of human use. We might, without much concern, leave our discussion to take care of itself against such misunderstanding or deductions. The principle we apply is definite and old, and has, as we have pointed out, illustrating examples. And both by the expression of the principle and the citation of the examples *we have tried to confine our decision to the regulation of the business of insurance, it having become "clothed with a public interest,"* and therefore subject "to be controlled by the public for the common good. . . . "[1]

Some of the fears on the part of the Kansas legislature which were doubtless responsible for the law may be seen in the following statement of the court:

We may venture to observe that the price of insurance is not fixed over the counters of the companies by what Adam Smith calls the higgling of the market, but formed in the councils of the underwriters, promulgated in schedules of practically controlling constancy which the applicant for insurance is powerless to oppose, and which, therefore, has led to the assertion that the business of insurance is of monopolistic character and that "it is illusory to speak of a liberty of contract." It is in the alternative presented of accepting the rates of the companies or refraining from insurance, business necessity impelling if not compelling it, that we may discover the inducement of the Kansas statute. . . . The statute seeks to secure rates which shall be reasonable both to the insurer and the insured, and as a means to this end it

[1] Author's italics.

prescribes equality of charges, forbids initial discrimination or subsequently by the refund of a portion of the rates, or the extension to the insured of any privilege; to this end it requires publicity in the basic schedules and of all of the conditions which affect the rates or the value of the insurance to the insured, and also adherence to the rates as published. Whether the requirements are necessary to the purpose, or—to confine ourselves to that which is under review—whether rate regulation is necessary to the purpose, is a matter for legislative judgment, not judicial. Our function is only to determine the existence of power.

Mr. Justice Lamar presented the minority opinion of the court. Chief Justice White and Mr. Justice Van Devanter concurred in the dissent. In the dissenting opinion, Mr. Justice Lamar said in part:

I dissent from the decision and the reasoning upon which it is based. The case . . . presents no question of monopoly in a prime necessity of life, but relates solely to the power of the state to fix the price of a strictly personal contract. The court holds that fire insurance, though personal, is affected with a public interest, and therefore that the business may not only be regulated, but that the premium or price to be paid to the insurer for entering into that personal contract can be fixed by law.

The fixing of the price for the use of private property is as much a taking as though the fee itself had been condemned for a lump sum; that taking, whether by fixing rates for the use or by paying a lump sum for the fee, has always heretofore been thought to be permissible only when it was for a public use. But the court in this case holds that there is no distinction between the power to take for public use and the power to regulate the exercise of private rights for the public good. That is the fundamental proposition on which the case must stand, and the decision must therefore be considered in the light of that ruling and of the results which must necessarily flow from the future application of that principle. . . . The principle is applied here to the case of insurance; but the nature of that business and the intangible character of its contracts are such as to indicate the farreaching effect of the principle announced, and warrant a statement of some of the grounds of dissent.

Insurance is not production; nor manufacture; nor transportation; nor merchandise. . . . Such a contract is personal, and in the state whose statute is under consideration, insurance companies are classed among those "strictly private." *Leavenworth County* v. *Miller*, 7 Kan. 520, 12 Am. Rep. 425. The fact that insurance is a strictly private and a personal contract of indemnity puts it on the extreme outside limit, and removes it as far as any business can be from those that are in their nature public.

But it may be said that, though insurance is a contract of indemnity, and personal, its personal character has not been thought to preclude the many regulatory measures adopted and sustained during the past hundred years.

This is most freely conceded. But it is equally true that the failure for more than one hundred years to attempt to fix the rates of insurance is indubitable evidence of the general public and legislative conception that the business of insurance did not belong to the class whose rates could be fixed. That settled usage is not an accident. For rate making is no new thing, and neither is insurance. Its use in protecting the owner of property against loss; its value as collateral in securing loans; its method of averages and distributing the risk between many persons widely separated, and all contributing small premiums in return for the promise of a large indemnity, has been known for centuries. All these considerations were recently pressed upon the court in an effort to secure a ruling that insurance was commerce. In refusing to accede to the sufficiency of the argument, the court, in the Deer Lodge Case, pointed out that the size of the business of insurance did not change the inherent nature of the business itself, saying that "the number of transactions do[es] not give the business any other character than magnitude."

The character of insurance, therefore, as a private and personal contract of indemnity, has not been changed by its magnitude or by the fact that more policies and for greater amounts are now written than in the centuries during which no effort has ever before been made to fix their rates. . . . And if, as seems to be implied, the fact that a business may be regulated is to be the test of the power to fix rates, it would follow, since all can be regulated, the price charged by all can be regulated. Or if great size is the test, if the number of customers is the test, if the scope of the business throughout the nation is the test, if the contributions of the many to the value of the business is the test—or if it takes a combination of all to meet the condition—then every business with great capital and many customers distributed throughout the country, and making a large business possible, must be treated as affected with a public interest, and the price of the goods on its shelves can be fixed by law. Then could the price of newspapers, magazines, and the like be fixed, because certainly nothing is more affected with a public interest, nothing is so dependent on the public, nothing reaches so many persons, and so profoundly affects public thought and public business. Such a business is, indeed, affected with a public interest—justifying regulation (*Lewis Pub. Co.* v. *Morgan*, 229 U.S. 288; 57 L. ed. 1190; 33 Sup. Ct. Rep. 867), but not the fixing of the price of the paper or periodical or the rates of advertising.

. . . . . .

The elements which are said to show that insurance is affected with a public interest do not arise out of the size of any one company, but out of the volume of the aggregate business of all the companies doing

business within the state and beyond its borders. If that test be applied, and if the sum of the units is to determine whether or not a business is affected with a public interest (which is said to be the equivalent of a public use), then if the principle of the decision be applied to the business of farming, all can see to what end it leads. In view of the amount of property employed and the aggregate number of persons engaged in agriculture, and the public's absolute dependence upon that pursuit, it would follow that, farming being affected with a broad and definite public interest, the price of wheat and corn; cotton and wools; beef, pork, mutton, and poultry; fruit and vegetables—could be fixed. Or if we take the aggregate of those who labor, and consider the public's absolute dependence upon labor, it would inevitably follow that it, too, was affected with a broad and definite public interest, and that wages in the United States of America in this 20th century could be fixed by law, just as in England between the 14th and 18th centuries. And inasmuch as the prices of agricultural products are dependent on the price of land and labor, and as the price of labor is closely related to the cost of rent and food and clothes and the comforts of life, there would be the power to take the further step and regulate the cost of everything which enters into the cost of living. . . . There seems no escape from the conclusion that the asserted power to fix the price to be paid by one private person to another private person or private corporation for a private contract of indemnity, or for his product, or his labor, or for his private contracts of any sort, will become the center of a circle of price-making legislation that, in its application, will destroy the right of private property, and break down the barriers which the Constitution has thrown around the citizen to protect him in his right of property—which includes his right of contract to make property—his right to fix the price at which his property shall be used by another.

What influence did existing economic conditions have in shaping this decision?

Is there any significance in the geographical origin of this case?

How important was the factor of monopoly or the fear of monopoly in this case?

In deciding when a business should be regulated as a public utility, what weight would you give to economic considerations involved in the enforcement of the regulation?

3. Aspects of Selected Cases in Which Regulation as a Public Utility Was Denied

A. Manufacture or Preparation and Sale of Food, Fuel, and Clothing as Public Utilities

4. Charles Wolff Packing Co. *v.* Court of Industrial Relations[1]

In 1920, a bold attempt was made by the state of Kansas to extend public utility status to the manufacture, preparation, and sale of food and clothing for human consumption, and to the preparation and sale of any substance used for fuel.[2]

Some events which preceded the Kansas legislation are reflected in the message of the governor to the special session of the legislature in January, 1920.[3] In his message, the governor stated that the mine operators and the union miners' officials were making "the public the helpless victim of a fuel famine"; that with "a heartlessness" that "had no parallel in the history of the industrial quarrel, the public was told that while the controversy over a wage scale was going on between capital and labor, it could freeze." Estimates indicated that the reserve supply of coal under the most economic use would be adequate for not more than two weeks. The governor stated that both parties to the controversy were said to have supplied themselves with sufficient coal to keep from freezing and that their attitude toward the public "was of that callous indifference" which had "become familiar to the public." He pointed out that public institutions in Kansas closed down rapidly, in many localities schools closed almost immediately, and that there was suffering in homes and in hospitals. In one locality, two union miners who had attempted to operate a small strip pit "for the sole purpose" of supplying fuel to a hospital, were warned to cease operations.

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[1] *Charles Wolff Packing Co.* v. *Court of Industrial Relations*, 262 U.S. 522; 43 Sup. Ct. 630 (1923).

[2] *Kansas Special Session Laws*, 1920, Chap. 29.

[3] *The Court of Industrial Relations*, Kansas State Printing Plant, Topeka, 1920, p. 31. This contains Statements and Message of Henry J. Allen, Outlining the Need and Character of Proposed Legislation.

While these tragedies were impending, the state, through an order of its supreme court, took charge of the mines and for a period of one week urged the miners to return to work for the state, to relieve the public from the menace of a fuel famine. The state then called for volunteers, and more than ten thousand men from every vocation in life enrolled. From this group about one thousand men were chosen and coal was mined under the protection of a regiment of the Kansas National Guard. In his message to the legislature, the governor said:[1]

I believe . . . that it would be a great error if Kansas, having taken advantage of the unselfish devotion of these volunteers to relieve the immediate emergency, should now neglect to provide at once safeguard against the recurrence of this expensive and dangerous form of industrial warfare. . . . Into few controversies does there ever come a consideration of the rights of the public. The largest party at interest scarcely receives a hearing. I believe the time has come, in the increasing industrial life of the country, when a tribunal should be established which shall have the power to take under its jurisdiction the offenses committed against society in the name of industrial warfare, a tribunal which shall have the authority to meet industrial discontent, before it crystallizes, by a careful oversight and regulation of the conditions of labor before any injustices are allowed to fester and breed class hatred and bitter antagonisms.

. . . . . .

The doctrine that certain industries and occupations are impressed or affected with a public interest, and therefore subject to regulation by the state, is an old one. . . . It has been recently demonstrated beyond the peradventure of a doubt that the public may be made to suffer more acutely by the suspension of production of these necessities than by cessation of the service of transportation companies and other public utilities. The recent coal strike is no new experience, although a more startling one than heretofore known in Kansas. It has been believed for years that the great packing plants and other great interests affecting food production have so manipulated their business as to control the market and the price, not only to the producer, but to the consumer. Surely the state is not helpless to prevent such calamities to the public. . . .

It seems to me that legislation is imperatively needed and should be immediately enacted . . . declaring the operation of the great industries affecting food, clothing, fuel and transportation to be impressed with a public interest and subject to reasonable regulation by the state.

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[1] *Ibid.*, pp. 7–10.

Within 19 legislative days the special session of the legislature passed the so-called Kansas Court of Industrial Relations Act.[1] Under this law the following activities were declared to be affected with a public interest: first, manufacture and preparation of food for human consumption; second, manufacture of clothing for human wear; third, production of any substance in common use for fuel; fourth, transportation of the foregoing; fifth, public utilities and common carriers. The act vested an industrial court of three judges with power upon its own initiative or on complaint to hear any dispute over wages or other terms of employment in any such industry, and if it should find the peace and health of the public imperiled by such controversy, it was required to make findings and fix the wages and other terms for the future conduct of the industry. After 60 days, either party might ask for a readjustment, and then the order was to continue in effect for such reasonable time as the court should fix, or until changed by agreement of the parties. The supreme court of the state could review such orders, and in case of disobedience to an order, an appeal might be taken to that court.

In January, 1921, the president and secretary of the Meat Cutters Union filed a complaint with the Kansas industrial court against the Wolff Packing Company, a Kansas corporation, respecting the wages being paid to its employees. After a hearing, the industrial court found the situation constituted an emergency under the provisions of the law and ordered the packing company to increase the wages of its employees above the scale to which the company had reduced them. The company refused to comply with the order and the industrial court then instituted mandamus proceedings in the supreme court to compel compliance. That court appointed a commissioner, who found that the company had lost $100,000 the previous year and that there was not sufficient evidence of an emergency or danger to the public from the controversy to justify action by the industrial court. The supreme court overruled his report and held that the evidence showed a sufficient emergency.

The prescribed schedule of wages and the limitation of hours and the rate of pay required for overtime resulted in an increase in wages of more than $400 a week.

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[1] *Kansas Special Session Laws*, 1920, Chap. 29.

It appeared from the evidence that the Wolff Packing Company was under the control of, and in business association with, what were called "The Allied Packers," who had plants in various cities and competed with the so-called "Big Five Packers," the largest in the country; that the products of the Wolff Packing Company were sold in active competition with such products made by other concerns throughout the United States. It also appeared from the evidence that about the time of this controversy a strike was threatened in the packing houses of the Big Five, which the President of the United States had used his good offices to settle. The chief executive of the Wolff Packing Company testified that there had been no difficulty in securing all the labor desired at the reduced wages offered. The industrial court conceded that the Wolff Packing Company could not operate without a loss on the schedule fixed, but relied on the statement of the president of the company that he hoped for more prosperous times. The Kansas Supreme Court upheld the Kansas law and the decision of the industrial court.[1] The Wolff Packing Company then appealed to the U. S. Supreme Court.

Mr. Chief Justice Taft delivered the unanimous opinion of the court which held, in part:[2]

> Businesses said to be clothed with a public interest justifying some public regulation may be divided into three classes:
>
> (1) Those which are carried on under the authority of a public grant of privileges which either expressly or impliedly imposes the affirmative duty of rendering a public service demanded by any member of the public. Such are the railroads, other common carriers, and public utilities.
>
> (2) Certain occupations, regarded as exceptional, the public interest attaching to which, recognized from earliest times, has survived the period of arbitrary laws by Parliament or colonial legislatures for regulating all trades and callings. Such are those of the keepers of inns, cabs, and gristmills. . . .
>
> (3) Businesses which, though not public at their inception, may be fairly said to have risen to be such and have become subject in consequence to some government regulation. They have come to hold such a peculiar relation to the public that this is superimposed upon them. In the language of the cases, the owner by devoting his business to the public use, in effect grants the public an interest in that

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[1] *Court of Industrial Relations* v. *Packing Co.*, 111 Kans. 501; 207 Pac. 806 (1922).

[2] *Charles Wolff Packing Co.* v. *Court of Industrial Relations*, 262 U.S. 522; 43 Sup. Ct. 630 (1923).

use and subjects himself to public regulation to the extent of that interest although the property continues to belong to its private owner and to be entitled to protection accordingly. *Munn* v. *Illinois*, 94 U.S. 113 . . . *Spring Valley Water Works* v. *Schottler*, 110 U.S. 347. . . .

It is manifest from an examination of the cases cited under the third head that the mere declaration by a legislature that a business is affected with a public interest is not conclusive of the question whether its attempted regulation on the ground is justified. The circumstances of its alleged change from the status of a private business and its freedom from regulation into one in which the public have come to have an interest are always a subject of judicial inquiry.

. . . . . .

In the preparation of food, the changed conditions have greatly increased the capacity for treating the raw product and transferred the work from the shop with few employees to the great plant with many. Such regulation of it as there has been, has been directed toward the health of the workers in congested masses, or has consisted of inspection and supervision with a view to the health of the public. But never has regulation of food preparation been extended to fixing wages or the prices to the public, as in the cases . . . where fear of monopoly prompted, and was held to justify, regulation of rates. There is no monopoly in the preparation of foods. The prices charged by plaintiff in error are, it is conceded, fixed by competition throughout the country at large. Food is now produced in greater volume and variety than ever before. Given uninterrupted interstate commerce, the sources of the food supply in Kansas are country-wide, a short supply is not likely, and the danger from local monopolistic control less than ever.

. . . . . .

If, as, in effect, contended by counsel for the state, the common callings are clothed with a public interest by a mere legislative declaration, which necessarily authorizes full and comprehensive regulation within legislative discretion, there must be a revolution in the relation of government to general business. This will be running the public interest argument into the ground, to use a phrase of Mr. Justice Bradley when characterizing a similarly extreme contention. *Civil Rights Cases*, 109 U.S. 3, 24, 3 Sup. Ct. 18, 27 L. Ed. 835. It will be impossible to reconcile such result with the freedom of contract and of labor secured by the Fourteenth Amendment.

This brings us to the nature and purpose of the regulation under the Industrial Court Act. The avowed object is continuity of food, clothing and fuel supply. By section 6 reasonable continuity and efficiency of the industries specified are declared to be necessary for the public peace, health and general welfare, and all are forbidden to hinder, limit or suspend them. Section 7 gives the industrial court

power in case of controversy between employers and workers which may endanger the continuity or efficiency of service, to bring the employer and employees before it and after hearing and investigation to fix the terms and conditions between them. The employer is bound by this act to pay the wages fixed and while the worker is not required to work, at the wages fixed, he is forbidden, on penalty of fine or imprisonment, to strike against them and thus is compelled to give up that means of putting himself on an equality with his employer which action in concert with his fellows gives him.

. . . . . .

Justification for such regulation is said to be found in *Wilson* v. *New*, 243 U.S. 332. . . . It was there held that in a nation-wide dispute over wages between railroad companies and their train operatives, with a general strike, commercial paralysis, and grave loss and suffering overhanging the country, Congress had power to prescribe wages not confiscatory, but obligatory on both for a reasonable time to enable them to agree. The court said that the business of common carriers by rail was in one aspect a public business because of the interest of society in its continued operation and rightful conduct and that this gave rise to a public right of regulation to the full extent necessary to secure and protect it; that viewed as an act fixing wages it was an essential regulation for protection of public right; that it did not invade the private right of the carriers because their property and business were subject to the power of government to insure fit relief by appropriate means and it did not invade private rights of employees since their right to demand wages and to leave the employment individually or in concert was subject to limitation by Congress because in a public business which Congress might regulate under the commerce power.

. . . . . .

But the chief and conclusive distinction between *Wilson* v. *New* and the case before us is that already referred to. The power of a legislature to compel continuity in a business can only arise where the obligation of continued service by the owner and its employees is direct and is assumed when the business is entered upon. . . .

The minutely detailed government supervision, including that of their relations to their employees, to which the railroads of the country have been gradually subjected by Congress through its power over interstate commerce, furnishes no precedent for regulation of the business of the plaintiff in error, whose classification as public is at the best doubtful. It is not too much to say that the ruling in *Wilson* v. *New* went to the border line, although it concerned an interstate common carrier in the presence of a nation-wide emergency and the possibility of great disaster. Certainly there is nothing to justify extending the drastic regulation sustained in that exceptional case to the one before us.

We think the Industrial Court Act, in so far as it permits the fixing of wages in plaintiff in error's packing house, is in conflict with the Fourteenth Amendment, and deprives it of its property and liberty of contract without due process of law.

Is there any economic justification for regulation as public utilities of the activities included in this case?

Could such regulation be enforced?

B. Gasoline Business as a Public Utility

5. Williams *v.* Standard Oil Co.[1]

In 1927 the state of Tennessee passed a law declaring the marketing and the sale (either wholesale or retail) of gasoline within the state to be "impressed with a public use." The preamble to the law stated that gasoline had become a motor fuel in general use; that it was essential to the commerce of the state; and that the business of selling and marketing it had become demoralized through the attempt on the part of some dealers to monopolize the business. It was further stated that it had become necessary for the state to regulate the business of selling and marketing of gasoline in order to prevent destruction of competition, to prevent extortionate prices, and to preserve both public and private commerce and transportation.

The act established a Division of Motors and Motor Fuels which was authorized to collect and record data concerning the manufacture and sale of gasoline, freight rates, differentials in price to wholesalers and retailers, the cost of production, etc.

The information thus collected was made available for use by the Commissioner of Finance and Taxation in the regulation of prices at which gasoline might be sold in the state. Permits for such sale were to be issued subject to the approval of the commissioner, but only at the prices fixed and determined, with the proper differential between the wholesale and the retail price. Rebates, price concessions, and price discrimination between persons or localities were forbidden. The prices first were to be stated by the applicant for a permit and if not approved by the superintendent of the division were to be determined by that official with the right of review by the commissioner and finally by the courts.[2]

Suit was brought in the U. S. District Court of Tennessee to enjoin the state officers from carrying out their intention to enforce the law and institute criminal proceedings for violation of the act.

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[1] *Williams* v. *Standard Oil Co.* 278 U.S. 235; 49 Sup. Ct. 115 (1929).

[2] *Public Acts Tennessee*, 1927, Chap. 22; *Shannon's Tennessee Code*, Sec. 6437.

That court granted an injunction and an appeal was taken to the Supreme Court.

The Supreme Court's analysis of the Tennessee law and its opinion of the act may be seen from the following excerpts from the decision:

The principal ground of attack, and the only one we need to consider here, is that the legislature is without power to authorize agencies of the state to fix prices at which gasoline may be sold in the state, because the effect will be to deprive the vendors of such gasoline of their property without due process of law in violation of the Fourteenth Amendment. . . .

It is settled by recent decisions of this court that a state legislature is without constitutional power to fix prices at which commodities may be sold, services rendered, or property used, unless the business or property involved is "affected with a public interest." . . . Nothing is gained by reiterating the statement that the phrase is indefinite. By repeated decisions of this court, beginning with *Munn* v. *Illinois*, 94 U.S. 113, that phrase, however it may be characterized, has become the established test by which the legislative power to fix prices of commodities, use of property, or services, must be measured.

. . . . . .

There is nothing in the point that the act in question may be justified on the ground that the sale of gasoline in Tennessee is monopolized by appellees, or by either of them, because, objections to the materiality of the contention aside, an inspection of the pleadings and of the affidavits submitted to the lower court discloses an utter failure to show the existence of such monopoly.

. . . Finally, it is said that even if the price-fixing provisions be held invalid other provisions of the act should be upheld as separate and distinct.

. . . . . .

The bare recital of these details [contained in the law] shows conclusively that they are mere adjuncts of the price-fixing provisions of the law or mere aids to their effective execution.

. . . . . .

Appellants also insist that certain provisions in respect of rebating and discrimination contained in section 8 of the act are separable. Those provisions are that it shall be unlawful to grant any rebate, concession, or gratuity to any purchaser for the purpose of inducing the purchaser to purchase, use, or handle the gasoline of the particular dealer, and that it shall likewise be unlawful to discriminate for or against any purchaser by selling at different prices to purchasers in the same locality or in different localities. It seems clear that these provisions are mere appendants in aid of the main purpose; but, if

treated as separable, they are unconstitutional restrictions upon the right of the private dealer to fix his own prices and fall within the principle of the decisions already cited. . . .

This interpretation of the various provisions of the act is fortified by a requirement of the Tennessee Constitution (Art. II, Section 17) that "no bill shall become a law which embraces more than one subject, that subject to be expressed in the title." It is fair to conclude, and there is nothing to suggest the contrary, that in the passage of the present act the legislature intended to observe this requirement and confine the provisions of the act to the one subject of price-fixing.

Accordingly, we must hold that the object of the statute under review was to accomplish the single general purpose which we have stated, and, that purpose failing for want of constitutional power to effect it, the remaining portions of the act, serving merely to facilitate or contribute to the consummation of the purpose, must likewise fall.

How could a fair price for gasoline be determined through state or federal regulation?

Could such legislation be enforced?

C. Ice Business as a Public Utility

6. NEW STATE ICE COMPANY[1]

In 1925 the state of Oklahoma passed a law which declared the manufacture, sale, and distribution of ice to be a public business, and provided that no person or corporation should be permitted to manufacture, sell, and distribute ice within the state of Oklahoma without first having secured a license from the Oklahoma Corporation Commission. A license fee was fixed at 50 cents per ton per annum of the daily capacity of ice manufactured, sold, or delivered but the minimum license was set at $5.

Sections 3 and 5 of the law provided:[2]

Section 3. That the Corporation Commission shall not issue license to any persons, firm or corporation for the manufacture, sale and distribution of ice, or either of them, within this state, except upon a hearing had by said commission at which said hearing, competent testimony and proof shall be presented showing the necessity for the manufacture, sale or distribution of ice, or either of them, at the point, community or place desired. If the facts proved at said hearing disclose that the facilities for the manufacture, sale and distribution of ice by some person, firm or corporation already licensed by said commission at said point, community or place, are sufficient to meet the public needs therein, the said Corporation Commission may refuse and deny the applicant [sic] for said license. In addition to said authority, the said commission shall have the right to take into consideration the responsibility, reliability, qualifications and capacity of the person, firm or corporation applying for said license and of the person, firm or corporation already licensed in said place or community, [so] as to afford all reasonable facilities, conveniences and services to the public and shall have the power and authority to require such facilities and services to be afforded the public, provided, that nothing herein shall operate to

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[1] This case is based upon the provisions of a law passed by the state of Oklahoma in 1925 (*Okla. Session Laws*, 1925, Chap. 147) and upon three court decisions. First, on the decision of the District Court of the U.S. for the Western District of Oklahoma, 42 F. (2d) 913 (1930); second, on a decision of the Circuit Court of Appeals (Tenth Circuit), 52 F. (2d) 349 (1931); and, third, on a decision of the U. S. Supreme Court, *New State Ice Co.* v. *Liebmann*, 285 U.S. 262, 52 Sup. Ct. 371 (1932).

[2] Section 4 involved the procedure for applying for a license and the hearing thereon. Section 6 provided for appeal from the commission's decisions to the Oklahoma Supreme Court. *Okla. Sess. Laws*, 1925, Chap. 147.

prevent the licensing of any person, firm or corporation now engaged in the manufacture, sale and distribution of ice or either of them, in any town, city or community of this state whose license shall be granted and issued by said commission, upon application of such person, firm or corporation and payment of license fee.

Section 5. That the Corporation Commission shall have the same power and authority to be charged with the duty of regulating and controlling the manufacture, sale and distribution of ice in all matters relating to the performance of public duties and the charges therefor, and correcting abuses and preventing unjust discrimination and extortion, as is exercised by said commission as to transportation and transmission companies and shall have the same power to fix rates, rules, charges and regulations to be observed by such person, firm or corporation engaging in the manufacture, sale and distribution of ice, or either of them, and the affording of all reasonable conveniences, facilities and service, as it may impose as to the transportation and transmission companies.

In February, 1930, Ernest A. Liebmann began construction of an ice-manufacturing plant in Oklahoma City and was about to engage in the manufacture, sale, and distribution of ice in that city without first having obtained the required license. The Southwest Utility Ice Company and the New State Ice Company, already engaged in the manufacture, sale, and distribution of ice at Oklahoma City, under licenses issued by the Oklahoma Corporation Commission, brought separate suits to enjoin Liebmann from duplicating their operations. The two suits were consolidated for trial.

The court stated that the two cases presented the single question whether the business of manufacturing and selling ice was of such a character that it was subject to regulation to the extent of requiring a certificate of convenience and necessity before a person might engage in it. In other words, could the state prohibit a man from manufacturing ice on his own property and selling it to his neighbor at a price upon which they mutually agreed? The District Court of the U. S. for the West District of Oklahoma[1] answered these questions in the negative and the case was appealed to the Circuit Court of Appeals (Tenth Circuit).

The circuit court pointed out that prior to the enactment of the law of 1925, the commission from time to time by order had regulated the price of ice, and its authority so to do had been

[1] 42 F. (2d) 913 (1930).

upheld by the Supreme Court of Oklahoma.[1] The Corporation Commission, under powers granted by prior statutes, had also made and enforced regulations governing the manufacture and sale of ice, to insure honest weights, pure and wholesome ice, and adequate delivery service. By the law of 1925 the Oklahoma legislature undertook to grant the additional power to regulate by limiting the number of persons who might engage in the ice business in a given territory.[2]

In its decision the circuit court said:[3]

> When rates or charges in a business are fixed by public regulation, competition is largely removed. Such rates must be sufficient to produce a fair return upon the value of the manufacturer's plant used and useful in the business. Permitting additional plants to enter the field, in excess of the market requirements, unnecessarily increases rates to be fixed by the regulatory body and paid by the consumer. It is to prevent such needless duplication of plants and facilities, and the consequent increase in rates or charges, that certificates of public convenience and necessity are required. . . .
>
> The regulation of the price at which ice may be sold is an extraordinary interference with the liberty of the citizen [cases cited] and can only be justified by the existence of exceptional circumstances making it necessary for the protection of the public.
>
> Notwithstanding the close relation between price regulation and the requirement of a certificate of convenience and necessity, we are of the opinion that a limitation on the right to engage in a business which is a matter of common right is an even greater encroachment on the rights of the citizen than the regulation of prices in such business.

The court pointed out that, while ice is now generally used for the conservation and preservation of foodstuffs and in the treatment of the sick, and is recognized as a necessary and indispensable commodity, it is no more essential than meat, bread, clothing, or coal.

With reference to the possibility of monopoly in the ice business the court said:

> . . . Home ice manufacturing plants are now available to persons of average means. Many hospitals, restaurants, meat markets, hotels and dairies have their own ice manufacturing and refrigerating plants. Ice may be shipped by rail in refrigerator cars a distance of 100 miles

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[1] *Oklahoma Light & Power Co.* v. *Corporation Commission*, 96 Okla. 19; 220 Pac. 54.

[2] *Okla. Sess. Laws*, Chap. 147.

[3] 52 F. (2d) 349 (1931).

at an approximate cost of 10 cents per 100. It may be transported in insulated trucks over improved highways a distance of 75 miles and sold in competition with local ice manufacturers. Ice manufacturers in Oklahoma in 1925 operated 378 rural routes extending 25 to 30 miles from their plants through sparsely settled territory and delivered ice to consumers on farms and in small communities. In 1930 such routes had been increased to 769.

The court did not believe that regulation of the ice business in Oklahoma had reduced the price of ice.

In its decision the court said:

It is our conclusion that while ice is an essential commodity, there is both potential and actual competition in such business sufficient to afford adequate protection to the public from arbitrary treatment and excessive prices. With such competition existing in the business, we seriously doubt that the manufacture of ice is so affected with a public interest as to justify the fixing of prices at which the commodity shall be sold, and we hold that it is not so affected to the extent required to warrant the more serious invasion of the rights of the citizens by limiting the number of persons who may engage in such business in a given territory.

Appeal was taken from the decision of the circuit court to the U. S. Supreme Court. That court in its decision (March 21, 1932) divided on the question at issue.[1] In the majority opinion, presented by Mr. Justice Butler, the following statements were made:

Here we are dealing with an ordinary business, not with a paramount industry, upon which the prosperity of the entire State in large measure depends. It is a business as essentially private in its nature as the business of the grocer, the dairyman, the butcher, the baker, the shoemaker, or the tailor, each of whom performs a service which, to a greater or less extent, the community is dependent upon and is interested in having maintained; but which bears no such relation to the public as to warrant its inclusion in the category of businesses charged with a public use.

It may be quite true that in Oklahoma ice is not only an article of prime necessity, but indispensable; but certainly not more so than food or clothing or the shelter of a home. And this court has definitely said that the production or sale of food or clothing cannot be subjected to legislative regulation on the basis of a public use; and that the same is true in respect of the business of renting houses and apartments, except as to temporary measures to tide over grave emergencies [cases cited].

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[1] 285 U.S. 262; 52 Sup. Ct. 371 (1932).

Concerning the possible rôle of monopoly and competition in the ice business, the court said:

It has been said that the manufacture of ice requires an expensive plant beyond the means of the average citizen, and that, since the use of ice is indispensable, patronage of the producer by the consumer is unavoidable.

The same might, however, be said in respect of other articles clearly beyond the reach of a restriction like that here under review. But, for the moment conceding the materiality of the statement, it is not now true, whatever may have been the fact in the past.

We know, since it is common knowledge, that today, to say nothing of other means, wherever electricity or gas is available (and one or the other is available in practically every part of the country), anyone for a comparatively moderate outlay may have set up in his kitchen an appliance by means of which he may manufacture ice for himself. . . .

Moreover, the practical tendency of the restriction, as the trial court suggested in the present case, is to shut out new enterprises, and thus create and foster monopoly in the hands of existing establishments, against, rather than in aid of, the interest of the consuming public.

. . . . . .

Stated succinctly, a private corporation here seeks to prevent a competitor from entering the business of making and selling ice. It claims to be endowed with State authority to achieve this exclusion. There is no question now before us of any regulation by the State to protect the consuming public either with respect to conditions of manufacture and distribution or to insure purity of product or to prevent extortion.

The control here asserted does not protect against monopoly, but tends to foster it. The aim is not to encourage competition, but to prevent it; not to regulate the business, but to preclude persons from engaging in it. There is no difference in principle between this case and the attempt of the dairyman under State authority to prevent another from keeping cows and selling milk on the ground that there are enough dairymen in the business; or to prevent a shoemaker from making or selling shoes because shoemakers already in that occupation can make and sell all the shoes that are needed.

We are not able to see anything peculiar in the business here in question which distinguishes it from ordinary manufacture and production. It is said to be recent; but it is the character of the business and not the date when it began that is determinative. It is not the case of a natural monopoly, or of an enterprise in its nature dependent upon the grant of public privileges.

. . . . . .

And it is plain that unreasonable or arbitrary interference or restrictions cannot be saved from the condemnation of that amendment merely by calling them experimental. . . .

The principle is imbedded in our constitutional system that there are certain essentials of liberty with which the State is not entitled to dispense in the interest of experiments [cases cited].

In a dissenting opinion by Mr. Justice Brandeis (in which Mr. Justice Stone concurred) it was maintained, in support of the Oklahoma law, that the due process clause of the Fourteenth Amendment, under which the law was declared unconstitutional by the majority, was not intended to deprive the states of power to remold through experimentation economic practices and institutions to meet changing social and economic needs.

The minority opinion contended that there was need in Oklahoma for the regulation of the ice business and that the court should not interpose its judgment for that of the legislature with regard to the advisability of regulation.

In the minority opinion Justice Brandeis said in part:[1]

. . . In my opinion, the judgment should be reversed.

. . . The Oklahoma statute makes entry into the business of manufacturing ice for sale and distribution dependent, in effect, upon a certificate of public convenience and necessity. Such a certificate was unknown to the common law. It is a creature of the machine age, in which plants have displaced tools and businesses are substituted for trades. The purpose of requiring it is to promote the public interest by preventing waste.

. . . . . .

The introduction in the United States of the certificate of public convenience and necessity marked the growing conviction that under certain circumstances free competition might be harmful to the community and that, when it was so, absolute freedom to enter the business of one's choice should be denied.

. . . . . .

. . . Oklahoma declared the business of manufacturing ice for sale and distribution a "public business," that is, a public utility. So far as appears, it was the first State to do so. . . . Of course, a legislature cannot by mere legislative fiat convert a business into a public utility [case cited]. But the conception of a public utility is not static. . . . The welfare of the community may require that the business of supplying ice be made a public utility, as well as the business of supplying water or any other necessary commodity or service. If the business is, or can be made, a public utility, it must be possible to make the issue of a certificate a prerequisite to engaging in it.

. . . . . .

[1] The comprehensive and valuable notes and references of the minority opinion are not included in this case.

In Oklahoma a regular supply of ice may reasonably be considered a necessary of life, comparable to that of water, gas and electricity. The climate, which heightens the need of ice for comfortable and wholesome living, precludes resort to the natural product. . . . There as elsewhere, the development of the manufactured ice industry in recent years . . . has been attended by deep-seated alterations in the economic structure and by radical changes in habits of popular thought and living.

. . . . . .

Nor can the court properly take judicial notice that in Oklahoma the means of manufacturing ice for private use are within the reach of all persons who are dependent upon it. Certainly it has not been so. In 1925 domestic mechanical refrigeration had scarcely emerged from the experimental stage. . . . Since that time, the production and consumption of ice manufactured for sale, far from diminishing, has steadily increased. . . . In Oklahoma the mechanical household refrigerator is still an article of relative luxury.

. . . . . .

The business of supplying ice is not only a necessity, like that of supplying food or clothing or shelter, but the Legislature could also consider that it is one which lends itself peculiarly to monopoly.

. . . . . .

Competition in the industry tends to be destructive because ice plants have a determinate capacity, and inflexible fixed charges and operating costs, and because in a market of limited area the volume of sales is not readily expanded. Thus, the erection of a new plant in a locality already adequately served often causes managers to go to extremes in cutting prices in order to secure business.

. . . . . .

Where there was competition, it often resulted to the disadvantage rather than the advantage of the public, both in respect to prices and to service. Some communities were without ice altogether, and the State was without means of assuring their supply.

. . . . . .

In this situation, the distributor of such a necessity as ice should not be permitted by reason of the impracticability of anyone else engaging in the same business to charge unreasonable prices, and if such an abuse is persisted in, the regulatory power of the State should be invoked to protect the public. . . .

By formal orders, the Commission repeatedly fixed or approved prices to be charged in particular communities . . . required ice to be sold without discrimination . . . and to be distributed as equitably as possible to the extent of the capacity of the plant.

. . . . . .

The enactment of the so-called Ice Act in 1925 enlarged the existing jurisdiction of the Corporation Commission by removing the requirement of a finding of virtual monopoly in each particular case . . . by conferring the same authority to compel adequate service as in the case of other public utilities, and by committing to the Commission the function of issuing licenses equivalent to a certificate of public convenience and necessity.

. . . . . .

In my opinion, the true principle is that the State's power extends to every regulation of any business reasonably required and appropriate for the public protection. I find in the due process clause no other limitation upon the character or the scope of regulation permissible.

. . . . . .

It is no objection to the validity of the statute here assailed that it fosters monopoly. That, indeed, is its design. The certificate of public convenience and necessity is a device—a recent social-economic invention—through which the monopoly is kept under effective control by vesting in a commission the power to terminate it whenever that course is required in the public interest. To grant any monopoly to any person as a favor is forbidden even if terminable.

. . . . . .

The economic emergencies of the past were incidents of scarcity. In those days it was preeminently the common callings that were the subjects of regulation. The danger then threatening was excessive prices. To prevent what was deemed extortion, the English Parliament fixed the prices of commodities and of services from time to time during the four centuries preceding the Declaration of Independence. . . . Like legislation was enacted in the Colonies; and in the States, after the Revolution. . . .

When the first due process clause was written into the Federal Constitution, the price of bread was being fixed by statute in at least two of the States, and this practice continued long thereafter.

. . . . . .

The people of the United States are now confronted with an emergency more serious than war. Misery is wide-spread, in a time, not of scarcity, but of over-abundance. The long-continued depression has brought unprecedented unemployment, a catastrophic fall in commodity prices and a volume of economic losses which threatens our financial institutions. . . . Some people believe that the existing conditions threaten even the stability of the capitalistic system. . . .

Economists are searching for the causes of this disorder and are reexamining the bases of our industrial structure. Businessmen are seeking possible remedies. Most of them realize that failure to distribute widely the profits of industry has been a prime cause of our

present plight. But rightly or wrongly, many persons think that one of the major contributing causes has been unbridled competition. . . .

Increasingly, doubt is expressed whether it is economically wise, or morally right, that men should be permitted to add to the producing facilities of an industry which is already suffering from overcapacity. In justification of that doubt, men point to the excess-capacity of our productive facilities resulting from their vast expansion without corresponding increase in the consumptive capacity of the people.

They assert that through improved methods of manufacture, made possible by advances in science and invention and vast accumulation of capital, our industries had become capable of producing from 30 to 100 per cent more than was consumed even in days of vaunted prosperity; and that the present capacity will, for a long time, exceed the needs of business. . . . All agree that irregularity in employment—the greatest of our evils—cannot be overcome unless production and consumption are more nearly balanced.

Many insist there must be some form of economic control. There are plans for proration. There are many proposals for stabilization. . . . And some thoughtful men of wide business experience insist that all projects for stabilization and proration must prove futile unless, in some way, the equivalent of the certificate of public convenience and necessity is made a prerequisite to embarking new capital in an industry in which the capacity already exceeds the production schedules. . . .

Whether that view is sound nobody knows. The objections to the proposal are obvious and grave. The remedy might bring evils worse than the present disease. The obstacles to success seem insuperable. . . . The economic and social sciences are largely uncharted seas. We have been none too successful in the modest essays in economic control already entered upon. The new proposal involves a vast extension of the area of control.

Merely to acquire the knowledge essential as a basis for the exercise of this multitude of judgments would be a formidable task and each of the thousands of these judgments would call for some measure of prophecy. Even more serious are the obstacles to success inherent in the demands which execution of the project would make upon human intelligence and upon the character of men. Man is weak and his judgment is at best fallible.

Yet the advances in the exact sciences and the achievements in invention remind us that the seemingly impossible sometimes happens. There are many men now living who were in the habit of using the age-old expression: "It is as impossible as flying." The discoveries in the physical sciences, the triumphs in invention, attest the value of the process of trial and error.

In large measure these advances have been due to experimentation. In those fields experimentation has for two centuries been not only free but encouraged. Some people assert that our present plight is due, in part to the limitations set by courts upon experimentation in the

fields of social and economic science; and to the discouragement to which proposals for betterment there have been subjected otherwise. There must be power in the States and the Nation to remould through experimentation our economic practices and institutions to meet changing social and economic needs. I cannot believe that the framers of the Fourteenth Amendment, or the States which ratified it, intended to deprive us of the power to correct the evils of technological unemployment and excess productive capacity which have attended progress in the useful arts. . . .

To stay experimentation in things social and economic is a grave responsibility. Denial of the right to experiment may be fraught with serious consequences to the Nation. It is one of the happy incidents of the Federal system that a single courageous State may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country. This court has the power to prevent an experiment. . . .

We may strike down the statute which embodies it on the ground that, in our opinions, the measure is arbitrary, capricious or unreasonable. The due process clause has been held applicable to matters of substantive law as well as to matters of procedure. But in the exercise of this high power, we must be ever on our guard, lest we erect our prejudices into legal principles. If we would guide by the light of reason, we must let our minds be bold.

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Should the regulation of the ice business be extended to price-fixing; to limitation of the number permitted to engage in the business?

How are the foregoing phases of regulation related?

How do the businesses in the foregoing cases over which public utility control was denied differ from those which were subjected to public utility regulation?

Do these cases indicate any general trend with reference to the attitude of the U. S. Supreme Court toward the control of businesses as public utilities?

In light of the foregoing cases, how would you determine what constitutes a public utility?

4. Early American Conceptions of the Obligations of a Recognized Public Utility

7. PATERSON GAS LIGHT CO. *v.* BRADY[1]

This case arose as the result of a suit for damages brought by Brady, a prospective consumer of gas, against the Paterson Gas Light Company. The case was taken to the New Jersey Supreme Court on appeal, and the question before the court was whether the Paterson Gas Light Company was bound, upon general principles, or as a duty imposed upon it by its charter, to furnish gas to all buildings on the lines of its main pipes, upon the applicants therefor agreeing to pay the fixed price. In its decision the court made the following statements:

That no such duty arises out of the mere facts, that the company made gas, laid pipes in the streets, and actually furnished it to many persons, may be safely assumed. Innkeepers and common carriers are bound to receive all who properly apply to them, but this is a duty peculiar to them. I fully concur with what is said by Judge Bronson, delivering the opinion of the court in *Wells* v. *Steam Nav. Co.* "Other bailees and persons engaged in other employments are not, like common carriers and innkeepers, bound to accept employment when offered; nor, like them, tied down to a reasonable reward for their services. They are at liberty to demand an unreasonable price before they will undertake any work or trust, or to reject employment altogether."

But the court, in the charge, rested this duty on the terms of the act of incorporation. The language is "they were incorporated with the special powers of their charter for the purpose of lighting the streets, buildings, manufactories, and other places in this city, not such particular streets, buildings, and mills as the caprice of their stockholders or officers may elect."

Upon looking into the charter, *Acts of* 1825, p. 102, it appears to be simply an act of incorporation, giving the company "power and authority to manufacture, make, and sell gas, for the purpose of lighting the streets, buildings, manufactories, and other places situated in the said town of Paterson." . . . No monopoly or special privileges are granted, except that the company is entitled to recover double damages for any wilful injury done to the pipes or other works.

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[1] 27 N. J. Law 245; 72 Am. Dec. 360 (1858).

The state of demand does not assume, nor was it insisted on in argument, that the charter imposes upon the company the duty of supplying gas to all the town, but only to persons having buildings on the line of their pipes. In my opinion, it imposes no duty of either description, but simply empowers the incorporation to do what private individuals might have done without any charter. There is nothing in the act indicating any intention to impose any duty that would not have devolved on an individual erecting gas works; nor is there anything to prevent another company, or any individual who can obtain the permission of the city and the owners of the land, from setting up a rival manufacture, and placing pipes alongside of those belonging to the company. Most of the acts incorporating gas companies do what this does not, authorize the company, in express terms, to place their pipes in the public streets; but I am not aware that any of them impose the express duty of furnishing gas to all the persons demanding it, or to any of them. The Paterson Company is authorized to make and sell gas, which, in the absence of any indication to the contrary, implies that they may fix their own price, and choose their own customers, like any other manufacturer. If the duty of furnishing gas to those requiring it was meant to be imposed, it would doubtless be expressed, and not be left to mere inference. If it is to be inferred, what is to be the limit? Why have not all the inhabitants of the town the same right to demand it as those having buildings on the streets along which the pipes are placed? The charter sets forth the general purpose of lighting all the streets and buildings, and the court below seems to have held that the company has no choice in the matter. But what company in the state, or elsewhere, could have ventured to assume such a responsibility as that?

The language of the charter is throughout permissive, and not compulsory. The company may organize, may make and sell gas, or not, at their pleasure; and I see no more reason to hold that the duty of doing so is meant to be imperative, than to hold that other companies incorporated to carry on manufactures, or to do any other business, are bound to serve the public any further than they find it to be their interest to do so. It was earnestly insisted, on the argument, that the community have a great interest in the use of gas, and that companies set up to furnish it ought to be treated like innkeepers and common carriers, and that, if no precedent can be found for such a decision, this court ought to make one. But that there is no authority for so holding in England or America, where companies have been so long incorporated for supplying water and gas to the inhabitants of numerous towns and cities, affords a strong presumption that there is no principle of law upon which it can be supported.

Had the plaintiff averred that the company had held out to the persons occupying buildings on the streets along which the pipes are laid, that it was ready to furnish gas to those providing the requisite fixtures and accepting the prescribed terms, and that he had done this, and that, in consequence of a breach of a contract, thus or otherwise

entered into, he had suffered damages, the case would have been very different. But this is not the nature of his claim. He claimed and has recovered damages, and it would seem exemplary damages, simply on the ground that it was the duty of the company to furnish gas, on the streets where the pipes are laid, to all persons demanding it, and offering to pay a reasonable price. Assuming this principle, it was left to the jury to say whether one of the rules of the company was reasonable. Being of opinion that the state of demand discloses no good cause of action, and that the court erred in the charge, I think the judgment must be reversed.

8. SHEPARD *v.* MILWAUKEE GAS LIGHT CO.[1]

Shepard, a merchant in Milwaukee, in 1857, fitted his store with the necessary pipes, burners, and apparatus for lighting it with gas and applied to the Milwaukee Gas Light Company to serve him, tendering $5 in advance payment. Because Shepard refused to sign certain regulations such as would subject his premises to instantaneous visits at all times by the Milwaukee Gas Light Company and which would give the company the right to cut off the gas if it suspected abuse or fraud in its use, the company refused to furnish Shepard's store with gas.

The questions before the court were the reasonableness of the Milwaukee Gas Light Company's regulations and the right of the gas company to refuse to furnish gas to a prospective consumer.

The court stated that while the company had the right to require a consumer to comply with rules and regulations for the protection of himself, other consumers and also the property of the company, these regulations must be reasonable. It was held that the rules and regulations which the Milwaukee Gas Light Company insisted Shepard should sign before he could receive service were unreasonable.

Concerning the right of the company to refuse to sell gas to Shepard, the court made the following statements:

> It is sufficient for the purposes of this case, to know that the company had the exclusive right to manufacture and sell gas, and that hence the only means of supply available to the citizens was through the agency of the company. It is within the every day experience of us all, and hence within the judicial knowledge of the court, that the manufacture and supply of inflammable gas for the purpose of lighting cities, stores and dwellings, is not a domestic or family manufacture. It is carried on, either by public, or associated capital, and is dependent

[1] 6 Wisc. 539 (1857).

for its profit upon general consumption. Corporations of this kind are not like trading or manufacturing corporations, the purview of whose operations is as extensive as commerce itself, and whose productions may be transported from market to market throughout the world. Their product is designed for the consumption of the immediate community in which the manufacture is wrought. It is not a trading corporation, for its product depends exclusively upon home consumption. If gas were an article of merchandise, and could be bottled or packed up, and imported or exported like "soap, candles or hats," to be distributed to the various markets of commerce, there might possibly be claimed for it the character of merchandise, or manufactures partaking of that attribute. But such is not the fact. Its manufacture depends upon the consumption of the immediate neighborhood for its profit and success, and upon no other place. It is local, and hence not commercial. It is consumed upon the spot of its manufacture, and hence can have no affinity with articles of trade. Its success necessarily depends upon its general use in the vicinity of its manufacture; and seriously affects the public policy and individual convenience of the immediate community. The gas is not sold to whomsoever will buy, but is offered to be, and is furnished to whomsoever is prepared to, and will take and use it. It is not an article of trade, because it is not bought, measured and delivered in quantity, but is furnished, used and to be paid for after it is used, because it cannot be measured before. From the nature of the article, the objects of the company, their relations to the community, and from all the considerations before mentioned, it is to me apparent that the company is not at all analogous to an ordinary manufacturing or trading corporation.

But it is asked, would a soap and candle factory, or a hat or carriage factory, with the privilege of laying pipes in the public streets, make it a public corporation, and oblige the company to furnish soap, candles or carriages to any citizen upon tender of a fair compensation? Perhaps not. The citizen could procure his soap, candles and carriages elsewhere. These are all articles of trade, capable of transportation, from place to place, and, as is sometimes alleged, the incorporation of companies for their manufacture, does not interfere with the rights or privileges of private citizens. But suppose the citizen was prohibited from obtaining soap, candles or carriages from any other than the particular corporation, how would the case stand? Could such company wantonly refuse to sell to the citizens upon the usual terms?

However, if these reasons are insufficient to distinguish the character of this corporation, we proceed to examine another already in part considered, which to our mind is conclusive; *viz.*: the exclusive privilege conferred upon the company to manufacture and furnish or sell the gas.

The very fact of this exclusive right conferred upon the company to manufacture and sell gas in the city, to be consumed therein by the citizens thereof, would imply an obligation on the part of the company

to furnish the city and citizens with a reasonable supply, on reasonable terms. And when the nature and objects of the corporation are considered, *viz.:* the exclusive right to manufacture and sell gas, *for the purpose of lighting the city of Milwaukee, and the dwellings and business places of its inhabitants*, how can it be urged that this is a mere private corporation for the manufacture and sale of a commercial commodity? The very term is incompatible with the idea of trade and commerce. It is not in its nature interchangeable, but merely consumable, and consumable only at the place of delivery in the immediate vicinity of its production. [Court's italics.]

If a company were chartered with the exclusive privilege of manufacturing and selling bread in the city of Milwaukee, would it be contended that the company were under no obligation to supply or sell bread to any but such person or persons as the company should capriciously select? Odious as were monopolies to the common law, they are still more repugnant to the genius and spirit of our republican institutions, and are only to be tolerated on the occasion of great public convenience or necessity; and they always imply a corresponding duty to the public to meet the convenience or necessity which tolerates their existence.

The successful operation of this gas company worked a radical change in the mode of lighting the streets, dwellings and places of business in the city, and created thereby a sort of necessity for the article, to produce which, the exclusive privilege was conferred upon them, and hence they assumed the correlative duty of supplying this necessity.

We think there can be no doubt that the company were bound to furnish the gas to the plaintiff, upon his complying with such reasonable conditions or terms as they might rightfully impose.

What do the terms of the charter indicate concerning the conception of a public utility in New Jersey in 1858?

In light of the terms of the charter of the Paterson Gas Light Company, was the decision of the New Jersey Supreme Court sound?

To what extent do the decisions in the *Paterson Gas Light* and the *Shepard* v. *Milwaukee* cases rest upon the terms of the charters or franchises and upon the point of view of the courts?

SECTION II

PRODUCTION PROBLEMS OF PUBLIC UTILITIES

1. Reliance upon Competition between Utilities

A. Between Street Railways

9. CAPITAL TRACTION COMPANY[1]

In June, 1929, the Capital Traction Company, operating a street railway in Washington, D. C., petitioned the District of Columbia Public Utilities Commission for authority to increase fares from 8 cents each, or six tokens for 40 cents, to 10 cents cash, or four tokens for 30 cents. Company officials claimed that the existing fares were confiscatory and that the company was not receiving a reasonable return upon the fair value of its property. The Capital Traction Company also asked that its competitor, the Washington Railway & Electric Company, be made a party to the proceedings. The latter company was made a party to the proceedings and in its answer requested a similar increase in fares, presenting the same arguments which had been advanced by the Capital Traction Company in support of the increase.

The Capital Traction Company claimed that the value of its properties exceeded $26,000,000. This figure was obtained by adding to the value fixed by the Court of Appeals of the District of Columbia as of January 1, 1925, the claimed net costs of additions to January, 1929. It produced no inventory statement as of January, 1929.

The Washington Railway & Electric Company claimed a minimum value for rate-making purposes of over $19,000,000, determined by adding to the fair value found by the District of Columbia Public Utilities Commission as of June, 1919, the claimed net costs of additions and betterments to 1929. It produced no inventory as of January, 1929.

The Capital Traction Company presented evidence to the effect that the rate of return upon its claimed fair value had been

[1] *Re Capital Traction Co.*, P.U.R. 1930A, 25.

as follows: 1926, 4.30 per cent; 1927, 3.92 per cent; 1928, 3.64 per cent.

The Washington Railway & Electric Company's evidence was intended to show that its rate of return upon its claimed value had been for 1926, 3.99 per cent; for 1927, 4.13 per cent; and, for 1928, 4.32 per cent.

The Capital Traction Company stated that it had decided "for reasons which it deemed controlling" to ask at that time for the increase in fares which has been indicated even though it was fully aware that such fares would not produce the rate of return to which it believed itself entitled. The Washington Railway & Electric Company asked for the same increase in fares as was sought by the other company on the basis of prior decisions of the commission itself to the effect that the two companies should have the same level of fares. The Capital Traction Company estimated that the increased fares would increase the rate of return upon its claimed fair value to 4.88 per cent. The other company similarly estimated that its rate of return would be 6.25 per cent.

The commission pointed out that aside from the fact that it could not accept valuations for rate making purposes that were not "upon the basis of the fair value of the properties at the time of the inquiry," there was evidence which plainly disclosed errors in accounting which rendered inexact the values claimed by both companies, and that more important still, uncontradicted evidence showed that the accounting methods of the two companies differed markedly in their treatment of charges to capital account, so that the fair value claimed by one or the other of the two must necessarily be incorrect.

The commission maintained that the street railway companies should do everything reasonably possible to effect an increase in their net revenues by reducing their operating expenses before asking for increases in fares. It pointed out that the question of operating costs should be considered in reaching its decision, and it therefore sought to determine what, if any, economies would result from unified operation of the two street railway companies, or from the joint use of each other's facilities without a complete merger. It also attempted to ascertain the saving in operating expenses which might be expected in the event that such a corporate merger as was then authorized by law, should become a fact.

The commission did not believe that the economies from joint use of tracks and other facilities without a corporate merger could be gauged with much accuracy. It maintained that without the hearty cooperation of the competing companies, the probability of substantial savings in the operating departments was quite remote.

On the other hand, the commission was convinced that the record did indicate the possibility of substantial economies through a corporate merger of the companies; that overhead expenses would be reduced; and that a single management could bring about reforms in routing of cars, in the elimination of certain duplicated facilities and in the probable abandonment of certain trackage. The commission believed that the possible economies which could be realized through a corporate merger of the companies would amount to "as much as $1,000,000 per year" and that while the possible savings were based upon estimates, the estimates were probably understated. The companies had estimated that the proposed increase in rates would increase their combined net revenues about $900,000. This increase in combined net revenue was based upon the assumption that the higher fare would result in no diminution in the number of riders.

The commission pointed out that it had the right, and that it was its duty, to insist that the companies effect all reasonably possible operating economies before authorizing them to swell their gross revenues by exacting higher fares from the streetcar riders; that while it had the power to compel the companies to make joint use of each other's tracks and facilities, without the wholehearted cooperation of the companies, the full possibilities of such a forced unification of operations could not be realized and, therefore, this procedure might result in little or even no improvement in existing conditions.

The commission felt that a corporate merger, authorized by law, substituting unified for dual control would improve the service and bring about economies, which under existing fares, would probably put the new merged company in a better condition financially than that of the two separate companies if they were granted the increased fare and if their expectations of its monetary results were fully realized.

The commission concluded that under such circumstances it was not justified in compelling the streetcar riders to pay nearly

$1,000,000 more per year for the benefit of the two competing companies.

The Capital Traction Company and the Washington Railway & Electric Company appealed from the commission's order to the District of Columbia Supreme Court.[1] The court held that the commission could not refuse to grant a street railway company increased fares on the ground that no up-to-date valuation of the utility's property was available, where the existing rates were clearly insufficient to yield a fair return based on the last known valuation of such properties, and where the commission had the power to order proceedings for a new valuation and had taken no steps to do so. Furthermore, the commission could not refuse to grant increased rates, otherwise shown to be warranted, merely because the amount of net income to be realized from such an increase was speculative. Obviously, such an argument, if accepted, would be likely to prevent an advance in rates at any time. In light of the evidence presented by the companies to the commission, the rate of return under the existing fares was clearly insufficient. Thus, in July, 1930, both companies were authorized to increase the fares to 10 cents cash or four tokens for 30 cents.

The question of a merger of the companies furnishing mass transportation in the District of Columbia had been under discussion for many years. A law enacted in 1913 prohibited the merger of public utility companies in the District of Columbia, but Congress in 1925 set up a procedure by which a merger might be legally brought about. This procedure called for the approval first by the Public Utilities Commission and then by Congress itself of any agreement which might be reached by the companies, before it could be effective. Such an agreement was executed on February 10, 1928, and approved by the stockholders of each company. It was submitted to the commission which approved it after making certain modifications and submitted it to Congress.[2]

After nearly five years of investigation and hearings, a joint resolution providing for the merger was passed by the House of Representatives on May 9, 1932. A majority of the Senate Dis-

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[1] *Washington Railway & Electric Company* v. *Public Utilities Commission of the District of Columbia*, P.U.R. 1930D, 155.

[2] Facts concerning the history of the merger are given in *Annual Report of the Board of Directors to the Stockholders of the Capital Traction Company*, 1932, p. 4.

trict Committee, after many hearings, favorably reported the House resolution with further amendments. A minority of the Senate District Committee opposed the resolution as submitted and prevented action on it before the adjournment of Congress in June of that year.

Before the reconvening of Congress, a committee of citizens representing leading business organizations and civic organizations, took the matter actively in hand and impressed upon the Senate Committee the importance of action. Members of the Senate Committee met with this committee and with representatives of the companies. As a result the Senate reported a resolution in favor of the merger on December 22, 1932. The House approved the Senate resolution on January 5, 1933, and it was signed by the President on January 14.[1]

The resolution of January 14 was amended further on February 16, 1933. Under authority of the latter act, the Capital Transit Company was incorporated on September 28, 1933. Effective December 1, 1933, this company took over all the properties, rights, and franchises of the Capital Traction Company and all the transit properties of the Washington Railway & Electric Company, including stock of transit subsidiaries of that company. The Capital Transit Company issued 240,000 shares of common stock, one half of which was exchanged on a share-for-share basis for the outstanding common stock of the Capital Traction Company. Upon the completion of this exchange the latter company was liquidated. The remaining 50 per cent of the common stock of the Capital Transit Company was issued in exchange for the properties acquired from the Washington Railway & Electric Company.

The merger of the two transportation companies in 1933 left the Washington Rapid Transit Company operating bus lines as the sole competitor of the Capital Transit Company in the furnishing of mass transportation in the District of Columbia. Under the Congressional resolution of February 16, 1933, the Capital Transit Company was authorized to acquire control of the competing bus company through the purchase of its stock upon terms subject to the approval of the Public Utilities Commission. On May 12, 1936, the commission approved a plan

[1] *Public Resolution* 47, 72d Cong., 2d Sess.

whereby the Capital Transit Company was to acquire all the properties of the Washington Rapid Transit Company at a purchase price of $477,074.87. Of this $113,363.87 was paid in cash, $63,711 was payable in June, 1937, and the remaining $300,000 in 10 equal payments the first of which was due in June, 1937. Title to the property passed to the Capital Transit Company on June 10, 1936, and operation of all lines by the latter company was begun on that date.

After the merger of the Capital Transit Company and the competing bus company, the number of streetcars in service decreased markedly and there was substantial increase in the number of buses.[1] Streetcar miles decreased by about one and one-half million miles from 1935 to 1936 and by more than one million miles from 1936 to 1937. Bus miles operated in 1936 compared with 1935 increased more than 4,000,000 or almost 50 per cent and for 1937, the increase was almost 14 per cent more than for 1936.[2]

How do you account for the fact that competing street railways existed for so many years in the District of Columbia?

From the economic point of view is competition in furnishing street railway service ever justified?

What, in your opinion, will be the benefits of eliminating bus competition with the street railway?

Should the sightseeing buses in the District of Columbia be operated by the Capital Transit Company? Should the taxicabs in the District be operated by that company?

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[1] The first annual report after the merger of the companies giving data regarding types of rolling stock was for the year 1935. It reported total streetcars owned January 1, 1935, as 835. These decreased to 775 on January 1, 1936. Buses on January 1, 1935, were 235 and these had increased on January 1, 1936, to 375. On January 1, 1937, some streetcars which were purchased during 1936 brought the total to 791 streetcars and 512 buses. On January 1, 1938, streetcars had decreased to 669 and buses had increased to 559. Data are from annual reports of the company for 1935, 1936, and 1937.

[2] See annual reports of the company for 1936 and 1937.

B. Between Natural Gas Companies

10. BOWDOIN UTILITIES COMPANY[1]

On April 9, 1923, the city of Glasgow, Montana, granted a franchise to the Bowdoin Oil and Gas Company, authorizing it for a period of 39 years to "erect, construct, maintain, and operate a complete plant for the manufacture and distribution of artificial gas and natural gas, and for the piping, distribution, and selling of artificial gas and natural gas within the corporate limits of the city. . . . " This franchise also carried the right to lay pipes in the city's streets. Nothing was done by the Bowdoin Oil and Gas Company toward the exercise of its franchise rights until six years later (July 10, 1929), when it assigned its franchise to the Montana-Dakota Utilities Company. This company agreed to furnish gas to the inhabitants of the city before the expiration of 1930.

Six weeks before the date of the transfer of the Glasgow franchise, the Montana-Dakota Utilities Company had secured a similar franchise from the city of Malta, Montana. Subsequently, the Montana-Dakota Utilities Company changed its name to the Bowdoin Utilities Company.

The operations of the Bowdoin Utilities Company were financed by its parent organization, the Minnesota Northern Power Company, which had arranged with a firm of drilling contractors to develop some gas fields located approximately 47 miles from Glasgow and 19 miles from Malta. After several wells had been drilled, however, the contractors severed their relations with the Minnesota Northern Power Company, thereby leaving the Bowdoin Utilities Company without any developed source of supply.

After this breach, the contracting firm interested some capitalists in the formation of a distributing company, a pipe-line company, a development and producing company, and a holding company (hereinafter referred to as the competing utility) for the purpose of acquiring franchises and supplying natural gas in the same territory as that of the Bowdoin Utilities Company. The

[1] *Re Bowdoin Utilities Co.*, P.U.R. 1931B, 20.

competing utility promised the cities of Malta and Glasgow competition in the distribution of natural gas in their respective districts and a rate of 15 cents per 1,000 cubic feet in return for the franchises. Each city granted a franchise on the condition that the systems be installed immediately.

In order to protect its franchise rights, the Bowdoin Utilities Company in the meantime had commenced to lay its transmission lines and distribution systems. It also attempted to develop a source of supply of natural gas. During November and December, 1929, the two competing utilities staged a mad race in laying their transmission lines from the same field and in installing duplicate distribution systems in Malta and Glasgow, fighting bitterly to acquire customers for their respective systems. The construction work was pushed on day and night, in spite of darkness and the rigors of winter. Since the Montana Public Service Commission had approved the initial rate of 15 cents per 1,000 cubic feet, the competitors had to carry their rivalry to fields other than price. The approved custom of requiring customers to pay for service pipe from their property lines to the premises served was discontinued. In numerous instances such appliances as ranges and furnaces were installed at no charge to the consumer.

In the latter part of November, 1929, the Bowdoin Utilities Company began furnishing natural gas to its customers in Malta and, on December 24, inaugurated its service in Glasgow. By this time the company's supply of natural gas was not sufficient for its total needs; hence, as a guaranty against failure of fuel supply, the company provided many of its customers with coal. It was unable to secure meters for installation on those customers' premises until after several months of operations. This led to the establishment of a flat rate system based upon each customer's estimated consumption.

In December, 1929, the competing utility completed its lines to Glasgow and Hinsdale. It never completed its pipe line to Malta, in spite of the fact that it had installed a distribution system there.

As a result of the low rates and exceptional services offered under these competitive conditions, Glasgow became a 100 per cent natural gas-serviced town; Hinsdale, 95 per cent; and Malta, approximately 85 per cent.

On March 1, 1930, the competitive battle between the utilities was terminated by the consolidation of the competing utility with

the Bowdoin Utilities Company, brought about by the financial interests of both companies.

Shortly after this consolidation had been effected, the Bowdoin Utilities Company applied to the commission for approval of a new schedule of rates, as follows:

DOMESTIC GAS RANGE

Cubic Feet per Month	Cents per M.C.F.
First 3,000	75
Next 3,000	65
Next 94,000	45
Next 200,000	40
Next 200,000	30

Minimum bill: $2 per month
Prompt payment discount: None

COMMERCIAL HEATING RATE

Thirty cents per M.C.F. for consumers who will use a minimum of 1,500,000 cu. ft. per year.
Minimum bill: 1,500,000 cu. ft. per year.
Prompt payment discount: None.

The commission decided to hold a public hearing upon the proposed rate schedule in May, 1930, at which time the utility was to furnish a detailed inventory of its property, used and useful, devoted to the natural-gas service in the territory involved, a detailed statement of its capital expenditures, operating revenues, and expenses, and a rate study exhibiting the manner in which the schedules were constructed. Before the hearing the commission instructed its chief engineer and its auditor to prepare reports on the utility's inventory and property valuation, thus necessitating postponement of the date of the public hearing. The utility, therefore, applied to the commission for permission to inaugurate an emergency rate schedule to remain in effect until the commission's decision was handed down. The commission granted this request and the following emergency rate schedule was introduced:

DOMESTIC RATE

Cubic Feet per Month	Cents per M.C.F.
First 25,000	40
Next 25,000	35
Next 50,000	33
Next 100,000	29
Next 550,000	25
All additional	20

Minimum bill: $1.50 per month
Prompt payment discount: None

COMMERCIAL HEATING AND COOKING RATE

(Available to consumers whose annual gas consumption on one premise is in excess of 1,500,000 cu. ft. of gas)

Cubic Feet per Month	Cents per M.C.F.
First 200,000	30
Next 400,000	25
Next 400,000	22
All over 1,000,000	19

Minimum bill: $1.50 per month
Prompt payment discount: None

Representatives of gas consumers in the towns affected argued that the new schedule of rates should not be allowed, since the utility voluntarily proposed the original 15-cent rate which caused many customers to invest in gas ranges and other appliances on the supposition that that rate would be continued. Although the commission granted the validity of this contention, it pointed out that a utility may, for reasons of its own, establish an unreasonably low rate but that the commission, according to the Fourteenth Amendment of the Constitution of the United States, could not *force* a utility to operate at such a rate against its will.

In order to establish the reasonableness of its proposed rate schedule, the company testified that its previous experience in similar communities indicated that there would be between four and five residents for each meter ultimately installed by the company. Since the population of Glasgow was 2,211, Malta, 1,333, and Hinsdale, 325, the company estimated that it would ultimately have a total of 920 meters in all three towns. Assuming an average annual consumption of 250,000 cubic feet per meter, and an average price of 48 cents per 1,000 cubic feet of gas, which was higher than the company's past experience had shown to be obtainable in other towns in similar territories under identical rate schedules, a maximum average return of $120 per meter was anticipated. This would yield a gross revenue of $110,400. The company called attention to the fact, however, that it would take at least two or three years of operation under the most favorable conditions to attain this revenue.

As against this revenue of $110,400, the company estimated that its annual expenses would be $108,235.

The net operating profit would, therefore, under the most favorable conditions amount to only $2,165. The foregoing expenses were based on the assumption that the company could

purchase gas at 5 cents per 1,000 cubic feet, which, assuming a 10 per cent loss in transmission and distribution, it felt to be an extremely optimistic estimate in view of the high drilling costs.

The commission held that the utility company's estimates regarding the number of meters which would ultimately be installed, the average consumption per meter, and the average price which could be obtained under its proposed rate schedule were reasonable. In analyzing the company's forecast of its expenses the commission agreed that 5 cents per 1,000 cubic feet of gas at the wells at a pressure of 10 ounces above atmospheric pressure was reasonable and that a 10 per cent transmission loss, as predicted by the company, was not overestimated. However, it called attention to the fact that since the utility bought its gas at a 10-ounce gauge pressure and distributed it at a 6-ounce gauge pressure, the resulting expansion would decrease the cost of the total gas consumed by the utility by $1,100, from the estimate which was submitted. Other expense items listed by the utility met with the commission's tentative approval.

The company claimed that it was entitled to earn a fair return on a rate base of $750,564 since it had expended $528,298 on its own properties other than gas wells and had purchased the competing utility for $254,118. Because of the consolidation, however, it was able to retire property at a salvage value aggregating $32,287 and estimated that it could salvage $34,565 additional. It claimed that it had acquired the properties of the competing utility at a total cost considerably lower than their actual value. The commission, however, maintained that only the property used and useful could be justly included in the rate base, and upon the advice of its engineers, fixed the value of such property, less the observed depreciation, at $503,731. Most of the property which was in effect a duplication of facilities resulting from the original competition of the two utility companies, later merged into the Bowdoin Utilities Company, was held to be neither used nor useful. No going concern value was allowed.

In spite of the contention of the protestants that the value of service pipes placed upon customers' property at the utility company's expense, during the period of its competition with the other utility, should not enter the rate base because this would result in an injustice to customers who applied for service later, when the utility company no longer furnished this free service, the com-

mission found sufficient precedent to allow the value of these pipes to be included in the rate base.

The company contended that if it was not allowed to include the value of its duplicate facilities in the rate base, it should be permitted to earn a return sufficient to amortize the loss caused by the abandonment of duplicate properties after the merger. The commission, however, ruled that since under the laws of the state certificates of public convenience and necessity were not required for the conducting of a public utility business, except in the case of motor-vehicle common carriers, it could not prevent competition among public utilities. Whether or not a gas utility could enter an incorporated city or town was a matter for the qualified electors of each city to decide. If, therefore, the commission was to grant permission to a utility which had taken over a competitor to make the public pay for the amortization of duplicated facilities, it would discourage cities and towns from granting more than one franchise and would thus be expressly contrary to the intention of the Montana law that there should be competition in the public utility field, except where otherwise specifically provided. The commission, therefore, refused to allow the company to include an amortization charge on useless facilities among its legitimate expenses. The commission did, however, take this opportunity of voicing its disapproval of the existing statute permitting competition among public utilities.

The commission permitted a reasonable amount for working capital to be included in the rate base and fixed the utility's depreciation annuity allowance at 8 per cent. After all these allowances had been made, the commission decided that the value of the system was $622,606. It estimated the cost per 1,000 cubic feet of gas sold by the utility to be 36.025 cents instead of 47.1 cents, as estimated by the utility. The commission found, however, that even after such reductions, the proposed rate schedule would not yield a fair return, which it considered to be 8 per cent on the value of the property. This was shown by the following computation:

Estimated Operating Revenues under Proposed Rate	$110,400.00
Estimated Operating Costs (Computed as 36.025 Cents per M.C.F. of Gas Sold)	82,857.50
Total Available for Return	$ 27,542.50
Fair Return (8% of $622,606—Present Fair Value of Property)	49,808.48
Total Deficit below Fair Return	$ 22,265.98

The commission therefore approved the rate schedule proposed by the utility, but required it to submit a monthly statement of its income and expenses in order to enable the commission to alter the rate schedule if actual experience should prove that the assumptions on which the rate base had been established were untenable.

The rate schedule approved by the commission which became effective December 1, 1930, remained in effect until 1934 when the following changes were made in the domestic service rates applying to Glasgow, Hinsdale, and Malta. No change was made in the commercial heating rate.

DOMESTIC RATE EFFECTIVE APRIL 17, 1934

	Cubic Feet per Month	Cents per M.C.F.
First	3,000 or Less: $2:00	
Next	7,000	57
Next	15,000	45
Next	275,000	40
All Additional		30

Minimum bill: $2 per month
Prompt payment discount: None

SOURCE: *American Gas Association Records.*

Discuss the advisability of competition of gas companies from the point of view of the consumers, of the utilities, and of the general public.

C. Between Interstate and Intrastate Electric Utilities

11. Public Service Company of Colorado[1] (A)

For some years prior to 1929 the municipal electric plant of Julesburg, Colorado, had been delivering energy at the corporate limits of the city to the town of Sedgwick. The purchased energy was conveyed over a transmission line built and owned by the latter town and distributed in that town over its own municipal system. Sedgwick had furnished energy from its transmission line to a private company which distributed power in Ovid, a town between Julesburg and Sedgwick. The town of Julesburg

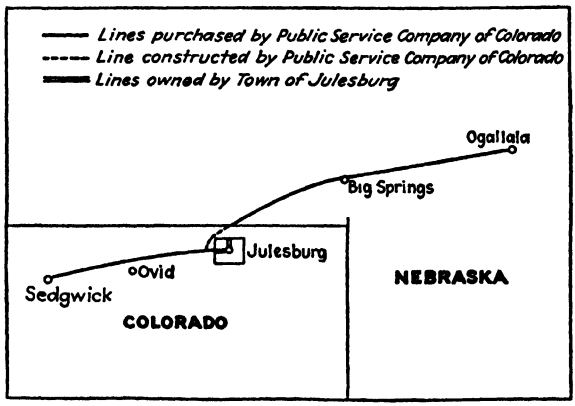


Exhibit 1.—Public Service Company of Colorado—Transmission lines of the Public Service Company of Colorado and the Town of Julesburg, Colorado.[2]

also supplied energy at its corporate limits for distribution in Big Springs, Nebraska.

Subsequently, the Public Service Company of Colorado purchased not only the distribution systems in Sedgwick, Ovid, and Big Springs, but also the transmission lines, one running west from

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[1] *Re Public Service Co. of Colorado*, P.U.R. 1929E, 467.

[2] Acknowledgment is due the editors of *Public Utilities Fortnightly* for permission to reproduce this map. (*Public Utilities Fortnightly*, September 5, 1929, p. 264.)

Julesburg past Ovid to Sedgwick, and the other running north across the state line to Big Springs (Exhibit 1). It also assumed the contract between Sedgwick and Julesburg, expiring in June, 1929. When this case came before the Colorado Public Utilities Commission, in May of that year, the Public Service Company of Colorado proposed at the termination of the contract to obtain all of its energy from a privately owned plant situated in Ogallala, Nebraska (Exhibit 1).

The Public Service Company of Colorado had already built its transmission line from Ogallala to Big Springs and was then engaged in constructing a line from a point on the Colorado-Nebraska border about one-half mile west of Julesburg, thus forming a connection between the Big Springs (Nebraska) and the Sedgwick-Ovid (Colorado) lines. The commission had entered an order requiring the company to show cause why, before making such a connection, it should not have first procured a certificate of public convenience and necessity. Furthermore, the commission asked why this transmission line would not so interfere with the operation of the municipal plant in Julesburg as to require either that the line be prohibited or that the commission "prescribe such terms and conditions as might be just and reasonable."

Evidence was submitted by the town of Julesburg to the effect that it had a large modern generating plant producing "quite a surplus of energy"; that large expenditures on this plant had been made in order to continue the sale of energy under the contract which had been assumed by the Public Service Company of Colorado for distribution in Sedgwick and Ovid. There was some evidence that the plant in Ogallala, Nebraska, was antiquated and of doubtful capacity. The Public Service Company of Colorado claimed, however, that it had entered into an advantageous contract and that it would assume the responsibility of giving adequate service to the consumers involved. Moreover, it contended that the transmission of energy from Ogallala, Nebraska, to the distribution systems of the Colorado towns of Sedgwick and Ovid was interstate commerce and that the Colorado Public Utilities Commission had no jurisdiction over contracts for the purchase of electrical energy outside of the state of Colorado.

The commission was impressed with the argument that the real issue in the case involved interstate commerce. In its analysis of the situation it quoted from the decision of the U. S. Supreme

Court which involved state regulation of interstate transportation by motor vehicles.[1] In this case the court had said:

Its primary purpose is not regulation with a view to safety or to conservation of the highways, but the prohibition of competition. It determines not the manner of use, but the persons by whom the high ways may be used. It prohibits such use to some persons while permitting it to others for the same purpose and in the same manner. . . . Its effect upon such commerce is not merely to burden but to obstruct it. Such state action is forbidden by the Commerce Clause.

In commenting upon the statement of the Supreme Court in the foregoing decision, the Colorado Public Utilities Commission said:

We are of the opinion that the . . . language of the Court in the Buck case applies with considerable force to the situation here. . . .

. . . . . .

. . . In so far as the purpose of the action by the state, as distinguished from its effect, is concerned, it would seem that the thing we are asked to do, namely, to protect intrastate commerce by prohibiting interstate, is the principal thing sought to be prevented by the constitutional provision.

It is admitted, in view of the Attleboro Case[2] . . . that this Commission would not have power over the rates at which energy brought across the state line may be sold at wholesale. But we are asked to go further and virtually prohibit the bringing of electricity into the state by saying to a company which is now lawfully engaged in distributing electricity under both municipal and State Commission authority that it cannot receive into its distribution systems in Sedgwick and Ovid, energy brought from another state. . . .

It appears, therefore, and the Commission so concludes that to prohibit respondent from making the connection in question not only would directly burden interstate commerce but it would obstruct and prohibit it.

The chairman of the commission in a dissenting opinion made the following statements:

I regret my inability to concur with my colleagues in the disposition of this case. I recognize, of course, that the issue herein is somewhat complicated and that there is some doubt as to whether the transmission of electric energy interstate as involved in this case is or is not a burden upon interstate commerce. . . .

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[1] *Buck* v. *Kuykendall*, 267 U.S. 307 (1925); P.U.R. 1925C, 483.

[2] 273 U.S. 83 (1937); P.U.R. 1927B, 348. See case entitled Attleboro Steam and Electric Co., p. 739.

. . . In my opinion, if this Commission would sustain the contention of Julesburg, it would only be regulating the distribution of electric energy within the state of Colorado, which would be purely a local matter under the police power of the state. . . . In other words, any regulation by this Commission under the circumstances would only indirectly affect interstate commerce and is necessary to protect or regulate matters of purely local interest. Since the Supreme Court of the United States has never directly passed on this exact question, I am constrained to dissent from the opinion of my colleagues.

To what extent may interconnection of light and power companies develop: (*a*) monopoly? (*b*) competition?

If all of the companies involved had been engaged in intrastate business, and hence under the control of the Colorado commission, should the local municipal plant have been protected from competition?

D. Between Taxicab Companies

12. NEW YORK TAXICAB INDUSTRY

The history of the New York City taxicab industry from 1922 to 1937 was one of intensive competition and declining rates. In 1922 fares were generally high and lacked uniformity. Gradually two general rates were established: one, of 30 cents for the first ½ mile, and 10 cents for each additional ¼ mile, for not more than two passengers; and the other, applicable to all rides on which more than two passengers were accommodated, of 40 cents for the first ½ mile and 10 cents for each succeeding ⅙ mile. This latter rate, known as the "70-60 rate," attracted competition, with the result that the number of taxicabs in New York City increased steadily and rates again fluctuated widely.

In 1925, the city established a legal maximum for taxicab fares of 20 cents for the first ⅓ mile and 10 cents for each succeeding ⅓ mile.[1] Subsequently, the prevailing rate adopted by a large majority of taxicab operators was the 30-20 rate or the 15 cents for the first ¼ mile and 5 cents for every ¼ mile thereafter charge. No minimum rate was specified by this municipal ordinance. The number of taxicabs on the city's streets continued to increase rapidly and reached a peak in 1926–1927 of 34,675.

Early in 1929, confronted with New York State's impending gasoline tax of 2 cents a gallon, two of the largest taxicab organizations in the city began agitating for a higher fare. Taxicab owners and operators in general protested against the tax, opposing it on the ground that the added burden would result in their complete ruin, particularly as they regarded the 15-5 rate as an absolute rock bottom fare. When the gasoline tax became operative on May 1, 1929, the campaign for fare increases began in earnest. Increased insurance rates were also cited by fleet operators as an argument for higher taxi fares.

The independent taxicab operators opposed this move for increased taxi fares. They claimed that the higher fare move-

[1] *City of New York, Code of Ordinances*, 1925, Chap. 14, Article 8.

ment was designed to put them out of business since they felt they could not obtain sufficient traffic at higher rates to enable them to earn a fair living. They claimed that 2 cents a gallon tax on gasoline did not, and could not, justify an increase of 5 cents a mile, or more, in rates. At this time, therefore, a rate war was waged between those favoring an increase and those favoring the retention of the then prevailing rate.

This war was suddenly complicated by the announcement of a new company, the White Horse Taxi Service Company, that it would seek to operate a fleet of cabs at 15 cents a mile, the lowest rate thus far contemplated. A storm of opposition greeted this announcement. The standard organizations presented figures showing that operation at such a rate would be ruinous. Taxicab officials saw a crisis threatening and one of them petitioned the mayor of the city of New York to appoint a public commission similar to the Transit Commission to regulate taxicab transportation in the city.

Meanwhile the police department refused to license the low-rate cabs, most of which were converted pleasure cars. It declared that the White Horse Taxi Service Company was nothing more than a "racket." The cut-rate fight, however, was not thus ended. It was taken up by the Amalgamated Taxi Associations which succeeded in establishing the legality of the rate of 15 cents a mile. At approximately this time, the situation was further complicated by the Chrysler interests placing in service a specially built Dodge Brothers taxicab. This move was shortly followed by the announcement that the Ford Motor Company would become a factor in the New York taxicab situation by supplying a small Ford taxicab which could be operated much more economically than any of the heavier machines supplied by General Motors, Chrysler, or other important manufacturers. Thus it appeared that unless some form of regulation was immediately imposed, the three largest motor-car manufacturing organizations in the country would take an active part in bringing about a disorganized and chaotic condition in the taxicab business in New York City.

The increasing traffic congestion on the streets and repeated objections to the cruising of taxicabs by such civic organizations as the Fifth Avenue Association together with the critical situation existing in the taxicab industry itself, finally led to the appoint-

ment by the mayor of a special commission to investigate the taxicab situation in the city. This commission found itself confronted with a most serious problem, not the least important aspect of which was the struggle between three contending factions.[1] These were composed of those who wished to have the 30-20 rate maintained, those who wished to have the fare increased, and those who demanded a flat rate of 15 cents a mile. The mayor of the city previously had vetoed a measure establishing a minimum rate of fare for taxicabs, although a maximum-fare law was in force. The courts had ruled that the police commissioner did not have the power to refuse to license cut-rate taxicabs merely because of their low rates. On September 23, 1930, the mayor's commission submitted its report on the existing situation, together with its recommendations for the future.

The mayor's commission stated that it believed conditions in New York City's taxicab industry were decidedly unhealthy, but attributed this state very largely to what it termed the adolescent period of its development. It held that the industry had recently outgrown its infancy, but had not yet obtained the importance of a full-fledged transportation agency to which its size, from the point of view of the total number of passengers carried, gross revenues received, and investment involved, entitled it.

The indictment returned by the commission against the taxicab industry pointed out, among other things: (1) that it was responsible for many avoidable accidents; (2) that it was largely in the hands of operators without the financial responsibility necessary to assume full liability for such accidents; (3) that it was responsible for excessive cruising with the resulting addition to traffic congestion, added hazards, and unnecessary costs; (4) that it was uneconomical and inefficient in the utilization of its cabs; (5) that it was characterized by financial insecurity and offered no assurance of steady employment to its drivers; (6) that drivers having no stability of employment were compelled to operate an excessive number of hours per day; (7) that the resulting fatigue tended to increase accidents; and (8) that it failed to

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[1] *Report of the Mayor's Commission on Taxicabs*, September 23, 1930, New York City. The personnel of this commission was as follows: Frank P. Walsh, Chairman, George W. Mixter, Secretary; Leonor F. Loree, Philip LeBoutillier, Daniel L. Reardon; Leland Olds, Economist; and J. I. Metcalf, Engineer.

provide the safe, economical, and available transportation which the public had a right to demand, and at the same time that it failed to provide sure remunerative employment to the workers and stable returns to the investors.

At the time of the submission of this report to the mayor, the taxicab industry apparently was suffering from all the evils resulting from excessive competition. Although the industry had outgrown the highly subdivided ownership of individually owned horse-drawn hacks which it inherited from the past, it was, nevertheless, controlled by approximately 10,000 separate owners. There were 29,983 taxicabs licensed between April 1, 1929, and March 31, 1930. The mayor's commission reported that more than 60 per cent of all the cabs were operated in units of from 1 to 25 cabs. Naturally, this resulted in duplication of equipment and management which, in turn, involved uneconomical operation. There was also an excessive number of drivers. Whereas it was estimated that 40,000 would have been sufficient to render adequate service if the industry were properly organized, figures from the police department showed that between April 1, 1929, and March 31, 1930, there were 73,626 hack drivers licensed in the city. This excess deprived the drivers of all sense of security in their jobs and reduced their feeling of responsibility in operating public vehicles. This feeling of insecurity, in turn, resulted in unusually high labor turnover, amounting in the case of one important fleet to 460 per cent, and prevented most organizations from developing a responsible and stable operating personnel.

Another phase of the problem of the intense competition was the excessive cruising which was due in part to the lack of adequate provision for taxi stands. The police department had no specific authority to originate taxi stands nor was it possible to assure the use of such stands, if once established, so long as the intense competitive situation then existing continued to prevail. The extent of this cruising was apparent from the fact that 2,000 empty cabs had been counted passing a single Fifth Avenue corner in one day. Police efforts to reduce cruising on Fifth Avenue, however, had been entirely fruitless. Police department counts also showed that 71½ per cent of the cabs operating in the Pennsylvania station zone between 8:30 A.M. and 9:30 A.M. and 64.6 per cent of those operating between 5:30 P.M. and 6:30 P.M.

were empty. Similar figures had been obtained from counts made at other points.

The mayor's commission stated that the elimination of excessive cruising required cooperation between the city and a taxicab organization sufficiently inclusive to make possible a planned distribution of cabs. The mere provision of taxi stands without coordinated operation was deemed insufficient as a cure for excessive cruising because of the futility of placing upon police traffic officers the additional burden of supervising the operation of nearly 20,000 taxicabs, a duty properly in the sphere of management.

Excessive cruising materially aggravated the congestion in the city streets, not only because of the large number of empty cabs involved but because of their method of operation. A cruising cab, generally, proceeded at very slow speed and its driver seized upon every opportunity to pull in toward the curb as frequently as possible. This made the operation of private vehicles and motor buses very difficult. Taxicab cruising also resulted in excessive driver fatigue which, combined with the increased congestion thereby created, in turn resulted in increasing the number of accidents.

Not only was the public welfare thus affected by increased congestion and accidents, but taxicab operators themselves were unable to earn a reasonable profit under conditions which compelled them to cruise without fares between 50 and 60 per cent of the distance which they normally covered in a day. The mayor's commission reported that, in its opinion, the city of New York eventually would have to adopt a unified plan for the economical utilization of cabs at every hour of the day, based on a study of public requirements, in place of the haphazard methods of cruising taxicab service.

Cruising was, however, practically forced upon taxicab drivers under conditions existing in 1930, since there was a city ordinance which read as follows:

> No public hack while waiting employment by passengers shall stand on any public street or place other than at or upon a public hack stand designated or established in accordance with this article.[1]

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[1] *Report of the Mayor's Commission on Taxicabs*, p. 20.

There were, however, at that time approximately 600 taxi stands having a total capacity of slightly more than 2,500 vehicles. Some of these stands could be used for only a limited number of hours. Hence parking space was entirely inadequate for the number of licensed hacks within the city. This fact, coupled with the regulation prohibiting taxicabs from soliciting business by standing at any other place than a taxi stand, made cruising compulsory.

Those who advocated a planned movement of taxicabs by means of dispatching in place of continuous cruising naturally presupposed coordinated operation of taxis. It seemed unlikely that either the independent owner-driver or the small fleet owner would have a place in such a program.

In connection with the taxicab accident situation, statistics obtained by the mayor's commission indicated that taxicab drivers who were paid on a mileage basis were relatively safer drivers than the operators of private cars. These records indicated that the general impression that the taxicab driver was made reckless by low rates appeared to be unfounded. Furthermore, the impression that individual owner-drivers were safer than the drivers of company-owned taxicabs was also statistically disproved. It was even indicated that large companies could materially improve their accident records through regular inspection of rolling stock, similar to that carried out by the railroads, and through personnel methods involving selection, supervision, and training of drivers, and assurance of suitable employment at fair wages with reasonable hours of work.

An additional factor in favor of large scale operation of taxicabs was the inability of many smaller enterprises to meet all legitimate claims made against them as a result of accidents. To the extent that such financially responsible operations were not assured, the general public was forced to shoulder some of the obligations of the industry. Even though operators were adequately covered by insurance, nevertheless they frequently passed on certain burdens of their business to their communities. Taxicabs, for example, were often purchased with a down payment of cash and then turned back in a badly depreciated condition when the owner was unable to meet his payments. Such an operator sometimes left bills for supplies unpaid. Also when taxicabs were purchased with borrowed money and no adequate provision for depreciation

was made, it was impossible to replace the cab when it became worn out.

In 1930 the rate charged by 91 per cent of the taxicabs in the City of New York was the so-called 15-5 rate. The mayor's commission believed that in the face of the highly competitive conditions existing in the industry, this rate did not provide either a decent living for the drivers or a reasonable profit to the owners. It was pointed out that other results of the excessive competition were the use of more luxurious cabs, excessive cruising, and driving at excessive speeds. If taxicab operations had been centralized in one large company, it was believed that a purpose-built cab could have been used which could probably have been obtained at an average cost of $500 less than the taxicabs then generally in use. Because of the large purchasing power of such an organization, the cost of gasoline, oil, tires, and other supplies, as well as garage costs, could probably have been materially reduced, so that under unified operation, the existing 15-5 rate could probably have yielded an able management a fair profit and enabled it to pay a reasonable wage to its drivers.

According to the commission's report, revenue derived from the taxicab industry in New York almost equaled the total revenue of all other agencies of local transportation combined. The commission estimated this industry's annual income to be approximately $120,000,000, or about $144,000,000 including tips, as contrasted with the total gross income of subways, elevated, streetcar, and bus lines of approximately $160,000,000. The total number of passengers carried by the taxicabs in the City of New York in 1929 was 346,000,000 or one-third as many as all the street service lines in the city.[1]

In 1929, the convention of the National Association of Taxicab Owners adopted a resolution describing the industry as a public utility and advocating the requirement of a certificate of public convenience and necessity for permission to engage therein. The mayor's commission noted that there appeared to be a growing tendency to merge the taxicab industry with the general system of street transportation through direct or indirect affiliation with the street railways. The theory was that the general trans-

[1] *Report of the Mayor's Commission on Taxicabs, op. cit.*, p. 14. The accuracy of these annual income figures was challenged by the editor of the *Transit Journal* in *The New York Times*, December 6, 1932, p. 20.

portation interests of a city could be most economically and most satisfactorily served by the combined operation of all transit facilities. It stated that the problem of taxicab regulation was to fit public automotive vehicles giving individual service at low rates into the general city transit system without unduly congesting the streets.

The mayor's commission stated that the certificate of convenience and necessity requirement bridged the gap between unregulated competition and regulated monopoly. The commission added, however, that this device would have to be carefully used if it was not to deprive the public of the benefits of competition without giving it the advantages of a single unified operation under municipal regulation and control. The commission realized that some provision would have to be made to prevent domination of the taxicab business by a single cab manufacturer from being furthered by the certificate requirement.

The commission summed up this report by presenting a summary of conclusions, recommendations, and suggestions in which it urged the unification of all taxicab operations under a single franchise with due regard, however, to the interests of all parties at that time engaged in the industry, and the possibility of coordinating such taxicab operations with the city's general rapid transit system. It recommended that the taxicab industry of New York City should be a public utility and should be placed under the jurisdiction of a taxicab control bureau. Emphasis was placed upon the desirability of controlling the number of cabs in service through certificates of public convenience and necessity. It was stated that additional certificates should be issued only on the basis of demonstrated need and with assurance of the ability of prospective operators to assume full financial responsibility for all liabilities incurred. The commission believed that the taxicab industry should be treated as a vital part of the city's transit system, and that every step in carrying out the proposed plan of regulation should be guided by the belief that the city would best be served by encouraging a trend toward unified operation under a franchise. The commission was convinced that the number of taxicabs in service was excessive, and that under unified control adequate service could be rendered by approximately 14,000 cabs.

In accordance with the suggestions of the mayor's commission, a bill was submitted to the municipal assembly in January, 1931,

providing for the creation of a Board of Taxicab Control. After extended negotiations this bill was finally passed late in January, 1932.[1] Provision was made for a board of control composed of six members, one of whom was the police commissioner of New York City. The remaining five were appointed by the mayor and served without salary. In general, the powers given to the board followed the recommendations of the mayor's commission. It was provided that no cab should be operated or licensed until the Board of Taxicab Control, after a hearing, should declare that public convenience and necessity required the service of such vehicle. Other provisions included the right of the board to determine financial responsibility and fitness of management, officers, and stockholders of cab companies, to determine working conditions necessary for safe and efficient operation of public vehicles, and to provide for the establishment of hack stands. The board was also directed to hold hearings for the purpose of drawing up a code of rules and regulation, including a schedule of rates.

The Hack Bureau of the police department was to cooperate with the Board of Taxicab Control in enforcing any rules and regulations that might be drawn up. The bureau was to retain its already existing functions, including the issuing, revoking, and renewing of licenses for public vehicles and drivers of such vehicles, and the periodic inspection of public vehicles. All licensing, however, was to be subject to the prior issuance of a certificate of public convenience and necessity by the board.

Objections to the proposed system of regulation were raised by independent taxicab operators on the grounds that the plan fostered monopoly and would result in the elimination of the small operator from the field.

In November, 1932, a code for the regulation of taxicabs was adopted by the board, to become effective December 15, 1932. Because it was felt that the city could not legally establish a minimum rate of fare, the code provided that 15 cents for the first ¼ mile and 5 cents for each additional ¼ mile should be the maximum fare charged by taxicab operators. A procedure was set up for the issuance of certificates of public convenience and necessity on the basis outlined above. Another objective of the new code was the reduction of cruising. The establishment of

[1] *Local Laws of the City of New York*, 1931, No. 31.

public hack stands by the police commissioner was encouraged and cruising cabs were prohibited from soliciting business in the vicinity of such stands. Furthermore, it was provided that no cab should operate so that over a period of 30 days the amount of unpaid mileage should be excessive.

In April, 1933, the Board of Taxicab Control was abolished, and the regulation of cabs was vested in the Board of Aldermen.[1] The latter body was given exclusive power to modify any of the existing regulations affecting cabs. Enforcement of all ordinances relating to the taxicab industry was transferred to the police department. After the abolition of the Board of Taxicab Control, licensing was continued by the police department on a so-called "charter basis." While no specific city ordinance existed authorizing licensing by the department, the function was assumed on the basis of a charter amendment in 1925 by which licensing was transferred from the Department of Licensing to the police department.

Mayor LaGuardia in February, 1934, announced the appointment of a committee, headed by Bernard S. Deutsch, president of the Board of Aldermen, to study the taxicab industry and submit recommendations for its regulation and improvement. Membership of the board included representatives of fleet operators, independent owners, labor, the public, and the Board of Aldermen. The committee in its report submitted in July, 1934, found the taxicab industry to be "thoroughly unsound in organization and operation" with "too many cabs and too many licensed drivers." In order to correct these conditions the report favored "economic limitation" rather than an arbitrary limit on the number of cabs. In order to bring about this economic limitation, it was proposed that maximum hours and minimum wages be set for drivers and that more rigid requirements be made to insure financial responsibility of both operator and insurer. The committee found that on June 27, 1934, there were 15,122 cab licenses issued, of which 13,950 were in operation. On May 10, 1934, there were 53,713 hack drivers' licenses outstanding. It was stated that a maximum of about 10,000 cabs and 35,000 drivers would be sufficient to supply the city's needs.

Early in March, 1936, a committee of the New York State Legislature made public a report on regulation of the New York

[1] *Local Laws of the City of New York*, 1933, No. 4.

City taxicab industry. This committee found that the number of cabs in operation on January 1, 1936, was adequate, and it was proposed that no more licenses be issued without proof of public convenience and necessity. The establishment of uniform fares, supervision of hours and working conditions, and more stringent insurance requirements for both owners and drivers were favored. The need for more public hack stands was emphasized as a remedy for cruising. The committee proposed that regulation be put in the hands of the Transit Commission, on the grounds that the taxicab industry was an integral part of the city's transportation system and could be most effectively regulated by that body which already had control over other forms of transportation.

Licensing of cabs on a "charter basis" continued until March, 1937, at which time a law was passed specifically authorizing the Hack Bureau to regulate the taxicab industry.

In order to carry out the provisions of this act, the Hack Bureau was ordered to determine the total number of cabs in actual operation at the time of the enactment of the ordinance, and the division of this total between fleet and independent operators. It was found that on March 3, 1937, there were 16,962 licensed cabs in the city, of which about 13,600 were in operation. Of this latter number, about 8,300 belonged to fleets and 5,300 were operated by individuals.

Provision was made for the Hack Bureau to hold public hearings not more than once a year in order to determine whether public convenience, welfare, and necessity required the issuance of additional cab licenses. If such were found to be the case, the additional licenses were to be issued so that the ratio between fleet and independent operators remained the same.

In addition to limiting the number of cabs in operation, the 1937 law provided that the rate of fare to be charged should be the 35-20 rate, or 20 cents for the first ¼ mile, and 5 cents for each additional ¼ mile.

In May, 1937, the right of the city to limit the number of taxicab licenses was contested in a suit before the New York Supreme Court.[1] It was claimed that the ordinance deprived an unsuccessful applicant for a license of his rights and privileges without due process of law, but the court upheld the law.

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[1] *Rudack* v. *Valentine*, 295 N.Y.S. 976.

To what extent should the taxicab industry be regulated?

If the taxicab industry is to be regulated as a public utility, should regulation extend to control of minimum rates?

Do you agree with the statement that "the present magnitude of the taxicab industry in New York City is perhaps the best evidence of its right to join the other public utilities as a part of the city's regular transit system"?

Compare the issue with reference to the limitation of the number who should engage in the taxicab business with the same issue in the case of the New State Ice Company.

2. Significance of Load Factor in Utility Field

A. In Combination of Private Power Plant with Central Station Facilities

13. DEEPWATER POWER STATION PROJECT

During 1926 and 1927, the American Gas and Electric Company sought a means of providing additional generating capacity on an economical basis for the use of its subsidiary companies, Atlantic City Electric Company, operating in nearly all cities and towns of southern New Jersey, and a group of companies later combined under the name of Delaware Power and Light Company, operating in Wilmington, Delaware, and vicinity.

The Atlantic City Electric Company supplied its entire territory from a steam electric generating station located in Atlantic City, and from a small 11,000 volt interconnection under the Delaware River with the Wilmington and Philadelphia Traction Company. Coal freight rates to Atlantic City were comparatively high, but if a plant could be located somewhere on the Delaware River below tidewater, a material reduction in fuel cost could be realized. At such a location, for example, coal could be brought by barges from Norfolk, Virginia, or from Philadelphia, or it could be shipped by rail from the interior of Pennsylvania where anthracite "fines" could be obtained at reasonable prices. Such a diversification of sources of supply would make a power plant so located practically independent of any one coal company.

The group of Delaware properties, later operated as Delaware Power and Light Company, obtained power from a comparatively small electric generating plant located in the city of Wilmington, and also from an interconnection with the Philadelphia Electric Company. Because of the growth in the system load, it became necessary to investigate methods of providing additional generating capacity for these properties.

In 1918 E. I. du Pont de Nemours & Company had constructed a power plant at Deepwater in Salem County, New Jersey, where its dye works were located. At the time of its erection, this plant

was both modern and efficient. High temperatures and pressures[1] and back-pressure turbines had not at that time been introduced in power plant design. The du Pont Station, however, was able to achieve an overall annual average boiler efficiency of 81 per cent. This power plant supplied the company's dye works with large quantities of steam for heating and process work, and also supplied the company with power. It was so constructed that it could burn either coal or oil. Even as late as 1925 it was considered a modern plant, but in that year plants operating at higher temperatures and pressures began to appear, and by 1927 such installations especially in conjunction with back-pressure turbines were being generally utilized. Even at that time, however, the du Pont power plant was in no way antiquated. Nevertheless, the company's engineers considered the cost of remodeling it for use of higher pressures and higher temperatures, and of installing back-pressure turbines which would exhaust at a sufficiently high pressure to serve the varied needs of the dye works.

From consideration of all the above factors, it appeared that the construction of a modern power plant in the vicinity of Deepwater to supply both the electric requirements of the two utility companies and the steam and electric requirements of the du Pont Company might prove advantageous to all parties concerned.

Consequently, the American Gas and Electric Company inquired whether E. I. du Pont de Nemours & Company would be interested in purchasing its power requirements from a utility company if the latter erected a plant in the vicinity of Deepwater. The Atlantic City Electric Company and the group of Delaware properties had already developed loads requiring the generation of approximately 650,000 pounds of steam per hour in their territories, and these loads could be most economically served from such a location. The du Pont plant carried a load approximately equal to one-half that of the utilities. Because of diversity of demand, the assumption of the combined loads by a single plant would result in lower costs of operation.

The resulting negotiations led to an agreement between the power companies and E. I. du Pont de Nemours & Company, by

[1] Pressures of 500 pounds or more were not generally used before 1925 or 1926. Temperatures of 750° F. were not commonly used before 1927 or 1928.

the terms of which the power companies were to erect a power plant at Deepwater and devote certain equipment to the needs of the du Pont dye works. E. I. du Pont de Nemours & Company agreed to bear its share of the fixed charges on the portion of the equipment installed in the new plant which was devoted exclusively to its own needs.

In the early part of 1928, the United Gas Improvement Company acquired the above mentioned group of electric utility properties located in Delaware, and thus became interested in the Deepwater project, joining with American Gas and Electric Company in the construction of the Deepwater plant, on which work was started at about that time.

The Deepwater power station was financed and constructed by the American Gas and Electric Company and the United Gas Improvement Company, with the intention that, upon completion, the plant would be physically divided and absolute title to the respective interests vested in a subsidiary company of each. Under this arrangement, each of the ultimate owners of the plant would have, after creating the necessary mutual easements, a substantially complete generating station of its own.

The project was not constructed symmetrically about a median line, but was laid out in accordance with the most economical design, keeping in mind the proposed ultimate division. For illustrative purposes, however, the main generating station proper, that is, the boiler plant and turbine room, may be considered as having comprised three distinct sections, the northern and southern sections being devoted to the installation of equipment for the utilities, and the central section for the du Pont equipment. Each of the utility sections contained a 1,350-pound standard boiler and one reheat boiler, whereas the du Pont section contained two standard boilers. In the turbine room, each of the utility sections, as well as the du Pont section, contained a 12,500-kilowatt high-pressure turbine. The throttle steam at 1,200 pounds pressure, and 750°F. was supplied from the standard boilers. In the utility sections, the exhaust from these high-pressure units passed through the reheat boilers, and thence to 40,500-kilowatt low-pressure turbines which exhausted into condensers. In the du Pont section, however, no low-pressure turbine was provided. The 400-pound exhaust steam from the high-pressure turbine, before being returned to the boilers, was

passed through a bank of seven high-pressure evaporators, the make-up[1] for which was supplied by direct water lines from the du Pont dye works. The vapor delivered by the evaporators at 180 pounds per square inch pressure was passed through a superheater fed by live steam and raised to 440° F. temperature, and delivered to the du Pont dye works to be utilized for process work and heating.

In case the du Pont high-pressure turbine was out of service, steam could be supplied directly to the evaporators from the high-pressure manifolds through a reducing valve to supplant the exhaust of the du Pont high-pressure turbine.

Electrically, all three sections of the Deepwater plant were interconnected in such a way that, if necessary, power could be readily interchanged. Energy generated by the du Pont high-pressure turbine was transmitted through underground cables to the du Pont plant at a generator voltage of 11,000. The 11,000-volt du Pont equipment was also connected with the power companies' buses through transformers so that the load could always be adjusted to meet the process steam demand. If the process steam load produced more than the required electrical power, the excess flowed into the utility system and was credited to the du Pont company. Conversely, an excess demand for electric power was drawn from the utilities' power systems.

Instead of purchasing power and process steam separately, the du Pont company bought metered heat as 1,200-pound steam delivered from the boiler room to the turbine allocated to its load (or to the reducing valve if the turbine was not in operation), and consequently was entitled to all electricity generated by it. The cost of the steam to the E. I. du Pont de Nemours & Company was dependent on the steam generation cost for the entire station. Consequently, the du Pont company was permitted to participate in the selection of the equipment installed to the extent that such selections might affect the overall operating efficiency of the station.

For the purpose of operating the Deepwater Station in the interests of all parties, a corporation named Deepwater Operating Company was organized. This company had no property inter-

[1] Make-up is raw water which must be added to the boilers to make up for losses of steam which are not returned in the form of condensate.

ests whatsoever but was merely an agency which functioned as a custodian of the property and was charged with the duties of operation and maintenance.

The E. I. du Pont de Nemours & Company contracted for the purchase of steam for a period of 10 years, and obligated itself to bear its proportionate share of the carrying charges covering return on investment, depreciation, property taxes, and property insurance.

Upon the completion of the construction work and commencement of operation, the American Gas and Electric Company designated the Atlantic City Electric Company to take title to its interest in the station. The United Gas Improvement Company, through its subsidiary, the Philadelphia Electric Company, caused the organization of the Deepwater Light and Power Company to take title to its interests in the Deepwater Station, and the Deepwater Light and Power Company contracted to sell its entire output to the Philadelphia Electric Company, utilizing for the transmission of the energy specially constructed transmission lines and submarine cables under the Delaware River and also certain transmission facilities of the Delaware Power and Light Company. Interconnection with the Philadelphia electric system contributed in a large measure toward securing a high station load factor and consequent economies of operation. The Philadelphia Electric Company supplied the entire electrical requirements of the Delaware Power & Light Company from energy generated either at the Deepwater Station or from other stations in its system.

The Atlantic City Electric Company and the Deepwater Light and Power Company had prior rights for the use of the installed electrical capacity, with the exception of the du Pont turbine, but in the event that the electrical requirements of the du Pont company exceeded the generation of the du Pont turbine, and if at that time the station was not entirely loaded by the utility companies, the du Pont company was entitled to purchase additional power at the average station cost. If, however, the generation of the du Pont turbine was insufficient to meet the requirements of the du Pont company and at the same time the station was entirely loaded by the utility companies, the du Pont company could purchase its additional requirements from the Atlantic City Electric Company. In such a case, the latter company had to

place in operation some of its less efficient generating equipment in order to supply the excess load thus imposed on its system.

Under the arrangements between the two utility companies, either one was at all times entitled, in addition to its specifically allotted capacity, to all capacity unused by the other. Owing to the nature of the sources of generation of the Philadelphia electric system and to the size of the system load, it was possible for that company to utilize the Deepwater Station as a base load station, operating at a very high load factor and dovetailing with the load imposed by the Atlantic City Electric Company. Thus, although the load factor of the Atlantic City Electric Company was, generally speaking, its natural system load factor, having pronounced daily and seasonal peaks because of the preponderance of its lighting business, the above mentioned dovetailing of the load of the Philadelphia Electric Company permitted a very high overall station load factor, a circumstance which was exceedingly beneficial to all parties involved.

In midwinter, when the du Pont plant required large quantities of steam for heating purposes as well as for process work, the turbine allocated to its service generated electrical energy in excess of the electrical requirements of the du Pont company. At such times, the excess power thus generated was sold to the utility companies at the average cost of generation, based principally upon the cost of heat energy absorbed by the turbine from the steam passing through it.

At the time of the construction of the Deepwater plant, the average steam requirement of the du Pont company was 250,000 pounds per hour, with peak demands of 300,000 pounds per hour. Thus the boiler capacity of 400,000 pounds per hour allocated to the du Pont company was more than adequate to meet the needs of the company. In the years following this installation, both the steam and electric loads of the du Pont plant increased considerably. By 1935 the company's steam demand was between 500,000 and 600,000 pounds per hour. Consideration was given to the possibility of installing another unit in the du Pont section of the Deepwater plant. No action was taken in this direction, however, because overhead charges on a new unit would have been prohibitive in view of the relatively small amount of steam required above the capacity of the original installation.

To supply the increased steam requirements of the dye works some of the 12 boilers of the du Pont plant constructed in 1918 were used. The number of these boilers placed in operation varied from two or three in the summer months to seven or eight during the winter. Electricity requirements of the dye works above the capacity of the du Pont section of the Deepwater plant were met by direct purchases of energy at favorable rates from the utilities with which the Deepwater plant was interconnected.

During the winter of 1936–1937 the steam demand of the dye works reached a peak of 750,000 pounds per hour. Because of this increased demand it was thought advisable to take steps toward a long-time plan for meeting both steam and electricity requirements of the works. Negotiations were therefore commenced between the utilities and the du Pont company. The engineers of the latter company stated, however, that in considering the advisability of expansion of the Deepwater plant they would make their calculations of the cost of alternative methods of producing the power on the basis of a different type of unit from the one originally installed in the Deepwater plant.

Research work was being conducted concerning the treating of water used as boiler feed. From this study the du Pont engineers hoped to be able to eliminate the need for evaporators such as had been included in the original Deepwater unit. In the proposed unit, water for the boiler would first be passed through a special treating plant. As in the earlier layout, steam from the boiler would pass through a turbine. In the new installation, however, the turbine would exhaust at 175 pounds directly into the dye plant mains. Instead of depending upon condensate for boiler feed, the use of new water would be possible because of the installation of the treating plant.

The use of the installation described would result in substantial increases in efficiency as compared with the original unit. For example, it was estimated that from the same quantity of steam there could be produced approximately 56 per cent more electricity than by the old method. In addition to this increase in efficiency, the elimination of the expensive evaporators would be a saving to the du Pont company in the event that a new unit was installed. This saving would more than offset the additional investment involved in the construction of a water-treating plant for boiler feed.

Another factor favoring the elimination of the evaporators was the contract between the du Pont company and the utilities. By the terms of this agreement, in the event of a termination of the arrangement involving the Deepwater plant, the du Pont company was required to pay to the utilities the unamortized balance on any special equipment used to supply its requirements. This special equipment amounted to about one-third of the du Pont unit of the Deepwater plant. If a water-treating plant was substituted for the evaporators, the amount of special equipment would be reduced to one-fourth of the total investment.

Early in 1938, it was stated that because of the decrease in load of the dye works resulting from business depression, no active steps were being taken toward increasing the capacity of the Deepwater plant. It was anticipated, however, that steps would be taken in this direction when the du Pont company's load again increased.

Both utility companies and the du Pont company profited from the cooperative arrangement involving the Deepwater plant. All three parties were able to attain in the plant a degree of reliability and flexibility which would have been impossible had each of them erected a plant to serve its own territory or needs exclusively. A much greater investment in standby equipment would probably have been necessary if such a course had been adopted. The cooperation of the three parties made possible a more efficient plant than could have been economically constructed and operated by any one of them. Furthermore, fuel costs were decreased, since the barging charges per ton of coal decreased as the volume of the shipments increased, and labor, supervision, and other overhead costs were materially reduced. Coupled with these advantages, there was obtained, as a result of cooperation between the interested parties, a very high station load factor.

Should the American Gas and Electric Company and the United Gas Improvement Company have erected and operated a joint station if the du Pont load had not been available?

To what extent should public utility companies cooperate with industrial consumers in the construction and operation of plants to supply power and steam?

B. Interchange of Electric Energy by Two Utility Systems

14. Consolidated Edison-Niagara Hudson Interconnection

In 1931 the New York Power and Light Corporation applied to the Public Service Commission of New York for permission to construct an electric transmission line having a normal operating capacity of 160,000 kilowatts at 132,000 volts, for the purpose of connecting its electric generating and transmitting system with the system of the New York Edison Company.

The Niagara Hudson Power Corporation was formed in June, 1929, as a holding company for certain utility companies located in upper New York State. Through its subsidiaries, including the New York Power and Light Corporation, the Niagara Hudson Power Corporation furnished gas and electricity to large sections of New York State from Buffalo to Albany. On December 31, 1930, the electric generating facilities of the Niagara Hudson system included 93 hydro stations with a total capacity of 1,041,000 kilowatts and 6 steam stations with a combined capacity of 529,000 kilowatts. The generating facilities of the system were interconnected to provide for the interchange of energy among the various subsidiaries.

The New York Edison Company had been for some time a subsidiary of the Consolidated Gas Company of New York, originally formed in 1884 as a result of the consolidation of several gas companies doing business in New York City. In the years following, additional companies were acquired which furnished both gas and electricity to the metropolitan area. Directly, or through its subsidiaries, the Consolidated Gas Company of New York furnished virtually the entire supply of electricity to Manhattan, Brooklyn, the Bronx, and a large part of Queens and Westchester counties, and served gas to Manhattan, the Bronx, and sections of Queens and Westchester. Through another subsidiary, it also engaged in the steam heating business in Manhattan. On December 31, 1930, the electric generating facilities of the system consisted of steam stations with a total capacity of 2,075,250 kilowatts. Of approximately 11,500,000 shares of

Consolidated Gas Company common stock outstanding in 1931, the Niagara Hudson Power Corporation was reported as owning 201,500 shares.

In 1936 the Consolidated Gas Company of New York simplified its corporate structure by merging several of its subsidiaries, including the New York Edison Company, Inc.,[1] with the parent company. The name of the latter was also changed during the year to Consolidated Edison Company of New York, Inc.

In the hearings before the Public Service Commission of New York on the proposed interconnection of the Niagara Hudson and New York Edison systems, the benefits to be derived by these systems from such an interconnection were described.[2] It was stated that the New York Edison system had somewhat different load characteristics from almost any other utility in the country and certainly from any other utility in New York State. A particularly noticeable characteristic was that for a period of two or three hours a day during December, the demand exceeded by more than 200,000 kilowatts that experienced at any other time of the year. The company had to have capacity sufficient to take care of these short, sharp peaks. This apparatus was virtually unused, however, during the remainder of the year. The New York Edison system load was also subject to rapid and substantial fluctuations on certain other occasions; for example, during a thunderstorm, such a rapid darkening of the sky obviously produced a sudden and sizeable rise in the system load.

Available facilities of the Niagara Hudson system were well adapted to meeting the load requirements of the Edison company. The generating stations of the former system were mainly hydros. Thus, these plants could meet short, sharp peaks in the load by ponding their water. For example, a hydro station might be located on a stream with a normal flow capable of delivering 10,000 kilowatts regularly. However, by ponding, the water behind the dam would be allowed to accumulate so that the same stream might be capable of delivering 30,000 kilowatts for a short period. By such a process, the Niagara Hudson plants

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[1] The New York Edison Company, Inc., had been incorporated in 1935 as a consolidation of The New York Edison Company and a subsidiary of that company, The United Electric Light & Power Company.

[2] State of New York, Department of Public Service, State Division, Public Service Commission, Cases Nos. 6822 and 6823 (1931).

EXHIBIT 1

CONSOLIDATED EDISON-NIAGARA HUDSON INTERCONNECTION
SUMMARY OF ANNUAL ELECTRIC SALES OF CONSOLIDATED EDISON SYSTEM: KILOWATT-HOURS, 1931–1936

1931 = 100

	1931		1932	1933	1934	1935	1936	
	Index	Kilowatt-hours					Index	Kilowatt-hours
Residential	100	728,131,378	107 9	108 9	117 2	123 9	138 6	1,009,148,561
Commercial	100	2,351,763,354	93 4	92 4	94 8	98 2	103 8	2,442,109,107
Industrial	100	659,468,921	95.0	87.0	90 6	91 6	98 7	651,161,978
Railroads	100	332,077,022	105 0	134 3	154 4	159 5	210 0	697,524,272
Municipal	100	237,781,570	109 2	100 4	107 6	124 2	139 2	331,030,032
Total	100	4,309,222,245	97 9	98.1	103 3	107.7	119.1	5,130,973,950

SUMMARY OF ANNUAL ELECTRIC SALES OF CONSOLIDATED EDISON SYSTEM: REVENUE, 1931–1936

1931 = 100

	1931		1932	1933	1934	1935	1936	
	Index	Revenue					Index	Revenue
Residential	100	$ 51,982,534.72	101 0	99.3	106 4	108.4	111.3	$ 57,856,970.22
Commercial	100	106,129,930 20	92.0	89.7	92.0	94.1	94.5	100,344,060.36
Industrial	100	9,215,583 53	94.0	84 5	92.6	97 0	106.7	9,830,137.31
Railroads	100	3,057,623.11	104.2	123.0	149.5	157 1	188.8	5,773,064.54
Municipal	100	11,232,394.94	105 8	100.3	100.4	63.5	63.0	7,088,669 32
Total	100	$181,618,066.50	95.7	93.4	97.6	97.5	99.6	$180,892,901.75

could be of service to the Edison system in meeting the occasional peak demands.

The types of markets served by these two systems differed substantially as may be seen from Exhibits 1, 2, and 3. In addition to the marked difference in distribution of electric sales by classes of consumers, the entire market of the Edison company was concentrated in a relatively small area, while that of Niagara Hudson included a substantial part of upstate New York. Despite the occurrence of the daily peaks of the two systems at approximately the same time, there was some diversity because Buffalo, at the western end of the Niagara Hudson system, was about 300 miles from Albany, at the eastern end; hence the peak at Buffalo normally occurred slightly later than that in Albany.

The markets served by the two systems also differed from the standpoint of cyclical demand for power. Exhibits 1 to 3 illustrate the effect of changing business conditions on the demand

EXHIBIT 2

CONSOLIDATED EDISON-NIAGARA HUDSON INTERCONNECTION
SUMMARY OF ANNUAL ELECTRIC SALES OF NIAGARA HUDSON SYSTEM: KILOWATT-HOURS, 1931–1936

1931 = 100

	1931		1932	1933	1934	1935	1936	
	Index	Kilowatt-hours					Index	Kilowatt-hours
Farm	100	19,570,744	114.6	116.6	125.0	140.1	169.7	33,207,279
Residence	100	356,772,384	102.6	101.5	108.5	117.1	129.1	460,660,770
Commercial	100	472,416,385	101.5	96.2	102.3	109.4	120.1	567,208,295
Industrial								
General	100	1,012,337,931	77.2	86.5	91.7	102.2	131.6	1,331,819,394
Special—Chemicals	100	1,645,534,284	63.5	72.7	89.5	93.9	128.6	2,116,785,205
Special—Mechanical	100	460,291,348	76.6	86.7	101.7	124.0	142.3	654,808,296
Off-peak Surplus	100	295,151,844	69.2	71.9	75.1	55.1	59.1	174,451,538
Total Industrial	100	3,413,315,407	69.8	78.6	90.5	97.1	125.3	4,277,864,433
Electric Transportation	100	189,044,111	81.3	70.8	63.8	59.3	57.7	109,133,593
Municipal—Distribution	100	49,957,872	104.4	101.5	108.5	113.9	119.8	59,836,625
Municipal—Miscellaneous	100	34,842,256	91.8	92.5	100.6	97.8	103.1	35,924,129
Street and Highway Lighting	100	81,259,562	97.6	88.2	87.7	90.1	96.5	78,399,963
Distributing Companies (Nonassociated)	(100)*	541,890,380	187.4	231.8	224.3	279.5	197.8	1,072,423,797
	(100)†	541,890,380	184.3	137.9	122.5	112.3	123.0	666,355,797
Total	(100)*	5,159,069,101	88.9	98.2	106.3	117.6	129.8	6,694,658,884
	(100)†	5,159,069,101	88.4	88.3	95.6	100.0	121.9	6,288,590,884

* Including sales to Consolidated Edison system.
† Excluding sales to Consolidated Edison system.

EXHIBIT 3

CONSOLIDATED EDISON-NIAGARA HUDSON INTERCONNECTION

SUMMARY OF ANNUAL ELECTRIC SALES OF NIAGARA HUDSON SYSTEM: REVENUE, 1931–1936

1931 = 100

	1931		1932	1933	1934	1935	1936	
	Index	Revenue					Index	Revenue
Farm	100	$ 1,219,063.91	111.5	111.2	108.1	108.1	117.3	$ 1,430,292.65
Residence	100	16,754,740.30	101.8	101.0	103.0	102.8	107.6	18,028,630.21
Commercial	100	14,700,285.72	97.9	91.7	94.9	97.8	101.0	14,840,864.96
Industrial								
General	100	11,018,596.85	79.5	80.2	83.9	89.0	104.9	11,558,002.41
Special—Chemicals	100	7,023,585.37	75.9	65.3	72.3	75.1	93.6	6,571,937.92
Special—Mechanical	100	3,694,954.45	79.5	80.3	93.0	108.9	121.6	4,493,519.05
Off-peak Surplus	100	1,842,410.91	78.2	72.7	72.7	40.7	42.2	776,867.90
Total Industrial	100	23,579,547.58	78.3	75.2	81.0	84.2	99.2	23,400,327.28
Electric Transportation	100	1,513,808.49	84.7	74.5	62.4	56.9	55.4	838,280.16
Municipal—Distribution	100	626,945.51	104.0	99.9	105.2	109.2	113.2	709,534.30
Municipal—Miscellaneous	100	459,115.46	99.0	96.1	94.2	91.4	95.3	437,355.63
Street and Highway Lighting	100	4,265,873.54	94.3	87.1	86.3	86.0	86.9	3,706,693.11
Distributing Companies (Nonassociated)	(100)*	3,089,468.88	114.8	133.1	142.3	165.5	144.2	4,456,120.77
	(100)†	3,089,468.88	111 6	99.4	106.1	103.4	117.5	3,630,555.41
Total	(100)*	66,208,849.39	92.5	89.9	93.3	95.9	102.5	$67,848,099.07
	(100)†	66,208,849.39	92.3	88.3	91.7	93.2	101.2	$67,022,533.71

* Including sales to Consolidated Edison system.
† Excluding sales to Consolidated Edison system.

for power in the various types of markets served. The Niagara Hudson system, especially in its western division, furnished energy to heavy industrials whose demands fluctuated considerably. There was some variation as to the time within a cycle when these individual industrials were most seriously affected, and the extent to which they were affected. Because of this diversity there was the possibility of achieving operating economies by transferring power generated by efficient units in temporarily depressed areas to sections where this power could be used more advantageously.

In common with most hydroelectric systems, Niagara Hudson was faced with the problem of seasonal variations in the flow of streams on which its plants were located. By providing for adequate capacity in times of low water, the system had excess power at times of high water. At certain periods of the year, the hydro stations were capable of delivering their full generator capacity 24 hours a day. Obviously, the increment cost of this power was extremely low, especially when compared with the cost of coal for steam plants in certain parts of New York State. Thus, savings could be effected if this surplus power at times of high water could be transferred to areas where power requirements were being met by steam stations, and where coal costs were relatively high. Furthermore, this transfer of energy for use in other areas would result in the utilization of water power that would otherwise be wasted.

The area served by the New York Edison system met the conditions described above. If the proposed interconnection with the Niagara Hudson system was constructed, it would enable the former to use the surplus power generated at times of high water and to shut down some of the steam units which would ordinarily have been in service at the time.

The amount of the saving that could be effected by means of such an interchange was uncertain, as it would depend not only on the amount of power available but also on the time of day and year that it was available and upon the efficiency of the steam plants that could be shut down. It was recognized that the returns received by the Niagara Hudson system from this interchange would be small, relative to what might be realized from the sale of the power locally if such a market were available. As an alternative to the complete waste of available water power, however, the intersystem connection was distinctly superior.

At times of low water on the Niagara Hudson streams, an interconnection with the New York Edison system would be valuable. At such times, normally during the summer months, it was necessary for the former to supplement its hydro plants with energy from reserve steam stations which were not operated during the remainder of the year. The operation of these steam plants was expensive for several reasons. First of all, the plants were relatively small. Secondly, they were normally closed down for a considerable part of the year, and some expense was involved in starting them up. This expense included assembling an operating crew. The cost of operating these steam plants was especially high in view of the fact that the period of low-water condition which necessitated their being placed in service might last for only a short time. Thus, the expense of starting up the stations had to be allocated over a relatively small amount of energy produced.

With a connection between the Niagara Hudson and the New York Edison systems, the steam plants of the latter could be used to supplement the upstate hydros at times when it would be economical to do so. The units in the Edison system were large and modern with an efficiency of operation materially better than that of the smaller Niagara Hudson plants that would normally be used during periods of low water. Thus, the proposed tie-line would provide the Niagara Hudson system with a far more efficient steam reserve than would otherwise be available.

From the standpoint of providing additional generating capacity for both systems, the interconnection would be advantageous. During the hearings before the Public Service Commission of New York in 1931, this argument was cited as a justification for the Edison company's incurring the costs that would be involved in the construction of the line. It was estimated at that time that without the line and on the basis of existing and expected loads, the Edison system would have to install additional generating capacity necessitating an immediate investment of $4,800,000 in 1934, $13,000,000 in 1935, and $13,000,000 in 1936, plus carrying charges of these amounts thereafter.

Certain other advantages in providing for future growth of both systems would result from an intersystem connection. From a scientific standpoint, in order to obtain operating efficiency it is necessary to construct new plant facilities in units of relatively large capacity. Thus, while a company's load may grow steadily,

its capacity will not expand in the same manner because of the sudden and substantial increase in the latter resulting from the fact that a new unit has been placed in service. In deciding on the size of unit to install, it is necessary for a company to weigh the saving to be gained from a larger and more efficient generator against the disadvantage of having capacity temporarily considerably in excess of demand. However, if the company or system in question is connected with another system which also requires additional capacity, it may be feasible to construct one plant to meet the needs of both systems, thus making it possible to obtain a larger and more efficient unit and at the same time to provide for a more uniform growth of capacity with load requirements. Furthermore, in the selection of locations for the new plant a wider choice of sites would undoubtedly be available.

The total amount of installed reserve and operating reserve could be reduced as a result of an interconnection between the Niagara Hudson and New York Edison systems. Less total reserve would be necessary to provide for emergencies and for such conditions as shutdowns for repairs. By a joint use of reserve capacity, both systems could effect economies through reduction of standby losses.

In addition to the direct advantages which would result from the proposed interconnection, the line would be valuable from certain other standpoints. For example, in 1931 Westchester County relied for its source of power mainly on two underground cables from the Hell Gate Station of the Edison system, which station was located south of the Westchester boundary. The proposed tie-line with the Niagara Hudson system would provide an additional source of power for Westchester from the north. Similarly, the connection would provide an improved source of power for the Central Hudson Gas & Electric Corporation in Poughkeepsie and in the area lying north of the Westchester boundary and south of the section served by the New York Power and Light Corporation.

In the hearings before the New York commission in 1931, estimates were made as to the capital expenditures involved in the construction of the proposed interconnection. According to the plans presented, the New York Edison system would construct and own the line to the northern boundary of Westchester County. The New York Power and Light Corporation would construct

and own the link between the Westchester boundary and the existing facilities of the Niagara Hudson system.

According to figures presented by the engineers of the New York Power and Light Corporation, the capital investment of the latter company in the project would amount to $7,446,730. While the total amount involved was not hard to estimate, some question arose as to the allocation of certain parts of this total. Specifically, there was the problem of deciding what proportions of the total amount were chargeable: (1) to power transmission to metropolitan New York; (2) to the connection with the Central Hudson Gas & Electric Corporation at Poughkeepsie; and (3) to the normal growth and protection of the Niagara Hudson system. It was estimated on the basis of existing and expected loads that approximately 65 per cent of the total expense, or $4,840,374.50, would have to be incurred within two or three years, even if the New York interconnection project were completely abandoned. Thus, the estimated amount chargeable to the proposed tie-line was $2,606,355.50.

Estimates were also presented relative to the cost of the line to the Edison system. It was stated that in 1931 the latter system already had invested $5,990,000 in apparatus for the transmission of power from the Hell Gate Station north to Westchester. These facilities had been installed with the idea that there would eventually be a connection with the Niagara Hudson system. Thus, of the $5,990,000 of plant already installed and used for the purpose of serving the Westchester load, $3,000,000 could properly be charged to the intersystem connection. In order to complete the line, it was estimated that an additional $2,982,000 would have to be invested, of which approximately two-thirds should be allocated to the interconnection. The total capital expenditure on the part of the New York Edison system was therefore estimated to be $8,972,000. On the basis of load conditions in 1931, $5,000,000 of this amount was chargeable to the intersystem tie-line, and $3,972,000 to supplying the requirements of Westchester County.

Certain estimates of savings to be effected as a result of the construction of the proposed interconnection were presented in the hearings. It has already been stated that if the line were not constructed, it was expected that the Edison system would have to install additional generating capacity at a cost of $4,800,000

in 1934, $13,000,000 in 1935, and $13,000,000 in 1936. Thus, on capital account the Edison company would save the difference between these amounts and the $5,000,000 chargeable to its section of the tie-line. Without the interconnection, it was estimated that the New York Power and Light Corporation would require additional steam capacity at a cost of $4,000,000. Therefore, on capital investment this company would save the difference between $4,000,000 and the $2,606,355.50 allocable to the line. Only very rough approximations could be presented as to operating economies that might be expected because of the existence of certain unknown factors, such as the time of day and year when power would be interchanged and the efficiency of steam stations that could be shut down as a result of energy interchange. It was estimated that the total annual savings of this nature to both systems would be between $200,000 and $400,000.

As originally planned, it was anticipated that the construction of the interconnection could be completed by December, 1931, or at the latest in time to make possible the transmission to metropolitan New York of surplus energy generated from the 1932 spring flood waters in Niagara Hudson territory. Construction of the line was begun in the spring of 1931 but was held up in June by a restraining order issued by the New York commission. After authorization of the project by this regulatory body, work was resumed in November. Another restraining order of the commission was issued in March, 1932, which delayed construction until June of that year. In the latter month, connection was made at Millwood with the lines serving Westchester County, and partial operation of the tie-line was commenced at that time with the delivery of power to the Westchester Lighting Company. Further delays were encountered in the construction of the remainder of the line in Westchester. Work was held up between June and November, 1932, and in March, 1933, while negotiations were under way for the acquisition of certain rights of way. Finally, on April 30, 1933, connection was made with the cables from the Hell Gate Station of the New York Edison system and full operation of the line commenced on that date.

As stated earlier, it was estimated in 1931 that the total cost to the New York Power and Light Corporation of the construction work contemplated would be $7,446,730. As a result of difficulties arising during the period of construction, the actual cost

varied somewhat from this estimate. Several changes in the location of the line were found to be necessary because of difficulties in securing rights of way. Furthermore, the interruptions in the work not only added to the interest charges during the period of construction, but also increased the actual cost of construction. The actual expenditure for the items included in the original estimate amounted to $7,939,158.38. In addition, other work was done which was not contemplated at the time of the original estimate. This included the reconstruction of a part of an existing transmission line and the installation of additional switching apparatus. By the latter part of 1934, the total investment of the New York Power and Light Corporation since the beginning of the tie-line construction amounted to $8,494,255.47.

When the total investment of the company was ascertained, there still remained the problem of allocating this cost to the various phases of the company's operation. In 1931, on the basis of existing and expected loads, it had been estimated that 65 per cent of the total cost of the New York Power and Light Corporation's share of the tie-line would have been incurred within two or three years even if the connection with the Edison system had been abandoned. Under the changed conditions existing in 1934, including variations in load and the extent of the construction work undertaken, the following allocation of costs was made:

Chargeable Directly to the Metropolitan New York Load	$6,371,273.24
Costs Made Necessary by the Interconnection but Not Primarily a Part Thereof.....	665,623.41
System Improvements Not Chargeable to the Interconnection.	1,457,358.82
Total.....	$8,494,255.47

It was expected, as the business of the New York Power and Light Corporation developed within its own territory, that a larger portion of the capital expenditures could be properly allocated to such business, with a corresponding decrease in the amount allocated to the interconnection.

In 1931 it was estimated that the total cost to the New York Edison system of the project under consideration would amount to $8,972,000. As the greater portion of the power supply for Westchester County would be carried over these interconnecting lines, it seemed proper that a part of this total investment be considered a cost of supplying the area in question. To accomplish this, capital costs were prorated on the basis of actual use

made of the facilities available by the companies serving Westchester. Thus, the balance to be allocated to the interconnection varied with the Westchester load. On the basis of 1931 load forecasts, $3,972,000 of the total investment was considered to be chargeable to the Westchester supply, and $5,000,000 to the intersystem connection.

On October 1, 1933, the total amount invested by the New York Edison system in the interconnection project amounted to $9,070,599. During the first full year of supplying the Westchester load over the lines included in the interconnection, the load amounted to less than that estimated in 1931. Thus, on the basis of actual use, the total investment of the Edison system was allocated as follows:

Chargeable to Westchester Supply	$2,703,857
Chargeable to Interconnection	6,366,742
Total	$9,070,599

As mentioned earlier, the investment in the interconnection by the Edison system was believed to be justified because of the saving to be made in the installation of additional generating capacity. It had been estimated in 1931 that by 1934 an investment of $4,800,000 would be necessary if the tie-line was not constructed. The annual carrying charges on this investment would be $735,360. With the construction of the line the company had eliminated this annual charge. The annual carrying charges on the capital allocated to the interconnection in 1934, however, amounted to $998,304. Thus, considering these charges alone, the Edison system had an annual net loss of $262,944. However, it was recognized that this loss would be converted into a substantial saving as the Westchester load grew, and as the total Edison system load reached the point where additional generating capacity would have been necessary had the Niagara Hudson interconnection not been constructed.

In addition to determining the capital investment chargeable to the interconnection, the Niagara Hudson and Edison systems were faced with the problem of dividing the operating savings resulting from the use of the line. From the completion of the line in May, 1933, until December 31, 1933, a flat rate per kilowatt-hour was charged for all energy interchanged. It was estimated by engineers of the Edison system that the value to the latter, on an increment generating basis, of energy from the Niagara

Hudson system delivered at the Hell Gate Station, with an increment amount of 1,000,000,000 kilowatt-hours per year, was approximately $0.002 per kilowatt-hour. This price was tentatively agreed upon for all energy metered at Pleasant Valley, a substation on the Niagara Hudson line, and delivered at the Hell Gate Station of the Edison system.

In 1934 a change was made in the method used for the division of operating savings. The basis for this change was the belief that the price of energy should vary with different conditions of system load so that there would be an incentive to both systems to

EXHIBIT 4

CONSOLIDATED EDISON-NIAGARA HUDSON INTERCONNECTION INCREMENT VALUE OF POWER SENT OUT OF PLEASANT VALLEY TO NEW YORK EDISON SYSTEM, 1934

Cents per Kilowatt-hour

Coal at $5 per Gross Ton Alongside

N.Y. Edison System Load, Less Load Carried by Waterside, Sherman Creek, and Gold Street Stations	Thousands of Kilowatts Bought by New York Edison System		
	50	100	150
150	0.18	....	....*
200	0.19	0.19	....*
250	0.20	0.20	0.19*
300	0.22	0.21	0.20
350	0.24	0.23	0.22
400	0.24	0.23	0.22
450	0.25	0.25	0.23
500	0.26	0.26	0.25
550	0.25	0.24	0.24
600	0.26	0.25	0.25
650	0.26	0.26	0.25
700	0.27	0.27	0.26
750	0.28	0.28	0.27
800	0.29	0.29	0.28
850	0.31	0.30	0.29
900	0.32	0.31	0.30
950	0.34	0.33	0.32
1000	0.36	0.35	0.34
1050	0.39	0.38	0.36
1100	0.42	0.41	0.38

* Power from outside sources limited by minimum capacity of machines on New York Station buses.

have the maximum amount of interchange of power take place at times when the greatest economy would result. For example, if only a small amount of water were available for the hydro stations of the Niagara Hudson system, the greatest savings would result if the Edison system took the energy generated by this water during the late afternoon or evening. Because of the peak load condition on the Edison system, energy taken at that time of day would enable the company to shut down less efficient units that would otherwise have been required to carry the load. Thus, it was believed that in order to obtain the greatest advantage from the tie-line, the price paid for "economy flow" of energy should take into consideration seller's cost and purchaser's value, as determined from actual daily operating statistics for different conditions of system load. As an illustration of the principle described, Exhibit 4 presents the data used in 1934 to determine the increment value to the Edison system of energy received from the Niagara Hudson interconnection.

For example, if the Edison system load as defined was 300,000 kilowatts, and 50,000 kilowatts additional capacity was available from the line, the increment value to the Edison system of energy received from the Niagara Hudson system would be 0.22 cents per kilowatt-hour. However, if the Edison load was 950,000 kilowatts and 150,000 kilowatts were available from the line, the purchaser's value per kilowatt-hour would be 0.32 cents.

In addition to the table presented, data in similar form would be available for the purpose of determining seller's cost of the Niagara Hudson system at varying load levels.

In 1934 there arose the question of a guarantee as to the amount of firm power that either system would supply to the other. However, at that time the load conditions were such that neither system required additional generating capacity. Furthermore, it was believed that there was a need for more experience in the operation of the line before either system entered into a capacity contract.

In 1934, in connection with the allocation of capital expenditures to the intersystem connection, the Edison system estimated that the annual carrying charges on its investment would be $998,304.[1] By the construction of the line, annual carrying charges in the amount of $735,360 were saved. Thus, before any

[1] See p. 96.

operating economies could be shown by the Edison system as a result of energy interchange, increased carrying charges of $262,944 would have to be covered.

With the end in view of taking into consideration the various factors mentioned, including seller's cost, purchaser's value, carrying charges, and in addition allowing for standby savings and emergency flow, an agreement was made between the New York Power and Light Corporation (Niagara Hudson system) and The United Electric Light & Power Company (Edison system). This agreement was described as follows in a statement sent to the company's auditor by the president of the New York Edison Company:

> Effective as of January 1, 1934, and until further notice, operating savings due to interchange of electric energy between the New York Power and Light Corporation and The United Electric Light and Power Company are to be shared between the two Companies and bills are to be rendered and payments made on the following basis:
>
> Boiler Standby Savings
>
> Savings realized from a reduction in standby boilers due to use of the line are to be computed each month and 50% of these savings are to be allocated to each Company in each and every month.
>
> Economy Flow
>
> The price to be paid for economy flow shall be
>
> The seller's cost at the Westchester-Putnam County line plus 50% of the difference between the buyer's value and the seller's cost until such time as The United Electric Light and Power Company will have realized $262,944 (estimated annual fixed charges of the line allocated directly to the interconnection) from savings due to economy flow.
>
> After the fixed charges of $262,944 have been realized, the savings due to economy flow will be allocated for the balance of the year, 25% to The United Electric Light and Power Company and 75% to the New York Power and Light Corporation.
>
> Emergency Flow
>
> The price to be paid by either Company for emergency flow and unintentional flow shall be determined as follows:
>
> (1) Same as for economy flow, or the seller's cost plus 10%, whichever is the higher, or
> (2) The seller may elect to have returned to it an amount of energy equivalent to 110% of the energy supplied plus losses at such times within 30 days that may be mutually agreeable.

Late in 1937 a new agreement was made between the Niagara Hudson and Consolidated Edison systems which provided for the billing of energy interchanged during 1938 and 1939. The method of billing economy flow, as found in the 1934 agreement, was retained. In addition, it was provided that purchaser's value and seller's cost should be determined monthly by the engineers of the two systems. Emergency flow was to be billed monthly either by the same method as for economy flow or at seller's cost plus 10 per cent, whichever was the higher. It was further provided that any energy taken by either party under any call it might make upon the other for standby or reserve capacity should be considered as emergency interchange for billing purposes.

The main difference between the 1938–1939 contract and that developed in 1934 was in regard to standby or reserve capacity. Both agreements stated that savings resulting from the reduction in standby boilers should be computed monthly and divided equally between the two systems. However, the following exception was included in Paragraph V of the 1938–1939 contract:

V—For the term of this agreement the Edison Company agrees to furnish standby or reserve capacity up to 108,000 kw. to the Power Company, as required by the Power Company, provided, however, that it will furnish such standby capacity only when it has it available over and above its own requirements. In consideration of this arrangement as to standby the savings in standby boiler costs allocated to the Power Company in accordance with Paragraph IV shall be reduced by $165,000 per year. In case the Power Company's share of the boiler standby savings should be less than $165,000 during any year, then the Power Company, in addition to relinquishing its entire share of the boiler standby savings, shall pay to the Edison Company for that year, a sum equal to the difference between $165,000 and a sum equal to its share of the boiler standby savings for that year.

By the winter of 1937–1938, after almost five years of operation, the value of the intersystem connection had been definitely demonstrated. During this period certain difficulties had been encountered, arising mainly out of the necessity for developing a technique of control for the operation of a tie-line connecting two large systems. The principal difficulty encountered consisted of holding the tie-line load to any predetermined amount, despite changing load conditions and disturbances of both systems. Any deviation of the tie-line load from the scheduled amount would give rise to several undesirable conditions, especially a

variation in load on the station or stations regulating frequency. Such deviation, in turn, would result in lowered economy, increased cost of maintenance, variations in voltage, and generally unsatisfactory operation. In developing means of meeting these difficulties, the two systems not only obtained more satisfactory results from the operation of the line, but also realized certain other improvements for the systems as a whole, including, for example, better frequency control.

At the end of 1937 well over 90 per cent of the energy interchanged over the line since its installation in 1933 had been sent from the Niagara Hudson system to the Consolidated Edison system. With the drop in load accompanying the general business depression, the Edison system had been able to take care of its own peaks with equipment already installed. Thus, almost all the interchange had been in the nature of economy flow, resulting from surplus water in the streams on which were located the hydro plants of the Niagara Hudson system. However, during certain of the summer months power had been transmitted north to supplement the hydros at times of low water.

EXHIBIT 5

CONSOLIDATED EDISON-NIAGARA HUDSON INTERCONNECTION
SUMMARY OF OPERATING RESULTS, 1933–1937

	1933*	1934	1935	1936	1937
Net Kilowatt-hours Received by Consolidated Edison System.	489,382,554	549,529,730	905,891,000	392,160,000	429,470,000
Increment Value of Energy to Consolidated Edison System.....	$1,037,998	$1,332,278	$2,443,454	$1,089,433	$1,109,831
Standby Value.....	180,000	322,000	141,816	16,797	7,937
Total Value.....	1,217,998	1,654,278	2,585,270	1,106,230	1,117,768
Increment Cost of Energy to Niagara Hudson System.....	430,787	348,218	557,683	370,007	400,888
Total Operating Savings.....	787,211	1,306,060	2,027,587	736,223	716,880
Consolidated Edison's Share of Operating Savings.....	239,233	539,700	673,823	319,727	312,676
Niagara Hudson's Share of Operating Savings.	547,978	766,360	1,353,764	416,496	404,204

* May–December.

The line had also proved its value as an additional reserve in case of emergencies. In January, 1936, a short-circuit occurred in the Hell Gate Station of the Edison system at approximately the beginning of the daily rush hour and peak-load condition.

EXHIBIT 6

CONSOLIDATED EDISON-NIAGARA HUDSON INTERCONNECTION
REDUCTION IN COST TO CONSOLIDATED EDISON SYSTEM, 1937

Month	Net Kilowatt-hour Received from Niagara-Hudson at Millwood	Cost of Coal per Net Ton	B.t.u. per Pound	Reduction in Cost to Consolidated Edison System			
				Increment		Boiler Standby Reduction	Total Reduction
				Fuel	20% for Labor and Repairs		
January	70,448,000	$4.579	13,997	$151,823.12	$ 30,364.62	$6,412.00	$ 188,599.74
February	59,080,000	4.531	14,032	126,970.93	25,394.18	0	152,365.11
March	31,644,000	4.516	14,065	67,113.28	13,422.66	0	80,535.94
April	55,420,000	4.673	14,049	118,789.78	23,757.96	765.00	143,312.74
May	65,886,000	4 830	14,077	141,474.49	28,294 90	0	169,769.39
June	17,628,000	4.869	14,053	38,996.89	7,799.38	0	46,796.27
July	8,695,000	4.922	14,000	17,277.53	3,455.50	0	20,733.03
August	766,000	4.910	14,016	475.46†	95.09†	0	570.55†
September	9,940,000*	4.909	14,068	29,474 93†	5,894.98†	0	35,369.91†
October	5,075,000*	4.909	14,052	21,225.96†	4,245.19†	0	25,471.15†
November	58,808,000	4.908	14,060	135,093.84	27,018.77	0	162,112.61
December	76,110,000	4.977	14,066	178,495.83	35,699.16	760.00	214,954.99
Total	429,470,000	$4.800	14,045	$924,859.34	$184,971.87	$7,937.00	$1,117,768.21

* Sold to Niagara Hudson at Millwood.
† Increase in cost.

EXHIBIT 7
CONSOLIDATED EDISON-NIAGARA HUDSON INTERCONNECTION
OPERATING SAVINGS EFFECTED, 1937

Month	Net Kilowatt-hour Received from Niagara-Hudson at Millwood	Total Reduction in Cost to Consolidated Edison System	Increment Cost of Energy to Niagara-Hudson	Net Over-all Operating Savings	Share of Savings	
					Consolidated Edison System	Niagara-Hudson
January	70,448,000	$ 188,599.74	$ 49,953.00	$138,646.74	$ 69,323.37	$ 69,323.37
February	59,080,000	152,365.11	62,205 00	90,160.11	45,080.05	45,080.06
March	31,644,000	80,535.94	48,902.00	31,633.94	15,816.97	15,816.97
April	55,420,000	143,312.74	58,076.00	85,236.74	42,618.37	42,618.37
May	65,886,000	169,769.39	55,654.00	114,115.39	57,057.69	57,057.70
June	17,628,000	46,796.27	28,271.00	18,525.27	9,262.63	9,262.64
July	8,695,000	20,733.03	9,710.87	11,022.16	5,511.08	5,511.08
August	766,000	570.55†	3,141.80‡	2,571.25	1,285.62	1,285.63
September	9,940,000*	35,369.91†	35,369 91‡	0	0	0
October	5,075,000*	25,471.15†	37,031.05‡	11,559.90	5,779.95	5,779.95
November	58,808,000	162,112 61	70,366.35	91,746.26	30,334.95	61,411.31
December	76,110,000	214,954.99	93,292.00	121,662.99	30,605.75	91,057.24
Total	429,470,000	$1,117,768.21	$400,887.46	$716,880.75	$312,676.43	$404,204.32

* Sold to Niagara Hudson at Millwood.
† Increase in cost.
‡ Reduction in cost.

After a 12-minute lapse of service, the Niagara Hudson system was able to take over the Westchester County load, thus relieving the Edison system of this additional burden while service was being restored in northern Manhattan and the Bronx.

As anticipated in the original plans for the line, it had also provided an improved power supply to the Central Hudson Gas & Electric Corporation at Poughkeepsie, and to certain sections of the Niagara Hudson territory.

As a result of an increasing load on the Niagara Hudson system, the value of the interconnection as a means of securing reserve capacity was demonstrated, as evidenced by the contract between the two systems for 1938 and 1939.

In Exhibit 5 is presented a summary of the results of operation of the line from May 1, 1933, to December 31, 1937, including energy interchange and operating savings accruing to each system.

Exhibits 6 and 7 present for 1937 monthly data on interchange of power, with an illustration of the method used by the Edison system in determining the reduction in cost resulting from energy interchange.

Do you feel that the situation in New York State is unique, or do the facts in this case indicate possibilities of physical integration in other areas? Would difference in time zones be important?

To what extent were the rates which the utilities charged each other based upon (*a*) cost of service; (*b*) value of service?

Does this case throw any light on how rates should be made to ultimate consumers?

C. In Furnishing Local Transportation Service

15. PUBLIC SERVICE COORDINATED TRANSPORT (A)

Before the phenomenal development and general adoption of the automobile in the United States, street railway transportation companies were able to keep their equipment fully employed during Sundays, holidays, and summer months. Streetcars were used not only for transportation to and from various amusement centers but were frequently used, especially in the summer, for so-called "joy riding." The advent of the automobile, however, marked the beginning of a decline in street railway companies' holiday revenues. Regular weekday business also declined but not with the same rapidity or acceleration which was shown by Sunday, holiday, and summer traffic.[1]

Practically all street railway companies in the United States were thus affected. In numerous instances, however, peak loads were but little affected by the general swing to automobile transportation. Hence, it was essential to maintain a practically undiminished amount of rolling stock in spite of a decreased and declining total weekly business. During a large part of each day and especially on week ends, valuable equipment stood idle in the various street railway yards so that it might be available for transporting the public during the week-day peaks. At approximately the same time street railway companies found themselves confronted with motorbus or so-called "jitney" competition. Such competition in its earlier stages was entirely unregulated and grew at such a rate that it foretold the complete ruin of many streetcar companies.

Public Service Railway Company, a subsidiary of Public Service Corporation of New Jersey, was not exempt from the full effects of these developments. In its attempt to meet the increasing competition of the private automobile and the motorbus, the

[1] The falling off in the summer traffic made it uneconomical for the street railway companies to maintain specialized equipment in the form of open cars for the summer season. Obviously the elimination of the open cars further reduced the summer riding.

Public Service Railway Company acquired, in 1923, a small number of bus lines operating throughout its territory. The number of buses in the company's employ increased rapidly, and in 1928 the bus and streetcar operations of Public Service Corporation of New Jersey were merged into a newly formed subsidiary known as the Public Service Coordinated Transport. In 1928 over 311,000,000 passengers were carried by the company's motorbuses as compared with 331,000,000 who rode on streetcars. By 1936 over 292,000,000 passengers were carried in buses while the number riding on streetcars had declined to 118,000,000.[1]

The officials of Public Service Coordinated Transport were impressed with the possibilities of increasing to a maximum the total utilization of their rolling stock by substituting motorbuses for streetcars wherever possible. The large investment in streetcars which remained idle in the company's yards on Sundays and holidays, they believed, could in time be materially decreased by substituting motor coaches for the more expensive electric vehicles. If the large and costly streetcars could be utilized for serving what in the electric power business was termed "the base load," they could be more fully employed, while motor coaches could be used during stock periods and also on the more lightly traveled routes. Idle investment could thus be reduced.

Decreasing the total cost of the rolling stock was not, however, the only factor to be considered in order to diminish the investment in idle equipment during off-peak hours and on Sundays and holidays. Because of the greater flexibility of the motorbus, its smaller total seating capacity could adequately serve the company's territory. If, for example, an unusually heavy demand for passenger accommodations arose at any time in any one community, motor coaches from less heavily burdened sections of the community could easily be dispatched to assist in meeting this demand.

In order to obtain this increased flexibility and efficiency provided by the motorbus, the company embarked on a definite program of substitution of this latter type of vehicle for existing streetcars. The progress of this program is indicated by the fact

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[1] See case entitled *Public Service Coordinated Transport (B)*, p. 156, for details as to organization and operations of the company.

that the number of streetcars operated decreased from 1,592 in 1930 to 604 in 1937.[1]

In September, 1935, "all-service" vehicles were substituted for streetcars on two of the company's longest lines. This type of conveyance was equipped to run either as a trolley coach, using energy from overhead wires, or as a motor coach, using its own gas-electric engine. During 1936 over 100 of these vehicles were put in service, and by the end of 1937 the total number in operation was approximately 500. At that time it was estimated that by the end of 1938 another 100 all-service cars would be in operation.

The results obtained from the use of all-service vehicles were favorable. In addition to more economical operation, the increased flexibility of the new vehicle over the old streetcar made possible improved service. This flexibility equaled that found in the motor coach already in use. Passenger traffic on lines using all-service cars increased as a result of the greater riding comfort of the new vehicle and the added convenience of boarding it from the street curb instead of the middle of the street. The ability of the conveyance to run under its own power was especially valuable at times when an interruption in service was threatened. During the winter, for example, streetcars were often hampered by ice on the overhead trolley wires. In such cases, the all-service vehicle could proceed under its own power. As in the case of the motorbus, the flexibility of the all-service vehicle was also demonstrated in its ability to avoid obstructions in its route. During a severe fire in the company's territory in 1937, it was estimated that streetcar service on a certain route would have been tied up for 12 hours. The all-service vehicles, however, were able, after

[1] The number of different types of equipment operated from 1930 to 1937 was as follows:

EQUIPMENT AS OF DECEMBER 31, 1930–1937

Year	Streetcars	Motorbuses	All Service	Taxicabs	Ferries
1930	1,592	2,427	...	446	9
1931	1,445	2,400	...	442	9
1932	1,387	2,385	...	110	9
1933	1,334	2,270	...	103	9
1934	1,237	2,182	...	105	8
1935	1,220	2,178	61	401	7
1936	890	2,305	190	182	7
1937	604	2,438	456	97	7

making a detour of two blocks, to resume the scheduled route with virtually no delay.

In the fall of 1936, Public Service Coordinated Transport put into service small lightweight buses for use on certain outlying routes on which traffic was light and where vehicles could operate at a high speed. These small buses had a seating capacity of 20 or 21 passengers and cost from $3,000 to $4,000 each. Strong, lightweight construction was emphasized, the weight of the entire unit being approximately 6,000 pounds as opposed to 20,000 pounds for the ordinary large buses. The chassis of these small buses were constructed by one of the large automobile manufacturers from standard parts belonging to several different cars in its line. Thus, replacement parts were easily obtainable and were relatively inexpensive. The body, constructed of duralumin, was 84 inches in width, or 12 inches narrower than the ordinary bus. This saving in width was a factor in increasing the ease in managing the vehicle.

Substantial operating economies were achieved by the use of these small buses. On some of the outlying routes, the ordinary buses previously used were obtaining 17 or 18 cents a mile in revenue while costing 20 cents or more a mile to operate. The lightweight vehicles were operated at a cost of 14 to 14½ cents a mile, the saving being due largely to the decreased cost of gasoline, oil, and tires. In addition, there was a saving in cost per mile as a result of a larger number of miles covered by the faster buses. On routes where the average speed had been 12 miles per hour, it was increased to 15; where from 13 to 14 miles per hour had been the average speed, the small buses were able to raise it to between 16 and 17 miles per hour.

The company believed that the use of the small, lightweight buses was in accordance with a trend in transportation away from the use of large vehicles. It was stated that with large units there was a constant temptation to sacrifice service for capacity, which led to a loss of business to private automobiles. For example, on a purely cost basis it might be less expensive for a commuter to use the public transportation system in place of his own automobile. Because of the superior convenience of the latter type of transportation, however, the relative costs were often of secondary importance. Thus the transportation company was faced with the necessity of providing a service approaching that of the private automobile. The use of small buses seemed to be a method of

achieving this end. Because of the lower costs of operation and higher speeds, it was possible to reduce headways as compared with the type of bus previously used. Furthermore, if this improvement in service resulted in increased revenue, it was possible to reduce headways still further by the addition of more small buses.

In general, the company was able to adjust the quality of service rendered to the requirements of the individual routes, as evidenced by revenue received from them. Peak loads were met simply by increasing the number of units in service.

Early in 1938, the company estimated that by the end of the year there would be 900 of the small buses in operation. Work was also being done on a Diesel-powered bus which would show a saving of 2 cents a mile in cost of fuel over gasoline-powered buses. Also experimentation was under way on a 25 to 27 passenger Diesel-electric bus for use on certain intermediate routes where traffic was neither so heavy as on main city routes, nor so light as on the routes where the lightweight buses were being used.

The flexibility of the motor bus was utilized in yet another way to decrease enforced idleness of rolling stock on Sundays and holidays. A special bureau was organized to conduct and promote special and chartered motorbus service. This bureau solicited business from fraternal, social, industrial, and other organizations which might be willing to charter motorbuses for special excursions or parties. A majority of such business usually developed on week ends and holidays when buses were in plentiful supply. Each district informed the central bureau how many buses it could spare from its regular schedules, and these vehicles were then made available for special parties. This business not only had the advantage of utilizing some of the company's excess capacity on holidays, but was found to be decidedly seasonal in nature. Regular traffic generally declined during the spring and reached a minimum in the summer. Chartered service, however, expanded very materially during the spring and summer seasons. It, therefore, had the very desirable characteristic of tending to smooth out the demands made upon the company's facilities.

In conjunction with its chartered business, the company developed what it termed "special" business. Special business differed from chartered business in that the responsibility for obtaining the passengers and for the conduct of such trips remained with the company, whereas when a motor bus was chartered, a fee

was charged for its use either on a mileage basis or on an hourly basis, or both, regardless of the number of passengers accommodated. The party chartering the vehicle, furthermore, assumed all the responsibilities of organizing the excursion while the company merely furnished the vehicle and the driver for a stipulated compensation.

Special business was developed by organizing trips to various points of interest. These trips were advertised in the company's vehicles. Round-trip tickets, sometimes including all expenses, were sold. Usually two types of service were offered, one at a low fare, and another de luxe service at a somewhat higher price. In the latter service, a roomier and more comfortable type of motor coach was utilized. Such holidays as Washington's Birthday generally provided an excellent opportunity for conducting special trips to points of historic interest. Trips to football games, the Bronx Zoo, and similar centers of attraction proved to be extremely popular.

In the fall of 1937, the company ran "Mystery Rides" on certain nights to unannounced destinations. These trips, to various amusement centers within an hour's drive, started at certain designated terminals at 7:30 or 8:00 P.M. and returned by midnight. The cost of the transportation was 75 cents or $1. The success of this idea was evidenced by the fact that at times 18 to 20 buses were required to meet the demand.

Revenue from special and charter business amounted to slightly over $600,000 in 1937. Of this total, approximately $60,000 was derived from the special business. It was believed that there was opportunity for a substantial increase in this amount in the future. Compared with the total annual gross revenue of Public Service Coordinated Transport, amounting to approximately $25,000,000, the amount derived from special business was small. It was pointed out, however, that because most of this business was obtained in the dull period between July 4 and Labor Day, the company was actually receiving about $25,000 a month from equipment that would otherwise be idle. It was estimated that the cost of operating the equipment used for such business was about 20 cents a mile, while revenue received averaged 40 cents a mile.

What light does this case throw upon the justification of any further displacement of streetcars by motor coaches?

D. In Balancing Summer and Winter Loads of a Gas Utility

16. The Peoples Gas Light and Coke Company (A)[1]

On June 1, 1931, The Peoples Gas Light and Coke Company, serving the city of Chicago, filed with the Illinois Commerce Commission two new rates designed to attract off-peak business and thereby improve the company's annual load factor.

In the early nineties, a gas company's business was practically 100 per cent lighting. This business was almost entirely a winter load, the demand falling off sharply during the summer months. Under these conditions the annual load factor of most companies was approximately 50 per cent. At about the same time that electric lighting was introduced, however, practical gas cooking appliances were placed on the market and the sale of gas for domestic cooking developed rapidly. By 1915 the annual load factor of The Peoples Gas Light and Coke Company for that business was approximately 74 per cent, and about that time such business constituted approximately 75 per cent of the company's annual sales, materially improving its annual load factor.

After the cooking load had become well established, the managers of gas companies turned their attention to the use of gas for water heating. Although the annual load factor of this class of business was only about 57 per cent, it was desirable because its peak demand occurred in the summer, thus tending to eliminate the seasonal fluctuations in load curve.

The load factor of the hotel and restaurant business was usually as high as 84 per cent. The industrial use of gas also contributed to a satisfactory load curve, as it had a load factor of approximately 72 per cent.

All these classes of business tended to improve the annual load curve of The Peoples Gas Light and Coke Company, and this improvement continued up to 1920 when it was noticed that the maximum day began to increase faster than the average day. In

[1] Acknowledgment is made to Mr. Francis X. Mettenet, vice-president, and Mr. D. W. Chapman, manager industrial gas sales, of The Peoples Gas Light and Coke Company, for data used in this case.

other words, the annual load factor began to decrease. This was explained by the fact that the use of gas for auxiliary house heating was greatly increased at this time because of the high prices then prevailing for domestic coal. By 1923 a demand for gas-fired house heating had developed, and as the price of coal continued to be relatively high, the number of central gas-heating installations continued to increase. The superiority of central gas heating over coal-fired plants further stimulated this movement.

As was to be expected, the house-heating load proved to be extremely seasonal, and the production load factor for this class of business in Chicago was only 28 per cent as compared with 74 per cent for cooking. Obviously, as the volume of this business increased, the total annual load factor of The Peoples Gas Light and Coke Company decreased. It appeared to the company, therefore, that a house-heating rate should have a demand charge at least two and one-half times the demand charge included in the cooking rate. The distribution load factor of house heating was, however, very satisfactory. There was a considerable hourly diversity with the domestic and other loads so that a large volume of house-heating business could be taken on without much additional investment in distribution equipment.

As the customer cost per thousand cubic feet was almost negligible, the company concerned itself primarily with the production charges. In June, 1931, the established house-heating rate of approximately 75 cents per thousand cubic feet, in force throughout the company's territory, covered all these charges and resulted in house-heating customers actually paying two and one-half times more for production overhead than was paid by the other domestic customers.[1] Under this rate the company's house-heating business increased rapidly and became a substantial part of its total business. The potential use of gas for house heating, however, which was estimated to be considerable, could not be fully exploited unless the existing rates could be reduced materially. Obviously, lower rates could be inaugurated only by finding some way to use the company's manufacturing plants during the summer months; that is, in order to increase the company's total business, it became essential to improve its annual load factor. Efforts to

[1] The rates published by the company at this time were actually on the therm basis. A therm is equivalent to 100 cu. ft. of 1,000 B.t.u. natural gas, or 200 cu. ft. of 500 B.t.u. manufactured gas. In other words, it is equivalent to 100,000 B.t.u.

accomplish this end were supplemented by the engineering staff, which attempted to devise some means of utilizing idle plant capacity during the summer for the manufacture of products other than gas. The sales executives, however, attacked the problem from the point of view of increasing off-peak sales of gas.

When the executives of electric utility companies had been faced with a similar problem, they had adopted the expedient of offering their customers especially attractive off-peak rates for various uses. Although these efforts had met with considerable success, relatively little effort of this kind had been exerted by the executives of gas utility companies.

In April, 1929, however, the company inaugurated a special water-heating rate available to customers who would use gas for such water heating only during the period from May 1 to September 30 each year. This was the company's first attempt to encourage off-peak business.

The rate for off-peak water heating introduced in April, 1929, was designed to meet the cost of competitive fuels for water heating. A few installations made under the original schedule established the feasibility of using gas as a summer-time fuel, the customer changing back to crude fuels in winter. The price of gas, however, was found to be too high to meet competition in all but a few special cases. Subsequently three major revisions of the rate were made, and, beginning in February, 1936, it took the form given below:

Gas Used during Months of April to October, Inclusive		Gas Used during Months of November to March, Inclusive	
Therms	Cents per Therm	Therms Taken in Any One Month	Cents per Therm
First 130	6.0	First 130	25
Next 130	5.0	Over 130	20
Next 9,740	3.0		
Next 65,000	2.0		
Next 75,000	1.8		

Under the rate available for water heating from April to October, the summer sales, in therms, for the intervening years, 1929–1937, were as follows:

Year	Therms	Year	Therms	Year	Therms
1929	137,774	1932	1,283,060	1935	7,626,497
1930	253,402	1933	2,489,174	1936	15,786,916
1931	329,245	1934	2,450,303	1937	18,318,711

In 1929, two new forms of an industrial gas rate were also introduced, which specified that the utility company would not be required to supply gas in excess of 20 per cent of the customer's maximum one-hour demand in any hour between 10:00 A.M. and 2:00 P.M. on Sundays during the period from November 15 to March 15, or between the same hours on Thanksgiving, Christmas, and New Year's Day. This rate consisted of a demand charge on an annual basis and a commodity charge. A similar rate was offered to customers on a monthly demand basis. Customers taking gas in the period from March 16 to November 14, only, were not required to pay a demand charge.

Under the rate schedule with the demand charge on an annual basis, the customer had to pay, for a period of 12 months, a demand charge based upon the highest demand established just prior to that period, while the schedule required that the customer pay a demand charge in each month based only upon the demand established in that month. Demand charges are supposed to represent the fixed charges on capital investment dedicated to the use of a customer. The demand charge in the first rate schedule was based on the theory that it was impossible for a utility to increase or decrease, on a month-to month basis, the amount of physical equipment devoted to the use of a customer, and also that a scientific rate structure necessitates that a demand charge once established should prevail for at least a year.

In spite of the fact that a properly constructed demand charge merely provides for pricing utility service in accordance with the fixed costs incurred by the utility to enable it to render that service, such a charge has always been exceedingly unpopular with the greater number of a utility's customers. Hence, the second type of demand charge was offered at the customer's option to meet the recognized objection on the part of the public to the first form of demand charge.

In the depression years 1932 to 1934, it was clearly demonstrated that customers who enthusiastically accepted the lower average

gas rates that resulted from a combination of a demand charge and a separate charge for the gas when production and load factors were high, flatly refused to accept higher average rates that naturally resulted from the same demand charge and gas rate when production and load factors were low. As a consequence, the company felt obliged to take what it considered a backward step and reverted to the use of block form rates.

Accordingly, The Peoples Gas Light and Coke Company on July 1, 1933, revised its schedule and filed two industrial classifications. One of these was of the two-part, demand and commodity form, but the other was a block rate so designed that it paralleled the demand rate when the customer's load factor approximated 60 per cent, that is, when the volume of gas used in a month approximated 18 days' use of the maximum 24-hour demand. The demand rate was retained for the use of those few customers who were willing to accept its penalties as well as its advantages, and to furnish a satisfactory classification for the use of off-peak customers who required service only during the period March 15 to November 15 each year. Effective February 4, 1938, the availability clause was modified so that the company was required to supply only 10 per cent instead of 20 per cent of the customer's maximum 1-hour demand in any hour between 10:00 A.M. and 2:00 P.M. on Sundays during the period November 15 to March 15, or between the same hours on Thanksgiving, Christmas, and New Year's Day.

The company's policy with regard to class rates, as set forth in 1928, seemed to the executives of the company to have been justified. Under the special summer rate for water heating and steam generation, the company was able to make a substantial gain in its summer load from office buildings and industrial customers. In 1935, the volume of gas sold under this classification was about four times as great as for the corresponding summer months of 1934.

Effective February 28, 1936, a special classification was put into effect for the sale of gas for forging and billet heating during the off-peak season. The steps in this rate, though similar to those of the off-peak water-heating classification, were modified so as to obtain a higher revenue from the forging business. Because of the improvement in quality of product that can be obtained through the use of a refined fuel, gas is more valuable as a metallurgical than as a boiler fuel. Upon entering a field where gas could

command a higher price, the company believed that its duty was to enforce the principle of making the price as high as competitive conditions warranted for industrial uses of gas.

The availability clause and charges for gas for forging and billet heating were as follows:

Therms Taken in Any One Month	Charge, Cents per Therm
First 25,000	3.0
Next 25,000	2.5
Next 50,000	2.25
Next 100,000	2.0
Over 200,000	1.8

The rates were available only during the period March 1 to November 30 inclusive, or any part thereof, in 1936, and during the period April 1 to October 31, or any part thereof, in any year thereafter. These rates were available to any customer who should by a contract in writing agree to use the gas purchased under such rates only as fuel in billet heating furnaces, forges, and/or ferrous metal melting furnaces and who should use such gas in equipment having a total gas-consuming capacity of not less than 100 therms per hour and located at a point adjacent to one of the company's mains where a sufficient supply of gas was available for this type of service.

A third avenue for summer use of gas was opened by adopting a form of rate for manufacturers that restricted the call for gas during specified hours on Sundays and holidays in the peak period and required that maximum daily demands upon which bills were computed be determined in the peak period only. This classification proved to be effective in improving summer send-out to firms engaged in a seasonable business and to other companies whose requirements were such that they must obtain gas for crude heating operations at a rather low price in order to meet the cost of competing fuels. Also steps were taken to procure industrial business on the off-peak and interruptible basis to fill in the summer valley. Through comparatively short main extensions, natural gas was made accessible to a few large boiler plants under contracts which provided that the customer change to a stand-by fuel upon 30 minutes' notice. In a similar manner, natural gas was accepted by large mills for use as a fuel in metallurgical processes where, because of collateral advantages and provisions for a slightly longer notice to the customer before interrupting service, it was possible to obtain considerably higher prices for the gas than would have

been the case had all the summer surplus been consumed under boilers.[1]

Why should the company have changed from the cubic foot to the therm basis of measuring gas?

Is the policy followed by this company one which could be generally adopted by gas companies in developing a better annual load factor?

Is there any other important load in sight which is not mentioned in this case?

Which is a more scientific demand charge, one made on an annual or one made on a monthly basis?

Should demand charges be increased during business booms and decreased during business depressions?

Should a natural gas company make industrial rates designed to increase the use of gas in place of coal and oil?

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[1] For further details, see "Pointing Industrial Sales to Conform with Company Aim," by D. W. Chapman, *Western Gas*, October, 1935.

E. In Consolidation of Telephone Companies

17. Lehigh Telephone Company[1]

The Lehigh Telephone Company was incorporated February 5, 1924, for the purpose of operating a telephone system in the counties of Lehigh, Northampton, Carbon, parts of Schuylkill and Luzerne, and vicinity, in the state of Pennsylvania. It was created to carry into effect the reorganization of the Consolidated Telephone Company, the property and franchises of which were all deeded to the Lehigh Telephone Company as authorized by the Pennsylvania Public Service Commission on June 17, 1924.

The Lehigh Telephone Company and the Bell Telephone Company of Pennsylvania were both serving the territory to which reference has been made, and they entered into an agreement for a rearrangement of the territory between them, so that each company, after such rearrangement would have been perfected, would furnish through a single system complete universal local and long distance service within the territory which was therein assigned to and set apart for it. On February 1, 1925, in fulfillment of the terms of this agreement, the Lehigh Telephone Company acquired the telephone system of the Bell Company in some 15 communities, the transfer of the property being preceded by the approval of the Pennsylvania commission and the Interstate Commerce Commission.[2]

Unification was completed on March 1, 1926, and new tariffs were filed, revising the rates, so that all subscribers furnished by the Lehigh Telephone Company would be charged on the same basis, that is, the rates for each local service area being based upon the number of subscribers in the area. The new rates became effective on February 1, 1926, except for the Hazelton area where they were effective March 1, 1926. The complaint in this case was directed against the rates for Hazelton.

The amount of the increases and the various classes of subscribers affected in the Hazelton district are shown in Exhibit 1.

[1] *Mathew Long et al.* v. *Lehigh Telephone Company*, P.U.R. 1927A, 772.

[2] The communities were Allentown, Bethlehem, Catasauqua, Easton, Freeland, Hazelton, Hellertown, Lehighton, McAdoo, Mauch Chunk, Nesquehoning, Northampton, Slatington, Wetherly, and White Haven.

EXHIBIT 1

LEHIGH TELEPHONE COMPANY
RATES IN HAZELTON SERVICE AREA

Service Classification	Monthly Rental Rates		
	Former Consolidated	Former Bell	Present Lehigh
Business Service:			
Individual Line	$4.00	$5.00	$5.50
Two-party Line	3.50	4.50	4.75
Four-party Line	2.75	4.00	None
Multi-party Line	None	4.00	4.25
Service Station	None	0.50	0.75
P. B. X. Trunk Line	4.00	5 00	5.50
Residence Service:			
Individual Line	2.33	3.25	3.25
Two-party Line	None	2.75	2.75
Four-party Line	1.67	2.25	2.25
Multi-party Line	None	2.25	2.25
Service Station	None	0 50	0.50
P. B. X. Trunk Line	2 33	3.25	3.25

The Hazelton service area, under the Consolidated Telephone Company, had 2,451 stations, and after unification with the telephone exchanges acquired from the Bell Telephone Company of Pennsylvania it had 6,210.

Before unification there were in the Hazelton area 5,272 Bell subscribers, paying an average rate of $2.65 per month, or at the rate of 5 cents per 100 stations, and 2,451 subscribers of the Consolidated Telephone Company, paying an average rate of $2.24, or at the rate of 9 cents per 100 stations. After unification the 6,210 subscribers paid an average rate of $2.76, or at the rate of 4 cents per 100 stations, on the basis of the new rates.

From these facts it will be seen that before unification a telephone user, in order to obtain complete local service, had to pay for two telephones, an average amount of 14 cents per month per 200 connected subscribers, or 7 cents per 100 subscribers. By virtue of unification and the application of the rates set forth in the new tariffs, this cost to the patron, for complete local service through a single exchange, was reduced to 4 cents per 100 connected stations.

The rates of former Bell Telephone Company subscribers having residence service were not affected by the unification,

but the service was broadened by making available 2,451 more stations; the rates of former Consolidated Telephone Company subscribers were raised to the level of the rates of the former Bell Telephone Company subscribers, and the service was broadened by making available 5,272 more stations. All business rates were increased in varying amounts as shown in Exhibit 1.

The saving per month to the various classes of subscribers by elimination of the one telephone, made possible by the unification, is shown in Exhibit 2.

EXHIBIT 2

LEHIGH TELEPHONE COMPANY

SAVINGS TO SUBSCRIBERS THROUGH UNIFICATION OF EXCHANGES

	Business			
	Individual	2-party	4-party	Multi
Old Rates:				
Bell	$5.00	$4.50	$4.00	$4.00
Consolidated	4.00	3.50	2.75	2.33
Total	9.00	8.00	6.75	6.33
New Rates:				
Lehigh	5.50	4.75	None	4.25
Saving to Former Subscribers of Both Companies	3.50	3.25	2.00*	2.08

	Residence			
	Individual	2-party	4-party	Multi
Old Rates:				
Bell	$3.25	$2.75	$2.25	$2.25
Consolidated	2.33	None	1.67	1.67
Total	5.58	2.75	3.92	3.92
New Rates:				
Lehigh	3.25	2.75	2.25	2.25
Saving to Former Subscribers of Both Companies	2.33	1.67†	1.67	1.67

* Assuming next higher grade of service used.
† Assuming next lower grade of service used.

The records of the case show that six months before any new rates were filed, the Lehigh Telephone Company explained to the public by newspaper notices and through personal interviews with each individual subscriber the proposed rates to be effective when unification took place. In the Hazelton service area 94 per cent of the former Consolidated Telephone Company subscribers signed

applications agreeing to pay these proposed new rates, if the company could bring about single service. Of the remaining 6 per cent, who did not desire to continue service, the majority took exception to the proposed application of business rates to the service which they were then receiving at residence rates.

Before unification the total monthly exchange service gross revenue of the two companies was $14,705.17 in Hazelton, and after unification $14,151.89, or a loss in revenue of $553.28, which was principally due to the elimination of 924 dual subscribers. The corresponding amounts for the entire Hazelton service area were $17,689.41 and $17,136.13 respectively, the amount of loss being the same. The Lehigh Telephone Company stated that the initial expenditure for the major unification projects at Hazelton exchange, necessary to tie the two systems together, amounted to $560,000. Included in this amount were land and buildings, central office equipment, subscribers' station equipment, and tie cables, but minor expenses were not included. The Lehigh Telephone Company asserted that the rates being charged in Hazelton local service area were necessary in order that the company might receive a just, fair, and reasonable return upon its property.

The rates which were being charged by the Lehigh Telephone Company were arrived at according to a fixed and uniform method dependent upon the number of subscribers in the local service area. The Pennsylvania commission disposed of the complaint against the proposed rates of the Lehigh Telephone Company as follows:

> The classification of local service areas and the graduated scale of rates applicable thereto was in effect previous to the transfer at all of the points in the territory hereinbefore described as having been transferred from the Bell Telephone Company to the Lehigh Telephone Company. The Lehigh Telephone Company adapted the classification and rates to its territory so that now the same rates obtain therein as are in effect on the Bell Telephone Company's lines where the number of subscribers per area are the same. This method of making telephone rates recognizes the value of the service to the subscriber, which in this case is shown to have been substantially enhanced.
>
> Upon all of the facts of record we find and determine that the monthly rental rates of Lehigh Telephone Company for Hazelton and the Hazelton local service area are just and reasonable.

Wherein do the results of a consolidation of telephone companies differ from those of the consolidation of other public utilities?

F. In Consolidation of a Gas, Electric, and Steam Utility

18. New York Steam Corporation

The New York Steam Corporation was incorporated in 1921 to succeed the New York Steam Company, which had been operating continuously since 1881 under a franchise from the City of New York "to lay mains and pipes in any and all the streets . . . for the purpose of supplying to the city and its inhabitants for motive power, heating, cooking or other useful applications, steam, water, air, and other fluids . . . and to make all necessary excavations . . . . " Beginning with 1913, the company's business was subjected to regulation as a public utility by the Public Service Commission of New York.

The corporation offered "block" rates, so that larger users paid lower average prices for steam. Three rates were offered according to the classifications of service and the types of market served. Much of the new business gained after 1922 was from large units, such as skyscrapers, public buildings, and railroad terminals, which benefited from this type of rate. Approximately 75 per cent of the buildings served in 1936 had no boiler equipment. In January, 1918, this corporation had originated the principle of varying the rate tariff in accordance with the cost of coal, and this policy proved advantageous to customers during most of the period from 1922 to 1936. Consumers further benefited by the fact that the coal cost rate adjustment was modified by improvements in the operating efficiency of the steam service, and the corporation made notable progress in this direction, having reduced the operating ratio from 79 per cent in 1922 to 58.6 per cent in 1936. For example, during 1936 the ratio of gross tons of coal consumed to thousands of pounds of steam billed was 1 to 15.4 compared with the base ratio of 1 to 14, given in the rate agreements. Consequently, during the ensuing year, with the same unit cost of coal to the corporation, rates to consumers per 1,000 pounds of steam would be slightly lower. These two factors accounted for the gradual reduction in average revenue per 1,000 pounds of steam from $1.25, in 1921, to $0.906, in 1933, although there were some

minor reductions and readjustments in the rate tariffs. By 1936 the higher cost of fuel caused this average revenue to rise to $0.945.

Under these rates, steam service was able to compete with other fuels such as coal and oil for space heating and industrial uses. Comparison of rates for steam with those for electricity and gas on the basis of equivalent B.t.u. was not practicable, because steam gives direct heat, whereas the theoretical heat content of electricity and gas suffers loss in the process of conversion into applied heat. This conversion factor varies according to the apparatus used. An interesting comparison could be made, however, of the total equivalent heating values of steam, electricity, and gas, assuming that there were no conversion losses for the last two. On this basis, the New York Steam Corporation supplied 8 per cent of the area of Manhattan Island with 14,500,000,000 B.t.u., whereas the heat equivalents of gas and electricity furnished the whole of the island were 13,000,000,000 and 7,000,000,000 B.t.u. respectively.

The corporation offered experienced engineering service free to its customers, instructing their operating personnel in the installation of equipment for steam use and in its most economical and satisfactory operation. It was estimated that this service resulted in a saving to consumers of an average of probably 10 per cent of their steam bills.

Major factors retarding the rate of growth of revenue after 1930 were the effects of the depression and the abnormally warm winters, which continued for the five years from 1928 to 1933.

Since 1924, this corporation had purchased steam from the New York Edison Company, then a subsidiary of the Consolidated Gas Company of New York, and later merged into the Consolidated Edison Company of New York, Inc. These purchases were principally for peak load requirements, as the total bought during the year 1932 amounted to only 2.5 per cent of the steam requirements. In 1934, there were some extremely cold days; hence this proportion rose to 6 per cent. In 1935, it rose again to 7.1 per cent, but almost half this amount was supplied during the night hours throughout the year. In 1936, the amount of steam purchased from the New York Edison Company was 6.2 per cent of the total send-out. The 1929 annual report explained that "detailed studies have shown the advisability of purchasing peak

load steam if available at reasonable prices, rather than making capital expenditures for station capacity which would be used only at short intervals"; moreover, it was stated that this arrangement was "mutually advantageous because of the dissimilarity of the daily load factors and the seasonal load factors of the two companies. The peak requirement for steam service occurs during the morning hours, whereas the maximum demand upon an electric company occurs in the late afternoon. Likewise, the maximum send-out of a steam distributing utility is on the coldest day of the year, which normally occurs during the latter part of January, whereas the peak demands on an electric company are usually in December, coincident with the shortest day of the year." In this case, steam not required for generating electricity in the New York Edison stations was drawn direct from the boilers through desuperheaters into the mains. Such a situation was just the reverse of that arising from the joint production of steam and electricity in the same plant, where the flow of steam through a back-pressure or bleeder turbine and then at low pressure directly into the steam mains required, for greater efficiency, identical load demands for steam and electricity.

The report of the corporation for the fiscal year ending June 30, 1930, contained the following statement:

> The acquisition by the Consolidated Gas Company of New York, one of the most important utility companies in the world, of a substantial majority of the common stock of the New York Steam Corporation should prove of benefit to the corporation and its present and future customers.
>
> While the New York Steam Corporation is being operated as a separate unit and will be expected to earn its operating and other expenses, the close affiliation with the Consolidated Gas System should result in improved service, increased efficiencies and greater economies of operation. These advantages may be expected to include savings in management and operating costs of various kinds, such as engineering, the design and construction of power stations and distribution systems, insurance, rents, coal and other supplies, the purchase of additional steam at times of peak load on the corporation's system (which usually occurs off the peak of the electric companies), the possible sale of surplus electric energy from the plants of the corporation[1] to the electric companies, and other advantages similar to those which have resulted from like affiliations.

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[1] At that time only sufficient electrical equipment had been installed to generate for the electrical needs of auxiliaries within the plants of the steam corporation.

By December 31, 1930, the Consolidated Gas Company of New York was reported as owning "approximately 74% of the 360,000 shares" of common stock outstanding of the New York Steam Corporation.

Although the New York Steam Corporation had protected itself and its customers against fluctuations in the price of coal, no such precaution was considered necessary in the price of water and the cost of labor, which constituted a substantial portion of the remaining operating expenses. During 1933, however, the NRA code for this industry increased labor costs, and the city of New York announced a 50 per cent increase in the rate for water, effective January 1, 1934. The 1934 annual report estimated that these two conditions caused increases in the year's operating expenses of $250,000 and $160,000 respectively. In addition, the city imposed an excise tax, effective September 1, 1933, of 1.5 per cent on the gross earnings of public utility corporations, subject to the supervision of the Public Service Commission. Within a year this was raised to 3 per cent, and also the utilities' bills to consumers became subject to the city's new 2 per cent tax on retail sales. The corporation and other affiliated companies of the Consolidated Gas Company's system unsuccessfully challenged in the courts these emergency tax measures of the city which applied only to public utilities.[1]

New York City also notified the corporation that it had increased its real estate assessment by $2,463,000, which would result in an increase of approximately $69,500 in taxes. In addition, for 1936, the New York State Unemployment Insurance Law, enacted in 1935, required the corporation to pay 1 per cent of a substantial part of its pay roll, or approximately $16,000, for unemployment insurance; the rate prescribed for 1937 was 2 per cent, and thereafter 3 per cent.

An official of the corporation estimated that 75 per cent of the buildings on streets served by mains in the downtown district were being served with steam and that this figure for the whole system was 50 per cent. The annual report for 1933 pointed out a new potential market:

Cooling and air-conditioning buildings by steam is rapidly gaining in popularity. While the use of steam for this purpose is a recent

[1] *New York Steam Corporation* v. *City of New York*, 276 N.Y.S. 99; 278 N.Y.S. 539; 197 N.E. 172.

development, apparatus similar to that required has been in use in industry for many years and is manufactured by 5 or 6 large and long established companies.

. . . . . .

Since a year ago when steam-jet cooling equipment was made practicable for use in cooling buildings, contracts have been made for 10 installations utilizing the corporation's service. . . .

The company's annual report for 1934 discussed difficulties arising in attempting to extend the use of steam air conditioning, as follows:

Undoubtedly there would now be more installations were it not for the comparatively large initial investment involved. Manufacturers of the equipment are endeavoring to have air conditioning included in the building modernization program of the Federal government. When economic conditions become more nearly normal, there should be a gratifying increase in the number of air conditioning installations, not only for new buildings, but in existing structures.

Since about 1930 the public had been growing acutely air-conditioning-conscious. Even earlier, many industries with special problems had appreciated the necessity for controlling air conditions. Woodworking, grain milling, and chemical plants found it desirable to remove dust and fumes from the air; paper and printing establishments, candy and tobacco manufacturing plants, and textile mills, among others, found that control of moisture, temperature, and dust improved the quality and increased the uniformity of products. Since the electrical equipment manufacturers had conducted active advertising campaigns, emphasizing human comfort, this feature had reached the consciousness of the masses to such an extent that the air-conditioning field extended to theaters, restaurants, retail stores, and even offices and homes. At last something was being done in response to Mark Twain's plaintive observation, "Nobody does anything about the weather."

In order to provide maximum satisfaction, air conditioning requires fourfold control of the air supply: temperature (heating and cooling); humidity[1] (moistening and drying); cleaning (dirt, germs, acid fumes); and circulation. Various combinations of

[1] See case entitled *The Peoples Gas Light and Coke Company* (B), p. 592.

these functions, with the use of different mediums, are possible. Hence there is likely to be substantial competition among the various types of utility services in the development of air conditioning.

As a result of this competition, continuous work was done by the company's research department on the improvement of steam-jet air conditioning. For example, during 1935 substantial reductions were made in the quantities of steam and condensing water required for refrigeration. In other cases the company was able to iron out defects of which even the manufacturers of the apparatus had been unaware. In all instances both potential customers and those who had already installed steam air-conditioning units were given the benefit of the company's experience.

In promoting the sale of air-conditioning units, the company made all contacts with potential customers through its sales department. Representatives of the latter department consulted with the clients' engineers as to details of the installation. While advice was given to clients on the basis of research work done by the company, as a matter of policy, the company did not attempt to act in the capacity of consulting engineers for its customers.

Greatest competition in the sale of air-conditioning units was experienced from small compressor units, usually run by electricity. These units were built in large numbers with a more or less standard design. On the other hand, at the end of 1937, steam units were still "tailor-made" to meet the individual user's requirements. Because of this difference, the company found that delivery time was a definite problem in competing successfully for the air-conditioning market. In many cases the desirability of air conditioning was not brought forcibly to the attention of a potential customer until the arrival of summer weather. At that time he was likely to buy one of the available compressor units, despite the fact that it might be less efficient in the long run.

From a financial standpoint the operating cost of steam-jet units compared favorably with the cost of running other types of units. In certain cases, as a result of the company's research work, reductions of as much as 35 per cent in fuel costs were realized. At the end of 1937 the company's rate structure had not reflected the advantages to be gained by both company and customer from the use of steam for summer air conditioning. It was expected that steps would be taken in this direction, although no immediate change was contemplated because of the time

required to settle difficulties involved in introducing a new rate without seriously disturbing the existing situation.

During the summer season of 1937, 18 steam-jet units were in operation on the company's line. These units had a total capacity of 1,560 tons. In other words, their capacity was equivalent to the amount of heat absorbed by melting 1,560 tons of ice in 1 day. The steam required for this purpose was 45,000 pounds per hour, or approximately 10 per cent of the hourly summer load. Early in 1938, it was stated that prospects for additional installations were favorable, and that several specific installations were under consideration, but were being delayed pending more favorable business conditions.

As stated earlier, by the end of 1930 the Consolidated Gas Company was reported as owning approximately three-quarters of the common stock of the New York Steam Corporation. After that date the former company, later known as the Consolidated Edison Company, increased its holdings of steam corporation stock. At the end of 1937, the Consolidated Edison Company was reported as owning 97 per cent of the common stock and 94 per cent of the aggregate of preferred stock of the New York Steam Corporation.

In June, 1937, the Consolidated Edison Company had submitted to the Public Service Commission of New York a plan calling for the exchange of the preferred stocks of the New York Steam Corporation for preferred stock of the Consolidated Edison Company. After negotiations, the commission on July 1, 1937, approved a revised plan whereby the Consolidated Edison Company would exchange 92,134 shares of its $5 preferred stock for the 6 and 7 per cent preferred stock of the steam corporation. The ratios of exchange were one share of Consolidated Edison preferred stock for one share of 7 per cent New York Steam Corporation preferred, and nine-tenths of a share of the former preferred for one share of 6 per cent preferred of the latter. It was estimated that this exchange would result in an annual saving of $166,847 in preferred dividends.

At a special meeting of Consolidated Edison stockholders in July, 1937, the company's charter was amended to permit the company to engage in the business of furnishing district steam. At that time it was stated that a merger of the Consolidated

Edison Company and the New York Steam Corporation would take place as soon as possible.

Appraise the advantages to a steam utility of its affiliation with other utilities.

Should the New York Steam Corporation be operated as a department of the Consolidated Edison Company, similar to the practice in Boston and Rochester?

Would your answers to the above questions be the same if the scene were laid in St. Louis or San Francisco instead of New York?

What are the principal problems confronting the management of the New York Steam Corporation and how would you meet them?

Would consideration of the interests of the consumers alter your answers to these questions?

Should district steam-heating service be subject to the same regulation and for the same reasons as in the case of an electric power or gas utility?

3. Coordination of Local Transportation Facilities

A. In a Medium-sized Community

19. The Community Traction Company[1]

In November, 1920, as the aftermath of several years of agitation on the part of the public for a reorganization of the transportation system and the insistence on the part of the owners that improvements and capital expenditures could not be made without the protection of an operating franchise, the voters of Toledo passed the so-called "Milner service-at-cost" ordinance. This franchise became effective on February 1, 1921, at which time the railway property of The Toledo Railways and Light Company was turned over to a new corporation called The Community Traction Company.

During the next seven years The Community Traction Company, operating under this franchise, was unable to meet the cost of operation plus interest and dividends, and a net deficit accrued in the so-called "fare stabilizing" fund. This period of seven years of operation was notable for the rapid decline in gross revenue, owing partly to the rapid increase in the number of privately owned automobiles and to a larger extent to the presence on the street of many independent bus operations. These "wildcat" operations were not only conducted without the burdens imposed by the service-at-cost franchise on the street-railway company, but the owners were permitted to skim the cream from the profitable territory without incurring the losses from any obligations to serve the less profitable areas. The City of Toledo contended that at least a part of the company's financial trouble was due to the existing power rate and demanded a substantial reduction in the rate paid for power. The company contended that failure of the city to regulate competition was responsible for its continuing

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[1] Acknowledgment is made to Mr. C. H. Forsgard, vice president and general manager of The Community Traction Company, Toledo, Ohio, for data used in the preparation of this case. Some information was also obtained from the *Electric Railway Journal*, July, 1929.

losses, which were reflected in the company's inability to finance a large reconstruction program.

In 1928, after several years of bickering, the city and the company reached a new agreement, which was based in part upon expert reports which had been submitted by both parties. A new ordinance provided for a five-year modification of the original Milner ordinance. This new ordinance gave the company practically a monopoly of all local transportation in Toledo by forbidding any other common carrier to operate within one-fourth of a mile of a car or bus line operated by the traction company. This provision left open to the city the right to grant a franchise to any other agency if The Community Traction Company did not see fit to extend service into areas more than one-fourth of a mile from established routes. The ordinance also provided for a substantial reduction in the power rate to the railway.

Before June 30, 1928, there were six independent bus lines competing with the traction company. Under the terms of the ordinance giving the company a monopoly of the bus service, the independent bus operators were forced to sell out. The six lines were purchased from the independents on a property-valuation basis under the terms of the ordinance. A total of 40 buses was thus purchased, though only a few of them were serviceable. In order to provide adequate service, The Community Traction Company purchased, in 1928, at a cost of about $900,000, a total of 88 buses, of which 69 were new. At the beginning of 1929 the company had a total fleet of 124 buses.

In addition to the numerous extensions of bus service, the company established special services with some of its new buses. In order to reduce operating costs, buses were also operated, instead of streetcars, in the "owl" service on certain lines.

The service furnished by streetcars was also improved. The ordinance provided for a five-year track rehabilitation program involving an expenditure of $560,000. In addition, $230,000 was appropriated for the replacement, within a period of three years, of worn-out equipment. The improvement in equipment was reflected in the fact that the number of cars which were "pulled in" because they were temporarily unfit for service was 40 per cent less in 1928 than in 1927.

Higher speed was obtained by adding two 35-horsepower motors to streetcars already equipped with two motors of the

same size. On the Cherry Street line, for example, the extra motors permitted the terminal schedule speeds to be raised as follows:

SCHEDULE SPEEDS IN MILES PER HOUR

Time of Service	Old	New	Percentage Increase
Morning Peak	9.84	10.53	7.01
Base	10.17	11.09	9.05
Afternoon Peak	8.72	10.34	18.58
Night	10.17	11.09	9.05

While the maximum speed possible was definitely limited by traffic conditions and traffic regulations, it was possible to increase somewhat the speed of the streetcars by rearranging the stops on several lines so as to increase the length of the run. The new stops were explained to the public in literature distributed by the company, and the stops were conspicuously marked by means of brilliant orange stripes around nearby poles, the color conforming to that of the cars. Two other devices also improved the speed of cars. Safety zones were established in the business district, and new transfers were issued in colors indicating the parallel routes on which they could be used. These new transfers were so designed that they eliminated a certain amount of return riding by means of transfers.

Realizing that superfluous routes in some parts of the city and lack of any service in other parts resulted in inadequate service, a waste of revenues, and failure to secure maximum patronage, the company gave serious consideration to the readjustment of its service through rerouting, expansion of bus routes, and effective coordination of the service of streetcars and buses. In July, 1926, the rail routes totaled 57.43 miles, while bus routes covered only 4 miles. During the next year bus mileage was increased to 30.6 and in 1928, to 58 miles. During the same period rail mileage was decreased by 11.14 through rerouting and abandonment of lines on which savings could be made by the substitution of bus service. In July, 1929, the total rail and bus mileage was 124.79, which was more than double the total mileage, 61.43, in July, 1926.

The bus routes were mainly feeders to the streetcars or were lines which did not compete directly with the streetcars. In

January, 1928, a total of 3,787,459 passengers were carried on the 54.1 miles of streetcar route. In January, 1929, the streetcar mileage had been reduced to 46.9 miles, but the total passengers carried increased to 3,895,821. In other words, by confining streetcar operation to the heavy routes of travel and coordinating this service with feeder bus lines from outlying districts, the number of passengers carried on streetcars increased from about 70,000 per mile of route in January, 1928, to approximately 83,000 passengers per mile of route in January, 1929. Even more striking than the increase in the number of passengers carried in streetcars was the increase in the number carried in motor buses. In 1927 bus patronage was somewhat less than 2,800,000. In 1928 the number increased to more than 6,000,000.

Under the new ordinance all fares on cars and buses were 10 cents for a single ride, or three tokens for 25 cents and 1 cent for a transfer.

As provided in the original Milner ordinance, it became necessary either to extend the franchise of the company for another 10-year period or to begin amortizing the property as of February 1, 1931. During 1930 an effort was made to reach an agreement between the city and the company in regard to certain desirable changes in the franchise, but no agreement was reached other than upon the question of amending the city charter so that the so-called "monopoly clause" could be written directly into the amended franchise. This proposal was submitted to the voters at the August primary election and carried. An effort was then made to work out an ordinance, amending and extending the Milner ordinance for another 10-year period, which could be presented to the electorate before February 1, 1931. One faction in the city contended that the bondholders should forego the greater portion of the accumulated deficit and that the capital value of the company should be arbitrarily reduced. A hopeless deadlock resulted and the City Council, in an effort to stave off the operation of the amortization clause, passed a straight renewal of the old ordinance for a two-year period. This two-year renewal ordinance was submitted to the voters in November, 1930, but failed to receive a majority vote.

In January, 1931, the holding company which owned the bonds of The Community Traction Company advised the city that, if an effort was made to adjust the differences between the various

parties who were attempting to negotiate the franchise changes so that the amended franchise might be presented to the people, the bondholders would waive their rights in regard to amortization until the voters had expressed their desires. Negotiations were continued and at the election on August 11, 1931, the amended franchise was passed by a majority of 3½ to 1.

The amended franchise stated, among other things, that the company should make any necessary extensions of bus service when ordered to do so by the City Council and when approved by the Board of Street Railway Control; also that the provision prohibiting competition within one-fourth mile on either side of any street on which the company was giving service might be repealed if at any time the company failed to carry out the findings of a board of arbitration provided for in the franchise.

In the 14-year period from 1924 to 1937 inclusive, the low mark for passenger revenue was in 1933 when it was but $1,654,310. For 1937 the comparable figure was $2,110,056. The high mark for the 14-year period was in 1929 when passenger revenue was $3,656,912. For revenue miles, the high point was also in 1929 when it was 9,126,883 miles; the low point of 6,727,174 miles occurred in 1925. For 1937 the revenue miles were 7,130,319 compared with 7,108,643 in 1924. If the 14-year period is considered, the revenue miles of the system increased very slightly, but the passenger revenue fell off in the same period by about 40.0 per cent.

Taxicab competition in Toledo finally brought about the passage of a taxicab ordinance which became effective November 1, 1932. This ordinance provided for use of a meter rate until May 1, 1933, after which a zone system was to be in effect with a 30-cent fare for the first zone and 15 cents for the second and third zones; in addition, 5 cents was to be charged for each extra passenger beyond two. Space within the city limits composed the first two zones. Compensation of drivers was also fixed by the ordinance.

After approval of the 1931 franchise, the company made further shifts from street railway to trackless trolley and gas bus service. In 1935, for example, an important change was made in substituting a trackless trolley for streetcar service on Dorr Street, a 4-mile route in a well-populated district. On other lines with light traffic, gas buses replaced street cars. Thus reroutings were made possible and certain radial gas bus routes gave service

between residential and industrial areas by crosstown bus routes, thus avoiding the traffic congestion of downtown routes. With the increased flexibility of the entire service which resulted from the increased use of buses, attention was given to possible improvement in the character of the service through careful scheduling of the different types of service, and riders were saved both time and unnecessary riding in reaching their destinations.

Streetcar mileage in 1937 was 2,316,259 and 42 per cent of the passenger revenue was from streetcar service. Gas bus mileage was 4,484,826 and about 52 per cent of passenger revenue was from this source. Trackless trolley mileage was 329,240 and about 6 per cent of the passenger revenue was from this type of service.

Included as amendments to the franchise in 1931 were certain provisions which permitted the company to install optional rates of fare in addition to the fare established by franchise. The company immediately began a series of experiments with other types of fares and, as a result, offered in addition to the 10-cent cash fare, or three tokens for 25 cents, the following optional rates:

1. A weekly pass entitling the holder to an unlimited number of rides per week for $1.25.
2. A short haul downtown zone rate of 5 cents for a distance of approximately 1¼ miles from the business center of the city.

Also in addition to a 5-cent rate for students above the age of eight years established in the amended franchise, the company installed a 50-cent weekly school pass entitling the holder to unlimited riding privileges on school days and during school hours.

Owing to the fact that these optional rates were installed at a time when revenues were declining because of the general business depression, the effect of such fares on the company's revenue was obviously obscured, but the management believed that such fares accomplished three things:

1. Reduced the effect of harmful low-rate taxicab competition which sprang up because of the unemployment situation.
2. Sale of a full week's transportation in advance reduced the effect of the 5-day week.
3. The fact that the weekly pass gave an average rate to pass riders of slightly more than 4 cents per ride effectively stopped a public demand for a horizontal reduction in rates by demonstrating the company's willingness to provide a lower rate of fare for the frequent rider.

Should there be any competition of motor buses with street railways in cities the size of Toledo?

B. In a Metropolitan Center

20. CHICAGO SURFACE LINES

In 1913 an important step was taken toward the unification of street railway service in Chicago. This move was followed by considerable agitation for the unification of all local transportation agencies. Through the passage of the Unification Ordinance in November, 1913, and the completion of an operating agreement among the four surface street railway companies operating in the city, they were combined into a single operating unit known as the Chicago Surface Lines under the management of a board of operation selected by the several companies.[1]

Unified operation actually began on February 1, 1914. The four companies whose operations were unified were the Chicago Railways Company, the Chicago City Railway Company, the Calumet & South Chicago Railway, and the Southern Street Railway Company. The company operating in the northwest part of Chicago, the Chicago Railways Company, later had to compete with the service rendered by the Chicago Motor Coach Company, which began its initial operations in the same year that the ordinance was passed for unified operation of the street railway.

The predecessor of the Chicago Motor Coach Company, the Chicago Motor Bus Company, was organized under Illinois law in 1913. This company originally requested a certificate of convenience and necessity for the privilege of operating its buses only on the boulevards and through the parks of the city. This operation, however, was not authorized by the Illinois Public Utilities Commission until 1917. In 1923, the Chicago Motor Bus Company, which had been in the hands of a receiver for several years, was reorganized and its name changed to the Chicago Motor Coach Company.

In 1924 the Chicago Motor Coach Company filed amended supplemental petitions to applications which had been before the

[1] A copy of this ordinance is given in a valuable compilation of ordinances and other official data, edited by H. P. Weber, entitled *Outline History of Chicago Traction*, 1936; see pp. 97–103.

commission for some time. Some of these petitions had been originally filed by the company's predecessor, the Chicago Motor Bus Company. In these amended supplemental applications, it was stated that the petitioner desired "further to transact a general business of rendering motor coach service in the city of Chicago." The Chicago Surface Lines intervened and pointed out the impropriety of permitting the development of a duplicate and competitive transportation agency. The Chicago Surface Lines strenuously opposed the use by the Chicago Motor Coach Company of any of the streets in the downtown loop district because of interference with street railway operation in an "already overcongested area." Counsel for the surface lines contended that three significant facts were disclosed by the amended supplemental applications of the Chicago Motor Coach Company. As stated in a brief for the Chicago Surface Lines presented to the Illinois Commerce Commission,[1] these facts were as follows:

1. The Chicago Motor Coach Company was seeking to gridiron the city with proposed motor bus lines so as to discourage any other motor bus company from entering the field. That is, the coach company aimed at a monopoly of all motor bus transportation in the city of Chicago.
2. The coach company was seeking to depart from its original plan of operating merely boulevard and park motor bus lines, and to establish a general and comprehensive motor bus transportation system in each division of the city of Chicago in direct competition with the existing surface and elevated railways.
3. The lines included in this proposed comprehensive plan were laid out in such manner as would be calculated to block any future extensions of the street railway system.

The Illinois Commerce Commission had maintained in 1922, in connection with an application of the Chicago Motor Bus Company for a certificate of convenience and necessity, that motorbus service in a large city should be unified and so distributed and controlled that it would be permanent in the communities which it should serve and be readily unified in any general transportation scheme involving the subways, surface cars, and elevated lines.[2]

[1] In 1921 the name of the Illinois Public Utilities Commission was changed to Illinois Commerce Commission.

[2] *Re Chicago Motor Bus Company* (Ill.) Nos. 6066, 6642, 10900, Nov. 21, 1922.

In connection with the granting of a certificate of convenience and necessity to the Chicago Motor Bus Company for the operation of motorbuses, in 1923, the commission said:[1]

> The history of the street car lines and their ultimate unification in 1913, the elevated service and its ultimate unification, leads the commission to believe that it should not repeat the mistake formerly made in the street car and elevated service but should, as rapidly as possible, permit a bus structure and operation which will enable the Chicago Motor Bus Company to reasonably coordinate its operations.

The certificate was granted by the commission although the city of Chicago had passed an ordinance prohibiting the operation of buses on city streets.[2]

The commission said in November, 1926, in connection with one of the applications of the Chicago Motor Coach Company, that the motor coach company would be authorized to extend a route into a large city district that had grown rapidly and had a large population, although the district was directly or indirectly served by other transportation agencies. The commission found that the extension would afford direct transportation to the downtown business district, that local railroad service was infrequent even in rush hours and some stations were a mile or more distant, that elevated railway service touched only one end of the district, and that streetcar lines parallel to the extension were one-half a mile distant, were reached only by crosstown lines, and carried exceptionally heavy loads at times, even in the nonrush hours.[3]

The Illinois Commerce Commission, in June, 1927, after making certain changes in pending applications of the Chicago Motor Coach Company, granted that company a certificate of convenience and necessity to operate on three of the routes specified in its applications.

In a decision made January 26, 1928, the Illinois Commerce Commission also granted a certificate of convenience and necessity to the Chicago Surface Lines to provide feeder bus service in certain parts of the northwest section of the city. On May 15, 1928, the Chicago Surface Lines filed a petition with the Illinois Commerce Commission asking permission to spend the necessary

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[1] P.U.R. 1923E, 521.
[2] P.U.R. 1923E, 422. This certificate was granted April 5, 1923.
[3] P.U.R. 1927E, 855.

sum required for the purchase of the buses, which had been authorized under the order of January 26, 1928, out of a "special equipment fund" which had been set up under the order of the Illinois Public Utilities Commission in 1920. The commission denied the petition. It took the position that it had no authority to grant such permission, inasmuch as streetcars were the only type of equipment under consideration at the time the special equipment fund was established. Concerning the local transportation problem in Chicago and possible provision for coordination of local transportation agencies, the commission said:

> It is a matter of common knowledge that the franchise grants of the various street railway companies in the city of Chicago, passed in the year 1907, have expired and have created a traction problem which the agencies concerned are devoting extensive efforts to solve.
>
> Serious consideration has been given to the consolidation or unification of the various transportation agencies in the city of Chicago, at least as regards operation, as a part of said solution. This is another reason why the commission believes it undesirable to authorize any extensive motor bus operation by the street railway companies. When the time comes to work out a satisfactory solution of this problem, the commission believes that negotiations will be less hampered and it will be less difficult to deal with the agencies operating the various types of local transportation if each agency is operating the character of service it was organized to perform.[1]

In the meantime, April, 1928, the commission had held further hearings on an application of the Chicago Motor Coach Company, which had been on file for several years, for permission to install motor-coach operation on certain streets in the northwest section of the city. On September 19, 1928, the commission rescinded its order of January 26, 1928, granting a certificate of convenience and necessity to the Chicago Surface Lines to provide certain feeder bus service. On October 2, 1928, the commission not only granted permission to the Chicago Motor Coach Company to provide the service on a number of routes in the northwest part of the city, but it even ordered this company to furnish the service without delay. In its decision, the commission said:

> The season of the year when local transportation is most needed in the northwest side of Chicago is rapidly approaching. The hardships occasioned by the long walks required to reach existing transporta-

[1] *Central Northwest Business Men's Association* v. *Chicago Surface Lines*, P.U.R. 1928E, 685, 690.

tion, which in many instances, the evidence shows, are through open country, across which the wind sweeps with unabated force, and where in many instances there are no sidewalks, are greatly intensified by the inclement weather of the fall and winter season. Relief is needed at once to remedy such a condition. The thoroughfares covered by this order are logical extensions to existing lines of the Chicago Motor Coach Company, and . . . this company offered proof of its readiness, ability, and willingness to inaugurate such motor coach service by extending its existing system.

. . . The Chicago Railways Company filed an answer that under certain conditions it was prepared to serve the territory covered by this order, with so-called "feeder" bus service. There has been no disposition shown on the part of the Chicago Railways Company to extend its regular street railway service into this territory. Under existing conditions the company should not be expected to spend large sums of money to meet the immediate necessities of this district by street railway extensions.

. . . Aside from the time required in construction, it would be an unreasonable and arbitrary act to order the Chicago Railways Company (then in hands of receiver) to extend its street railway lines to meet the pressing needs. The courts have held that this commission cannot enforce an arbitrary and unreasonable order. Therefore, we desire to meet the pressing needs of transportation on the northwest side in the only manner we can conceive which will be approved by the courts. We are in the position where we can require the Chicago Motor Coach Company to extend its service and cannot require the Chicago Railways Company to extend its street railway service.[1]

The Chicago Motor Coach Company within 24 hours diverted to the new service all its own equipment which could be spared, and immediately rented coaches from companies in New York, St. Louis, Detroit, and other cities. Counsel for the Chicago Surface Lines made the following comment on the order of the commission:

The order of October 2 contained no provision as to when it should take effect and therefore under the expressed provisions of Section 65 of the Illinois Commerce Commission Law the order could not take effect or become operative until 20 days after the service thereof. Nevertheless, in the morning of October 3, 1928—the day immediately following the entry of the order,—the coach company commenced operation under that order with prepared schedules and under police protection.

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[1] *Illinois Commerce Commission* v. *Chicago Motor Coach Company*, P.U.R. 1929A, 96, 99, 100.

In the opinion of counsel for the Chicago Surface Lines, the order of the commission had been "recklessly and arbitrarily entered."

The decisions of the Illinois Commerce Commission involving the agency which was to furnish local transportation in the northwestern part of Chicago were appealed to the courts. The commission's decision of June, 1927, granting a certificate of convenience and necessity to the Chicago Motor Coach Company to operate on certain streets in northwest Chicago, was appealed to the Superior Court of Cook County. This court, in October, 1927, confirmed the commission's order. An appeal was taken from this judgment to the Supreme Court of Illinois and that court in June, 1929, reversing the order and judgment of the Superior Court of Cook County, held the commission's order void, as unreasonable and unlawful. In its opinion the Supreme Court of Illinois said:[1]

> It is not the policy of the Public Utilities Act to promote competition between common carriers as a means of providing service to the public. The policy established by that act is that, through regulation of an established carrier occupying a given field and protection of it from competition, the public will be served more efficiently and at a more reasonable rate than if other competing lines were authorized to render the same public service in the same territory.
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> . . . . . .
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> It is in accord with justice and sound business economy that the utility already in the field be given an opportunity to furnish the required service where it offers and is able to do so.
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> . . . . . .
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> The operation of motor buses has contributed to the density of street traffic and the difficulties of street car operation on streets where both street cars and motor buses are operated and traffic is dense, and the addition of more motor buses would add to the street congestion, to the inconvenience of the users of the street cars and to the detriment of the general convenience, safety, and welfare of the public.

The Supreme Court of Illinois also passed upon the order of the commission (September 19, 1928) which rescinded the commission's earlier order (January 26, 1928) granting a certificate of convenience and necessity to the Chicago Surface Lines to provide feeder bus service to certain of its lines in northwest Chicago. In its decision (October, 1929), the court said:

[1] *Chicago Railways Company et al.* v. *Commerce Commission, ex rel. Chicago Motor Coach Company*, 336 Ill. 51; 167 N.E. 840 (1929); P.U.R. 1930A, 385.

The original petition presented to the commission was the question whether the street railway service of the Chicago Railways Company was adequate to meet the demands of the public and whether extension of that service was needed, and if so, whether that need could be met by the establishment of motor bus lines as auxiliary to the street car service. It is conceded that the question presented was within the jurisdiction of the commission to decide . . . . The commission found, *and the findings are supported by the facts*, that the existing street car railway service was inadequate and that it could be made adequate to meet the public needs by establishing motor bus extensions to that service.

The commission . . . made the specific findings (January 26) directing the Chicago Railways Company, and the receivers thereof, to install motor bus service on the streets hereinbefore named, as a part of said system known as the Chicago Surface Lines and subject to the same rates of fare and the issuance and exchange of transfers between motor buses and street cars as prevail on the Chicago Surface Lines.

Before the commission could lawfully rescind its order of January 26, it was necessary that it make a finding of facts different from the finding of facts on which the original order was entered, and that the facts as found in the original order were erroneous, or that since the entry thereof conditions had changed to such an extent that the facts and conditions as they existed at the time of the rescinding order were different, or that a mistake as to the law had been made, and enter findings of facts applicable to the then conditions. This the commission failed to do and there is nothing in the record before us authorizing the entry of an order rescinding the order entered January 26. It is not given to the commission to determine the public policy of the state. (*Public Utilities Com.* v. *Bartonville Bus Line*, 290 Ill. 574.) The finding that the operation of motor bus service as an extension of street car service is not desirable as a matter of public policy is a finding in a field which the commission may not enter.[1]

In the hearings before the Illinois Commerce Commission in the early part of 1930, counsel for the Chicago Motor Coach Company pointed out that as the result of operating the lines under the commission's order of October 2, 1928, it had lost during the period from October 3, 1928, to December 31, 1929, approximately $348,000; that for the year 1929 the losses approximated $210,000. It was the opinion of the management of the Chicago Motor Coach Company that a very considerable portion of this loss would be avoided in the year 1930 because of reduced expenses, such as the extraordinary expenses incurred through the rental of buses made

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[1] *Central Northwest Business Men's Association et al.* v. *Illinois Commerce Commission et al.*, 337 Ill. 149; 168 N.E. 890; P.U.R. 1930B, 485.

necessary in 1928 and 1929 in order to give the people prompt and speedy service in accordance with the commission's order. The management expressed the belief that within a reasonable time it would be reimbursed for losses and be able to carry on with a fair return on the capital invested.[1]

The Chicago Motor Coach Company took the position that if the commission ordered the Chicago Railways Company to install "feeder" bus service on certain streets (for example, on Diversey Avenue) it should also order simultaneously the Chicago Motor Coach Company to cease all operations on the other lines involved; that it would be an injustice to the Chicago Motor Coach Company to expect it to operate merely the least profitable of the lines.

In compliance with the decision of the Illinois Supreme Court, the order of the Illinois Commerce Commission of March 6, 1930, authorizing the Chicago Surface Lines to furnish feeder bus service, was based on the theory that the utility in the field should first be allowed the opportunity to provide additional service required by the community. In its decision, the commission said:

> The commission recognizes, and it appears from the great volume of testimony in the record of this consolidated cause, that there is urgent need for additional transportation facilities in the northwest portion of the city of Chicago. And this commission recognizes, and it further appears from the evidence in this cause, that the great majority of people residing in the aforesaid territory expressed themselves as desirous of bus street railway extension service, as proposed by the street railway companies, with free interchange of transfers between buses and the street cars now operated by the street railway companies, and at the same rate of fare now being charged by said street railway companies on the Chicago Surface Lines.
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> The commission further recognizes, and it further appears from the evidence in this cause, that the people residing in the territory proposed to be served by the street railway companies have given great publicity to the want of transportation in this particular territory, to-wit, through the press, at called mass meetings, and by actual demonstrations held in said territory and at the office of this commission, urging in the aforesaid and various other manners, immediate relief from the existing lack of transportation facilities in said territory, and further urging that this commission require the said street railway companies to meet this inadequacy by installing, maintaining and operating bus lines as extensions of the existing street railway system.[2]

[1] Data from typewritten statement furnished by the Chicago Motor Coach Company.

[2] *Re Chicago Motor Coach Company* (No. 12513), *Park View Chamber of Commerce v. Chicago Railways Company* (No. 17869), P.U.R. 1930E, 161.

The commission's order was made contingent upon permission being obtained by the receivers of the Chicago Railways Company from the United States District Court for the use of funds from the special equipment and renewal fund to provide for the new service. The routes involved comprised about 17 miles of streets. With the exception of one route, Belmont Avenue, all the new service was to be provided with trolley buses. In accordance with its own request, the Chicago Motor Coach Company was permitted to discontinue its service on streets in the territory not included in the order for service by Chicago Railways Company. It was directed to operate on all streets included in the order until the Chicago Railways Company was ready to provide service.

The commission stated, in its decision, that its obligation to the public to authorize adequate service made it necessary to insist that the authority to use funds for the purposes of providing the new service be promptly obtained and the service installed without delay. The authority to use the funds was granted by the court, and the Chicago Surface Lines inaugurated in April, 1930, trolley-bus service which was coordinated with street railway service.[1]

Unification of all local transportation facilities in the city was being considered by the city of Chicago during the same period that the Illinois Commerce Commission and the Illinois Supreme Court were determining what agency should furnish bus service in the northwestern part of the city. The expiration in 1927 of the 20-year franchise brought the problem squarely before the city.

Receivership of the street railways in Chicago began on December 15, 1926, when the Chicago Railways Company passed into the hands of the court just before the maturity of its bonded indebtedness, coincident with the end of the 20-year ordinance period on February 1, 1927. After that date, the board of operation of the Chicago Surface Lines functioned subject to the authority and under the control of the Federal court in receivership proceedings pursuant to various day-to-day ordinance permits passed by the city council.

Throughout the various court proceedings, Judge James H. Wilkerson stated that some method must be devised to bring the proceedings to a close as soon as possible through securing a city

[1] Chicago Surface Lines, *Seventeenth Annual Report*, 1931, p. 3.

ordinance "in terms which are not confiscatory and which are fair both to the public and these utilities." Obviously the drafting of an ordinance for the complete unification of ownership and operation of the Chicago Surface Lines alone presented much less difficulty than was involved in the unification and consolidation of all local transportation systems in the city. But the city took the position that a new franchise should provide for the latter plan.

After receivership proceedings began, Judge Wilkerson appointed a Citizens' Traction Settlement Committee, to cooperate with the city and the companies in working out a comprehensive plan, including state and city legislation, to secure unified operation of local mass transportation, under a single ownership. The Illinois General Assembly passed the necessary enabling legislation, and the ordinance passed by the city was approved by the voters in 1930.[1]

This ordinance provided, among other things, that during the first 10-year period the city would contribute $100,000,000 for the construction of subways, and the unified company was to provide $200,000,000 of new capital for improvements and extensions, about one-third of which was to be spent during the first three years. Part of the cost of subways was to be met by special assessments upon property specially benefited. The new ordinance provided for a terminable permit and regulation of service (but not rates), by a local home-rule commission to be appointed by the mayor of Chicago with the approval of the City Council. Universal transfers were to be provided over the entire system without additional charge, except transfers from the surface lines to the elevated lines, for which a charge of 3 cents was to be made. Transfers from the elevated lines to the surface lines were to be free. Universal transfers on all surface lines and on all the elevated lines were to be provided. The ordinance was not to become effective until the new company had acquired all the properties of the existing companies subject to certain liens on the elevated properties which were specifically set forth in the ordinance itself. The city was to have the right to purchase the

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[1] *Act for Organization of Corporations to Establish and Operate Unified Local Transportation Systems*, as cited by H. P. Weber, "Outline History of Chicago Traction," pp. 283–285. Act is *Illinois Laws*, 1929, p. 289. The validity of this act was sustained by the Illinois Supreme Court in *The People* v. *City of Chicago*, 349 Ill. 304, 182 N.E. 419 (July 26, 1932).

property of the company at any time at a value that had been agreed upon.[1]

Unfavorable economic conditions and certain financial problems involved in the unification made it impossible to reach any agreement after several years of negotiation. Finally, in 1934, the city refused to make any further extension of the time within which the companies could accept the ordinance.[2]

In November, 1936, Judge Wilkerson instructed proponents of the Surface Lines Reorganization Plan to begin negotiations with the city for a new ordinance, and these negotiations were started in December of that year. In May, 1937, definite suggestions for an ordinance for the surface lines were submitted to the city. It was proposed, among other things, to expend available funds for immediate extensions and improvements and the acquisition of the properties of the Chicago Motor Coach Company; and to agree to suitable provisions for purchase of equipment and operation of city-owned subways and for eventual acquisition of the whole or part of the properties of the elevated railroads if demanded by the city after suitable city-owned subways were provided. Acquisition was to be at such price and upon such terms as might be agreed upon by the transportation companies and approved by the city and the Illinois Commerce Commission.[3]

In November, 1937, the mayor transmitted to the City Council Committee on Local Transportation and filed in the Federal Court a report of the city's engineers entitled, *A Comprehensive Local Transportation Plan for the City of Chicago*, which the mayor had publicly outlined in principle earlier in the year.[4] Some of the more important conclusions of this committee were that "to a considerable degree" the city's "rapid transit" system was inadequate because of the age of equipment, indirect routing, and "limited zone of influence"; that the surface systems were "outmoded and inadequately coordinated with rapid transit facilities";

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[1] For data relating to the ordinance and provisions of the ordinance, see Weber, *op. cit.* pp. 287–326.

[2] *Journal Council Proceedings*, 1933–1934, pp. 1830, 1835; cited by Weber, *op. cit.* p. 352.

[3] Chicago Surface Lines, *Twenty-Fourth Annual Report*, 1938, p. 4.

[4] *A Comprehensive Local Transportation Plan for the City of Chicago* by Philip Harrington, traction engineer, city of Chicago; R. F. Kelker, Jr., engineer, Committee on Local Transportation; and Charles E. DeLeuw, consulting engineer, was submitted to Edward J. Kelly, mayor, and James R. Quinn, chairman of the Committee on Local Transportation of the City Council of the city of Chicago, November 22, 1937. Hereafter referred to as the *Comprehensive Plan of* 1937.

that there was an intensive use of private automobiles with consequent aggravated congestion of streets, increased cost of commercial deliveries and a high traffic accident rate; that the construction of a comprehensive subway system extending to outlying centers was neither justified by the density of population nor financially possible of construction at that time; that the construction of extensions to the elevated structures for expanded rapid transit train operation was not financially possible under existing conditions; that construction of subways in the central business area and the conversion of the existing elevated structures into superhighways was feasible and could be economically accomplished to the mutual benefit of transit riders and the many users of the street surfaces; that some of the equipment and facilities of the three existing systems could be adapted to a modern system and utilized for a time, but that substantial portions of each must be immediately or shortly abandoned and replaced with modern facilities; that the variety of existing conditions warranted the use of a combination of rapid transit cars, streetcars, trolley coaches, and gas buses, each in its proper place, for the proposed replacement and extension program; that moneys were available for accomplishment of the recommended plan and that the probable earnings would be sufficient to maintain a modern, up-to-date system; and that the interests of the people of Chicago and many of the suburbs were so closely interrelated that a single metropolitan transit system would best serve the interests of all.[1]

Among the recommendations made were the following:

That a franchise ordinance be drafted providing for—

(*a*) Unified operation of all lines of the Chicago Rapid Transit Company, the Chicago Surface Lines, and the Chicago Motor Coach Company.

(*b*) Establishment of a local transit commission to supervise operation and accounting and to have exclusive jurisdiction over service, fares, future improvements, fair value, and reasonable rate of return.

(*c*) Adequate compensation to the city for use of streets and city-built subways and other facilities.

(*d*) Either a term or terminable form of permit, whichever was found necessary to best accomplish the purposes of the ordinance.

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[1] *Ibid.*, p. 15.

(*e*) A recapture provision under which the city would be given the option of purchase upon definite and reasonable terms.

According to these plans, the operating company would be required to provide certain improvements in existing physical facilities and to extend them in certain parts of the city. The rearrangement of rapid transit stations was to provide for the spacing of these stations about every half mile. A complete system of automatic block signals was to be installed. Wooden cars were to be replaced by lightweight, high-speed, all-metal cars of the most modern type. The equipment was to be provided for city-built rapid transit subways. About 360 miles of street railway track were to be converted into modern trolley or motorbus operation and necessary pavement work done on the right-of-way. Adequate surface facilities were to be extended throughout all built-up portions of the urban area. Modern street railway cars, trolley and motorbuses were to be purchased on an agreed equipment purchase program. About 170 single-way miles of express bus routes were to provide high-speed operation both on crosstown routes and on radial thoroughfares between the outlying districts and the central business area. Tests made of possible express bus speeds on various major thoroughfares in Chicago indicated that, by using modern equipment, express bus schedules could be worked out for surface operation at average speeds of from 16 to 21 miles per hour. There was to be a complete coordination of all schedules on surface lines so as to provide the maximum of convenience for passengers when transferring to high speed routes or suburban railroad services coordinated with the local system. City-built subways were to be utilized by streetcars, and high-speed coaches were to operate over city-built super-highways.

The plan outlined in detail the subway and other facilities which the public was to undertake. Meanwhile, during the period of negotiations on unification between representatives of the companies and the city, the need for extensions of service within the city raised the question whether such service should be rendered by the Chicago Surface Lines, the Chicago Rapid Transit Company, or by the Chicago Motor Coach Company. A number of applications or complaints arising in 1934 and 1935 were consolidated and heard by the commission and decided by it in 1936.

These applications in part involved service on certain parts of Foster and Kimball Avenues and of the north and northwest parts

of Chicago. One group of citizens demanded that the service in question be furnished by the Chicago Surface Lines; another group petitioned that the service be given by buses operated by the Chicago Rapid Transit Company. The Chicago Motor Coach sought authority to furnish the service, and it agreed to exchange free transfers with the rapid transit lines at the rapid transit stations that would be touched by the proposed route. During a period of five months, more than 40 hearings were held, and throughout these proceedings the three transportation companies asserted their desire to furnish the additional facilities. With reference to this fact, the commission pointed out in its decision that the zeal of the companies to expand their existing facilities for competitive reasons was not to be a determining factor. The commission felt that that agency should be permitted to render the service which would be the most satisfactory and at the lowest fare between downtown areas and the areas in which the new service was to be provided. On this basis the commission decided that the new service should be offered by the Chicago Surface Lines. In its decision, the commission said:[1]

> . . . The Chicago Surface Lines is the only transportation system which occupies the whole of the north and northwest sections of the city, and it serves the greatest part of that district as the only medium of public transportation; that we therefore find that the existing needs of the public for additional facilities can best be met by the proposed gasoline bus street railway extensions; that public convenience and necessity requires gasoline bus street railway extensions to be installed on Foster Avenue from Milwaukee Avenue to or near the eastern city limits and on Kimball Avenue from Leland to Milwaukee Avenue. . . .

The Chicago Surface Lines system comprised, in 1938, over 1,100 miles of single-track railway lines, 54 miles of trolley-bus lines, and 85 miles of gas bus routes.[2] It had available 3,669 cars, 152 trolley buses, and 125 gas buses to cover the entire city of Chicago and to furnish transportation throughout the city for a single cash fare. Through routes and lines were operated by which passengers were carried without change from one section of

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[1] Illinois Commerce Commission, mimeographed decisions No. 23257, 23330, 23338, 23358, 23369, 23393, 23438, March, 1936.

[2] The track mileage of the four street railway companies in 1938 in round numbers was as follows:

Chicago Railway Company	603	Calumet & South Chicago Railway	129
Chicago City Railway Company	360	Southern Street Railway Company	17

the city to another. In 1938 there were 16 such through routes and lines, the longest of which was 22 miles in length. The longest ride afforded on the system with transfers and for a single fare (7 cents) was approximately 36 miles.

The Chicago Surface Lines in January, 1938, was furnishing local transportation to approximately 78 per cent of the traveling public in Chicago. The elevated lines carried about 16 per cent and the motor coaches about 6 per cent. In the year ending January 31, 1938, Chicago Surface Lines carried 721,349,541 revenue passengers. The average week-day revenue passengers

EXHIBIT 1

CHICAGO SURFACE LINES

CHICAGO SURFACE LINES, CHICAGO RAPID TRANSIT COMPANY, AND CHICAGO MOTOR COACH COMPANY

Revenue Passengers Carried 1927–1937

Year Ending January 31	Chicago Surface Lines				Chicago Rapid Transit Co.	Calendar Years	Chicago Motor Coach Co.
	Trolley Bus	Gas Bus	Street-cars	Total			
1927–1928		374,290	882,084,357	882,458,647	226,212,172	1927	50,270,849
1928–1929		987,768	891,826,852	892,814,620	207,864,238	1928	61,836,233
1929–1930		1,050,783	896,513,571	897,564,354	196,774,395	1929	69,001,990
1930–1931	7,439,110	1,406,537	803,235,054	812,080,701	182,954,846	1930	58,310,208
1931–1932	13,376,821	1,099,473	717,619,407	732,095,701	152,414,248	1931	49,571,371
1932–1933	13,312,292	799,657	619,714,995	633,826,944	126,989,541	1932	40,799,663
1933–1934	14,019,773	870,904	636,711,841	651,602,518	124,855,354	1933	49,298,578
1934–1935	15,282,633	282,418	661,967,674	677,532,725	127,276,803	1934	43,698,473
1935–1936	16,399,689	5,172,854	650,574,508	672,147,051	131,420,588	1935	40,019,162
1936–1937	18,432,093	7,005,561	694,864,245	720,301,899	149,876,484	1936	49,505,960
1937–1938	17,882,452	10,234,062	693,233,027	721,349,541	150,349,614	1937	57,716,156

SOURCE: Data from annual reports of the company for years ending January 31, 1937, and January 31, 1938. Further details furnished by the company.

numbered 2,170,605 and the average Saturday revenue passengers, 1,945,700. The average number of passengers on Sundays and holidays was but 1,147,590. In the same year these lines operated 120,450,961 revenue car miles; 4,935,550 trolley-bus miles; and 3,958,342 gas bus miles.[1]

After a hearing in the Federal Court in December, 1937, a committee was appointed representing the Chicago Surface Lines, the Chicago Rapid Transit, the Chicago Motor Coach Company, and the mayor of the city, to conduct preliminary negotiations concerning the proposed plan and unification of all the properties.

[1] Data furnished by Chicago Surface Lines.

At that time, Judge Wilkerson designated Walter A. Shaw, formerly a member of the Illinois Public Utilities Commission, as adviser to the court under instructions to consult with the parties to the negotiations when requested by them to do so. During the

EXHIBIT 2

CHICAGO SURFACE LINES
CITY OF CHICAGO AUTOMOBILE AND TAXICAB REGISTRATION
1915–1937

Calendar Year	Passenger Motor Vehicles	Taxicab Licenses Issued	Persons	
			Per Passenger Motor Vehicle	Per Taxicab License
1915*	35,218		70.0	
1916*	48,542		51.9	
1917*	58,486		43 9	
1918*	59,965		43 7	
1919*	73,790		36 3	
1920	86,670†		31.9	
1921	137,750		20.6	
1922	172,655		16.8	
1923	218,991	4,760	13 5	622.8
1924	260,887	4,212	11.6	719.7
1925	289,948	4,567	10.7	678.0
1926	317,433	5,439	10 0	581.4
1927	335,263	5,035	9 6	641.3
1928	360,985	4,941	9 1	666.9
1929	402,098	5,289	8 4	635.3
1930	406,916	5,289	8 3	638.4
1931	423,786	5,289	7 9	634 7
1932	396,783	4,492	8.4	743.1
1933	367,402	4,108	9 0	807.9
1934	367,585	4,108	9.0	803.3
1935	397,023	4,107	8.5	819.8
1936	461,527	4,080	7.4	845.3
1937	501,448‡	4,060	7 0	862.1

* License year May 1 to April 30, 1915–1919 inclusive.
† Figures for May 1, 1920, to December 31, 1920.
‡ Figures up to and including September 30, 1937.
NOTE: City ordinance passed May 18, 1934, limits yearly taxicab registration to 4,108.
SOURCE: *A Comprehensive Local Transportation Plan for the City of Chicago*, 1937, p. 64.

early part of 1938, negotiations were again actively under way to work out a franchise which would provide for unified operation of all three agencies.

The riding habit on surface cars, elevated lines, and motorbuses combined for a 36-year period beginning in 1901 reached the peak in mass transportation in Chicago in 1926, when the number was

EXHIBIT 3

CHICAGO SURFACE LINES

NUMBER OF PASSENGERS ENTERING AND LEAVING CENTRAL BUSINESS DISTRICT OF CHICAGO

Typical Week Day in May—7:00 A.M.–7:00 P.M.

Year	Streetcars		Elevated*		Steam Railroad		Motorbus		Passenger Autos†		Total	
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
1926	294,958	283,967	256,286	231,320	118,857	103,225	44,391	44,878	166,367	159,157	880,859	822,547
1928	282,013	281,041	243,594	216,241	124,107	109,310	47,472	50,234	196,873	188,554	894,059	845,380
1929	296,690	290,592	236,575	196,988	132,723	115,996	55,161	62,264	203,996	184,084	925,145	849,924
1931	281,312	271,007	191,540	159,469	119,742	108,290	46,500	44,187	203,916	189,120	843,010	772,073
1935	254,528	246,048	169,690	137,223	84,251	72,595	42,465	36,449	204,768	190,852	755,702	683,167
1936	246,781	235,391	200,212	164,845	92,144	75,367	46,812	41,171	215,849	205,765	801,798	722,539
1937	248,946	239,386	209,590	169,111	103,505	86,885	57,106	47,996	226,699	211,651	845,846	755,029

* Includes Chicago, Aurora & Elgin Railroad Company, and Chicago, North Shore & Milwaukee Railroad Company.
† Factor used in 1929 and previous years was 1.8 passengers per auto; in 1931, 1935, 1936, and 1937, factor 1.7 was used.
SOURCE: *A Comprehensive Local Transportation Plan for the City of Chicago*, 1937, p. 55.

367 revenue rides per capita. In 1936 it was but 257. The riding habit on all three agencies in 1950 has been estimated at 275.[1] The revenue passengers carried by each of the three agencies of local transportation in the city for the years 1927 to 1937 are shown in Exhibit 1. Automobile and taxicab registration in Chicago from about the time unified operation of the street railway systems was begun is shown in Exhibit 2.

EXHIBIT 4

CHICAGO SURFACE LINES

YEARS OF MAXIMUM AND MINIMUM RIDING OF CHICAGO SURFACE LINES, CHICAGO RAPID TRANSIT, AND CHICAGO MOTOR COACH

	Chicago Surface Lines*	Chicago Rapid Transit	Chicago Motor Coach	Combined
Year of Maximum Riding	*1929*	*1926*	*1929*	*1927*
Revenue Passengers...	897,564,354	228,812,766	69,001,990	1,167,941,668
Year of Minimum Riding	*1932*	*1933*	*1932*	*1932*
Revenue Passengers...	633,826,944	124,855,354	40,799,663	801,616,148
Year—1936:				
Originating Rides.....	706,688,763	129,578,269	47,827,417	884,094,449
Revenue Transfers....	13,613,136	20,298,215	1,678,543	35,589,894
Total Revenue Fares	720,301,899	149,876,484	49,505,960	919,684,343
1936—Originating Rides:†				
Per Cent of Maximum.	78.6	55.6	69.3	82.8
Per Cent of Minimum.	111.6	104.0	117.0	110.3
1936—Total Revenue Fares:†				
Per Cent of Maximum.	80.2	65.5	71.6	78.9
Per Cent of Minimum.	113.7	120.2	121.1	114.9

* Chicago Surface Lines traffic figures for fiscal year ending January 31 of the following year in each case.

† There are some minor errors in several of these percentages. The per cent of the number of 1936 "originating rides" for "combined operation" should be 75.7 per cent instead of 82.8 per cent.

SOURCE: *A Comprehensive Local Transportation Plan for the City of Chicago*, 1937, p. 121.

Cordon counts of traffic to and from the central business district for selected dates within the period 1926 to 1937 are presented in Exhibit 3. Data derived from Exhibit 3 show the decreased use of the mass transportation facilities serving the central business district as contrasted with the increasing use of private automobiles as follows:

[1] Data from *Comprehensive Plan of 1937, op. cit.*

12-hour Cordon Count	Passengers Carried		Ratio 1937 % of 1926
	1926	1937	
Streetcars	578,925	488,332	86
Elevated Lines	487,606	378,701	78
Steam Railroads	222,082	190,390	86
Motorbuses	89,269	105,102	118
Passenger Autos	325,524	438,350	134

Data compiled by the Chicago Surface Lines indicated that the maximum accumulation of passengers[1] and of automobiles in the central business district on a typical week day in May, 1926, and in May, 1936, was as follows:

	Accumulation		% of Change
	1926	1936	
Total Passengers	358,000	336,000	6.1 decrease
Number of Automobiles	12,700	18,000	41.7 increase

Exhibit 4 indicates certain trends in the use of the three different agencies of local transportation in Chicago. As these data show, the Chicago Surface Lines retained a greater percentage of its maximum riding than the other companies, which is explained in part by the fact of its more "nearly-city-wide coverage," and also by the fact, mentioned earlier in this case, that operations of the Chicago Motor Coach Company were curtailed by order of the Illinois Commerce Commission after the peak year in 1929. It will be seen that of the three agencies, the Chicago Motor Coach Company had the highest percentage of increase following its depression low. The engineers who made the report to the city believed that the Chicago Motor Coach Company's gain was the result of rapid installation of modern equipment.[2] Regarding the increased use of rapid transit facilities, it should be pointed out that while there was but a 4 per cent increase in "originating"

[1] Arriving by all means of wheel transportation.
[2] See *Comprehensive Plan of 1937*, p. 122.

rapid transit rides above the depression minimum, over 20 per cent more patrons used the rapid transit system because it had been made readily available to them by the transfer arrangement, required by order of the Illinois Commerce Commission.

In the report made to the city in 1937, it was pointed out that to be a successful enterprise, a transit company needed more than a franchise granting it the exclusive right to operate as a common carrier over the public streets. On that point the report stated:[1]

> That portion of the total riding public whose daily fares represent the difference between profit and loss, now may exercise a choice between the use of the public mass carrier's vehicle and the private motor car. Unless the transit company offers an attractive service, experience indicates that it cannot hope to enjoy the patronage of this essential riding. And without the use of its facilities by a substantial proportion of the daily riding public, not only the investor, but the necessity rider, the employee, and the city as a whole will suffer.
>
> Hence it is that the interests of all are bound up in the requirement that the transit service be brought up to and maintained at a standard that will attract large numbers of riders.
>
> The essential elements of attractiveness, and therefore the basic tests to be applied to any plan for modernization or to any proposal for change in any existing transportation facility, are:
>
> 1. Feasibility
> 2. Safety
> 3. Accessibility
> 4. Frequency
> 5. Speed
> 6. Capacity
> 7. Dependability
> 8. Comfort
> 9. Economy
> 10. Adaptability to City Plan

Is the theory of the Illinois law that there should be monopoly in the furnishing of public utility service sound as applied to local mass transportation in a city the size of Chicago?

Is it desirable or essential to have a single unified management for street railways, rapid transit (elevated and subway), and trolley or motorbus service in a large metropolitan area?

What are some of the important rate and service problems that are involved in furnishing local mass transportation in a metropolitan community?

From the facts given in this case, do you have any constructive suggestions for the improvement of local mass transportation in Chicago?

[1] *Loc. cit.*

C. On Regional Basis

21. PUBLIC SERVICE COORDINATED TRANSPORT (B)

Public Service Coordinated Transport was formed in 1928 as a result of the merger of Public Service Railway Company and Public Service Transportation Company, both of which were subsidiaries of the Public Service Corporation of New Jersey. According to statements of the parent company at the time of the merger, the reason for forming the new organization was to place the operation of all intrastate buses and streetcars of the Public Service system in the control of one company. It was expected that this centralization would be of distinct advantage in securing fuller coordination of bus and streetcar service.

The circumstances leading up to the formation of Public Service Coordinated Transport had their origin as far back as 1915. At that time the president of Public Service Corporation of New Jersey, in his annual report, complained of the unwarranted competition of so-called "jitney buses." He stated that the public did not seem disposed to put upon the new user of the highways any portion of the innumerable burdens which it imposed upon the companies with which the jitneys competed. Again, in the annual report for 1919, it was stated that neither state nor local authorities had taken any constructive steps during the year to regulate jitney traffic. Complaint was made that jitneys had been allowed to run practically as they pleased without regard to the needs of the riding public. Such a policy of unbridled competition, it was believed, was extremely undesirable from the standpoint of the public. As a result of the duplication of facilities arising out of this competition, the public was called upon to pay, in the aggregate, several million dollars more annually for transportation than would have been necessary if jitneys had been controlled in the same manner and by the same authority as street railways, namely, on the basis of convenience and necessity. The belief was further expressed that a continuation of the existing condition would have a detrimental effect upon the development of many communities in the state of New Jersey.

In 1921 the annual report of the Public Service Corporation of New Jersey again pointed out that the basic problem of wasteful jitney competition in New Jersey still remained unsettled. It was stated that the railway company could not function at highest efficiency and at a minimum fare as long as destructive competition remained. The wasteful duplication of service resulted in the railway company's not being operated at anything approaching capacity. Attention was called to the fact that street railways operated on only 15 per cent of the highways in the municipalities served by the company. If it was decided that additional service was in the public interest, the company believed that it would be only fair if such service was confined to the remaining 85 per cent of the highways upon which no streetcars were operated.

Meanwhile, certain legislation had been enacted by the state of New Jersey regulating the competition between the motor vehicle and the streetcar. Before 1916, jitneys were operated without licenses and without regulation. In that year the Kates Act was passed under which jitney owners were required to secure licenses from municipalities in which they operated, and to provide insurance covering injury to passengers.[1] The Elliot Act, passed in 1921, extended regulation even further. It provided that all jitneys or buses, the routes of which were in whole or in part on streets in which streetcars operated, were to be considered as common carriers. Furthermore, jitneys or buses not in operation at the time of the passage of the act could not be operated unless granted a certificate of public convenience and necessity by the New Jersey Board of Public Utility Commissioners.[2]

In 1923 there was a strike on the street railway which caused an interruption in streetcar service for almost two months. Finally, a Plan of Settlement was proposed under which municipal and state authorities were asked to cooperate in eliminating wasteful jitney competition and in making possible the coordination of trolley and bus operations under a centralized management.

Although commercial bodies over the entire state endorsed the plan, and petitions favoring it were signed by nearly 400,000 citizens, it was not generally accepted, and no progress was made toward settlement of the strike. The lack of streetcar service and the inadequacy of bus service caused such great losses to business

[1] *New Jersey Laws*, 1921, Chap. 136.
[2] *New Jersey Laws*, 1916, Chap. 149.

interests that the governor of New Jersey, through the attorney-general, obtained a court order requiring the company to resume street railway service. In compliance with this order, the demands of the striking employees for a wage increase were granted and operations were resumed.

In 1923 the Public Service Transportation Company, one of the subsidiaries later merged into Public Service Coordinated Transport, began to acquire competing bus lines and buses as rapidly as they could be advantageously absorbed. The buses that were in fair condition were rehabilitated and new buses were provided for certain routes. As buses were acquired, steps were taken to bring their service into coordination with that of streetcars.

These developments were assisted by the passage of certain legislation after 1923. In 1925 a law was passed which permitted street railway companies to operate motorbuses, a right which before the enactment of the law they did not possess. It was further provided that if a company operated both streetcars and motorbuses, the revenue and expenses of each class of service should be recorded separately, each class to be considered a self-sufficient unit.[1] In 1926 a law provided that all buses operated in passenger service were public utilities. Permits granted to them by municipalities for operation in such municipalities before the law became effective were valid until revoked by the New Jersey Board of Public Utility Commissioners.[2] In 1928 a law was enacted permitting street railway companies, with the consent of the municipalities affected and of the Board of Public Utility Commissioners, to substitute bus for car service, and declaring that when streetcar and bus services were coordinated, they should be considered as a single service.[3]

Public Service Coordinated Transport was incorporated in 1928. The plan of providing unified transportation under a single management was conceived on the theory that since people were demanding speed in everything affecting their living habits, and also convenience and comfort, streetcar service would not be accepted by the public in lieu of the more convenient motor vehicles. A page was taken from the history of the electric and gas utilities, which had expanded their business materially by

[1] *New Jersey Laws*, 1925, Chap. 244.
[2] *New Jersey Laws*, 1926, Chap. 144.
[3] *New Jersey Laws*, 1928, Chap. 52.

creating a demand for the increased convenience made possible through the use of these utility services. It was thought that the bus was the best answer to the trend toward the private motor car; that in comfort and in convenience the newer and better type of bus equaled, or even surpassed, the private car, especially when the difficulties of parking were taken into consideration; and finally, that bus service could be sold on the basis of economy, and that it constituted a near approach to that "house to destination" service to which the American people had become accustomed through the use of the private car.

Substantial progress was made during the year 1929 in carrying forward the policy of coordinating transportation facilities. Efforts were directed toward the creation of a transportation system in which streetcars, buses, and other transportation facilities would provide a maximum service and effect economy by the elimination of waste and duplicate service through the combination of construction, maintenance, all operating activities, and through the reduction of overhead expenses. In the furtherance of this policy, additional bus service was substituted for car service in 1929 on lines where increased efficiency and economy were thought to be possible through such a change. At the same time, the field of operations was considerably extended through the operation of taxicabs, provision for superservice bus lines at higher fares, the addition of a number of interstate bus lines and the further promotion of chartered bus service.[1]

Before the World War the Public Service Corporation of New Jersey believed that government restrictions alone interfered with its profits. In the prewar period, considerable emphasis had been placed upon adequacy of rate of return. With the coming of the competition of the jitney and the private automobile, the company realized that it was then not only a question of securing some return but also of being able to render the type of transportation service which the public was willing to purchase. Concerning these problems, the president of the company and of its subsidiary, Public Service Coordinated Transport, made the following statements in 1929:

Before the Great War, our troubles were in the main concerned with matters of law and regulation.

. . . . . .

[1] See case entitled *Public Service Coordinated Transport* (A), p. 105.

The development of automotive transport has entirely changed the face of local transportation conditions. Whatever natural elements of monopoly the industry once enjoyed have disappeared. The habits of the American people as they affect the use of public carriers have been changed, and the physical difficulties connected with the giving of proper service have been greatly augmented.

No matter what temporary artificial restrictions may be imposed by regulatory bodies, so long as a comparatively few thousand dollars will put a bus line on the street alongside of a railway system in which, perhaps, millions have been invested, the threat, if not the actuality, of competition affects your operation. So long as the passenger motor car is available at decreasing cost and with increasing comfort, you can count on passengers only by offering them something that approaches its service in convenience. With the constantly growing congestion on streets and highways, we face higher costs and increased physical difficulty of operation.

. . . . . .

We have the right and the duty to seek from government and the people assistance in the task of placing the industry upon a sound economic basis.

Neither on behalf of the properties with which I am connected, nor of the industry, do I ask that local transportation shall be subsidized by government.

. . . . . .

I do ask, specifically and concretely, that those transportation companies which have borne the burden of providing service during that long period in which, while benefits continued to accrue to public and riders, owners went without return, or bore continuing losses, shall, within reasonable limits, be protected in the right to provide the extended and diversified service that local transportation now properly includes.

I am not the less insistent because it may be that the granting of this protection will lead to the cry of monopoly. Monopoly, regulated and controlled in the public interest, is in my opinion necessary to provide public requirements for local transportation service. If the history of transportation in this country proves anything at all, it proves that indiscriminate competition among common carriers inevitably leads, in the end, to poor service and high rates. Today, when there are more available transportation agencies than ever before, this conclusion applies with increased force.

Rapid transit in subway, and on elevated structures, street cars, motor buses, in city, suburban, interurban and special service, and taxicabs, have all become necessary facilities in an adequate and comprehensive system of local transit. . . . If they are coordinated under a single management, each can be used to its full advantage, providing a service that meets public requirements, and each can be operated economically and efficiently so as together to give such comprehensive service as is called for by community requirements rather than by the profit making exigencies of a host of individual owners.

In coordination—in the grouping under one responsible management of the various agencies of local transportation—lies, in my opinion, not only the future of this industry, but the hope of our communities to secure adequate service.[1]

After 1929, the company experienced a serious decline in riding as a result of the general business depression. This decline is shown in Exhibit 1. These data also show the results of the company's policy of substituting bus service for streetcars, wher-

EXHIBIT 1

PUBLIC SERVICE COORDINATED TRANSPORT (B)
TRANSPORTATION STATISTICS, 1904–1937

Year	Trolley Passengers	Bus Passengers	Total Passengers
1904	215,400,000		215,400,000
1905	235,079,986		235,079,986
1906	261,312,488		261,312,488
1907	282,663,974		282,663,974
1908	294,110,602		294,110,602
1909	319,720,235		319,720,235
1910	341,398,688		341,398,688
1911	362,550,395		362,550,395
1912	383,104,247		383,104,247
1913	404,411,105		404,411,105
1914	407,277,914		407,277,914
1915	414,422,040		414,422,040
1916	451,698,012		451,698,012
1917	476,974,983		476,974,983
1918	451,220,806		451,220,806
1919*	396,689,234		396,689,234
1920	453,505,154		453,505,154
1921	435,679,801		435,679,801
1922	410,212,814		410,212,814
1923	354,194,933	1,952,059	356,146,992
1924	427,828,444	76,451,240	504,279,684
1925	416,788,621	146,053,237	562,841,858
1926	397,690,308	199,640,564	597,330,872
1927	361,073,065	266,079,948	627,153,013
1928	331,568,468	311,565,713	643,134,181
1929	312,134,587	343,350,079	655,484,666
1930	241,943,106	307,189,334	549,132,440
1931	201,195,700	298,605,332	499,801,032
1932	154,562,183	273,005,954	427,568,137
1933	130,790,389	252,680,377	383,470,766
1934	130,416,302	268,375,091	398,791,393
1935	121,998,328	269,392,742	391,391,070
1936	118,075,676	292,398,397	410,474,073
1937	88,851,988	323,496,470	412,348,458

* Mile zone system in effect from September 14 to December 7.

[1] "Benefits of Unified Transportation," an address by Mr. Thomas N. McCarter, president, Public Service Coordinated Transport, before the American Electric Railway Assn., October 3, 1929.

EXHIBIT 1.—(*Continued*)

Year	Trolley Mileage	Bus Mileage	Total Mileage
1904	32,168,888		32,168,888
1905	35,068,223		35,068,223
1906	37,462,804		37,462,804
1907	39,178,277		39,178,277
1908	39,519,972		39,519,972
1909	40,890,360		40,890,360
1910	42,632,760		42,632,760
1911	44,561,141		44,561,141
1912	47,355,292		47,355,292
1913	49,853,408		49,853,408
1914	50,792,889		50,792,889
1915	51,873,660		51,873,660
1916	54,964,708		54,964,708
1917	56,087,403		56,087,403
1918	54,039,150		54,039,150
1919*	57,644,927		57,644,927
1920	60,798,743		60,798,743
1921	58,309,883		58,309,883
1922	56,419,982		56,419,982
1923	49,272,078	505,322	49,777,400
1924	53,945,515	15,704,663	69,650,178
1925	50,115,119	27,506,493	77,621,612
1926	45,632,230	36,082,405	81,714,635
1927	42,224,517	49,106,910	91,331,427
1928	38,418,325	63,986,756	102,405,081
1929	34,875,984	82,287,204	117,163,188
1930	29,996,260	82,299,949	112,296,209
1931	24,166,543	78,829,726	102,996,269
1932	19,098,268	71,812,289	90,910,557
1933	16,670,138	64,578,573	81,248,711
1934	16,578,715	67,523,489	84,102,204
1935	15,849,438	68,090,359	83,939,797
1936	14,739,359	72,184,089	86,923,448
1937	11,428,712	80,385,724	91,814,436

* Mile zone system in effect from September 14 to December 7.

ever feasible. In 1929 the number of passengers carried by bus exceeded for the first time the number carried by streetcars. After that year the percentage of passengers transported by bus continued to increase, amounting to over 70 per cent in 1936.

In addition to rendering the usual types of mass transportation service, the company also operated ferry boats on the Hudson River and the Kill van Kull, ran taxicabs in certain municipalities within its territory, and furnished interstate bus transportation through a subsidiary, Public Service Interstate Transportation Company. The company's ferry lines suffered not only from the

EXHIBIT 1.—(*Continued*)

Year	Trolley Hours	Bus Hours	Total Hours	Passenger Receipts Per Trolley Mile, Cents	Passenger Receipts Per Bus Mile, Cents
1904	4,003,614		4,003,614	25.59	
1905	4,228,344		4,228,344	25.73	
1906	4,464,162		4,464,162	26.29	
1907	4,671,246		4,671,246	26 75	
1908	4,598,714		4,598,714	27 56	
1909	4,747,729		4,747,729	29.08	
1910	4,961,608		4,961,608	30.29	
1911	5,159,073		5,159,073	31.07	
1912	5,465,926		5,465,926	30 87	
1913	5,696,066		5,696,066	30 97	
1914	5,665,119		5,665,119	30.72	
1915	5,573,670		5,573,670	30 49	
1916	5,911,131		5,911,131	31 37	
1917	6,021,225		6,021,225	32.44	
1918	5,698,089		5,698,089	36 00	
1919*	6,039,453		6,039,453	39.29	
1920	6,539,207		6,539,207	43 21	
1921	6,212,276		6,212,276	44.11	
1922	5,983,122		5,983,122	45.59	
1923	5,206,092	60,663	5,266,755	42 75	22 43
1924	5,662,340	1,928,498	7,590,838	41 04	26.13
1925	5,402,008	3,273,801	8,675,809	41 32	27 41
1926	4,929,558	4,013,602	8,943,160	42 88	30.08
1927	4,549,538	5,059,313	9,608,851	42.13	30 10
1928	4,153,599	6,244,293	10,397,892	42 40	29.27
1929	3,766,169	7,647,214	11,413,383	43 92	29.55
1930	3,216,340	7,548,315	10,764,655	41.02	28.01
1931	2,574,688	7,100,878	9,675,566	41.10	27 97
1932	1,997,930	6,368,060	8,365,990	39 63	26.11
1933	1,744,779	5,734,259	7,479,038	38 44	26.02
1934	1,761,416	6,040,823	7,802,239	38.70	26.79
1935	1,682,469	6,108,102	7,790,571	37 78	26.52
1936	1,588,597	6,516,841	8,105,438	39.32	27.04
1937	1,186,579	7,140,688	8,327,267	38.24	26.15

* Mile zone system in effect on September 14 to December 7.

decline in business activity following 1929, but also from the competition of the George Washington Bridge and the Bayonne Bridge constructed by the Port of New York Authority. The demand for taxicab service also declined, resulting in a curtailment of the taxicab facilities operated by the company.[1]

Continuing its policy of introducing new equipment in order to render improved service, the company developed an "all-service"

[1] See case entitled *Public Service Coordinated Transport* (A), p. 105, for details of lines and equipment operated by the company.

vehicle capable of operating either from overhead trolley wires, or under its own motive power. This type of vehicle was first introduced in 1935 and supplanted several existing streetcar lines. In 1936 the company developed small, lightweight buses for use on lines in outlying districts, where operations were unprofitable with larger buses.[1] Still another type of mass transportation was inaugurated in 1935 when the company commenced operations in the first section of the Newark City Subway. Through a rental agreement with the city of Newark, several important streetcar lines were rerouted through the subway, thus relieving congestion in the downtown sections of the city.

By 1937 Public Service Coordinated Transport was rendering various types of transportation service to an area with a population of approximately 3,700,000. Gross revenue derived from transportation was about $27,000,000 in 1936. Since its organization in 1928 Public Service Coordinated Transport had incurred annual deficits, the 1936 loss amounting to approximately $775,000.

It was estimated that there were being operated within the territory 400 to 450 buses which could be considered as competing with the company's transportation facilities, and perhaps 100 others that were noncompetitive. The annual gross revenue of these independent companies was estimated to be $5,000,000.

What light does this case throw on the proper spheres of management and regulation?

Do you believe that the demand made in 1929 by the president of the company was in this case an economically sound one?

What importance do you attach to the trends shown by the data in Exhibit 1?

[1] See case entitled *Public Service Coordinated Transport* (*A*), p. 105, for development of "all-service" vehicles and lightweight buses.

D. Street Railway and Taxicab Service

22. Philadelphia Rapid Transit Company (A)[1]

In the spring of 1926, the Philadelphia Rapid Transit Company acquired complete ownership of the Yellow Cab Company of Philadelphia, the largest taxicab company in the city. Philadelphia Rapid Transit Company operated, through ownership or leaseholds, a complete system of subway, elevated, and surface railways in Philadelphia. Bus service had been installed for outlying districts in 1923. In addition to these facilities, the city had under construction the $100,000,000 Broad Street subway which was to be operated by the company upon its completion in 1928.

Purchase of the taxicab company was held by officials of Philadelphia Rapid Transit Company to be a logical step in the company's policy of coordinating all forms of local transportation. They contended that the system was losing passengers to taxicab operators and stressed the fact that the company needed these earnings in order to support the unprofitable operations of the system. It was stated that the immediate increase in earnings would be applied to the extension of surface and bus-line facilities in the Tacony-Holmesburg (northeast) sections of the city. In addition to immediate needs, the contemplated operation of city-built subways might soon need support. Engineers had estimated that earnings to be realized from the Broad Street subway would not cover operating expenses of the line.

Taxicabs were considered to be common carriers in Pennsylvania and consequently were under the jurisdiction of the public service, commission. Every cab operator was required to obtain a certificate of public convenience and necessity from the commission. The certificates contained provisions governing rates, number of cabs, and other matters pertaining to service.

The Public Service Commission of the Commonwealth of Pennsylvania approved the purchase of the Yellow Cab Company

[1] This case is based upon information secured from the Philadelphia Rapid Transit Company and from public sources as indicated.

on April 21, 1926. The majority opinion supported most of the arguments advanced by the Philadelphia Rapid Transit Company as follows:

> . . . The taxi revenues come from potential street car riders. The coordination of street car and taxicab service will increase the revenue of the Transit Company and aid it in bearing the burden of operating the city's nonpaying high speed lines; will result in considerable reduction in overhead operating expenses of the cab company and will provide a more adequate and convenient distribution of the taxicab service and other transportation facilities. . . . [1]

The price paid for the Yellow Cab properties was $3,000,000. This investment was financed, as were practically all capital expansions of Philadelphia Rapid Transit at that time, by the sale of 7 per cent preferred stock. The price was substantially in excess of the company's book value, but Philadelphia Rapid Transit Company attached great importance to the fact that it was acquiring a well-established organization which had been operating with success. No important changes were made in operating policies of the cab company, and the operating personnel of approximately 3,000 was retained. In April, 1926, the cab company was operating 1,100 cabs which represented over 60 per cent of the total in the city.

The 1926 annual report of Philadelphia Rapid Transit Company presented an optimistic picture for the future:

> P.R.T. system [gross] earnings should reach $70,000,000 by 1930, of which 25% may be earned by taxicabs and buses. If bus and cab service had not been developed by P.R.T., 1930 would find P.R.T. earnings entirely insufficient to enable it to supply adequate city-wide transit without endangering its own present financial position.
>
> With P.R.T. system developed as now planned, its entire earnings are pooled and afford a protection against wasteful competition. . . . [2]

Early results from operation of Yellow Cabs by the Philadelphia Rapid Transit Company were not altogether up to expectations. Net revenue from cabs for 1926 and 1927 was substantially below the 1925 figure, although gross revenue was much higher for both years. There was no saving in operating costs because the large size of both bus and taxicab operations of the company made a

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[1] Pennsylvania Public Service Commission, *Decisions*, Vol. VII, p. 720.

[2] Philadelphia Rapid Transit Company, *Annual Report to the Stockholders*, 1926, p. 6.

combination of maintenance facilities impossible, and no alleviation of the traffic congestion problem had been achieved by 1927, although Philadelphia Rapid Transit Company had stated this as one of the reasons for the cab purchase.

Purchase of two additional cab companies, however, was undertaken by Philadelphia Rapid Transit at the end of 1927. This action was held to be necessary in order to put into effect an agreement on the regulation of cruising which the Yellow Cab Company had made with Quaker City Cab Company, the only other major operator of taxicabs in the city.

During the winter of 1926 to 1927, congestion on the streets of downtown Philadelphia became unusually acute. This situation was attributed largely to unrestrained taxi cruising. After a study made in 1927 by the public service commission on traffic conditions, the above-mentioned agreement was made. Two smaller cab companies, however, the Diamond and Cunningham companies, objected strongly to entering the agreement, since their revenue was derived almost wholly from cruising. Accordingly, the Philadelphia Rapid Transit Company agreed to purchase and merge them with its Yellow Cab Company. Permission to purchase all the capital stock of the Diamond and Cunningham companies for the stated purpose of reducing cruising and city-center traffic was granted by the public service commission.

The agreement between the Yellow Cab and Quaker City Cab companies which was put into effect on December 12, 1927, provided for the establishment by the city of 176 additional cab stands in the central business district. It was expected that the number of cabs in the district during the peak hour would be reduced about 25 per cent, from 600 to 444. Telephones were to be installed at 159 of the total of 191 stands, one connecting with the Quaker company's switchboard and the other with the Yellow Cab Company's switchboard. As a result, the cabs in the district would be at all times under supervision and control of telephone dispatchers and street supervisors in the district. The stands were to be open to all cabs having a certificate of convenience and necessity granted by the public service commission.

The regulation restricting cruising was found to be effective in limiting the movement of empty cabs in downtown streets. A check made by the traffic department of the Philadelphia Rapid Transit Company at the beginning of 1928 showed a reduction of

66 per cent in the number of empty cabs passing a certain point compared with a similar check made the previous year. This reduction occurred despite the fact that cab companies had increased their fleets during the period.

The public service commission's study of Philadelphia traffic conditions made in 1927, which was referred to above, concluded that any deficiency in Philadelphia Rapid Transit Company's service was out of the company's control. In regard to taxicab operation, one of the reports stated, "It has also been clearly shown that there is no foundation for the charge that the company deliberately curtailed its street car service to force prospective passengers to use taxicabs."[1]

In 1928, the Yellow Cab Company constructed what was believed to be the largest taxicab maintenance shop in the world at a cost of approximately $200,000. It was planned to send each cab there every two weeks to be cleaned, inspected, and repaired.

Application was made to the commission in January, 1928, for permission to purchase Quaker City Cab Company also. The company stated that the purchase would make possible the standardization of all taxicab rates in Philadelphia and would eliminate duplicate service. The purchase was carried out at a price of $1,360,000, and operation of the Quaker City Cab Company was consolidated with that of Yellow Cab Company in March, 1928. The commission, however, withheld full approval of the sale. A series of investigations into the affairs of Philadelphia Rapid Transit Company were made in 1930 and 1931, and the approval of the commission for the purchase was not finally obtained until April, 1932, by adjustment of the purchase price to $472,325.64.[2]

A final taxicab purchase was announced by Philadelphia Rapid Transit Company June 9, 1930, when it bought the Hartel Cab Company, which operated about 25 units. These units were absorbed by Yellow Cab Company. In 1931 Yellow Cab Company was operating approximately 90 per cent of all the cabs in the city.

Some of the reasons which in 1931 seemed to the company to justify coordination of taxicab operations with other forms of local transportation in Philadelphia were as follows:

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[1] Philadelphia Rapid Transit Company, *Annual Report to the Stockholders*, 1927, p. 10.

[2] Pennsylvania Public Service Commission, *Decisions*, Vol. XI, p. 321.

1. It was believed that such coordination was meeting the growing public demand for a more luxurious service, and also meeting the competition of the private automobile.

2. By preventing loss of earnings to other forms of transportation it was felt that coordination was providing support for adequate service and for new facilities and extensions.

3. Coordination was sought to eliminate cutthroat taxicab competition. This had disrupted street railway earnings and also had lowered the taxicabs' quality of service.

4. The company felt that traffic congestion could be lessened through elimination of cruising, and through control of cab movements in the handling of large crowds.

5. It was thought that overhead could be reduced by the use of one automotive repair shop for buses and taxis, as well as a single supervisory force, a single legal department and a single purchasing department for the unified system; that mass purchases would reduce the cost of materials and supplies.

6. Taxicab service was planned to supplement interrupted streetcar, motorbus, or high-speed operations.

7. Rapid transfer of operators between cabs and buses could be made according to requirements of traffic.

Regarding its policy toward independent operators, the Yellow Cab Company in 1931 stated that it in no way endeavored to hamper their operation of cabs by intimidation, occupation of cabstands to the exclusion of other companies, or any other means. The company desired only to see that the franchise regulations of every operator were strictly adhered to. In May, 1932, the public service commission sustained a complaint made by Yellow Cab Company and ordered 26 independent operators to discontinue city-wide operations and confine themselves to their appointed stands. In addition, the applications of 44 independents to operate additional cabs were refused. Yellow Cab Company had protested these applications also.

In October, 1934, the commission inaugurated a definite policy of not allowing any further increase in the number of cabs in Philadelphia either by existing operators or by the grant of certificates to new applicants. The commission ruled at the same time, however, that "independents" henceforth would be allowed to pick up passengers anywhere in the city. The commission also rescinded all its regulations relating to cabstands because it believed the city could regulate them more effectively.

Operations of the Yellow Cab Company failed to yield a profit for any year after 1928. The 1934 annual report of Philadelphia Rapid Transit Company stated:

Philadelphia Rapid Transit taxicab operations have felt the weight of the economic depression to a greater extent than any other branch of Philadelphia Rapid Transit's transportation facilities. Taxicab earnings [gross] dropped from $5,975,000 for the year 1929 to a low of $1,726,000 for the year 1933, a decrease of 71% compared to the decrease of 35% in street car and bus receipts. . . . [1]

This report, however, noted an increase in cab revenues for 1934. In an effort to accelerate the improvement, the company reduced cab rates slightly in June, 1934. In addition, the company placed 100 new cabs in operation early that fall.

Court proceedings for reorganizing the Philadelphia Rapid Transit Company began in November, 1934. Taxicab operations continued to show a lack of improvement and the 1935 annual report of the company stated:

For several years your officers and directors have given serious consideration to the question of retaining or disposing of the taxicab properties due to the great losses suffered by this branch of the transportation system. In the year 1935 in the face of continuing losses and with the necessity of purchasing 500 to 600 new cabs, it was decided to dispose of the taxicab properties provided a satisfactory purchaser could be found who could be counted upon to furnish Philadelphia with adequate taxicab service and who would not enter into destructive competition with the street railway and motorbus transportation facilities of the company.[2]

After consideration of a number of bids, the court under which the company was being reorganized accepted one which was also considered satisfactory by Philadelphia Rapid Transit Company. The purchaser had formerly been an operating officer with Yellow Cab Company when it was under Philadelphia Rapid Transit Company ownership. The court believed his operation of the cab companies was less likely to be harmful to Philadelphia Rapid Transit Company than operation under either of the two competing offers. The price paid was $298,000, Philadelphia Rapid Transit Company retaining certain assets of the cab companies, the major ones being two pieces of real estate carried on the books at $440,000. Transfer of the properties took place February 15, 1936.

Do you believe that local mass transportation companies should also render taxicab service?

[1] Philadelphia Rapid Transit Company, *Annual Report to the Stockholders*, 1934, pp. 4, 5.

[2] Philadelphia Rapid Transit Company, *Annual Report to the Stockholders*, 1935, p. 6.

E. Local Mass Transportation by Buses in Various States under Unified Management

23. National City Lines, Inc.

National City Lines, Inc., was organized early in 1936, primarily as a holding company with its assets consisting chiefly of the securities of subsidiaries. The latter owned and operated motorbus lines under state and city franchises in the middle-western and southern sections of the United States. Management service for the subsidiaries was furnished by the parent company which maintained its central office in Chicago.

Through its subsidiaries the company was engaged in the transportation of persons in both interstate and intrastate commerce. Through The Southern Limited, Inc., an overland service was provided between Chicago and Evansville, Indiana, and Chicago and Paducah, Kentucky. As of March 2, 1938, National City Lines, Inc., owned 98.7 per cent of the outstanding stock of The Southern Limited, Inc. By means of other wholly owned subsidiaries, the parent company by the end of 1937 was operating 20 separate local transportation systems. In addition, another subsidiary, Rex Equipment Sales, Inc., was engaged in the business of purchasing, reconditioning, and selling secondhand buses, and of renting buses for special chartered trips. The names of the various subsidiaries, their location, and the approximate population of the area served are presented in Exhibit 1. Consolidated balance sheets and operating statements for the system are shown in Exhibits 2 and 3.

In acquiring operating rights and properties, National City Lines, Inc., followed the policy of not competing with existing transportation facilities. The aim of the company was either to supply transportation to a new area or to take over the operations of the company or companies already serving an area, and to furnish an improved, coordinated transportation service. Each property was organized as a separate corporation. Whenever possible, National City Lines, Inc., endeavored to retain the local management and labor previously connected with the property.

With this end in view the employees of an acquired company were given the first opportunity to qualify for positions with the local unit of the National City Lines system.[1]

As an example of the methods followed by National City Lines, Inc., the organization of Tulsa (Oklahoma) City Lines, Inc.,

EXHIBIT 1

NATIONAL CITY LINES, INC.

SUBSIDIARIES AS OF DECEMBER, 1937

Name of Company	Location	Estimated Population Served
Aurora-Elgin City Lines, Inc.	Illinois	100,000
Beaumont City Lines, Inc.	Texas	61,000
Beaumont-Port Arthur Bus Lines	Texas	.....
Bloomington-Normal City Lines, Inc.	Illinois	39,000
Butte City Lines, Inc.	Montana	40,000
Cedar Rapids City Lines	Iowa	57,000
Champaign-Urbana City Lines, Inc.	Illinois	35,000
City Transport Corporation (Lansing)	Michigan	85,000
Danville City Lines, Inc.	Illinois	37,300
Decatur City Lines, Inc.	Illinois	59,000
East St. Louis City Lines, Inc.	Illinois	75,600
Jackson City Lines, Inc.	Michigan	56,300
Joliet City Lines, Inc.	Illinois	45,000
Kalamazoo City Lines, Inc.	Michigan	55,600
Montgomery City Lines, Inc.	Alabama	68,000
Pontiac City Lines, Inc.	Michigan	70,000
Port Arthur City Lines, Inc.	Texas	54,400
Quincy City Lines, Inc.	Illinois	39,500
Saginaw City Lines, Inc.	Michigan	83,300
Tulsa City Lines, Inc.	Oklahoma	148,000
The Southern Limited, Inc.	Interstate Lines	.....
Southern Limited of Indiana, Inc.	.....	.....
Metropolis and Northern Motor Lines, Inc.	.....	.....
Rex Equipment Sales, Inc.	.....	.....

SOURCES: Poor's *Public Utilities; Standard Corporation Records;* Department of Commerce, Bureau of the Census.

may be cited. Before 1936 transportation service in Tulsa was furnished by a company operating a combined street railway and bus service, and by another company operating only buses. Because of competition between these systems on several routes, there was considerable duplication of service in certain sections. As a result of this condition, neither company had been able to earn more than out-of-pocket expenses, and because of financial

[1] *Bus Transportation*, January, 1937, p. 14.

EXHIBIT 2

NATIONAL CITY LINES, INC.
CONSOLIDATED BALANCE SHEET, AS OF DECEMBER 31

	1937	1936
ASSETS		
Real Estate, Motor Coaches, Machinery, Equipment, and Furniture and Fixtures	$3,901,420	$2,604,279
Less Depreciation	898,460	482,023
Balance	$3,002,960	$2,122,256
Leasehold Improvements Less Amortization	32,146	.....
Franchises and Organization Expense	1,931,666	1,462,272
Current Assets:		
Cash	447,130	1,430,777
Accounts and Notes Receivable	76,306	40,961
Due from Officers and Employees	6,621	11,936
Due from Affiliated Companies	39,291	14,809
Insurance and Other Deposits	32,160	21,362
Total Current Assets	$ 601,508	$1,519,845
Supplies	57,095	36,487
Prepaid Finance Charges	.....	46,180
Prepaid Licenses, Taxes, Insurance, etc	82,991	72,457
Other Assets	9,201	711
Total	$5,717,567	$5,260,208
LIABILITIES		
Common Stock	$ 200,000	$ 200,000
Preference Stock	1,500,000	1,500,000
Class A Stock	750,000	750,000
Purchase Money Obligations	1,094,956	876,173
Minority Stockholders' Interest in The Southern Limited, Inc	2,479	45,950
Current Liabilities:		
Purchase Money Obligations	691,029	611,232
Notes Payable to Bank	100,000	.....
Accounts Payable—Trade	156,431	208,060
Dividends Payable	37,500	.....
Due to Officers, Employees and Stockholder	554	11,102
Accrued Salaries and Wages	81,173	64,034
Accrued Taxes, Insurance, and Other Expenses	143,997	75,702
Sundry Creditors	.....	4,875
Federal Income Taxes, Payable	72,613	68,642
Total Current Liabilities	$1,283,297	$1,043,647
Unearned Revenue	32,605	28,700
Paid-in Surplus	760,000	760,000
Earned Surplus	94,230	55,738
Total	$5,717,567	$5,260,208

SOURCE: Poor's *Cumulative Corporation News.*

EXHIBIT 3

NATIONAL CITY LINES, INC.

CONSOLIDATED INCOME ACCOUNT FOR YEARS ENDED DECEMBER 31

	1937*	1936†
Operating Income:		
Passenger Revenue	$4,460,796	$1,911,732
Charter and Miscellaneous Revenue	120,639	46,692
Coach Rental	617	1,288
Management Fees	804	1,536
Profit from Sale of Motor Coaches	.....	9,137
Total Operating Income	$4,582,856	$1,970,385
Operating Expenses:		
Maintenance and Repairs	524,594	232,434
Transportation	1,763,474	737,733
Station Expense	36,594	23,309
Traffic Promotion	49,891	19,670
Insurance	284,749	131,150
General and Administrative	346,545	198,012
Operating Taxes	388,888	165,984
Operating Rents	92,486	35,891
Amortization of Franchise Extension Expenses	919	.....
Depreciation	573,824	235,312
Total Operating Expenses	$4,061,964	$1,779,495
Net Operating Income	$ 520,892	$ 190,890
Other Income	20,810	14,357
Total Income	$ 541,702	$ 205,247
Interest and Finance Charges	85,228	67,466
Miscellaneous Deductions	26,890	13,113
Net Income before Federal Income Taxes	$ 429,584	$ 124,668
Provision for Federal Income, Excess-profits, and Surtax	71,843	39,600
Net Income before Minority Interest	$ 357,741	$ 85,068
Minority Stockholders' Interests	498	29,330
Net Income	$ 357,243	$ 55,738
Preference Dividends	101,250	
Class A Dividends	67,500	
Common Dividends	150,000	
Surplus for Year	$ 38,493	
$3 Convertible Cumulative Preference Shares Outstanding (Par $50)	30,000	30,000
Times $3 Preference Dividend Earned	3.97	0.83
$2 Class A Shares, Outstanding (Par $10)	30,000	30,000
Times Class A Dividends Earned	4.45	0.26*d*
Times Preference and Class A Dividends Earned	2.38	0.50
Common Shares Outstanding (Par $1)	200,000	200,000
Earnings per Common Share	$ 1.04	$ 0.28*d*

* Year ended December 31.
† April 1–December 31.
d = deficit.
SOURCE: Poor's *Cumulative Corporation News.*

limitations the quality of the service had suffered. The lack of modern equipment had led to a decrease in the number of passengers carried and to the growth of a competitive 10-cent taxicab service.

The unsatisfactory transportation conditions in Tulsa led to efforts being made to effect a consolidation of existing lines. A survey made at the request of the city and with the approval of the companies showed that at least 33⅓ per cent excess mileage was being operated. After extended negotiations between the city and the two companies, the physical assets of the latter were purchased by National City Lines, Inc., early in 1936.

Upon acquiring these properties the company took steps to establish a coordinated bus transportation system. Numerous route duplications were eliminated and schedules were adjusted to meet riding requirements. Quality of service was also improved by the addition of a number of new buses. From the managerial standpoint it was necessary to create a new organization in place of the former separately managed companies. A considerable part of the personnel was drawn from the latter.

While certain of the changes inaugurated by the new company met with opposition at the outset, the superior service offered soon changed the attitude of the public. The company was able to secure a new 20-year franchise which facilitated the financing of additional equipment and made feasible the construction of a garage, which in turn aided the company in maintaining high service standards. By the end of 1937, Tulsa City Lines, Inc., was operating a completely modernized transportation system and was earning revenue per mile considerably in excess of that of its predecessors.[1]

At the end of 1937 the National City Lines, Inc., owned a total of 664 buses. During that year the system operated a total of 22,000,000 miles and carried 74,000,000 passengers.

How do you appraise this project? In your opinion is it a feasible solution of the problems of the local transportation industry?

Is "physical integration" of any importance in centralized holding company management of local mass transportation?

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[1] *Bus Transportation*, February, 1938, p. 68–69.

SECTION III

MANAGEMENT, ORGANIZATION, AND FINANCE

1. Responsibility of Management for Adequate and Efficient Service

A. Intensive Study of Parking and Street Traffic Problems and Their Relation to Adequacy and Cost of Street Railway Service

24. CHICAGO SURFACE LINES PARKING SURVEY AND STREET TRAFFIC STUDIES[1]

In 1929 the Chicago Surface Lines made some intensive studies of the parking of automobiles within certain districts of Chicago.

One such survey covered the Madison-Crawford district. The area embraced in this survey is shown in Exhibit 1. There were two business streets traversing this district: Crawford Avenue, running north and south, and Madison Street, running east and west. Washington Boulevard, paralleling Madison Street, was a popular route from the Chicago Loop to the western suburbs and highways. The survey showed that the vehicular traffic confined itself largely to the business streets and boulevard, and amounted to 35 per cent of that crossing the boundaries of the central business district of Chicago.[2] These streets were used extensively, and a large percentage of the flow of traffic consisted of through traffic. This was particularly true of Washington Boulevard, which was used by more than 50 per cent of the total traffic coming into the district.

Two important car lines served the Madison-Crawford area, which were an important influence in its growth. A station of the rapid transit system was located at one end of the district, and a

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[1] Acknowledgment is made to Mr. E. J. McIlraith, staff engineer; Mr. J. B. O'Connell, assistant superintendent of transportation, Chicago Surface Lines; and to Mr. William R. McConochie, traffic engineer of the same company, for the data on which this case was based.

[2] Vehicular traffic as used here does not include streetcars.

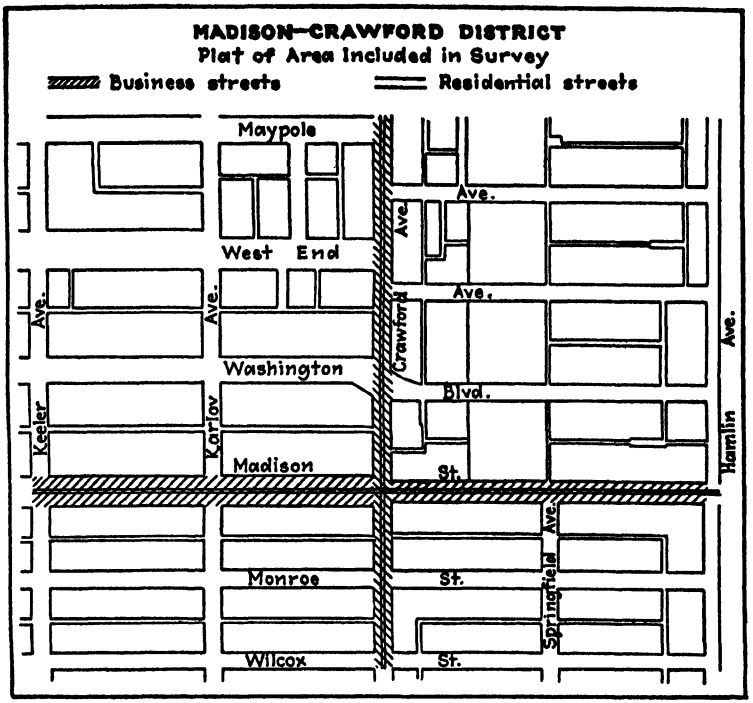


EXHIBIT 1.—Chicago Surface Lines. Madison-Crawford District. Plat of Area Included in Survey.

EXHIBIT 2

CHICAGO SURFACE LINES
MADISON-CRAWFORD DISTRICT
A COMPARISON OF PARKED PASSENGER AUTOMOBILES, MOVING VEHICULAR TRAFFIC, AND PEDESTRIANS IN FOUR REPRESENTATIVE BLOCKS
Typical Week Day. May, 1929. 7:00 A.M. to 6:30 P.M.

	Lanes	Moving Vehicles	Parked Automobiles	Percentage of Total	Pedestrians	Persons Served by Parked Cars	Percentage of Total
Madison Street:							
Karlov to Crawford	4	10,980	1,083	8 98	15,903	1,950	10.92
Crawford to Springfield	2	9,607	570	5 60	5,684	1,028	15.32
Crawford Avenue:							
West End to Washington	2	6,532	222	3.29	4,818	400	7.67
Madison to Monroe	2	5,893	187	3.08	6,340	337	5.05

bus line traversed it. The business activity followed along the car lines rather than along the routes of other modes of transportation.

Exhibit 2 gives a detailed analysis of the relationship existing between parked cars and moving vehicular traffic for four selected blocks in the Madison-Crawford district, as well as the total number of pedestrians within these blocks during a specific period and the percentage of pedestrians then served by parked cars. In three of these blocks from 94 to 96 per cent of the vehicles using the street were moving, and while these vehicles were necessarily confined to 50 per cent of the road, the small minority using parking space occupied the other half of the street.

The mode of travel for those riding into this district was as follows:

Mode of Transportation	Number of Persons	Percentage
Street Cars	20,623	74 8
Passenger Automobiles	6,160	22.3
Motor Coaches	800	2.9
Total	27,583	100 00

A comparison of the flow of passenger automobiles entering by these principal arteries is shown in the following tabulation:

Street	Passenger Automobiles Entering from	
	East or North	West or South
Washington Boulevard	10,160	9,656
Madison Street	2,695	4,876
Crawford Avenue	2,316	1,914

It will be seen that considerably fewer passenger automobiles entered the district over Madison Street from the east than entered from the west, while the use of Crawford Avenue and Washington Boulevard was more balanced. Washington Boulevard carried 376 per cent more vehicular traffic entering from the east than did

Madison Street, while from the west its volume was only 198 per cent greater.

The residential area tributary to this district was essentially all west of the west boundary of Garfield Park, namely, Hamlin Avenue. A competing business district starting on the other side of the park, one-quarter of a mile east of Hamlin Avenue, was centered on Kedzie Avenue and Madison Street one mile east of Crawford Avenue. Nevertheless, shopping activity on Madison Street, rather than centering at Crawford and extending east to Springfield or Hamlin as might have been expected, was more than twice as intense west of Crawford as it was east of this point, as shown by the following table:

Madison Street	Active Business Establishments	Pedestrians	Pedestrians per Business Establishment
Karlov to Crawford.... ...	36	15,903	442
Crawford to Springfield . ..	28	5,684	203

The conclusion was drawn that the narrowing of Madison Street at Crawford formed a barrier to potential customers approaching from the west. Although the street was four lanes wide, all traffic was confined to the car-track lanes by curb parking. Normal expansion of the Madison-Crawford district in this direction could occur only if the street was widened, or if curb parking by both passenger and commercial vehicles was completely eliminated.

On a typical week day in May, 1929, between 7:00 A.M. and 6:30 P.M., a total of 3,419 passenger automobiles were afforded curb parking space along the business streets within the Crawford-Madison district. An analysis of the parking habit revealed that 48.5 per cent of these cars were parked for less than 10 minutes, while 83 per cent were parked less than 1 hour. The remainder were parked from 1 to 9 hours, and possibly longer, as the check ended at 6:30 P.M. and the street was not clear at that time.

In the Madison-Crawford district, over 50 per cent of the cars parked in excess of 1 hour belonged to merchants, employees, and visiting salesmen, to the exclusion of customers. The following tabulation identifies the various types of "long-time parkers."

Streets	Merchants and Employees	Visiting Salesmen	Potential Customers	Residents	Unidentified	Total
Madison	133	117	80	60	86	476
Crawford	50	48	21	21	30	170
Adjacent to Madison	62	82	127	5	1	277
Adjacent to Crawford	69	93	163	19	3	347
Total	314	340	391	105	120	1,270

During the normal business day, the peak number of parked cars was reached at 3:00 P.M. on business streets and 3:20 P.M. on residential streets. A second peak occurred later in the evening principally because of the arrival of theater patrons.

Most of the business blocks and some of the residential blocks were used to their capacity during the period of maximum demand. This was especially noticeable in those blocks adjacent to theaters and clubs. There were 415 cars parked on the business streets of this district at the maximum period during the business day, while on the side streets, immediately adjacent, there was space available for more than 600 cars, in addition to those already using this space. It would, therefore, have been possible for every car parked on business streets to have used adjacent streets at no greater inconvenience to the driver.

Parking was prohibited on Washington Boulevard, but the restriction was not respected, and cars were found parked there during the day. The number of cars parked on this boulevard during the period of the check (7:00 A.M. to 6:30 P.M.) was almost 20 per cent of all cars using parking space on the residential streets of the district. Traffic on this street was for the most part merely passing through and was not responsible for much retail business. The lanes of travel were all equally active as there were no streetcars operating on this boulevard.

Pedestrian traffic along sidewalks in three of the representative blocks in the Madison-Crawford district averaged 425 persons per business activity, while in one block (Madison Street, Crawford to Springfield) there were but 203 persons per activity; yet in this block the ratio of persons served by parked cars to pedestrians was at a maximum. Parked cars in this block caused serious congestion with the result that autoists avoided it.

These surveys showed that certain classes of business had a larger clientele of customers using automobiles than had others and that department stores and banks were in this class. Examples of such first-class institutions were selected for study and the results of the analysis showed that even for these business establishments only a small percentage of the persons visiting them entered the buildings from parked automobiles.

The survey committee was convinced of the following facts: (1) uncontrolled parking was the most prominent cause of street congestion at controlled intersections; (2) in view of the fact that Crawford Avenue and Madison Street east of Crawford were narrow streets, parking was cutting down the efficiency of roadway use 50 per cent; (3) if 1-hour parking were the maximum allowed, the street space would be more than ample to serve the small number of automobiles; (4) persons who wished to park for a longer period should be requested to use adjacent streets.

Before such surveys were made by the Chicago Surface Lines there had been considerable discussion of the desirability of the prohibition of parking, but the merchants had generally opposed it on the theory that it would be detrimental to their business interests. The results of these surveys were put in graphic form and were presented at regular meetings of merchants' groups and before various civic organizations. After presentation of the facts, the Chicago Surface Lines obtained support of business men for city ordinances restricting parking.

An ordinance was passed placing a 90-minute time limit on parking along Madison Street between Springfield Avenue and Kostner Avenue. Angle parking west of Crawford Avenue was not disturbed, however, although such practice was prohibited by a general ordinance. Leading business men were convinced by the study that parked cars under prevailing conditions used street space and caused confusion out of all proportion to the relatively small number of customers they contributed to the neighborhood.

Unfortunately, the general business depression beginning early in 1930 caused sound planning for the regulation of parking to be put aside in a desperate attempt to cater to every potential customer. Enforcement of the new ordinance lagged until 1937, because of the attitude of shopkeepers and because the materially lessened volume of business reduced the urgency for control of parking. In the spring of 1937, double-parked cars behind angle-

parked cars were causing such obvious congestion that business men were once more receptive to ideas on parking control.

A brief survey by the Chicago Surface Lines showed that less than 9 per cent of the total number of automobiles parked during a business day were occupying more than 36 per cent of available curb space; that most of these cars were owned by local shopkeepers or their employees; and that all the other abuses of the parking privilege indicated by the 1929 survey still existed.

As a result, another campaign for limited parking was undertaken with the cooperation of aldermen, the police, and the community newspaper. Enthusiasm waned after a period of a few months, but responsible leaders promised a representative of the Chicago Surface Lines in March, 1938, that double parking would not again be permitted.

The history of this case illustrates, for Chicago at least, that the success of utility-sponsored parking-control ordinances depends not on cooperation between the company and city officials, but on cooperation between the company and organized groups of business men. Aldermen, police officials, and other public servants in Chicago showed themselves willing and able at all times to carry out the definite, carefully considered requests of business men's groups. The company merely attempted to have decisions made on the basis of competent studies. The company, however, felt that it could not engage in such comprehensive analyses of parking problems as would be undertaken by the city itself through a city-wide traffic survey bureau. Officials of the Chicago Surface Lines believed they should merely make demonstrations of what could be accomplished in analyzing and overcoming typical situations and that studies of other similar problems should be the duty of a traffic engineering department of the city government.

Among mass transportation companies, the Chicago Surface Lines has been unique in the vigorous part it has taken in street traffic matters. While most transit companies have played some role in shaping programs of traffic control, few have initiated action in such affairs to the extent which has prevailed in Chicago.

This initiative, personified in the staff engineer, was largely responsible for such outstanding traffic achievements as the installation of a cross-coordinated traffic signal control system in the central business district in 1926, the prohibition of curb parking in

certain areas in 1928, and the installation of equipment for "full flexible progressive" timing of traffic signals on Michigan Boulevard in 1934.

Efforts to obtain modernization of signal control on Michigan Boulevard extended over a period of seven years. Although no Chicago Surface Lines routes were operated on this street and only one crossed it in the section involved in this discussion, a great deal of time was devoted to this project in order that the feasibility of such control could be demonstrated under the heaviest traffic conditions to be found in the city.

Traffic signals were coordinated into a progressively timed system in October, 1934. Average speeds along the boulevard increased materially in spite of 10 per cent additional traffic attracted by the improvement. Total accidents were reduced 27.2 per cent, pedestrian accidents being cut 40.4 per cent. Because of the proved superiority of the Michigan Avenue type of signal interconnection, other systems of comparatively minor importance were installed throughout the city during the following two or three years.

These smaller units were constructed, however, without definite, officially adopted plans to combine them ultimately into comprehensive, cross-coordinated systems. In 1936, Chicago Surface Lines' engineers proposed the interconnection of essentially all traffic signals in a west-side area embracing 20 square miles in which there were 225 signalized intersections. These engineers prepared the necessary timing diagrams, cable diagrams, and other engineering plans. They also prepared publicity, gave illustrated talks on the plan, and encouraged more than 40 west-side business men's organizations to pass resolutions favoring the project.

The Association of Commerce of Chicago sponsored the project. Metropolitan newspapers gave front-page space to the subject, and community newspapers editorialized on the proposal. The plan was approved by the Chicago City Council and by the Chicago Park District Commissioners, and a quarter of a million dollars was appropriated by these two bodies for the work. New equipment was being installed rapidly in 1938.

The "west-side coordinated traffic signal system" being worked out in 1938 afforded a rather spectacular example of a type of work to which the Chicago Surface Lines devoted much attention. Beginning in 1934, one engineer has devoted full time to traffic

engineering work. In 1938 his staff comprised one or two engineering draftsmen in addition to traffic checkers varying in number with the volume of work in progress. His duties were to conduct special surveys of traffic conditions affecting operation of cars or buses and to make recommendations as to desirable changes; to act as liaison officer between the company and all other men or groups in the city interested in street traffic matters; to take an active part in the work of the Institute of Traffic Engineers, a national organization; and to assist city and park district traffic engineers by proposing, preparing, and promoting plans for improving facilities used by all classes of street traffic.

Should the management of a local street railway company take the initiative in making comprehensive studies of parking problems and street traffic congestion?

Would the cost of such surveys be a legitimate charge to operating expenses?

Should business men be asked to defray a portion of the costs of such surveys?

What role should the municipality play in making such surveys?

Does this case throw any light on the relative use in metropolitan transportation which might be made of (*a*) streetcars, (*b*) trolley buses, and (*c*) buses other than trolley buses?

2. Significance of Holding Company, and Intercorporate Control of Public Utilities

A. Public Utility Holding Company Organization in the Power and Light Industry

25. Electric Bond & Share Company (a)

The original Electric Bond & Share Company was incorporated in 1905 as the outcome of efforts on the part of the General Electric Company to create a market for public utility securities.

In the late seventies and in the eighties, basic electrical apparatus was invented and patents were granted to Edison, Brush, Sprague, and others. But when electrical manufacturing companies were organized, they found that their greatest problems were not technical ones. Creating a demand for their products was the first and most important problem with which these companies were faced. Incandescent lamps and street railway motors could not be sold until there was a demand for electric lighting and for street railway service.

Since the investing public little appreciated the potentialities of electricity, there was no market for the securities of light and power utilities. In view of this situation the electrical manufacturers found it necessary to accept the securities of these companies as part or whole payment for equipment sold to them. In addition to the prices charged for such equipment, a license fee was sometimes exacted for the privilege of using certain patented articles. These transactions soon brought about a close relationship between the electrical manufacturing industry and the public utility companies. At the outset the electrical manufacturers accepted the bonds of the utilities and of municipalities in payment for electrical equipment, but later on, such severe competition for clients was encountered that it became necessary to accept stocks. In some instances this stock ownership constituted majority control of local public utilities.

As the electrical manufacturers found the need of converting these securities into cash, they faced a difficult and ever recurring financial problem. The early method was to create a collateral

trust, pledging a miscellaneous lot of the public utility securities as collateral for an issue of bonds of the manufacturing company. Sometimes the trust was incorporated and the stock of the public utilities given to investors as a bonus with the bonds.

The Thomson-Houston Company, one of the three companies united in 1892 to form the General Electric Company, created such trusts on four different occasions. On each occasion securities were exchanged through the trustees for as many trust certificates as there were shares of the Thomson-Houston Electric Company stock outstanding, and the trust certificates were then offered to the stockholders for cash. While this method brought in cash on a particular transaction, the securities of the utilities were constantly accumulating in the treasuries of the manufacturing companies and the important problem remained of working out a financial plan which would enable the utilities to secure the cash with which to purchase electrical equipment. Accordingly, the Thomson-Houston Company, in 1890, organized the United Electric Securities Company, the special function of which was to assist in the financing of local electric companies by purchasing all, or some portion, of the bonds of those companies for which there was no general banking demand. The bonds were then deposited in a trust company, and the manufacturing company issued against them its own collateral trust bonds, for which a considerable market was developed during succeeding years.[1]

These trusts formed by the Thomson-Houston Electric Company and the United Electric Securities Company were the beginning of a system of marketing the securities of local public utilities through the sale of the securities of more widely known holding companies. This plan also made available to the investing public diversified securities issued by many companies operating in different communities and even in different geographical areas.

In 1904 the General Electric Company organized the Electrical Securities Corporation for the purpose of conducting the same sort of business as that being carried on by the United Electric Securities Company. In 1905 the General Electric Company attempted a more comprehensive plan for the marketing of public utility securities through the organization of the original Electric Bond &

[1] "The organization was a success, 39 separate series of collateral trust bonds having been issued by the company from time to time, which were gradually retired by the sale or maturing of the bonds deposited as security therefor." *Report of the Federal Trade Commission on the Electric-Power Industry*, 1927, p. 70.

Share Company. Through this company the General Electric Company sought a more effective control of the rapidly expanding market for electrical equipment.

The plan of financing as developed by the Electric Bond & Share Company consisted of four important features. First, subholding companies were formed by the Electric Bond & Share Company to take the *common stocks, including voting control*, of an extensive list of operating companies. Second, many operating companies within a particular region were merged into a single operating company with earnings sufficient to enlist public interest in its securities. Third, a financial structure was to be utilized through which from 50 to 60 per cent of the funds invested in the operating companies would be represented by debentures or mortgage bonds of those companies, about one-half of the remainder by their preferred stock and the other half by common stock to be taken by the holding company. Finally, the fourth feature was the avoidance of closed mortgages and closed debenture agreements and the use instead of instruments that would provide large reserves of bonds for future financing needs.[1] According to this plan, certain individuals interested in the Electric Bond & Share Company brought about the formation of a number of subholding companies.

The General Electric Company held voting control over the Electric Bond & Share Company until December 30, 1924. At that time the directors of the General Electric Company voted to distribute to the company's stockholders its holdings in the Electric Bond & Share Company. The charge had been made in the United States Senate that the General Electric Company was exercising a very extensive control over the electric power industry, either directly or indirectly, through stockholders or interlocking directorates, or otherwise.[2] In February, 1925, a comprehensive

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[1] *Report of the Federal Trade Commission on the Electric-Power Industry*, 1927, p. xxvii.

[2] "Taking the situation, however, as it was before December 30, 1924, a careful computation was made of the extent of that part of the electric power industry in which the General Electric interests referred to above owned a significant interest. Reports regarding the principal statistical facts of interest were obtained from operating companies producing in 1924 over 95% of the electric energy generated in the United States. Of this total the General Electric interests had 12.5% of the installed capacity, 11.8% of the electric energy generated, and 9.6% of the number of customers." *Report of the Federal Trade Commission on the Electric Power Industry*, 1927, p. xiii.

investigation of the electric power industry was authorized by the Senate.[1]

As already indicated, the method followed by the General Electric Company in divorcing itself from the Electric Bond & Share Company was through the distribution of shares of the Electric Bond & Share Company to stockholders of the General Electric Company. A new corporation, the Electric Bond & Share Securities Corporation, was created with the same number of shares as there were common shares of the General Electric Company outstanding. The General Electric Company then exchanged its holdings in the Electric Bond & Share Company for all the stock of the new corporation, and this stock was distributed to stockholders of the General Electric Company in January, 1925. As the stockholders of the General Electric Company were originally identical with those of the Electric Bond & Share Securities Corporation which controlled the Electric Bond & Share Company, there was some question as to whether this "formal divorce" constituted a real separation. An examination of the lists of stockholders as of September and October, 1926, by the Federal Trade Commission, showed that there were no large or dominating stockholders in either company and that the original identity of holdings had been reduced by 21 per cent in about 21 months. Concerning the relationship between the two companies the Federal Trade Commission said:[2]

> The present boards of directors of the two companies contain no common directors, and the board of the Electric Bond & Share Company appears to be in a position to manage its affairs independently.

The present Electric Bond & Share Company was formed under the laws of New York on March 13, 1929, through a consolidation of the Electric Bond & Share Securities Corporation and the original Electric Bond & Share Company. Exhibit 1 indicates the associated companies and the ownership of securities by the Electric Bond & Share Company in April, 1929, June, 1932, and December, 1937. A striking feature of the operating utilities was that for the most part they operated in small communities. Less than a dozen companies operated in larger cities, such as Duluth, Omaha, and New Orleans. It will be seen from Exhibit 1 that in

[1] *Senate Resolution* 329, 68th Cong., 2d Sess.

[2] *Report of the Federal Trade Commission on the Electric Power Industry*, 1927, p. xiii.

EXHIBIT 1

ELECTRIC BOND & SHARE COMPANY (A)

ASSOCIATED COMPANIES AND OWNERSHIP OF SECURITIES AS OF APRIL, 1929, JUNE, 1932, AND DECEMBER, 1937

Associated Companies	Owned by Electric Bond & Share Company, April, 1929*		Owned by Electric Bond & Share Company, June, 1932†		Owned by Electric Bond & Share Company, Dec., 1937‡	
	Number of Shares	% of Total Outstanding	Number of Shares	% of Total Outstanding	Number of Shares	% of Total Outstanding
American Power & Light Company:						
$5 Preferred Stock	51,840	5 33	51,840	5.30	51,840	5.30
Common Stock	523,748	23 66	937,209	31.10	937,221	31.10
Electric Power & Light Corporation:						
$7 Preferred Stock	485	0 10	485	0.09	485	0.09
Second Preferred Stock, Series A ($7)	9,480	8 56	13,905	12 81	13,905	16.76
Common Stock	312,141	17 56	1,976,638	59.54	1,976,638	57.76
Option Warrants to Purchase Common Stock	353,408	46 41	393,408	58.74	393,408	69.34
United Gas Corporation (a Subsidiary of Electric Power & Light Corporation):						
$7 Preferred Stock			17,310	3 85	17,310	3.85
Common Stock			752,666	9.63	752,666	9.63
Option Warrants to Purchase Common Stock			151,005	3.10	151,005	3.10
National Power & Light Company:						
Common Stock	1,660,583	30 63	2,540,433	46.61	2,540,450	46.56
American Gas & Electric Company:						
Common Stock	286,471	9 49	767,141	18 87	846,986	18.89
Electric Investors, Inc.:§						
Common Stock	124,857	13 17				
Commonwealth & Southern Corporation:						
Common Stock					1,624,700	4 82
Option Warrants to Purchase Common Stock					1,145,551	6.51
Niagara Hudson Power Corporation:						
Class A Option Warrants to Purchase Common Stock					21,000	0 73
United Corporation:						
Option Warrants to Purchase Common Stock					30,000	0.80

* *Report to Stockholders*, 1929, p. 6.

† *Report to Stockholders*, June 30, 1932, p. 7. In addition to the securities of the holding companies as shown above, Electric Bond & Share Company held in its investments in June, 1932, a $35,000,000 American & Foreign Power Company, Inc., note, due April 15, 1934, a $25,925,000 demand note of United Gas Corporation, and $20,000,000 principal amount of Cuban Electric Company 6 per cent, 20-year debenture bonds, Series A, due 1948.

‡ *Annual Report*, 1937, p. 7.

§ Financial service, only, rendered. The assets of Electric Investors, Inc., were transferred to Electric Bond & Share Company October 17, 1929.

NOTE: Script for fractional shares of stock is included in the above schedule at the equivalent in full shares.

1929 the Electric Bond & Share Company did not own a majority of the voting stock in any subholding company. It did own a majority of the voting stock of the American & Foreign Power Company (not included in Exhibit 1), whose activities were confined to foreign countries. Exhibit 1 also indicates that substantial increases in voting control were secured by the Electric Bond & Share Company over some of its subholding companies between 1929 and 1937.

The Electric Bond & Share Company owned in December, 1937, 57.76 per cent of the common stock of Electric Power & Light Company. While Exhibit 1 indicates that, in 1937, Electric Bond & Share Company held a minority interest of about 18 per cent in American Gas and Electric Company, the latter holding company has furnished centralized service to its own subsidiaries; hence, in the detailed data which follow, the American Gas and Electric System has not been included. The Electric Bond & Share rendered financial service to American Gas and Electric Company.

EXHIBIT 2

ELECTRIC BOND & SHARE COMPANY (A)
REGIONAL DISTRIBUTION OF ASSOCIATED DOMESTIC COMPANIES
DECEMBER 31, 1937

Associated Companies	Communities Served	Number of States in Which Companies Operated	Estimated Population of Territory Served
American Power & Light Company....	1,438	14*	3,711,000
Electric Power & Light Corporation...	1,378	12†	4,501,000
National Power & Light Company....	1,199	6‡	3,739,000

* Arizona, Florida, Idaho, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, New Mexico, Oregon, Texas, Washington, Wisconsin. A subsidiary of this company also sells water in Piedras Negras, Mexico.

† Alabama, Arkansas, Colorado, Florida, Idaho, Louisiana, Mississippi, Nevada, Oregon, Texas, Utah, Wyoming. This company also operated in Monterey, Mexico.

‡ Pennsylvania, North Carolina, South Carolina, Tennessee, Alabama, Texas.

SOURCE: Annual reports of the companies.

Exhibit 2 shows the regional distribution of the associated domestic companies controlled by three associated subholding companies of the Electric Bond & Share Company within the United States. Exhibit 3 shows that 90.9 per cent of these communities served at retail with electricity and/or gas in 1937 had less than 3,000 population. The Electric Bond & Share Company

pointed out in 1935 that, of 1,833 communities which had no electric service until served by Electric Bond & Share Company, about 98 per cent were under 1,000 population. Only two of these communities had over 3,000 population and 87 per cent had under 500. As evidence that the company was extending service to rural areas also, it pointed out that between 1926 and 1932, customers per mile of distribution for operating companies in its system decreased over 26 per cent.[1]

In addition to its functions in widening the market both for electricity and for the securities of local public utilities, the Electric

EXHIBIT 3
ELECTRIC BOND & SHARE COMPANY (A)
EBASCO CLIENT COMPANIES IN UNITED STATES
COMMUNITIES SERVED ELECTRICITY AND/OR GAS AT RETAIL ON DECEMBER 31, 1937

Size of Community (Population)	Communities Served	
	Number, December 31, 1937	% of Total
Under 3,000	3,531	90.9
3,000–10,000	240	6.2
10,000–50,000	80	2.1
Over 50,000	30	0.8
Totals	3,881	100.0

SOURCE: Data furnished by the company.

Bond & Share Company also performed other services for its subholding companies, for which it charged stipulated fees.[2]

In 1928 the Federal Trade Commission had sought certain information from the company on the grounds that it was engaged in interstate commerce, but the company refused to furnish this information on the theory that it was not so engaged. The functions of the Electric Bond & Share Company and its relationships with the associated or client companies were described in the first annual report of the new company in 1929 as follows:

[1] Data from *A Presentation on Behalf of Electric Bond & Share Company to the Committee on Interstate and Foreign Commerce of the House of Representatives in Public Hearings on the Proposed Public Utility Act of 1935* (H.R. 5423), 59 pp. Published by the company, March, 1935.

[2] See case entitled *Electric Bond & Share Company* (*C*), p. 744.

Electric Bond & Share Company (as did its predecessor of the same name) acts in a supervisory capacity for certain power and light and other public utility companies and supplies technical and financial assistance in connection with the financing, the business development, and the operation of these companies and the construction of their properties.

Electric Bond & Share Company is not engaged in the business of supplying power and light, gas, street railway, or other public utility service, nor does it own stock in any company doing an electric power, light, or gas business in the United States. It owns various amounts of stocks of public utility holding companies, principally those mentioned in the next succeeding paragraph, but of those it controls only the American & Foreign Power Company, Inc., which in turn controls public utility subsidiaries operating exclusively in foreign countries.

The company has Service Contracts with the following holding companies and their subsidiaries: American Power & Light Company, American & Foreign Power Company, Inc., Electric Power & Light Corporation and National Power & Light Company. It also renders a financial service for American Gas and Electric Company and subsidiaries and Electric Investors, Inc.

For the service rendered to its clients the company charges stipulated fees. In connection with this service the company maintains a staff experienced in all phases of the public utility business, including operating, financing, engineering, accounting, auditing, rates, statistical, commercial, business policy and customer relations. The Service Contracts do not in any way supersede the local managements of the operating companies. The management and operation of these companies are conducted directly by residents of the territories in which such companies operate. These local managements, under the Service Contracts, have available the assistance of the entire staff and personnel of Electric Bond & Share Company.

In August, 1932, a Federal Court decision concerning the refusal of the Electric Bond & Share Company to furnish certain data to the Federal Trade Commission held that in spite of the fact that the Electric Bond & Share Company had only a minority of voting control of most of the holding companies which it had brought into existence, it nevertheless controlled the major policies of these subholding companies.[1]

The court quoted from a contract between Electric Bond & Share Company and the General Electric Company regarding the purchase of electrical apparatus for its subsidiary companies, and commented on this as follows:[2]

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[1] For other issues not considered here, see case entitled *Electric Bond & Share Company (B)*, p. 741.

[2] *Federal Trade Commission* v. *Smith*, 1 F. Supp. 247.

The foregoing recital engenders an insistent thought that, through the interlocking relationship of the several corporations concerned, the Electric Bond & Share Company had much to do with the determination by its denominated subsidiaries as to when and where they should purchase apparatus, materials, and supplies which were required in carrying on their respective businesses; and also, that, in what was done, the parent company acted in other than a purely brokerage capacity. The phraseology of the contract with General Electric Company gives apparent recognition to the compulsory character of such influence as Electric Bond & Share Company chose to exercise over the affairs of the subsidiaries.

In 1935, when the Public Utility Holding Company Act was pending before Congress, the Electric Bond & Share Company presented facts in Congressional Committee hearings to show the nature and the value of the services which it rendered to its associated domestic companies.[1] While it is beyond the scope of this discussion to furnish even an outline of all the issues presented by the company in these hearings, it is of interest in this connection to mention briefly some points involving the relationships between the Electric Bond & Share Company and its subsidiaries.

Data were presented to show that the type of organization represented by Electric Bond & Share Company made it possible to raise funds for providing facilities for small operating companies that would not be able to finance themselves advantageously. As a recent example of this, the financing of natural gas companies during the years of the depression was cited. The Electric Bond & Share Company also pointed out that it had been a pioneer in developing interconnected electric grid systems, which in turn made possible a higher grade and more dependable service, greater diversification of risk, and efficient regional operation. It was stated that small companies under the Electric Bond & Share system could have the services of experts in various phases of the utility business which they would not find economical to provide for themselves, because of the infrequent demands which these companies would have for such expert talent. It was contended that all business concerns, including Tennessee Valley Authority

[1] See *A Presentation on Behalf of Electric Bond & Share Company to the Committee on Interstate and Foreign Commerce of the House of Representatives in Public Hearings on the Proposed Public Utility Holding Company Act of 1935* (*H.R. 5423*), 59 pp. Published by the company, March, 1935. The president of Electric Bond & Share Company also presented to the United States Senate Committee on Interstate Commerce: (1) a *Statement of S. R. Inch*, 27 pp.; and (2) *Charts*, 51 pp. Both published by the company in April, 1935.

itself, made use of the central service idea and that it was vital to the success of either private or public projects. Electric Bond & Share Company maintained that its central service organization supplemented but did not supplant the local personnel which had the responsibility for the actual management of the operating companies. With regard to control of the subholding companies the following statement was made:

> Although Electric Bond & Share owns a majority of the common stock in only one of these three companies (*i.e.*, Electric Power & Light Corporation), it may properly be said to exercise at this time practical control of each during the pleasure of the holders of a majority of the voting stock.

Regarding the charges made to local companies for services rendered to them, it was maintained that these charges were less than it would cost the operating companies to secure such services elsewhere or to provide such services for themselves. As to the mode of paying for such services, the Electric Bond & Share Company said:

> The basis which has been selected for the payment for supervision and general services is that of gross operating revenues. The development of Electric Bond & Share Company as a service organization has been in direct proportion to the development of the business of its associated operating companies. The scope of any utility business, measured by its gross annual revenues, is as accurate a guide to the scope of its operating system, facilities, and problems as can be found. In the same way there is a direct relationship between these problems and the need for supervision and general services. In turn, it is the need for such services which determines the size and cost of the central service organization. Other methods have been studied and even tried, but none of them gives results which are as fair and equitable to the operating utilities and to their customers.[1]

After the passage of the Public Utility Holding Company Act, the Securities and Exchange Commission filed a suit against the Electric Bond & Share Company in November, 1935, to compel the company and its subsidiaries to register under that act. A vital issue in that suit, which is of interest here, was the controversy concerning the services rendered to public utilities in the Electric Bond & Share system by the Ebasco Services, Inc. Shortly before the suit, a service company known as Ebasco Services, Inc., had

[1] *Ibid.*, p. 53.

been organized as a wholly owned subsidiary of Electric Bond & Share Company.

In 1928 the "business of supervising, constructing, and financing" of public utility properties in the system was estimated to produce on the average "at least half of the profits of the Electric Bond & Share Company in recent years."[1] In 1937 about $1,500,000 of Electric Bond & Share Company's income of $12,000,000 came from dividends paid by Ebasco Services, Inc. In other words, about 11 per cent of gross, or about 14 per cent of net income came from its subsidiary service company in that year.[2]

After the Securities and Exchange Commission won the suit in the lower courts and also in the Supreme Court,[3] the Electric Bond & Share Company registered under the act and announced that the Ebasco Service Company, Inc., would render service at cost to domestic "client" companies.[4] Ebasco Services, Inc., also filed with the Securities and Exchange Commission on behalf of itself and its wholly owned subsidiary, Phoenix Engineering Corporation, declarations concerning their organization and business as subsidiary service companies within a registered holding company system. The service-at-cost plan became effective as of April 1, 1938.[5] It was also stated that beginning with January 1, 1938, the services of Ebasco, Inc., had been segregated into the United States and International Divisions, so as to enable Ebasco to determine costs for service to companies within the United States.[6]

At the same time that the announcement was made that Ebasco Services, Inc., had become a service-at-cost service company, the Electric Bond & Share Company expressed regret that it had been necessary for banker representatives on the board of directors to resign in compliance with the holding company act.[7]

After the Supreme Court decision upholding the registration provisions of the Public Utility Holding Company Act, the chairman of the board of Electric Bond & Share Company pointed out

[1] *Wall Street Journal*, April 17, 1928.

[2] Poor's *Cumulative Corporation News*, April 1–May 31, 1938, p. 375; *New York Times*, April 15, 1938.

[3] See case entitled Electric Bond & Share Company (C), p. 744.

[4] It has been pointed out earlier that the operations of Electric Bond & Share Company in foreign countries through its subholding company, American and Foreign Power Company, Inc., are not here considered.

[5] Poor's *Daily Utility Reports*, April 16, 1938.

[6] *Standard Corporation Records*, June 15, 1938, p. 161.

[7] See case entitled Electric Bond & Share Company (C), p. 744.

that the chief problem confronting that company was that "of seeking a way without loss to the security holders" of conforming the group of companies in that system to such realignment as was contemplated in Section 11 of the act. He stated that this section of the law affected Electric Bond & Share Company "most seriously because of the diversity of location of the enterprises represented by the investments."[1]

How do you account for the complex intercorporate relationships which developed in the public utility industry during the decade following 1920?

Why should the Electric Bond & Share Company have organized subholding companies in which it owned minority interests?

What relationship, if any, is there between the device of minority holdings in subsidiaries by a holding company and its use of management fees and service charges of various sorts?

Why should the Electric Bond & Share Company have made substantial increases in the voting control of its subholding companies within recent years? Do you believe it should further increase its voting control over these subholding companies?

How do you account for the plan of geographical distribution of the operating properties of the Electric Bond & Share Company?

From the public's viewpoint, what are the advantages and disadvantages of the type of public utility organization and administration illustrated by the Electric Bond & Share Company case?

26. THE COMMONWEALTH & SOUTHERN CORPORATION (A)[2]

The Commonwealth & Southern Corporation, a public utility holding company, was incorporated under the laws of Delaware on May 23, 1929. This organization offered its common stock and option warrants in exchange for the common stock of the Commonwealth Power Corporation, and for the common stock and optional warrants of the Southeastern Power and Light Company, and of the Penn-Ohio Edison Company. Originally, this offer was made only to certain large stockholders of these corporations, but later it was publicly extended to all stockholders. As a result of these offers, The Commonwealth & Southern

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[1] *Corporation Records*, June 15, 1938, p. 161.

[2] Based upon annual reports of the utilities involved and upon data in Poor's *Public Utilities*, and Moody's *Public Utilities*.

Corporation acquired over 96 per cent of the outstanding common stocks of each of these holding companies. On July 1, 1929, a similar offer was made for the common stock of the Columbus [Georgia] Electric and Power Company with the result that voting control of this firm was acquired.

All the subsidiaries of the Commonwealth Power Corporation and of the Penn-Ohio Edison Company received operating and engineering supervision from the Allied Power and Light Corporation, a management company which controlled the engineering firm of Stevens and Wood. The Allied Power and Light Corporation had invested considerable sums in the securities of the utilities whose properties it managed; hence, after the exchange offer made by The Commonwealth & Southern Corporation had been successfully consummated, the Allied Power and Light Corporation became a large stockholder in this newly formed superholding company.

The subsidiaries of the Southeastern Power and Light Company and the Columbus Electric and Power Company, however, received no advice or supervision from the Allied Power and Light Corporation. Before January, 1930, therefore, The Commonwealth & Southern system had no unified operating supervision. The organization chart shown in Exhibit 1 indicates approximately the set-up of the system at that time.[1] As Exhibit 1 indicates, there were 109 companies in the system before 1930.

On January 7, 1930, a plan of merger and consolidation was advanced which proposed to merge The Commonwealth & Southern Corporation, the Penn-Ohio Edison Company, the Southeastern Power and Light Company, and the Allied Power and Light Corporation into The Commonwealth & Southern Corporation. This plan was approved by the stockholders of each of the companies involved and resulted in the elimination of the intermediate holding companies.

Shortly after the successful consummation of this merger plan, an extensive consolidation program was inaugurated. Typical of some of the changes made following soon after 1930 were: consolidation of the properties of the Southern Michigan Light and Power Company into the Consumers Power Company; consolidation of the electrical and steam-heating properties of what was formerly the Ohio Edison Company, the Northern Ohio

[1] Exhibits 1 and 2 were furnished by the company in June, 1938.

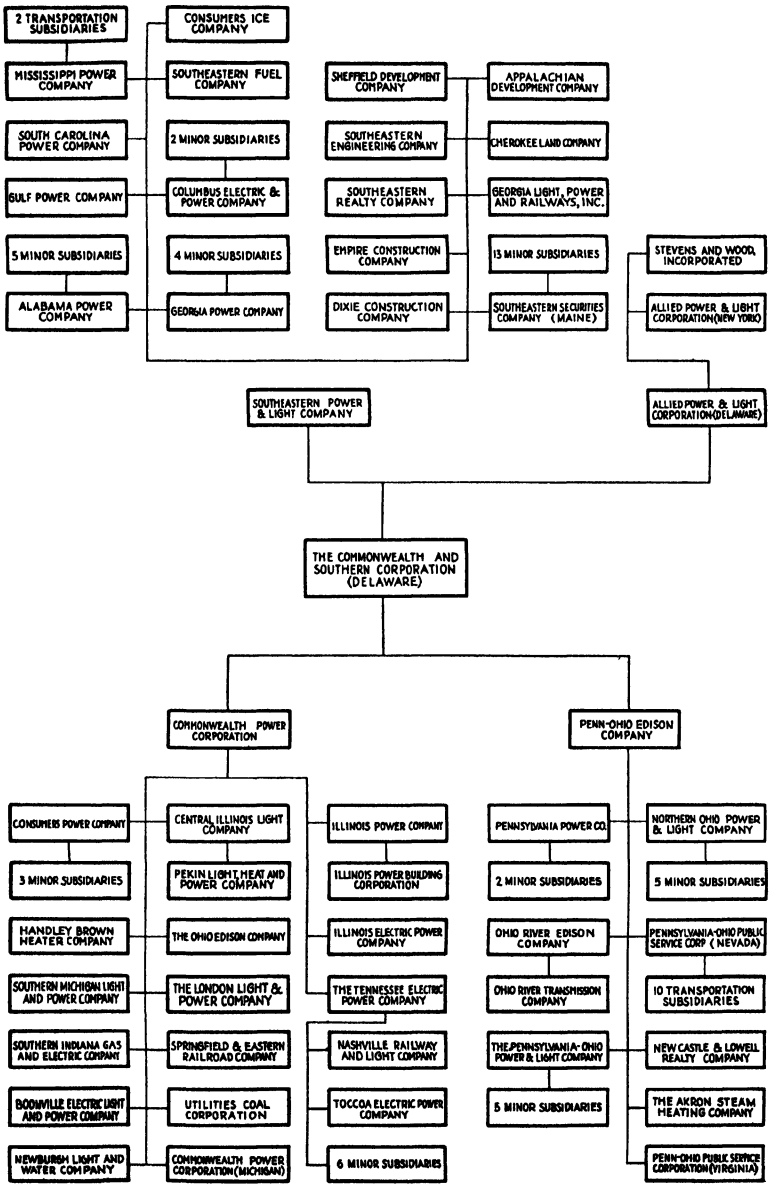


EXHIBIT 1.—The Commonwealth & Southern Corporation (A). Organization Chart Prior to Consolidation in 1930.

Power and Light Company, the Penn-Ohio Power and Light Company, the Akron Steam Heating Company, and the London Light and Power Company into a newly-formed company called the Ohio Edison Company; conveyance by the Ohio Edison Company of its transportation properties to three separate operating units in exchange for their respective stocks; acquisition by the Ohio Edison Company of the physical assets of the Ohio River Edison Company and the Ohio River Transmission Company; consolidation of the system's electrical power properties in Pennsylvania into the Pennsylvania Power Company; consolidation of the Georgia properties of Columbus Electric and Power Company into the Georgia Power Company; the dissolution of the Allied Power & Light Company and the formation of The Commonwealth & Southern Corporation of New York to provide management and supervisory service at cost to all the Commonwealth & Southern groups of operating companies; and the taking over of the business of Stevens & Wood by a new firm, the Allied Engineers.

In addition to the foregoing consolidations which were brought about within a comparatively short period of time after the merger plan of 1930 was inaugurated, many other mergers and consolidations were consummated from time to time. During the entire period from 1930 to 1938, 139 companies were dissolved, merged, or disposed of otherwise, eight of which would be characterized as holding companies. The apparent hiatus between these figures and the difference indicated by the two exhibits is due mainly to the fact that there were omitted from Exhibit 1 a number of companies which were mere corporate "shells" of practically no significance. It will be seen from Exhibit 2 that as a result of the company's policy of corporation simplification, there were only a few more than 40 companies in the system in 1938.

Since its organization, The Commonwealth & Southern Corporation has followed a policy of increasing its holdings of the common stock of subsidiary corporations. In 1938, all the common stock of its subsidiaries was owned by The Commonwealth & Southern except the Tennessee Electric Power Company, which was 99.02 per cent owned.[1]

[1] The Commonwealth & Southern also owned all the capital stock of the Transportation Securities Corporation and the General Corporation, which were, in effect, asset realization companies.

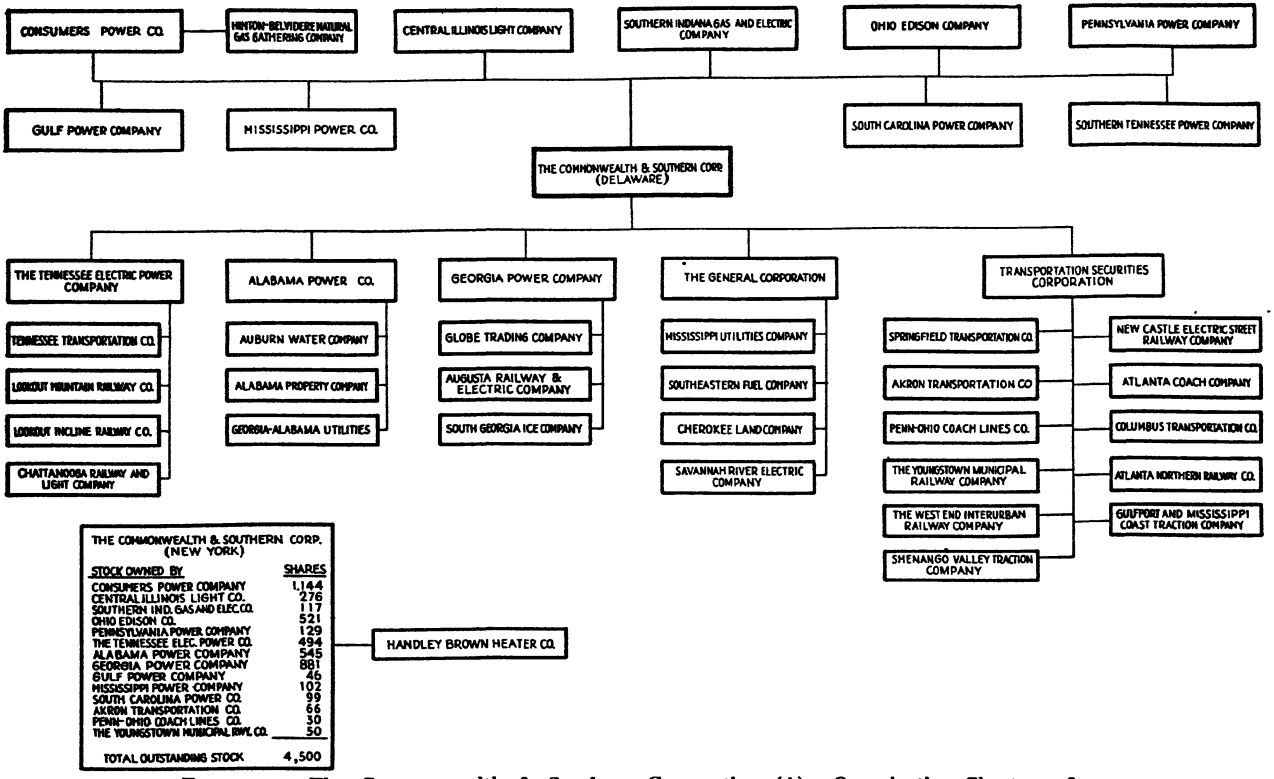


EXHIBIT 2.—The Commonwealth & Southern Corporation (A). Organization Chart, 1938.

Compare the organization of The Commonwealth & Southern Corporation with that of the Electric Bond & Share Company.

What are the advantages of such a merger and consolidation as that of The Commonwealth & Southern Corporation from the point of view of (*a*) capital structure, (*b*) management, (*c*) public relations, and (*d*) regulation?

B. American Telephone & Telegraph Company and Its Principal Subsidiaries

27. ORGANIZATION OF BELL TELEPHONE SYSTEM

In 1938 the Bell System included the following companies: the American Telephone & Telegraph Company; 25 principal directly or indirectly controlled telephone subsidiaries which for operating purposes were grouped into 19 organizations; two noncontrolled large telephone companies operating under license contract arrangements; several service and other minor subsidiaries.

The principal subsidiaries comprised the following two groups:

A. Principal Telephone Subsidiaries:
New England Telephone and Telegraph Company
New York Telephone Company
New Jersey Bell Telephone Company
The Bell Telephone Company of Pennsylvania
The Diamond State Telephone Company
The Chesapeake and Potomac Telephone Company
The Chesapeake and Potomac Telephone Company of Baltimore City
The Chesapeake and Potomac Telephone Company of Virginia
The Chesapeake and Potomac Telephone Company of West Virginia
Southern Bell Telephone and Telegraph Company
  Christian-Todd Telephone Company*
The Ohio Bell Telephone Company
Michigan Bell Telephone Company
Indiana Bell Telephone Company
Wisconsin Telephone Company
Illinois Bell Telephone Company
Northwestern Bell Telephone Company
  The Tri-State Telephone and Telegraph Company
  Dakota Central Telephone Company
Southwestern Bell Telephone Company
  The United Telephone Company
The Mountain States Telephone and Telegraph Company
The Pacific Telephone and Telegraph Company
  Bell Telephone Company of Nevada
  Southern California Telephone Company

* Subsidiaries controlled indirectly are indented under the controlling company.

B. Other Principal Subsidiaries:
Western Electric Company, Inc.
Electrical Research Products, Inc.
Nassau Smelting & Refining Company, Inc.
Teletype Corporation
Bell Telephone Laboratories, Inc.
195 Broadway Corporation
Empire City Subway Co., Ltd.*

In an address before the Telephone Society of New York City in 1921, Walter S. Gifford, later president of the American Telephone & Telegraph Company, made the following comments concerning an effective organization for a national communication system:

The fundamentals characteristic of an effective organization for a national communication system, such as the telephone, are:

1. A central administrative direction and control, over district operating organizations—thus decentralizing and localizing operations. (In this respect the scheme of organization is somewhat similar to that constituted by the Federal government and the local state governments.)

2. Long distance or through trunk lines connecting district operating units.

3. Control of the manufacturing organization which manufactures the intricate and sensitive apparatus.

4. A central bureau for scientific research and for development of technique of operation.

How nearly does the existing situation in the Bell System approach this wise scheme of organization? There is the American Telephone & Telegraph Company, which controls, through stock ownership, most of the Bell Telephone Companies operating throughout the United States; the long distance lines, owned and operated as a department of the American Telephone & Telegraph Company, which connect the systems of the local companies; the Western Electric Company, Inc., controlled through stock ownership by the American Telephone & Telegraph Company, which furnishes economical equipment of the latest and most improved design and manufacture; the general staff organization of the American Telephone & Telegraph Company which carries out the license contract between the American Telephone & Telegraph Company and the local operating companies, under which scientific research and development are carried on and technical knowledge and standardization of methods in all departments of work along the lines of economy and efficiency have been achieved. This structure coincides closely with the ideal plan.

* Subsidiary of New York Telephone Company.

NOTE: The Southern New England Telephone Company, New Haven, Connecticut, and the Cincinnati and Suburban Bell Telephone Company, Cincinnati, Ohio, were not controlled by, but had license contract arrangements with the American Telephone & Telegraph Company.

Under the organization of the Bell System, each telephone subsidiary was made responsible for service within its own territory, including strictly local service and toll service between points within the territory. The American Telephone & Telegraph Company believed that this localization of operating functions best enabled each company to study and provide for the particular needs of its own territory. This feature of the organization structure was important also because the laws of the different states varied in their regulation of the telephone industry. Those laws had a bearing on corporate ownership, operating functions, and the general conduct of the business.

But while it was necessary to have the telephone subsidiaries maintain separate identities for the purpose of meeting the particular requirements of their own territories, it was equally necessary that they be coordinated so as to function as a single, unified organization, furnishing communication between homes, cities, and states. This unification was particularly important because the Bell System, unlike other public utilities, constituted a nation-wide service organization.

This coordination was accomplished by two features of the Bell System's organization. The first of these, which applied to all but two of the telephone subsidiaries, was through the ownership by the American Telephone & Telegraph Company of a controlling interest in the territorial operating companies, the two exceptions being the Southern New England Telephone Company and the Cincinnati and Suburban Bell Telephone Company. As a whole, the American Telephone & Telegraph Company owned in 1938, about 93 per cent of the voting stock of the operating companies.

The second feature which contributed to the coordination of the various operating companies with each other and with the parent company was known as the License Contract. This agreement was entered into between the American Telephone & Telegraph Company, on the one side, and each of the telephone subsidiaries, including the two in which it did not own a controlling interest, on the other. Under its terms the American Telephone & Telegraph Company contracted to interconnect the territorial operating companies by means of its long distance lines, these being owned, constructed, maintained, and operated by the Long Lines Department of the American Telephone & Telegraph Company. The necessity for this centralized ownership and operation

of long distance lines was obvious, particularly when it was realized that calls from one part of the United States to another might pass through the territories of six or seven different operating companies.

In addition to providing this intercompany service, the American Telephone & Telegraph Company undertook on behalf of the entire system certain services which it was thought best to perform at one central point rather than to have each operating company do such work for itself. Briefly, the services performed by the American Telephone & Telegraph Company under the terms of the license contract may be summarized as follows: It carried on the fundamental work of research investigation and experimentation; furnished the licensee companies with engineering assistance and operating advice as well as assistance in legal, accounting, and financial matters; and, in general, afforded a central advisory service for the entire system.

These functions were performed by the general departments of the American Telephone & Telegraph Company. More specifically, the general departments undertook such work as development and research, general engineering studies, studies of operating methods, comparisons of operating results of different companies, studies of clerical and accounting methods; and, in fact, the study of all questions common to all or a number of the licensee companies.

The License Contract was amended from time to time. For example, it formerly provided that the American Telephone & Telegraph Company would own and maintain all telephone instruments supplied to subscribers. In accordance with changes in this contract, these instruments were to be owned and maintained by the respective licensee companies. In consideration of the services rendered to them by the American Telephone & Telegraph Company under the terms of the License Contract and of patent rights and other advantages accruing to them under its provisions, the licensee companies agreed to pay to the American Telephone & Telegraph Company a certain percentage of their gross annual revenues. At one time this amount was 4½ per cent. Reductions were made from time to time as conditions warranted, notably when the licensee companies took over the responsibility of providing subscribers' instruments. Since 1929, the annual payment by the licensee companies to the American

Telephone & Telegraph Company has been 1½ per cent of gross revenue.

The American Telephone & Telegraph Company also owned in 1938 about 99 per cent of the stock in the Western Electric Company. The Western Electric Company functioned as the manufacturing department and as the supply department for the entire system. In its capacity as manufacturer, it furnished the Long Lines Department of the American Telephone & Telegraph Company and the various licensee companies with materials and equipment of a peculiarly telephonic character, such as telephone instruments and other equipment used on the subscribers' premises, switchboards and associated central office equipment, and telephone cables. In order that the various items of equipment making up the facilities for nation-wide telephone service might function at full efficiency, a high degree of standardization both as to design and as to quality was necessary. This standardization could be effected only through such a centralized manufacturing service as that of the Western Electric Company. In its capacity as supply and purchasing department, the Western Electric Company provided the entire system with the large amounts of materials and supplies which were not essentially telephonic in nature and which the company, accordingly, did not manufacture itself. Examples of such materials were poles, wires, conduits, and tools.

In order to carry out their research and experimental functions, the American Telephone & Telegraph Company and the Western Electric Company, Inc., jointly owned and maintained the Bell Telephone Laboratories, Inc., each company owning a one-half interest in this corporation, which performed two functions:

1. It carried on research, development, and engineering work for the American Telephone & Telegraph Company in cooperation with the staff departments of that company.
2. It acted as the engineering department of the Western Electric Company, so far as research and development problems incident to the development of apparatus and materials manufactured and supplied by that company were concerned.

The American Telephone & Telegraph Company had, at the end of 1937, a total of more than 641,000 stockholders living in all parts of the United States as well as in foreign countries. Of these, no one stockholder owned as much as 1 per cent of the stock

then outstanding, the average holding being 29 shares. This nation-wide ownership of the American Telephone & Telegraph Company also meant ownership of the Bell System. Dividends and interest paid to the American Telephone & Telegraph Company by its subsidiaries, together with profits earned from its long distance lines, were used for the payment of interest on the American Telephone & Telegraph Company's bonds, the regular dividends to the American Telephone & Telegraph Company stockholders, and the protection of their investment.

The organization above described, in all important particulars, was almost as old as the telephone business, having been started within 10 years of the first public exhibition of the telephone. Thus by 1890 there was functioning an organization which embodied all the essential elements of the Bell System of 1938.

Is there a need for a different type of organization and administration of the telephone industry than is necessary for other public utilities?

28. ILLINOIS BELL TELEPHONE COMPANY (A)[1]

In August, 1923, the Illinois Commerce Commission prescribed reduced telephone rates to be charged by the Illinois Bell Telephone Company for certain classes of coinbox service in Chicago. The company sought an injunction against the enforcement of this order in the U. S. District Court[2] on the grounds that some of its property had been arbitrarily disregarded in making the valuation, that the valuation was too low, and that certain expenses were improperly rejected. A temporary injunction suspending the enforcement of the commission's order was granted in December, 1923, by this court, which provided for an immediate trial and disposition of the case. The Illinois Commerce Commission and the city of Chicago did not avail themselves of this offer, but appealed to the U. S. Supreme Court to vacate the temporary injunction. The order of the lower court, however, was affirmed by the Supreme Court in an opinion issued in October, 1925.[3]

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[1] *Illinois Commerce Commission* v. *Chicago Telephone Co.*, P.U.R. 1924A, 213; *Illinois Bell Telephone Co.* v. *Moynihan*, 38 F. (2d) 77 (1930); *Smith* v. *Illinois Bell Telephone Co.*, 269 U.S. 531 (1925); 282 U.S. 133 (1930).

[2] Northern District, Illinois, Eastern Division.

[3] 269 U.S. 531 (1925).

The trial of the case was repeatedly postponed upon requests of the city of Chicago, until finally there was a peremptory setting of the case in April, 1929.[1] The order granting the temporary injunction required the company to provide for a possible refund to its subscribers of the amounts paid by them in excess of the sums chargeable under the commission's order of August, 1923. By the date set for the trial, the amount so reserved was approximately $11,000,000.

One of the crucial points of the case involved the intercorporate relations between the Illinois Bell Telephone Company and the American Telephone & Telegraph Company. A large part of the material used in the construction of the local company's plant and equipment was purchased from the Western Electric Company, and much of the Illinois Bell Telephone Company's operating expense consisted of payments made under a contract with the Western Electric Company for apparatus and supplies. Since the American Telephone & Telegraph Company owned 99.99 per cent of the outstanding stock of the Illinois Bell Telephone Company, and since it owned substantially all the stock of the Western Electric Company, the city of Chicago contended that the local company was a mere agency or instrumentality of the American Telephone & Telegraph Company, and that the case must either be dismissed for lack of the real plaintiff, or should be tried as if the American Telephone & Telegraph Company were the party before the court.[2]

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[1] 38 F. (2d) 77 (1930).

[2] In 1929 the State of Michigan brought action against the Michigan Bell Telephone Company to oust that company from its franchise on the theory that the board of directors was not complying with the Michigan law which required that a Michigan corporation be managed by its board of directors.

The Michigan Supreme Court decided that evidence was "convincing" that in the Bell System, the Michigan Bell Telephone Company was merely an operating unit "operating on defined lines" to achieve "standardization in method, practice, materials, and equipment" which was "most minutely defined" and "as minutely followed"; that the Michigan Bell Telephone Company was no more engaged in conducting and carrying on a telephone business than was an ordinary railroad station agent engaged in conducting and carrying on the railroad business of his employer; that the station agent must use reason and intelligence and have a certain discretion; that it would be remarkable were his "lines" as closely defined as were those of the Michigan Bell Telephone Company. One justice dissented from the decision which held that while the ouster proceedings did not call for ousting the company from the state, relief would be granted with respect to the license contract, and "that defendant be ousted of right to have credit in a computation of rates for payment to the American company under and as upon the contract." *People ex rel. Potter, Atty. Gen.* v. *Michigan Bell Telephone Company*, 246 Mich. 198; 224 N.W. 438 (1929); P.U.R. 1929B, 459.

If the city's contention had been upheld, the Illinois Bell Telephone Company's expense of 4½ per cent of its gross revenue in accordance with the above agreement would not have been allowed in determining the fairness of the prescribed rate. Furthermore, a complete disclosure of the profits of the Western Electric Company from its business with the local company would have been required.

In refusing to grant the city's contention, the U. S. District Court pointed out that while stock ownership gave to the American Telephone & Telegraph Company power to control the Illinois Bell Telephone Company through the election of directors, this power in itself did not have the effect of destroying the separate corporate identity of the local company; that the stock ownership did not give authority to dictate the acts of the local directors; that in the absence of any evidence of fraud and misconduct, it would be presumed that the directors had performed their official duties honestly and had acted in good faith with respect to the corporation of whose affairs they were in charge, and to the public to which it gave service. The court explained further that, for the purpose of compelling the Illinois Bell Telephone Company to establish the prescribed rates, the commission had treated the local utility as an independent corporation. It therefore could not hold that the company had lost its corporate identity when it attempted to show that the rates prescribed were confiscatory.

In answer to the city's contention that the profits of the Western Electric Company were not disclosed, the court held that much evidence had been introduced tending to show that the charges made and allowed for the services rendered and supplies furnished by the manufacturing subsidiary of the American Telephone & Telegraph Company were reasonable and less than the amounts for which they could have been obtained elsewhere. The court then quoted from the decision of the U. S. Supreme Court in the Southwestern Bell Telephone case, as follows:

> Under the circumstances disclosed in the evidence, the fact that the American Telephone & Telegraph Company controlled the [Southwestern Bell Telephone] Company and the Western Electric Company by stock ownership is not important beyond requiring close scrutiny of their dealings to prevent imposition upon the community served by the company. . . .[1]

[1] *Houston* v. *Southwestern Bell Telephone Co.*, 259 U.S. 318, 323 (1922); P.U.R. 1922D, 793, 798.

The U. S. District Court ruled that the commission's order fixing telephone rates in the city of Chicago be set aside. The members of the Illinois Commerce Commission appealed this decision to the U. S. Supreme Court, which delivered its opinion in December, 1930.[1]

The Supreme Court sustained the lower court in its ruling that the Illinois Bell Telephone Company had not lost its corporate identity because of the ownership of substantially all its outstanding stock by the American Telephone & Telegraph Company. The Supreme Court upheld the contention of the telephone company that the associated companies were specialists in local service problems, with local operating forces familiar with the needs of their communities, and that the parent company endeavored to solve the problems common to all the affiliated companies.

The Supreme Court held that the rates charged for each class of service should be ample to cover the costs of rendering that service and of providing a fair return on a fair valuation of the property used in rendering it. The court ruled that profits earned in rendering one class of service could not be used as a basis for reducing rates on other classes of service, which might cause the company to incur a deficit on such business or lower its profits to a point at which the return might be deemed confiscatory of the property employed to render that service. It was, furthermore, pointed out that neither the Illinois Commerce Commission nor the lower court had any jurisdiction in the matter of the division of tolls between the local company and the American Telephone & Telegraph Company on interstate business, since interstate rates, as well as the division of revenue resulting from such rates, fell at that time specifically within the jurisdiction of the Interstate Commerce Commission.[2] On this phase of the controversy the court said:

> The proper regulation of rates can be had only by maintaining the limits of state and federal jurisdiction, and this cannot be accomplished unless there is a finding of fact underlying the conclusions reached with respect to the exercise of each authority. In view of the questions presented in this case the validity of the order of the State Commission

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[1] 282 U.S. 133 (1930).

[2] With the creation of the Federal Communications Commission in 1934, jurisdiction over interstate telephone rates was given to that body.

can be tested only by an appropriate determination of the value of the property employed in the intrastate business, and of the compensation receivable for the intrastate service under the rates prescribed. As to the value of that property and as to the revenue and expenses incident to that business, separately considered, there should be specific findings.

With regard to the ruling of the lower court which held that the Illinois Bell Telephone Company had furnished ample evidence to show that its equipment and supplies obtained from the Western Electric Company were purchased at a price as low as or lower than similar products could have been obtained elsewhere, the Supreme Court said:

Nor is the argument of the appellants answered by a mere comparison of the prices charged by other manufacturers for comparable material, or by the Western Electric Company to independent telephone companies . . . the question is as to the net earnings of the Western Electric Company . . . and the extent to which, if at all, such profit figures in the estimates upon which the charge of confiscation is predicated. We think that there should be findings upon this point.

In considering the contention of the appellants that the payment of 4½ per cent of the gross revenue of the Illinois Bell Telephone Company to the American Telephone & Telegraph Company, under the license contract in existence between the two companies in 1923, was exorbitant, the Supreme Court called attention to the fact that payments under this contract had been successively decreased to 4 per cent in 1926, to 2 per cent at the end of 1927, and finally to 1½ per cent in 1929.[1] The court then added:

. . . We see no reason to doubt that valuable services were rendered by the American Company, but there should be specific findings by the statutory court with regard to the cost of these services to the American Company and the reasonable amount which should be allocated in this respect to the operating expenses of the intrastate

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[1] In connection with these reductions, the subsidiary company was required to purchase the telephone instruments and other equipment which it had formerly leased from the American Telephone & Telegraph Co., at substantially the current price less 20 per cent. In 1924 the amounts paid in under the license contract exceeded the amount allowed by the state commission by $358,952; in 1925, by $387,284; in 1926, by $223,249; and in 1927, by $251,964.

business of the Illinois Company in the years covered by the decree [of the Illinois Commerce Commission].[1]

After considering other issues involved in the case, which have little if any bearing on the particular phase of intercorporate relations here considered, the Supreme Court remanded the case to the U. S. District Court for additional findings on the following points:

1. The actual value of property used in the intrastate business of the Illinois Bell Telephone Company and the revenue derived therefrom.
2. The net earnings realized by the Western Electric Company on its business with the Illinois Bell Telephone Company and the extent to which, if at all, such profit figured in the estimates upon which the charge of confiscation was predicated.
3. The portion of the total costs to the American Telephone & Telegraph Company of rendering services to the Illinois Bell Telephone Company which was directly applicable to the latter's intrastate business, in each year since the commission's decree, together with a determination from such findings regarding the justification for the 4½ per cent contract charge, and the subsequent 4, 2, and 1½ per cent charges.

In accordance with the directions of the Supreme Court, additional findings were made by the district court. The latter body then entered a final decree permanently restraining enforcement of the Illinois commission's rate reduction, and releasing the company from the obligation of refunding revenue collected during the suit.[2] Upon appeal to the Supreme Court by the state and city authorities, the decision of the district court was reversed, the injunction against enforcement of the proposed rate reduction was ordered dissolved, and the company was directed to make refunds to its customers for excess revenue collected since the institution of proceedings.[3]

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[1] On this point comparison should be made with the decision handed down in 1923 by the U. S. Supreme Court in *State of Missouri ex rel. Southwestern Bell Telephone Company* v. *Public Service Commission of Missouri et al*, 262 U.S. 276. In this case an order of the Public Service Commission of Missouri had been upheld by the Supreme Court of Missouri and appeal had been taken to the United States Supreme Court. The order in question undertook to reduce the company's rates for exchange service and to abolish certain installation and moving charges. The Supreme Court reversed the judgment of the lower court and found the commission's order to be confiscatory. In reaching its decision the Supreme Court examined, among other things, the valuation methods used by the commission. It was also found that in computing the company's annual net profit on operations available for depreciation and return, certain items of expense had been rejected by the commission. For statement of the U. S. Supreme Court, see case entitled United Fuel Gas Co., p. 225.

[2] 3 F. Supp. 595.

[3] 292 U.S. 151.

In its opinion the Supreme Court took into consideration the findings of fact which it had directed the U. S. District Court to make. The actual decision of the court, however, was based upon an aspect of the case which had been accorded comparatively little attention in earlier decisions. According to evidence before the court there existed a wide disparity between the aggregate amount charged for depreciation and current maintenance from 1923 to 1931, and the observed depreciation accrued during those years.[1] Because of this disparity the reasonableness of the amounts charged annually to operating expenses for depreciation was questioned by the court. The size of these amounts was deemed large enough to destroy any basis for holding that it had been demonstrated by the company that the reduction in income resulting from the commission's proposed rate schedule would produce confiscation. In conclusion, the court said:

> It is not the function of the court to attempt to construct out of this voluminous record independent calculations to invalidate the challenged rates. It is enough that the rates have been established by competent authority and their invalidity has not been satisfactorily proved.

Is it in the interests of the public that the telephone business be controlled by a centralized management?

Was it necessary, in your opinion, to determine the profits to the Western Electric Company from its sales to the Illinois Bell Telephone Company?

Should the sums paid by the Illinois Bell Telephone Company to the American Telephone & Telegraph Company, under the license contract, be allowed in a computation of fair rates?

Does ownership of 99.99 per cent of a subsidiary company's stock actually destroy the corporate identity of such a subsidiary for business or for legal purposes?

Why should an operating public utility company be separately incorporated when it is wholly owned by a parent company?

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[1] See case entitled *Illinois Bell Telephone Company* (*B*), p. 564.

C. Holding-company Management in the Independent Telephone Field

29. Associated Telephone Company, Ltd.[1]

In 1928 the Associated Telephone Company of Indiana sought permission to purchase a number of small telephone properties in that state.[2] The so-called Shively-Spencer Utility Act, which became a law in Indiana in 1913, contained the following section:

> No license, permit, or franchise to own, operate, manage, or control any plant or equipment of any public utility shall be hereafter granted or transferred except to a corporation duly organized under the laws of the state of Indiana or to a citizen of such state.

Commenting on the proposed purchase of the local telephone companies and the provisions of the law, the Indiana Public Service Commission made the following statements:

> The petitioner, the Associated Telephone Company, purports to be the company that proposed to operate the properties if permitted to buy said properties. Mr. J. G. Wray, of J. G. Wray and Company, utility engineers in Chicago, has been and is the principal figure in the proceedings in connection with this cause. Mr. Wray owns stock in the United Telephone Company, a Delaware corporation. The United Telephone Company owns more than 50% of the stock of the Associated Telephone Company. In the first hearing in which the Associated Telephone Company was the petitioner for authority to buy, Mr. Wray testified that his firm of engineers was to perform the duties of engineers and other duties in connection with the operation of these properties, and would receive 2½% of the gross receipts as compensation for performing those duties. In a later hearing of the same cause Mr. Wray testified that his firm of engineers had such agreement with the United Telephone Company as to its subsidiaries outside of Indiana, but the 2½% plan of compensation had been abandoned as to subsidiaries within Indiana, because it had been found that the Public Service Commission of Indiana was unfriendly to that plan of compensation for such services; that instead of 2½% of the gross receipts to be taken as compensation for such services, specific compensation would be made for specific services rendered; also, that

[1] *Re Associated Telephone Co.*, P.U.R. 1928C, 293; 1927C, 577.

[2] None of the towns involved had a population of over 2,000, according to the census of 1920, and some of them were evidently mere villages inasmuch as they were not reported in the census.

the United Telephone Company had assured him or his firm that it would use its influence to cause its subsidiaries to employ his firm to do such things as it should be found qualified to do in connection with the operation of such subsidiary companies. In view of the fact that the United Telephone Company owns more than 50% of the common stock of the Associated Telephone Company, such assurance by the United Telephone Company is equivalent to an order to the Associated Telephone Company to do the things suggested.

The Commission believed prior to the promulgation of previous order in this cause and believes now that it is warranted to conclude from the evidence offered by Mr. Wray and those associated with him that specific compensation for specific services rendered would amount to approximately 2½% of the gross receipts, as originally agreed upon; that the United Telephone Company, a Delaware corporation, is the real petitioner to buy in this cause and that the Associated Telephone Company is intended to meet, in form only, the requirements of Indiana law. . . .

But for this section of the act [the Shively-Spencer Utility Act] the Commission is convinced by the evidence of record that the Associated Telephone Company would not have been organized. Therefore, the Commission is convinced that a nonresident corporation has attempted to secure ownership and the right to operate the telephone properties involved in this cause indirectly and in violation of the section of the Public Service Commission Act quoted above and of other sections of said act.

During the hearing before the Commission and during the proceedings in the circuit court [of Marion County, Indiana] the petitioner to buy stressed a proposal to improve the service in the various exchanges involved in this cause. This matter was developed a little more particularly in the court proceedings than before the Commission, and said improvement of service was based upon:

1. Better engineering and better construction.
2. The use of better materials in construction.
3. The use of better maintenance.
4. The installation of proper operating methods and the better training of switchboard operators.

As to No. 1, there has been no evidence in either Commission or court proceedings that better engineering and better construction is needed. On the contrary almost all the evidence introduced was to the effect that the equipment is good and renders adequate service.

For the same reasons the introduction of better materials has not been shown to be either required or a prudent investment.

Similarly, the reasons underlying consideration given to Nos. 1 and 2 above are equally applicable to No. 3.

As to proper operating methods, etc., the Commission believes that the purposes intended to be accomplished by telephone properties of the size of the properties involved in this cause can be accomplished much better by the operating methods now in existence than by the

operating methods suggested by the petitioners to purchase. For example, the local management is now in personal contact with the operators at the switchboard, with the linemen and with the patrons. There was no suggestion during the hearing before the Commission or before the court that this method had not operated successfully. On the contrary, the evidence of several witnesses was that such method had been completely successful. The manager of each plant now knows the number of operators required to serve the patrons of his plant. Mr. Boyd, an expert witness introduced by petitioners to testify as to method for improving the plan of operation, confessed his inability to state the number of operators necessary to serve adequately a given number of subscribers and referred the court to Mr. Wray, who appeared principally as an expert engineer in the court proceedings. The Commission is convinced that the location of the manager for all of those properties and properties involved in the other two causes similar to this cause at a central point, and the control of all of said properties to be exercised by mail and through assistants would tend to reduce the efficiency of operation below the standard that has been attained by the present owners and managers of these properties and existing methods. The Commission believes also that the operation proposed must be more expensive in some respects than the plan of operation now in existence. This statement is made in view of the evidence introduced by petitioners to buy, that unified method of operation proposed would result in net savings. Such savings are usually made on paper rather than realized in practice.

It is the history of such methods that centralized management does not result in lower property values due to better engineering and does not result in lower operating expenses. As the plants are now operated, cost of engineering is included with and covered by other costs of operation. As proposed, the cost of engineering would be increased to the maximum and expert engineering witnesses introduced to sustain the increase.

The Commission is convinced that utility property value is not a matter of record made by expert testimony, but a matter of judgment resulting from the study of expert testimony and the study of other testimony that is less expert but equally familiar with operating practices and results. Likewise, the Commission is convinced that its judgment must be used in determining its conclusions as to whether centralized management will result in better maintenance, better operating methods, lower property values, etc., and that such judgment should consider both the expert testimony introduced in hearing and that testimony of practical men who do not claim to be experts in theory, as well as the experience of the Commission in similar cases.

In the instant case the Commission feels that authority to purchase would result in the following state of facts:

1. That the operation of these properties would be put in the hands of the United Telephone Company as a nonresident corporation, as the real operator of these properties.

2. That such result is contrary to law.
3. That such result is contrary to proper practice.
4. That such result would be followed by an application for increase in rates.
5. That such showing could be made in such application for increase in rates that the Commission could not lawfully deny it.

The Commission believes that:

1. The continuance of the operation of these properties as separate units as now operated is the most economical, most efficient, and most satisfactory method of operating telephone units of such size.
2. The service being rendered now by these properties is adequate and satisfactory.
3. The Commission has neither authority of law nor reason on account of successful operation of the properties to authorize the prayer of petitioners.
4. Sound public policy would be ruthlessly trampled upon if the prayer of the petitioners should be granted.

Appraise the Shively-Spencer Act of 1913.

Do you believe that rates would have been higher if the companies involved had been purchased by the Associated Telephone Company, Ltd.?

Do you agree with the reasoning of the Commission in this case?

How do you appraise the policy of the management in this case?

D. Holding Company Contracts with Subsidiaries for Management, Engineering, and Other Services

30. Engineers Public Service Company, Inc.

Before 1925 the operating properties under the management of Stone & Webster, Inc., were, in effect, independent utility companies. Included in this so-called Stone & Webster group were a number of electric railway, electric light, gas, and water power companies, located in various sections of the United States. Each of the companies was a distinct corporation having its own accounts, which were separately kept, and its own officers and board of directors.

The firm of Stone & Webster in most instances had a substantial investment in the common stocks of such companies as it managed, but this investment seldom exceeded 20 or 25 per cent of the outstanding common stock of an operating company. A wholly owned subsidiary of Stone & Webster, the Stone & Webster Service Corporation, entered into management contracts with the operating companies, by the terms of which it undertook to supervise their operations under the guidance of their boards of directors. In return for such supervisory services as it rendered, the Stone & Webster Service Corporation received, on the average, approximately 1¾ per cent of the gross earnings of the operating properties.

In 1925, however, a new corporation, the Engineers Public Service Company was incorporated under the laws of Delaware, as a public utility holding company. This holding company offered to exchange its stock for that of various of these operating companies, and in this way or by direct purchase secured approximately 99 per cent of the total outstanding common stock issues of certain of these companies. Stone & Webster turned over its investments in several of these properties in which it had had stock holdings, in accordance with this agreement, and obtained in exchange an equity of approximately 20 per cent in Engineers Public Service Company. The operating companies, then owned

by the Engineers Public Service Company, continued under the supervision of the Stone & Webster Service Corporation, which continued to receive the same fee for its services as it had received prior to the completion of this consolidation program.

In February, 1930, Stone & Webster offered to exchange its stock for the common stock of the Engineers Public Service Company, and as a result, acquired over 90 per cent of the total outstanding common stock of this holding company. This exchange of stock resulted, in effect, in a consolidation of the so-called Stone & Webster properties. Inasmuch as nearly one-half of the management fee of 1¾ per cent of gross operating revenues was profit to Stone & Webster Service Corporation, it was felt that there might be serious criticism on the part of the regulatory commissions and the public of a continuation of these management contracts. It was further apparent that, since Stone & Webster practically owned the operating companies through the Engineers Public Service Company, and actually did own directly 100 per cent of the stock of the service corporation, the collection of management fees, which included a profit, was merely a series of bookkeeping transactions having little, if any, effect upon the total consolidated earnings of Stone & Webster.

Therefore, on May 1, 1931, a new management company, the Engineers Public Service Company, Inc., was formed under the laws of New York, and took over the supervision of the constituent companies of the Engineers Public Service Company, formerly supervised by the Stone & Webster Service Corporation, which continued to manage other properties not owned by this holding company. The common stock of this newly formed management company was owned entirely and exclusively by the various operating companies under the control of the Engineers Public Service Company. Each subsidiary company subscribed to the stock of the management company at $5 per share, in an amount which bore the same ratio to the management company's total outstanding stock as the gross earnings of the operating company bore to the total gross earnings of the entire Engineers Public Service system.

The Engineers Public Service Company, Inc., unlike the Stone & Webster Service Corporation, did not charge the operating companies a fee based on a percentage of the gross earnings, but prorated the actual expense of supervision to the operating com-

panies in proportion to their stock ownership in the management company.[1] It thus became a purely nonprofit organization.

With the adoption of this new form of supervision, a changed policy with respect to the responsibility of the local management of the companies was inaugurated, allowing greater independence of action by local executives. The management company, being in effect the representative of the owners, continued to make such decisions as the owners of the properties thought they could not properly delegate. Thus, the basic policies to be adopted by the operating companies, the final decisions as to what additional capital should be invested in any one property, and the financial policies of the subsidiaries as regards fundamental accounting, raising of capital, and distribution of earnings, were primarily matters for the owning company and the boards of directors of the subsidiaries to determine.

The fact that the officers of the new management company, the Engineers Public Service Company, Inc., and of the owning company, the Engineers Public Service Company, were, in the main, identical, facilitated this arrangement. It was made clear, however, that while the final determination of the policies above mentioned rested with the boards of directors and owning company, the local organizations of the subsidiary companies were by no means relieved of the obligation of keeping the supervisory and owning organizations constantly informed as to their suggestions concerning such matters. Operating problems which arose outside of these restrictions were for the most part handled directly by the operating company's executives. In order to heighten the sense of responsibility of such executives, they were made presidents of their respective companies, rather than vice presidents, as had formerly been the case. Similarly, the heads of local accounting staffs were promoted from assistant treasurers to treasurers. The adoption of this policy of greater local autonomy was designed to bring about improved efficiency and more favorable public relations by eliminating many of the delays that had been experienced in making decisions under the previous system.

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[1] The ratio of the earnings of each subsidiary company to the total gross earnings was determined semiannually on the basis of revenue figures obtained for the preceding 12 months. Any appreciable change in the relative positions of the companies resulted in a redistribution of the stock of the management company in such a way that each one obtained an equity proportionate to its gross earnings during the preceding 12 months.

At a meeting held in December, 1937, the stockholders of Stone & Webster, Inc., approved a plan under which that company should divest itself of its holdings of public utility securities, including the controlling interest in the common stock of Engineers Public Service Company, acquired in 1930. Accordingly, on December 27, 1937, Stone & Webster stockholders received four-fifths of a share of Engineers Public Service common stock per share of Stone & Webster stock held. The remaining shares held by the latter company were transferred to a trustee for eventual sale.

The reasons for this separation were explained by the board of directors of Stone & Webster in a letter to stockholders. If the holdings in Engineers Public Service Company had been retained, Stone & Webster, Inc., would have been subject to the provisions of the Public Utility Holding Company Act of 1935. However, in the opinion of counsel, as a result of the distribution of its utility holdings, the company would no longer be subject to the act. It was felt that because of the uncertainties existing in connection with the act, and because of the restrictions that would be imposed upon activities of the corporation lying outside the utility field, the interests of Stone & Webster and its stockholders would be best served by the distribution of holdings in companies subject to the utility act. It was further stated that the separation from Stone & Webster, Inc., would result in no change in the status of Engineers Public Service Company or its subsidiaries.

What are some of the important business problems involved in determining the extent to which a holding company should manage its properties from a central office?

How should a management company be compensated for its services?

31. THE COMMONWEALTH & SOUTHERN CORPORATION (B)[1]

Before consolidation of various companies into The Commonwealth & Southern Corporation in 1930 and for a short period thereafter, the operating subsidiaries of the Commonwealth Power Corporation and the Penn-Ohio Edison Company received service from the Allied Power & Light Corporation of New York and

[1] Based upon annual reports of utilities involved and upon data in Poor's *Public Utilities* and Moody's *Public Utilities*.

engineering and construction service from Stevens & Wood, Inc., of New York, both companies being subsidiaries of Allied Power & Light Corporation of Delaware.[1]

For services rendered under the terms of these service contracts the subsidiaries of Commonwealth Power Corporation and Penn-Ohio Edison Company paid the Allied Power & Light Corporation of New York 2 per cent of the first $2,000,000 of their annual gross earnings, 1¾ per cent of the next $3,000,000, and 1½ per cent on gross earnings in excess of $5,000,000 per annum.

Before consolidation of the Southeastern Power & Light Company into The Commonwealth & Southern Corporation, operating subsidiaries of the former company received supervisory service from the Southeastern Engineering Company (a subsidiary of the Southeastern Power & Light Company) on a cost basis. Whenever any portion of such services was rendered exclusively for the benefit of any individual company, the cost of such service was billed directly to and paid for by such company. All expenses not allottable directly to any specific company were prorated among the operating companies on the basis of the percentage which the gross earnings of each company were to the combined annual gross earnings of all the operating companies.

After the merger and consolidation program of 1930 had been effected, Allied Power & Light Corporation of New York was consolidated with The Commonwealth & Southern Corporation of New York under the name of the latter company for the purpose of rendering supervision service to the operating companies of The Commonwealth & Southern Corporation of Delaware. A new basis was arranged and the entire capital stock of the service company (The Commonwealth & Southern Corporation of New York), was acquired by the subsidiary companies of The Commonwealth & Southern Corporation of Delaware, in the approximate

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[1] For earlier facts concerning the companies that were merged into The Commonwealth & Southern Corporation, see case entitled The Commonwealth & Southern Corporation (A), p. 196. These services were described in the operating companies' annual reports to stockholders as follows:

"Effective (date) a contract (subject to termination upon 60 days' notice by either party) was entered into with the Allied Power & Light Corporation for general supervision, under the direction and control of your Board of Directors, of the operation of the property of your company. Effective (date) a contract (subject to termination upon 10 days' notice by either party) was entered into with Stevens & Wood, Inc., for such engineering and construction work as can be done more economically and to better advantage than by your company's regular force of employees."

proportion that the annual gross earnings of the individual subsidiaries bore to their combined annual gross earnings. As a result of this arrangement, any surplus which the service company might realize over and above its expenses of operation was returned to the subsidiary companies in the form of dividends. Thus, the holding company (The Commonwealth & Southern Corporation of Delaware) did not realize any profit from the services rendered the operating subsidiaries.

In so far as certain engineering and construction services were concerned, these were not at that time included in the nonprofit contracts with the subsidiaries. As previously pointed out, this work was done for the operating subsidiaries of Commonwealth Power Corporation and Penn-Ohio Edison Company by Stevens & Wood, Inc. Stevens & Wood, Inc., however, did not confine its operations exclusively to these companies but did a general engineering and construction business and numbered industrial as well as other public utility companies among its clients.

In so far as subsidiaries of Southeastern Power & Light Company were concerned, engineering service was rendered to these companies (except Georgia Power Company) by the Dixie Construction Company, a subsidiary of the Southeastern Power & Light Company. A similar arrangement was in effect by the Empire Construction Company for Georgia Power Company. The Dixie Construction Company and the Empire Construction Company also did construction work for the Southeastern Power & Light Company's subsidiaries, but none of this work was carried out under the nonprofit type of contract provided by The Commonwealth & Southern of New York.

After the consolidation in 1930, the name of Stevens & Wood, Inc., was changed to Allied Engineers, Inc., which company took over the engineering and construction work formerly done by all the engineering and construction companies to which reference has been made. As the major construction work required by the operating companies neared completion, a change in policy was made with reference to the basis on which construction work and engineering service was done. Allied Engineers, Inc., was discontinued and the corporation dissolved. It was deemed necessary, however, to maintain a small force of engineers to assist the operating companies, but this personnel was added to that of The Commonwealth & Southern Corporation of New York,

thereby making construction and engineering service also available under the general supervision non-profit contracts.

The contract of the service company with operating utilities also provided that, in case any officer, agent, or employee of the service company was also an officer or employee of any of the operating companies served under the contract, he should not be paid any salary or other compensation by the operating companies.[1]

What are the advantages and disadvantages of centralized management of utilities through a holding company? Was there less or more justification for centralized control of public utility subsidiaries in 1935 than there was in 1925?

What criticisms have been made of the so-called management and service contracts between public utility holding companies and their subsidiaries?

What significance do you attach to the fact that there has been adoption by other public utility holding companies of some such plan as was pioneered by Engineers Public Service Company, Inc., and by The Commonwealth & Southern Corporation? Check other important holding company systems to determine the extent to which such plans followed the decision of the United States Supreme Court in the Electric Bond & Share case. See case entitled Electric Bond & Share Company (C), p. 744.

What bearing has the type of management and service contract used by the utilities upon (*a*) public relations, and (*b*) regulation?

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[1] Nominal fees to directors were not included in this restriction.

E. Effect of Intercorporate Relations upon Division of Profits between Utility and Nonutility Businesses

32. UNITED FUEL GAS COMPANY[1]

The United Fuel Gas Company, with extensive natural-gas lands and leaseholds in West Virginia and Kentucky, in 1916 began in a small way to produce gasoline by absorbing it from natural gas.

In that year the company had an investment in the gasoline business of $279,972 and realized net earnings of $299,293. According to findings of the West Virginia Public Service Commission, net earnings for the first six months of 1917 were $722,204.[2] In 1918 that commission determined that 50 per cent of the net earnings obtained by extracting gasoline from the natural gas should be credited to the gas department. This division of profits was again approved by the same commission in rate cases involving the United Fuel Gas Company in 1919 and in 1921.[3]

The United Fuel Gas Company was responsible for the organization of the Virginia Gasoline and Oil Company in May, 1922, and by deed conveyed to it, among other properties, the United Fuel Gas Company's 10 gasoline plants, certain tank cars, and all the oil in certain lands in West Virginia and Kentucky. It also assigned to the new company certain leases and contracts which involved the production of gasoline. The consideration for the transfer of these properties and rights was 8,897 shares of the capital stock of the Virginia Gasoline and Oil Company and the assumption by it of $1,717,000 of the United Fuel Gas Company's bonds.

On the same day the companies entered into another contract, called the "gasoline contract." Among other things, it provided that the Virginia Gasoline and Oil Company was to operate the

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[1] *Re United Fuel Gas Co.*, P.U.R. 1918C, 193; P.U.R. 1920C, 583; P.U.R. 1924A, 357; *Hope Natural Gas Co.*, P.U.R. 1921E, 418; *City of Charleston* v. *Public Service Commission*, 95 W. Va. 91, 120 S.E. 398 (1923); P.U.R. 1924B, 601; *United Fuel Gas Co.* v. *Railroad Commission of Kentucky*, 278 U.S. 300 (1929), P.U.R. 1929A, 433.

[2] P.U.R. 1918C, 193, 211.

[3] P.U.R. 1920C, 583, 605; P.U.R. 1921E, 418, 428.

gasoline plants which had been constructed by the United Fuel Gas Company and that the Virginia Gasoline and Oil Company was to pay to the United Fuel Gas Company a royalty amounting to one-eighth of the gross proceeds from the sale of this gasoline.

The West Virginia Public Service Commission, by an order[1] in August, 1923, held that *one-eighth* of the *gross* proceeds from the sale of the gasoline was a sufficient return for the extraction privilege, instead of *half* the *net* proceeds.[2] Among the reasons assigned for this order were the following: (1) that the extracting of the gasoline cleaned the gas; (2) that it enabled the company to serve its patrons more efficiently and economically since the maintenance costs were not so great;[3] (3) that since the price of gasoline was much depressed and under the current market price, and probably under the future market price, one-eighth of the gross revenue might exceed one-half of the net revenue derived from the operation of the gasoline properties in question. A fourth reason given by the commission was as follows:

> The matter of separating the gasoline business from the gas business is one that appeals direct to the discretion of the managing officers of applicant. These officials are the ones to decide what is a proper consideration for the gasoline rights. It is not the function of this commission to substitute its judgment for the judgment of such officials. So long as such officials do not abuse their discretion and judgment by making unfair contracts, or for the purpose of obtaining an advantage over the gas consumers of applicant, their action or conduct should not be disturbed by this commission, even though they are dealing with another company in which they are interested. The contract in question in this case, the relation of the parties thereto, and the facts and circumstances surrounding its execution are very similar to the contract, the relation of the parties thereto, and the facts and circumstances surrounding its execution, considered and discussed by the United States Supreme Court in the case of *Missouri ex rel. Southwestern Bell Telephone Company* v. *Public Service Commission*, 262 U.S. 276, 67 L. ed. 619, P.U.R. 1923C, 193.

The city of Charleston, West Virginia, appealed from this decision of the commission to the West Virginia Supreme Court of Appeals.

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[1] P.U.R. 1924A, 357, 369.

[2] In the three former cases, the commission had decided that half the net proceeds should be credited to the gas department.

[3] Gasoline in the gas tended to rot or pulverize the rubber rings used in packing or calking the large pipe-line joints.

In its decision the West Virginia Supreme Court of Appeals held the third reason given by the commission to be "wholly untenable."[1] On this point the court said that there was nothing in the record tending in the least degree to show that under the existing market price, and probably the future market price of gasoline, one-eighth of the gross revenue might exceed one-half of the net revenue derived from the operation of the gasoline properties in question. The court presented the following figures taken from testimony which had been submitted, and based upon data from the books of the Virginia Gasoline and Oil Company.[2]

Year	Gasoline, Gallons	Selling Price, Cents	Gross Revenue	Net Revenue
1917	9,085,137	21.08	$1,914,993.98	$1,339,910 56
1918	10,405,417	22.24	2,314,201.43	1,598,470 74
1919	12,902,984	22.43	2,894,409.38	2,187,301.21
1920	14,046,300	25.73	3,614,510 10	2,681,620.69
1921	13,835,690	19 92	2,756,084 14	2,065,519 61
1922	16,462,339	18 42	3,032,057 05	2,343,504.44

Year	One-eighth Gross Revenue	One-half Net Revenue
1917	$239,374.24	$ 669,955.28
1918	289,275 18	799,235.37
1919	361,801.17	1,093,650.60
1920	451,813.76	1,340,810 35
1921	344,510 52	1,032,759 80
1922	379,007 13	1,171,752.22

Concerning these facts the court said:

It will be observed that half of the net revenue each year is about three times the eighth of the gross revenue; that while in the commissioner's figures he calculates one-eighth of the gross revenue for 1922 at $380,000, one-half of the net revenue was $1,171,752.22; hence the third reason for the commissioner's finding has no basis of fact whatever to support it.

The court objected also to the fourth reason given by the commission for approval of the change of basis for a division of the profits between the two companies. On this point the court

[1] 120 S.E. 398; P.U.R. 1924B, 601, 632.

[2] There is a slight discrepancy in the above figures because the average revenue per gallon was not figured beyond the second decimal place.

quoted the first decision of the commission to the effect that it was the duty of the utility to sell the use of its gas in the gasoline process for its reasonable value, "as if dealing with a stranger at arm's length," that a gas utility should not be permitted to sell the use of its gas to itself for a private enterprise for less than fair market value; and that the reasonable value of that use was the measure of the earnings from that source which should be properly credited to production and transmission expense.

The court pointed out that the Columbia Gas & Electric Company owned 51 per cent and the Ohio Fuel Supply Company, 49 per cent of the capital stock of the United Fuel Gas Company; that on June 22, 1922, the United Fuel Gas Company declared a stock dividend of the 8,897 shares of the capital stock of the Virginia Gasoline and Oil Company,[1] which it had received in part payment for the oil and gasoline properties; that the United Fuel Gas Company directed transfers of this stock to be made to these two stockholders; and that after May 1, 1922, the gasoline business was conducted in the name of the Virginia Gasoline and Oil Company, the gas company receiving the one-eighth royalty. Concerning these negotiations, the court said:

> It is quite apparent that this whole transaction was in effect a sale made by the United Fuel Gas Company to itself for the sole benefit of itself. While the earnings upon this stock as a matter of accounting do not go into its treasury, they go directly into the treasury of its parent companies, where they would ultimately go if the United Fuel Gas Company drew the dividends in the first instance. That this was not a sale made at arm's length is admitted by company's counsel; indeed, we think it is tacitly admitted that the sale was not a fair sale. The price received and to be received in royalties is not the price that would have been demanded and received from a stranger. Such a price would have been much higher.

The court pointed out that under the arrangement between the Virginia Gasoline and Oil Company and the United Fuel Gas Company, the former, without paying a dollar's expense toward keeping the gas company's leaseholds intact or toward the production of gas from these leaseholds, was using the gas in its gasoline process, making a clear profit in 1922 of more than $2,340,000 and paying but $380,000 for the right to extract the gasoline from

[1] Par value $100 per share.

the gas. "Such an arrangement," said the court, "is, in our opinion, exceedingly unfair. We think the extraction privilege is worth at least 50% of the net profits, and that proportion should be charged to the gas business."[1]

In January, 1929, the United Fuel Gas Company appealed to the U. S. Supreme Court from a final decree of the District Court for the Eastern District of Kentucky, denying an injunction restraining the Kentucky Railroad Commission from establishing an alleged confiscatory rate for the sale of natural gas.[2] The United Fuel Gas Company maintained that the lower court erroneously included in the earnings of the regulated business the sum of $65,166, or 50 per cent of the net proceeds from the sale of gasoline extracted (before sale) from the gas sold in the regulated business, on the ground that this amount exceeded the profits from this branch of appellants' business as reflected on their books.

Concerning the division of the profits arising from the extraction of the gasoline from the natural gas, the U. S. Supreme Court said:

> We need not labor the point that a public service corporation may not make a rate confiscatory by reducing its net earnings through the device of a contract unduly favoring a subsidiary or a corporation owned by its own stockholders. . . . We recognize that a public

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[1] The court quoted the following from the decision of the West Virginia Public Service Commission concerning the value of the company's leaseholds: "As has been stated, on December 31, 1918, applicant's gas acreage was carried on its books at an investment cost of $6,597,224.91. At that time applicant set upon its books as representing the increased or appreciated value of this acreage, the sum of $31,778,111.42, making the total value of applicant's gas acreage as carried on its books, $38,375,336.33. . . . It has been the practice and custom of the applicant, when additional acreage is required, to charge to capital the expense of obtaining same, whether bonus, rental, or purchase price, and thereafter to charge to operating expenses the delay rentals or royalties paid for carrying such acreage. The aggregate of the expense of acquiring this acreage is the sum at which it was carried upon the books of the company as investment on and prior to December 31, 1918. . . . Whatever may be the difference of opinion, as shown by court and commission decisions, as to the ascertainment of fair value for other property of a gas utility, the many elements of uncertainty and speculation that must necessarily enter into all opinions regarding the value of gas leaseholds are so obvious and well known as to render it manifestly unjust and unreasonable to place any value upon such property in excess of its actual cost."

Concerning the United Fuel Gas Company's estimates of the value of its gas leaseholds, the court said: "We consider such estimates too uncertain to form a basis for a valuation of the company's leaseholds, and in this respect we agree with the commission. Therefore, under any view of the present record, the company has not shown by competent evidence that it is entitled to any appreciated values upon its leasehold property," P.U.R. 1924B, 601, 610, 611, 614, 617.

[2] 278 U.S. 300 (1929); P.U.R. 1929A, 433.

service commission, under the guise of establishing a fair rate, may not usurp the functions of the company's directors and in every case substitute its judgment for theirs as to the propriety of contracts entered into by the utility; and common ownership is not of itself sufficient ground for disregarding such intercorporate agreements when it appears that, although an affiliated corporation may be receiving the larger share of the profits, the regulated company is still receiving substantial benefits from the contract and probably could not have secured better terms elsewhere. *Missouri ex rel. Southwestern Bell Telephone Company* v. *Public Service Commission*, 262 U.S. 276, 288. . . . P.U.R. 1923C, 193. . . . *Houston* v. *Southwestern Bell Telephone Company* 259 U.S. 318. . . . P.U.R. 1922D, 793. . . .

But this case is not of that class. It is not without significance that the West Virginia court in considering this question had before it previous findings of its commission, based upon actual contracts for gasoline extraction, where the parties, dealing at arm's length, had agreed upon a 50% division. Credible evidence was introduced below tending to show that expenses on property used jointly by the two companies and properly allocable to the gasoline company had been borne by the gas companies to an amount in excess of the return received by them from the gasoline extraction. It likewise was shown, the evidence not being challenged by appellants, that the extracting company, during the years 1917 to 1922 inclusive, after allowing appellants 50% of the net earnings for the extraction privilege, would have earned not less than 102% of its capital investment in each year. The average yearly profit during this period was 119.75%. In 1923 its net return on this basis was 80.40%. Making allowance for fluctuation in market prices and other common business hazards, we do not think it would be difficult to induce capital to seek investment on the basis of this division of net earnings. In such circumstances we think no adequate reason is shown for not including in the appellants' earnings 50% of the net proceeds from the gasoline extraction.

Concerning the general principles to be followed by a public utility commission in the regulation of corporate management, the U. S. Supreme Court referred to its statement in the Southwestern Bell Telephone Company case, decided in 1923. This statement was as follows:

The important item of expense disallowed by the commission—$174,048.60—is 55% of the 4½% of gross revenues paid by plaintiff in error to the American Telephone & Telegraph Company as rents for receivers, transmitters, induction coils, etc., and for licenses and services under the customary form of contract between the latter company and its subsidiaries. Four and one-half per cent is the ordinary charge paid voluntarily by local companies of the general system. There is nothing to indicate bad faith. So far as appears, plaintiff in error's board of directors has exercised a proper discretion

about this matter requiring business judgment. It must never be forgotten that while the state may regulate with a view to enforcing reasonable rates and charges, it is not the owner of the property of public utility companies and is not clothed with the general power of management incident to ownership. The applicable general rule is well expressed in *State Public Utilities Commission ex rel. Springfield* v. *Springfield Gas & Electric Company*, 291 Illinois 209, 234; P.U.R. 1920C, 640; 125 N.E. 891:

"The commission is not the financial manager of the corporation and it is not empowered to substitute its judgment for that of the directors of the corporation; nor can it ignore items charged by the utility as operating expenses unless there is an abuse of discretion in that regard by the corporate officers."[1]

Under what circumstances, if at all, does a public utility have any obligation to engage in business of a nonpublic utility character?

If the management of a public utility, in a case like this, made no effort to extract the natural gasoline from the gas, what action, if any, should be taken by the public utility commission?

Do you agree with the decision of the U. S. Supreme Court in this case?

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[1] *Missouri ex rel. Southwestern Bell Telephone Co.* v. *Public Service Commission*, 262 U.S. 276, 289 (1923); P.U.R. 1923C, 193, 199. But see a later decision of the U. S. Supreme court in case entitled Illinois Bell Telephone Company (A), p. 207.

F. Ownership and/or Management of Nonpublic Utility Industries by Public Utilities

33. New England Public Service Company

In 1927 the New England Public Service Company, a holding company incorporated in Maine in August, 1925, inaugurated a policy of purchasing weak or bankrupt industrial companies in order to prevent its public utility subsidiaries from losing a market for their services.[1]

The entire plant of the Salmon Falls Manufacturing Company was purchased in 1927. The company was at that time in the process of liquidation. Among its assets was a fully developed hydroelectric station of 2,000 kilowatts. This was sold to the Public Service Company of New Hampshire, a subsidiary of the New England Public Service Company, the parent company retaining title to the mill and textile machinery. Plans were made for reopening the mill, thus continuing "a textile industry of more than eighty years standing."[2]

The Bath Iron Works, Ltd., in Bath, Maine, went into the hands of a receiver in 1924. In 1927 the New England Public Service Company, according to its annual report, "purchased all of the real estate, buildings, and heavy machinery" of this company. The report stated that "dispersion of the plant was thus prevented," and that within three months the New England Public Service Company sold the property to a new corporation known as the Bath Iron Works, Inc.[3]

Control of the Edwards Manufacturing Company in Augusta, Maine, was also purchased. The annual report of the New England Public Service Company stated that "a considerable factor in deciding to take this action was the valuable water power

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[1] The National Electric Power Company, also a holding company, incorporated in Maine in March, 1925, controlled the New England Public Service Company. The former company was organized to acquire controlling interests in public utility companies throughout the United States. In 1928 the Middle West Utilities Company acquired a controlling interest in the National Electric Power Company.

[2] *Report of the New England Public Service Company*, 1927, p. 7.

[3] *Ibid.*

owned by the Edwards Manufacturing Company."[1] This company manufactured print cloths and light shirtings.

Further acquisition of financially weak industrial companies was described as follows in the 1928 annual report:[2]

> In June, 1928, the shareholders of the Androscoggin Mills, of Lewiston, Maine, voted to liquidate. Had this action been carried out, it would have resulted in the throwing out of employment of some 800 or 900 wage earners in Lewiston and Auburn, with the consequent detriment to the Central Maine Power Company's business in those cities. The Androscoggin Mills own a valuable water power privilege on the Androscoggin River in Lewiston. Consequently, control of the Androscoggin Mills was purchased, the previous action of its shareholders rescinded, and the mill continued in operation.
>
> In December, 1928, a contract was entered into to acquire 55% of the capital stock of the Hill Manufacturing Company, of Lewiston, Maine, which also owns a water power privilege on the Androscoggin. The Androscoggin Mills, and the Hill Manufacturing Company together own a majority of stock of the Union Water Power Company, which company in turn owns the dam at Lewiston, Maine, sundry storage reservoirs on the Androscoggin, and in addition, some valuable undeveloped water power privileges on the same river.
>
> The water powers of the several mills, if coordinated with the electrical business of your company's utility subsidiary, the Central Maine Power Company, can be made to earn a substantially increased return over that properly attributable simply to supplying energy to the mills themselves.
>
> The prices at which the control of these mills has been acquired are such that, after assigning a fair value to the water power privileges, the investment in the textile business proper is reduced to a figure that your company believes will permit their operation on a profitable basis.

In 1929 the New England Public Service Company increased its holdings in the following textile mills: the Edwards Manufacturing Company, the Hill Manufacturing Company, and Androscoggin Mills. At that time it purchased another textile mill, the Bates Manufacturing Company. Late in 1929 the New England Public Service Company organized the Maine Seaboard Paper Company and made provision for the construction of a newsprint mill at Bucksport, Maine, located on tidewater at the mouth of the Penobscot River. On the one hand, the paper company entered into contracts with the Central Maine Power Company for electri-

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[1] *Ibid.*, 1928, p. 10.
[2] *Ibid.*, 1928, pp. 10, 11.

cal energy which would at the outset utilize about one-third of the output of a new dam which was to be completed in December, 1930. On the other hand, contracts were made with certain newspapers, beginning in 1931 and extending for five years, that would absorb the entire capacity of the mill.

The growth of the industrial activities of the New England Public Service Company brought about the organization of New England Industries, Inc., an industrial holding company. This was described as follows in the 1929 annual report of the New England Public Service Company:[1]

> In order to facilitate the handling of its industrial activities, there was organized in December, 1929, New England Industries, Inc., to be owned jointly by your company and an affiliated company. There have been transferred to New England Industries, Inc., all of the industrial securities owned by your company.

The scope of the activities of New England Industries, Inc., was described as follows in the 1930 annual report of the New England Public Service Company:[2]

> . . . The industrial enterprises, in which your company had been interested, were transferred to New England Industries, Inc. [1929], in which New England Public Service Company has a large, but not controlling interest.
>
> The principal businesses, in which New England Industries, Inc., is interested, are textile and newsprint manufacture.
>
> On December 31, 1930, New England Industries, Inc., owned the control of Edwards Manufacturing Company, Bates Manufacturing Company, Hill Manufacturing Company, Androscoggin Mills, and York Manufacturing Company.
>
> The operation of these mills provided steady employment for 4200 people who received weekly a payroll averaging $71,000, thereby materially contributing to the welfare of the communities in which the mills are located and in the prosperity of which the utility subsidiaries of the New England Public Service Company are so vitally interested.
>
> Largely due to the continuing decline in the price of cotton, these mills all showed substantial operating losses for the year 1930 but after writing inventories down to the basis of cost, or market, whichever was lower, the investment of New England Industries, Inc., in this situation, was in the opinion of your directors considerably less than its proportionate share in the liquidating value of the mills.

No annual reports of the New England Industries, Inc., were available but something of the financial condition of the company

[1] *Ibid.*, 1929, p. 11.
[2] *Ibid.*, 1930, p. 10.

and the extent to which it was financed by the New England Public Service Company may be seen from the 1931 annual report of the latter company:[1]

New England Industries, Inc., represents an investment of $27,728,900. Of this sum your company has provided $7,012,385.07 through the purchase of stock and $5,225,000 through loans, a total of $12,237,385.07 as shown by the balance sheet included in this report. The remainder has been provided principally by an affiliated company.

New England Industries, Inc., in turn has invested $6,696,090.88 in the shares of various textile companies, principally Androscoggin Mills, Bates Manufacturing Company, Edwards Manufacturing Company, Hill Manufacturing Company and York Manufacturing Company, and $5,148,550 in loans to these mills. $13,848,531.11 has been invested in the newsprint industry of which $11,860,000 is in the Maine Seaboard Paper Company. The remaining assets of New England Industries, Inc., are invested in the securities and notes of other industrial enterprises.

The aggregate decrease in the surplus accounts of the five cotton mills for the year 1931 amounted to $2,517,083.68 of which a considerable part was extraordinary expenses due to reorganization of material equipment, manufacturing and sales personnel, and the balance a loss from operations occasioned by depressed conditions in the textile industry and a continuing fall in the price of cotton and other raw materials. The program for the modernization of the cotton mills has been completed. Since the first of this year arrangements have been made that have materially strengthened their managerial personnel.

. . . . . .

For the past two years the activities of New England Industries, Inc., subsidiaries have exerted a very stabilizing effect in the territory in which your company's utility subsidiaries operate. With a return to normal conditions, their own activities should earn an adequate return on the investment therein.

In 1932 the industrial properties of New England Industries, Inc., continued to register losses as a result of decreased rates of operation and shrinkages in inventory values. The total deficit on the books of New England Industries, Inc., as of December 31, 1932, was $5,064,050.91.

Generally improved business conditions resulted in a substantial reduction of losses in 1933. A summary of operations for the period, including a description of the reorganization of the

[1] *Ibid.*, 1931, pp. 7–9.

capital structure of New England Industries, Inc., was given as follows in the 1933 annual report of the New England Public Service Company:[1]

At a meeting of the stockholders of New England Industries, Inc., held on December 12, 1933, a reorganization of the capital structure of that company was effected. Previously the control of New England Industries, Inc., was owned by the Mississippi Valley Utilities Investment Company, which is now in receivership.

. . . . . .

. . . New England Public Service Company retained ownership of all its common stock, which gives it voting control of New England Industries, Inc. It now has invested in New England Industries, Inc., and subsidiaries $14,864,446.51. . . . and, after deducting reserve provisions of $2,624,791 a net of $12,239,655.51, over half of which is in the form of notes.

The investments of New England Industries, Inc., . . . now consist primarily of those in five cotton mills and in Maine Seaboard Paper Company. After review by the management, all other investments have been written off or reduced by reserves to $252,059.

Additional losses were incurred by the industrial properties in 1934 and 1935. Furthermore, during this period it was necessary, in order to meet debt maturities, for the New England Public Service Company to make substantial loans to the Maine Seaboard Paper Company, bringing the total of such advances to $1,685,000.

The relationship of New England Public Service Company and New England Industries, Inc., was described as follows in the 1936 annual report of the former company:[2]

Your Company owns a majority interest in the 7% Preferred Stock and substantially all of the Common Stock of New England Industries, Inc. New England Industries, Inc., and its subsidiaries, the five textile mills and the Maine Seaboard Paper Company, were indebted to your Company at December 31, 1936, in the aggregate amount of $8,647,471.82, of which $6,772,000 is represented by notes and the balance by unpaid interest thereon. $7,292,175.92 of the aggregate debt is subordinated to bank loans.

The past year brought a material easing in the financial condition of the industrial group due largely to more profitable operation of the mills and the sale of miscellaneous minority holdings in nonaffiliated companies.

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[1] *Ibid.*, 1933, pp. 9 and 10.
[2] *Ibid.*, 1936, p. 8.

The following statement relative to the financial policy of the New England Public Service Company appeared in the company's 1937 annual report:[1]

A financial survey of the major companies constituting the New England Public Service Company System was completed last summer. The purpose was to review the broad financial trends of the utility subsidiaries over the past ten years, and to project their probable financial requirements and resources for several years ahead under conditions assumed as normal and growth considered as the normal increase in the constantly expanding electrical business. This study resulted in the adoption of a financial policy designed to strengthen the position of the operating subsidiaries in order that the additional capital required may be freely obtained on favorable terms, a prerequisite to releasing earnings for transfer in the form of cash to your Company.

The financial policy adopted and now being pursued is summarized as follows: Capital expenditures of the industrial group to be held to the lowest level consistent with the maintenance of economic efficiency; available cash realized by the industrial subsidiaries to be withdrawn through the liquidation of their indebtedness to your Company and applied to the strengthening of the equity position of the utility subsidiaries; the equity position to be further strengthened by a retention of a portion of earnings by the individual subsidiaries with the balance of earnings left free for disposition as the directors may consider wise under conditions then prevailing; expansion by the utilities to be limited to normal growth except as some unforeseen situation may develop which must be considered in the light of the then existing conditions; continuation of the program for regrouping of properties and simplification of the corporate structure of this group with financial credit and greater efficiency the objectives; liquidation of any industrial units to be reviewed when circumstances may warrant serious consideration of that drastic move.

Do you believe it is a wise policy for public utilities in order to preserve a market for their services to purchase weak or bankrupt industrial concerns?

What is involved in such a relationship between public utility and nonpublic utility businesses from the standpoint of (1) the public utility, (2) the utility's customers, (3) investors in utility securities, and (4) public regulation?

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[1] *Ibid.*, 1937, p. 3.

G. Organization and Function of a Centralized Industrial Bureau

34. NIAGARA HUDSON POWER CORPORATION (A)

The Niagara Hudson Power Corporation was formed in June, 1929, as a holding company for certain utility companies which were engaged in furnishing electric power to a wide area in upstate New York, and which manufactured and distributed gas in some of the large centers within their territories.

In the fall of 1929, the corporation organized an industrial bureau for the purpose of developing its power market by aiding both its present and prospective customers. The bureau offered to advise any manufacturer on problems of production, merchandising, management, or finance, but not in a manner to conflict with the work of exclusively engineering organizations. Such advisory services were made available just as freely to manufacturers outside of New York State as to those within it, since one of the chief functions of the industrial bureau was to convince those outside manufacturers who could produce and/or distribute more economically from a New York plant than they could from their own existing locations either to move into the territory served by the Niagara Hudson system companies or to establish a branch therein. However, the bureau was distinctly not interested in encouraging a manufacturer to locate in New York State unless he could operate there more economically, all things considered, than elsewhere. The policy adopted by the company toward its industrial development conformed with a long-range objective of building up a substantial and permanent load in the future rather than obtaining additional business immediately, regardless of the stability of the demand.

Briefly, therefore, the bureau's work could be described as being divided into two parts: to render assistance of an advisory nature to manufacturers within its territory; and to be instrumental in bringing new industries into the state. To fulfill these functions properly, it was necessary for the bureau to obtain men who were not only competent in merchandising, finance, and

engineering, but who were also familiar with the problems peculiar to numerous industries.

When first conceived, it was expected that the industrial bureau would be centralized in New York City. It was to have at its head a director of industrial development who was to be a public relations man and who would make necessary contacts. A technical director, familiar with numerous industries and well grounded in general business and finance, was to assume the responsibility of chief industrial engineer and was to have charge of all surveys and technical recommendations. He was to be assisted by experts in the various industries which made the greatest demands on the bureau's time, or which required advice of a highly specialized nature. It was proposed, for instance, to employ chemists, paper mill experts, textile men, etc., as the necessity for their services arose. The staff was also to include an expert cost accountant and financial analyst, a statistician, and numerous clerks, stenographers, and general office assistants.

Shortly after the industrial bureau was started, however, some officers of the company pointed out that a centralized bureau, organized as previously outlined, would result in needless duplication. They contended that a utility as large as the Niagara Hudson system already had experienced and well-trained engineers, statisticians, and accountants throughout its various operating companies. As residents of the respective localities served by their operating companies, such men generally could develop better public relations than an expert sent out from the corporation's central office. These officers believed that local officials of the Niagara Hudson System should constitute an important part of the bureau's machinery for dealing with the numerous local communities within its territory. They felt that there was a possibility that representatives of a centralized industrial bureau would make contacts with prospective customers before the local operating company manager could establish relations with them. Such a circumstance would result in minimizing the importance of the local companies' personnel in the eyes of their communities and would, in the opinion of the executives who held this view, become detrimental to the system's public relations. A centralized bureau might spend an undue amount of time in developing markets in some cities to the detriment of others, and being unfamiliar with local policy in various

communities, might create friction in its efforts to be helpful. Industrial men employed by various chambers of commerce might gain the impression that the centralized industrial bureau was attempting to infringe upon their legitimate functions. Needless antagomism might thereby be aroused.

Under the centralized plan which was adopted in 1929, the power salesmen in the various districts submitted reports of all rumors concerning possible expansions of demand for power, either through increased use by customers already connected with the company's lines, or through the establishment of new industries in their districts. The local managers were required to submit weekly reports to the central office, stating all such rumors and also estimating the demand for power within their districts in the immediate future. Monthly reports were submitted on the actual growth which had occurred. This information was used to obtain leads which were followed up by the central office. If, for example, a rumor were current that any companies within the Niagara Hudson system's territory were to be involved in a merger, representatives of the industrial bureau would ascertain from the executives of the companies involved whether the combined company would use additional power. With this information the utility could then be ready to serve its customers when the need arose. With such an entree, it was frequently possible to make suggestions and render advice which would ultimately result in increasing the utility company's load.

Similarly, the purchasing department reported to the industrial bureau a list of all commodities which it had had to purchase outside the state. The industrial bureau then investigated the market for these commodities within its territory, studied the various locations and allied problems of the industries which produced them, and then determined whether or not a company producing any of these items could improve its competitive position within its industry, either by moving to New York State, or by locating a branch plant there. If its survey indicated that some such industry would be justified in locating in the Niagara Hudson system's territory, contacts were established with the company's executives, and the subject of moving or locating a branch plant in New York was then discussed with them.

The accounting department reported to the industrial bureau all those industrial power customers who were not paying their

power bills promptly. Slow payment of bills generally was taken as an indication that the concern in question was experiencing some difficulty. In such cases, representatives of the industrial bureau would call upon the manufacturer and inquire whether they could be of assistance. If the manufacturer so desired, a study of his business was undertaken and suggestions were made as to how he could utilize idle capacity, improve production methods, alter merchandising policies, etc.

Other leads were obtained by the industrial bureau from inquiries received as a result of its advertising, which was carried on in national magazines and by direct mail, or from unsolicited inquiries received from manufacturers contemplating a change of location. Numerous inventors and so-called "fly-by-night" organizations sought various kinds of inducements from the industrial bureau to locate in the Niagara Hudson system's territory. All such requests were carefully considered and only those which appeared to have real possibilities were encouraged. If an invention appeared to have real merit, the industrial bureau frequently was able to make contacts for the inventor, either with some existing company in its territory which might be interested in producing such a product, or else with investment bankers who might be willing to finance a new organization.

Although the industrial development bureau was not in a position to render financial aid to its customers, present or prospective, it frequently was able to convince bankers that such companies were deserving of aid. The bureau also served as a clearing house for many of its customers' needs. Companies producing complementary products were sometimes brought together to their mutual advantage. In some instances, the bureau was able to be of assistance in obtaining valuable orders for its customers.

In order to be of greatest assistance to its customers and to be able to do its work intelligently, the industrial bureau contemplated making a detailed industrial master survey of its entire territory. This survey was to include a thorough study of all the raw materials available in New York State, the labor situation, the character of the corporation laws, transportation facilities, markets, and the cost and dependability of the available power sources. Questions of prospective customers could be much more adequately answered with such material already compiled and readily available.

The Niagara Hudson system was divided for organization purposes into Eastern, Central, and Western operating divisions. An industrial committee composed of representatives of each of these three main divisions, together with the head of the purchasing department, the director of commercial sales, and the director of public relations, was organized in order to avoid some of the difficulties anticipated with a centralized industrial bureau. Many of the objections raised, however, could not be entirely obviated.

After having operated under the centralized plan for some time, the company decided to abandon it in favor of more decentralized promotional activities. Practically all the functions outlined, however, were retained, but on a more decentralized basis. Industrial power development was considered as a function of the power sales department of each division. The president of the Niagara Hudson Power Corporation, as head of the operations of the entire system, required the director of public relations to report directly to him. The director of public relations was assisted by a committee which supervised whatever publicity and promotional work was conducted by the company. An independent industrial committee was separately organized, with the technical director of the industrial bureau as chairman also reporting to the president. The head of the power sales department in each of the system's three main divisions and the head of the purchasing department constituted the body of this committee. The local district managers of the various operating companies were responsible for their industrial activities to the head of the power sales of their division. Only the members of the industrial committee were responsible to the director of the industrial bureau, each, of course, for his respective division only. The work of the local district managers was checked by the division power sales executives who cooperated with, but were independent of, the local district managers. The cooperation of the purchasing department, accounting department, and of local bankers was maintained as originally planned.

The cost of operating the industrial bureau of the Niagara Hudson Power Corporation was prorated among its operating companies and was included in the operating expenses of the respective companies.

The industrial bureau was discontinued in 1932. The Niagara Hudson system at that time was faced with the necessity of

curtailing expenses. The discontinuance of the bureau was felt to be a feasible method of cutting operating costs because, as a result of the depressed general business conditions, it was very difficult to show satisfactory results, especially in obtaining new industries. After the cessation of the activities of the industrial bureau, promotional work was carried on independently by each of the company's three operating divisions.

In 1935 a new plan was evolved for performing some of the functions previously included in the work of the industrial bureau. This plan was similar to the previous decentralized organization plan of the bureau. In each of the three operating districts there was a power sales executive, who was responsible for all sales and promotional work in his division, including the retaining of old industries and the obtaining of new ones. Each of these men had a staff including salesmen, engineers, and other experts. However, the cost allocable to industrial bureau work was small, because almost all these staff members were company officials having other duties. The promotional work was essentially divisional in character, each of the three groups operating almost independently.

Coordination of efforts was obtained through the New York office of the parent company. One of the latter's executive officers kept in contact with each of the three power sales executives and in addition acted as head of a sales committee. All the company's business was represented on this committee, including the large power, commercial, rural, and domestic sales divisions. While there was no definite schedule of meetings, normally this committee met at least six times a year, depending upon the problems requiring the attention of the whole group.

The parent company gave no orders on the divisional industrial work, but merely acted in the capacity of coordinator. It also acted as a contact office and a clearing house for information. For example, in the New York office there was kept for the benefit of potential customers a record of industrial sites available in the state, land values, unoccupied buildings, and gas and electric rate schedules. When a request for detailed information was made to the parent corporation by an outside company, the corporation turned over this inquiry to the division it deemed best suited to meet the problem of the inquirer. On the other hand, a division might refer a prospect to the central office, which, in turn, might pass the prospect on to one of the other divisions. In this way the work was kept localized. In order to keep the entire organiza-

tion in touch with developments, a weekly report was sent from each division to each of the other divisions and to the New York office. This report included information about contacts made, new industries gained, electric and gas sales, and outstanding aspects of the work being done.

Under the plan inaugurated in 1935, the industrial work done was of a somewhat different nature from that performed by the original industrial bureau. The latter type of service became too broad in scope and too burdensome, both from the managerial and the financial standpoints. It was believed that detailed analyses of the problems of individual businesses led the company too far into the industrial engineering field. However, while the bureau did substantially less work of a consulting nature than it had done previously, it was still believed necessary for the bureau to make rather comprehensive examinations of the operations of individual companies in order to become acquainted with their power requirements.

After several years' experience with the decentralized set-up, it was felt that the system was functioning satisfactorily and, as compared with the original organization, was definitely more simple and workable and much more economical.

What are the advantages and disadvantages of a large industrial bureau serving many different operating companies?

Should such a bureau be centralized or decentralized in order to obtain the best results?

3. Finance

A. Problems of Capitalization and Capital Structure

a. Capitalization of Increased Property Value

35. MONDOVI TELEPHONE COMPANY[1]

In August, 1930, the Mondovi Telephone Company filed an application with the Wisconsin Railroad Commission[2] for authority to issue a common-stock dividend, in an amount not fixed, to be distributed pro rata among its stockholders. The commission was petitioned to determine the "value" of the company's property, and to permit the issuance of stock so that the total outstanding would "equal or more nearly equal" the value of the property as found by the commission.

In brief, the proposal of the company was that while it had only $15,000 capitalization outstanding (all in common stock), the value of its assets was more than four times that amount, and it desired authority to convert that appreciation in its assets into a surplus to be distributed in the form of additional stock. The annual report of the company to the commission for the year ended December 31, 1930, showed plant equipment at the close of the year of $49,429.25 and a depreciation reserve on the same date of $27,824.62. Capital stock was reported at $15,000, together with $7,413.41 of surplus, making a total stated equity of stockholders of $22,413.41. A summary of all balance-sheet accounts, as of December 30, 1930, as shown in the tabulation at the top of page 246, revealed plant and equipment as the principal asset, offset on the liability side by capital stock, surplus, and depreciation reserve.

Before 1922 the company's accounts were not accurately kept, but after that time, according to the statement of the company's secretary, the records and annual reports accurately represented the actual cost of property installed and retired. On

[1] *Re Mondovi Telephone Co.*, P.U.R. 1931C, 439.

[2] The name of this commission was later changed to Public Service Commission of Wisconsin.

Assets:	
Plant and Equipment	$49,429.25
Other Assets	1,486.28
Total	$50,915.53
Liabilities	677.50
Net Assets before Deducting Depreciation Reserve	50,238.03
Less Depreciation	27,824 62
	$22,413.41
Net Worth Represented by:	
Capital Stock	$15,000.00
Surplus	7,413.41
	$22,413 41

December 31, 1930, the company reported $49,429.25 of plant and equipment, without deduction for accrued depreciation, in comparison with $31,231.19 as of December 31, 1921, *or an increase of $18,198.06 during the nine years.* The additions and retirements during each year, subsequent to 1921, were reported as indicated in Exhibit 1.

EXHIBIT 1

MONDOVI TELEPHONE COMPANY

ADDITIONS AND RETIREMENTS OF PLANT, 1922–1930

Year	Balance Beginning of Year	Additions during Year	Retirements during Year	Balance Close of Year
1922	$31,231.19	$ 1,380.77	$ 690.26	$31,921.70
1923	31,921.70	598.77	416.00	32,104 47
1924	32,104 47	827.02	. . . . .	32,931.49
1925	32,931.49	5,018.78	. . . . .	37,950.27
1926	37,950.27	3,951 03	. . . . .	41,901 30
1927	41,901.30	1,631.78	. . . . .	43,533 08
1928	43,533.08	2,625.18	. . . . .	46,158.26
1929	46,158 26	1,914.24	. . . . .	48,072.50
1930	48,072 50	1,356 75	. . . . .	49,429.25
Totals	. . . . .	$19,304.32	$1,106 26	. . . . .

Balance December 31, 1921		$31,231.19
Gross Additions December 31, 1921, to December 31, 1930	$19,304.32	
Retirements December 31, 1921, to December 31, 1930	1,106.26	
Net Additions December 31, 1921, to December 31, 1930		18,198.06
Balance December 31, 1930		$49,429.25

As indicated in Exhibit 1, no retirements were recorded after 1923, even though it was alleged that after that date the entire pole line system had been rebuilt, and, with the exception of two rural lines, had been made metallic, a large amount of cable had been installed, and nearly all the cable in the city put underground.

Beginning with 1922, the maintenance expenditures were as follows:

1922	$ 2,277.86
1923	2,255.06
1924	2,470 31
1925	2,237.10
1926	2,641.18
1927	3,050 01
1928	3,207 17
1929	3,772 54
1930	3,004 44
Total	$24,915.67

The following amounts were charged against revenues for depreciation:

1922	$ 1,949 16
1923	2,234 40
1924	2,247.36
1925	2,305 20
1926	2,656.56
1927	2,933 04
1928	3,047 28
1929	3,231.12
1930	3,365.04
Total	$23,969.16

An analysis of the depreciation reserve from December 31, 1921, to the close of 1930, showed a net increase of $18,454.51, and the following additions to the reserve and deductions therefrom:

Balance December 31, 1921			$ 9,370 11
Amount Added by Depreciation Expense Charges from December 31, 1921, to December 31, 1930.		$23,969 16	
Amounts Charged against or Deducted from the Reserve from December 31, 1921, to December 31, 1930:			
Reconstruction Work	$2,892 73		
Poles Purchased	2,621.92	5,514 65	
Net Increase in Reserve			18,454.51
Balance December 31, 1930			$27,824 62

The foregoing items of property additions, maintenance, and depreciation stated by the company in its annual reports beginning with 1921 showed: (1) that net additions to plant and equipment were $18,198.06; (2) that maintenance was $24,915.67; (3) that depreciation accruals of $23,969.16 were made; (4) that reconstruction work and poles purchased, totaling $5,514.65, were charged

against the reserve for depreciation; and (5) that the net increase in the reserve was $18,454.51, or more than sufficient to finance the net book increase in plant, in addition to the reconstruction work and poles purchased, likewise financed out of the reserve.

An inventory and appraisal, submitted by the company, claimed a reproduction cost of plant and equipment undepreciated, as of July 31, 1930, of $75,316.04, and $61,412.17 after deducting depreciation.

The commission's staff checked the company's inventory, found it to be accurate, and applied prices as of October, 1930. These estimates were as follows:

	Direct Costs	Overheads 15 Per Cent	Total
Reproduction Cost New	$73,285	$10,993	$84,278
Reproduction Cost Less Depreciation	56,252	8,438	64,690

It appeared that the company's appraisal did not include overheads. Consequently, in a comparison of the two appraisals attention was directed to the direct costs. The commission indicated that it was skeptical of the use of so high a percentage for indirect costs when applied to a small, predominantly rural property of this kind, where supervisory services were known to be low. The different appraisals were as follows:

	Undepreciated	Depreciated
Company's Appraisal	$75,316	$61,412
Appraisal by Commission Engineer	73,285	56,252
Excess of Company Appraisal	$ 2,031	$ 5,160

The commission, in making a comparison of book values and the two appraisals, found that the appraisal (less depreciation) of the company ($61,412) was $39,808 in excess of the depreciated book value of $21,604, and that the appraisal by the commission's engineer was $34,648 in excess of the book figure. The details are shown in the following tabulation:

	Undepreciated	Depreciated
a. Company Appraisal	$75,316	$61,412
b. Appraisal by Commission Engineer	73,285	56,252
c. Book Figures Reported by Company	49,429	21,604
d. Excess of *a* over *c*	25,887	39,808
e. Excess of *b* over *c*	23,856	34,648

The commission pointed out that if the company were to keep intact the actual depreciation reserve which it had accumulated to December 31, 1930, namely, $27,824.62, and were permitted to "write-up" its plant and equipment to either $75,316 or $73,285 (the appraisals before deducting depreciation), the enhanced book value of the stock would be either $25,887 or $23,856, depending upon which appraisal was accepted. This was summarized as follows:

	Per Books	Adjusted to Appraisals	
		Company	Commission
Plant Equipment	$49,429.25	$75,316.00	$73,285.00
Other Assets	1,486.28	1,486.28	1,486 28
Total Assets	$50,915.53	$76,802.28	$74,771.28
Liabilities	677 50	677 50	677.50
Depreciation Reserve	27,824.62	27,824 62	27,824.62
Capital Stock	15,000.00	15,000 00	15,000 00
Surplus	7,413.41	33,300.16	31,269.16
Total	$50,915.53	$76,802.28	$74,771.28

The commission believed that the striking disparity of more than 50 per cent of the total claimed value was unsupported in the record by any convincing explanation; that there were three possible explanations for such disparity:

1. That large contributions had been made by subscribers or stockholders in the way of donated labor or material—a common condition in rural telephone operation.
2. That book records had not been accurately kept.
3. That the present-day value of the company's assets greatly exceeded their original or historical cost.

Concerning the first of these three explanations, the commission held that donations of customers should not be capitalized.

The commission could find nothing in the record to indicate that donations had been made by the stockholders. The company had stated in its application that, during the five years from 1926 to and including 1930, the entire system had been rebuilt. The commission believed that in the light of the company's records, it was possible that the excess of appraised value over book cost was due, in part at least, to inaccurate accounting methods; that it was possible, and the facts appeared to indicate, that the reconstruction was financed in part out of operating revenues through maintenance charges and use of the depreciation reserve; that it was improbable that the net book additions of $18,198.06 to the property beginning with 1921 "would bear any appreciation on the basis of reproduction cost"; that, therefore, the property on hand as of December 31, 1921, represented on the books at $31,231.19, would have to account for the appreciation. This property, however, was substantially rebuilt beginning with 1925, and the costs thereof would be no less than 1930 costs, and might well be greater.

The commission pointed out that while the record was not entirely clear, the fact remained that "*no new money had been put into the property since its inception*",[1] that the plant had been greatly expanded and improved, and, according to the company's own statement, had been substantially "*reconstructed and rebuilt*";[1] that, necessarily, these additions and improvements had been paid for out of earnings and rates paid by subscribers; that there was no other possible source of such funds, so far as the commission could determine.

While this case involved a small telephone company and the amount at issue was not large, the commission believed that fundamentals of regulation and finance were involved which justified extended discussion of the principles which had led to its conclusion.

Concerning the facts disclosed by the company's annual reports and important phases of the case, the commission, in its decision written by Commissioner Lilienthal, said:

The commission believes that the *regulatory usefulness of the annual report* has not heretofore been adequately emphasized. We are of the opinion, although unnecessary to a decision upon the present record,

[1] Commission's italics.

that the reporting public utilities may be *estopped* to deny the accuracy of these reports and the accuracy of their accounting procedure. The accounts and the annual reports of the public utilities subject to the commission's jurisdiction are representations as to property, revenues, and expenses, and upon the basis of these representations the commission, in the first instance, determines whether rates are reasonable and financial practices consistent with the public interest. Suppose, for example, that expenditures for additions and improvements are charged to maintenance and are so recorded in the annual reports. It seems clear to us that the company may not subsequently claim a return upon an appraised value of that portion of its physical assets which have thus been paid for out of rates, as a direct result of an overstatement of operating expenses and an understatement of plant account. The same principle applies to the use of depreciation reserves for the building up rather than the replacement of plant, contrary to sound accounting principles.

. . . We . . . desire to call the attention of the public utilities of the state to this issue, and to advise them of our disposition to apply these views in the future administration of our duties, wherever the facts make these principles applicable.

. . . . . .

The basic proposition underlying our conclusion as to the depreciation reserve was settled more than 20 years ago by the Supreme Court of the United States. In the Cumberland case it was held that it is incumbent upon a public utility to establish that no part of its depreciation reserve was added to capital account. This principle of finance and constitutional law should control in a security issue case as in a rate case. We quote from *Railroad Commission* v. *Cumberland Telephone & Telegraph Company* (1909) 212 U.S. 414. . . .

"*It was obligatory upon the complainant to show that no part of the money raised to pay for depreciation was added to capital, upon which a return was to be made to stockholders in the way of dividends for the future.*[1] It cannot be left to conjecture, but the burden rests with the complainant to show it. It certainly was not proper for the complainant to take the money, or any portion of it, which it received as a result of the rates under which it was operating, and so to use it, or any part of it, as to permit the company to add it to its capital account, upon which it was paying dividends to shareholders. . . . That it was right to raise more money to pay for depreciation than was actually disbursed for the particular year there can be no doubt, for a reserve is necessary in any business of this kind, and so it might accumulate, but to raise more than money enough for the purpose and place the balance to the credit of capital upon which to pay dividends cannot be proper treatment. . . .

. . . . . .

[1] Wisconsin Commission's italics

Where commodity prices have advanced over those prevailing at the date of actual installation of property the book cost will, of course, be less than the appraised value. In a rate case, at least, such appreciation must be reflected in the base. On the record before us, no such rise in prices can account for the excess of appraised value over book costs which we find in the instant case. . . . A valuation based upon replacement costs as of today would be lower, rather than higher, than one based upon prices prevailing during this period of reconstruction between 1926 and 1931.

Even if this were not the fact would the commission be justified in permitting the capitalization of an appreciation in value due to a change in price levels? We think not. As we read the opinions of the Supreme Court of the United States and those of the supreme court of our own state they do not require such a result. To fix *rates* upon a base which is fluctuating is one thing; for when that base rises rates can be increased (as they have been during the period of high prices) and when that base declines there is no constitutional restraint upon compulsory decreases. As was said by Mr. Justice Butler in the McCardle case (1926) 272 U.S. 400, 410 . . . P.U.R. 1927A, 15, 23 . . . : "It is well established that values of utility properties fluctuate, and that *owners must bear the decline* and are entitled to the increase."[1]

No such rule of apparent equity[2] . . . applies to regulation of the issuance of *securities*.[1] Once we authorize the issuance of securities our effective control over those securities ceases. To a considerable degree we are dealing with an inflexible situation. It is true that the Constitution does not require us to fix rates adequate to cover fixed charges and dividend requirements; capitalization is not synonymous with rate base. (*Knoxville* v. *Knoxville Water Company* (1909) 212 U.S. 1.) . . . But the pressure of business facts makes it very difficult to disregard capitalization when rates are in issue. (*Wisconsin Hydro-Electric Company* v. *Railroad Commission* (Wis.) P.U.R. 1931C, 433; 236 N. W. 663.) While the law in the Federal Supreme Court on this point is not established, if the law is to be sound it will be guided by the inescapable facts of the industry.

In the judgment of the commission nothing more convincingly demonstrated the financial unsoundness of capitalizing these fluctuations in prices than the course of prices from 1913 to 1930. Concerning price fluctuations the commission said:

We can take judicial notice of trends in prices. . . . It is a "matter of common knowledge" that commodity prices have been steadily

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[1] Commission's italics.

[2] On this point Commissioner Lilienthal, who wrote the decision of the commission, said, "I believe the equity of the rule to be more apparent than real."

declining in recent months. . . . The course of prices for the last 112 years indicates . . . that there may be a practically continuous decline for nearly a generation; *that the present price level may fall to that of 1914 within a decade;*[1] and that, later, it may fall much lower."

Whatever the next decade may hold this commission surely cannot justify an order permitting capitalization of appreciation in value due to price changes when every day brings further evidence that that appreciation is fast becoming depreciation. The protection of investors and ratepayers would be ill served by any such policy.

So much for the capitalization of appreciation in assets. There remains for consideration the item of approximately $7,500 of earned and free surplus. Upon the assumption that this is a true surplus it is clear that the company is entitled to distribute it in the form of dividends. . . .

Would the granting of such a petition as that of the Mondovi Telephone Company have any effect upon rates?

Should the petition of the company have been granted?

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[1] Commission's italics.

b. Capitalization of Voluntary Contributions by Rural Consumers

36. Wisconsin Hydro-Electric Company[1]

In August, 1928, the Wisconsin Hydro-Electric Company applied to the railroad commission in that state for a valuation (in accordance with the law of Wisconsin) of the property of the Luck Light & Power Company, and for a certificate of authority to issue securities for the purpose of securing funds to pay for the property.

Wisconsin statutes provided as follows:[2]

> No public service corporation shall purchase, or in any way acquire the property of any other public service corporation or of any person furnishing service to the public, for the purpose of effecting a consolidation, unless the property to be acquired shall first be valued as provided in Par. 184.09, and then only at a sum not to exceed the value found by the commission and stated in the certificate of authority issued to such corporation for the issuance of stocks, certificates of stock, bonds, notes, or other evidence of indebtedness.

In January, 1929, the commission issued a preliminary certificate, authorizing the Wisconsin Hydro-Electric Company to issue $58,800 par value of bonds at a discount of 10 per cent, to procure funds to pay in part for the property. The commission reserved for later determination, upon completion of the appraisal by the engineers, the question as to what additional securities might be authorized against the property.

The Luck Light & Power Company had on its books an account entitled "Customers' Line Extension Donations," showing a balance of $12,034.91, received in cash as donations from prospective customers to finance the construction of a certain high-tension line, transformer installations, and branch-line extensions. The account was carried in that form pursuant to accounting rules, theretofore promulgated by the commission, which required

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[1] *Wisconsin Hydro-Electric Co.* v. *Railroad Commission of Wisconsin*, 236 N.W. 663 (1931); P.U.R. 1931C, 433; 243 N.W. 322 (1932); P.U.R. 1932D, 304.

[2] Pars. 184.11 (2) and 184.09.

the Luck Light & Power Company, as well as the plaintiff in this case, to credit in such an account all customers' donations and also to debit the same to the proper fixed capital account on its books.

In May, 1929, the commission determined that the value of the property was $80,000, free and clear of all incumbrances, but including the donations of $12,034.91 contributed by customers; that $67,956.09 was the maximum amount at which the plaintiff could purchase the property and place it on its books; that the $12,034.91 should be credited on plaintiff's books to the Customers' Line Extension Donations account; that "the financial condition, plan of operation, and proposed undertakings of the corporation" were such as "to afford reasonable protection to purchasers of the securities to be issued"; and that to obtain funds to complete the purchase, in addition to the bonds for $58,800, theretofore authorized, the plaintiff should be authorized to sell 150 shares of its common stock at $100 per share.

An appeal was taken from the commission's denial of the application to the circuit court and that court vacated the commission's order. The commission then appealed to the Wisconsin Supreme Court.

The Wisconsin Hydro-Electric Company contended that it was entitled to capitalize the value of the acquired property without regard to the price which the vendor invested therein; that the commission erred in adopting the sum of $67,956 as the base value for issuing securities instead of the sum of $80,000, at which the commission valued the property; and that the fact that the commission might not be required to include the value of the donated property in a rate base did not justify deducting the amount at which the donation was carried on the vendor's books from the value of the property as determined under Wisconsin laws for the issuance of securities. The Wisconsin Hydro-Electric Company conceded that when

> . . . contributions were made to the Luck Light & Power Company the rates in force and approved by the commission recognized that customers in rural communities might help the company in financing extensions into marginal territory, and that the company was justified in giving such customers a lower rate on that account; that should plaintiff apply to the commission to increase its rates to the class of customers who had made such contributions, the fact of such contributions, the time when they had been made, the length of time that had

elapsed during which a reduced rate had been given, and the extent of that reduced rate, would all be factors which the commission would undoubtedly consider in determining whether or not it would grant an increase of rates; and further that should the commission determine that a proposed rate increase asked by the plaintiff would unjustly enrich the plaintiff at the expense of customers who had made contributions, the commission would doubtless deny the increase.

The commission pointed out that in accordance with the law it was necessary to determine that the financial condition, plan of operation, and proposed undertakings of the corporation were such as to afford reasonable protection to purchasers of the securities to be issued; that factors which affected the rate base and the rates were necessarily involved in the "plan of operation" and "proposed undertakings" to such an extent that they must necessarily be considered by the commission in determining whether a project afforded "reasonable protection to purchasers of the securities."

The commission contended that reasonable protection to investors required more than that the property which was to secure the investments should be of sufficient value to insure the repayment thereof; that to afford reasonable protection the plan of operation and the proposed undertakings for which the property could be used must be such as to afford reasonable assurance that the probable earnings of the property would be adequate to pay interest or dividends upon the investment; that the probable earnings could not be ascertained without first determining the probable amount of the rate base; and that in determining this amount it was proper to exclude contributions advanced by customers.

There was no dispute of the fact that the rate schedule of the company was constructed upon a basis which did not provide for a return to the utility upon the capital which its customers had donated; that is, it did not permit the utility to earn a return upon those donations. Plaintiff's counsel conceded that the fact of such contributions, the time at which they were made and which had since elapsed during which reduced rates were given, and the extent thereof, would all be factors which the commission would consider in determining whether it would grant an increase of rates; but the plaintiff contended that a rate base and a security base were not necessarily the same. On this point the Wisconsin Supreme Court maintained that when it became necessary to determine whether the security base afforded reasonable protection

to purchasers of securities, the rate base was necessarily involved and must be taken into consideration; that the fact that there were substantial donations, upon which the utility was not permitted to earn a return, directly and materially affected the probable rates and prospective earnings of the property which was offered as security, and must necessarily be taken into consideration in determining whether the undertaking afforded reasonable protection to investors for the interest or dividends on the securities, as well as for the principal invested therein; that consequently, in order to determine whether plaintiff's proposed undertakings and plan of operation as to the Luck Light & Power Company property afforded reasonable protection to purchasers of obligations secured by that property, it was proper for the commission to take into consideration the amount of the donations and the consequent rate base.

The court pointed out that under the Wisconsin law the commission was not authorized to grant a certificate of authority to issue securities in the absence of a finding by it that the financial condition, plan of operation, and proposed undertakings of the corporation were such as to afford reasonable protection to the purchasers of the securities to be issued.

In 1932 the Wisconsin Supreme Court remanded this case to the Wisconsin commission for reconsideration. In the case before the supreme court the company asserted, without challenge by the commission, that conditions had so changed that the rural customers who had previously received special rates were then enjoying the regular rates of the company, which were less than the rates they enjoyed before the purchase of the property by the plaintiff, and less than they ever had received by reason of any special arrangement with plaintiff's predecessor as a result of donations. The court therefore held, in part, as follows:

> . . . When a public utility of this character extends its original field of operations and service into the rural communities, so that they finally receive regular service in territory where they were theretofore served only by reason of special arrangements with donating customers, the situation is changed somewhat.
>
> . . . . . .
>
> . . . at all times since the acquisition of the property acquired by using the customers' donations, the legal title thereto has been in the utility.
>
> . . . . . .

However, if in the course of time such special customers become consumers located within the normal zone, which the utility is legally required to serve at a uniform schedule of rates, then their special rights, arising by reason of their original contributions, become valueless. . . . The utility as the owner thereof is then entitled to earn the same reasonable return upon the present fair value thereof, as it is upon all other property owned by it, which is actually used and useful in providing the service. . . . [1]

To what extent is a commission justified in overriding management in determining the financial policies of a public utility?

Is the Wisconsin law involved in this case sound?

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[1] P.U.R. 1932D, 304, 307, 308.

B. Financing with Emphasis upon Bond Issues

37. Public Service Company of Northern Illinois

The Public Service Company of Northern Illinois, incorporated September 1, 1911, acquired at the time of its organization the properties of various utilities rendering service in the suburban areas of Chicago. Other properties were acquired in later years and the territory served was extended into northeastern Illinois.

At the end of 1936, the company was serving 346 communities located in 17 counties of Illinois having an area of 6,000 square miles and a population of 1,100,000, excluding the city of Chicago. Electric service was rendered in 344 communities, gas in 105, water in 4, and heat in 2. The company's territory was well diversified, including farm lands, the residential districts of Chicago's North Shore, and several large manufacturing and residential cities in northern Illinois. The character of the company's market for both gas and electricity for the years 1930 to 1936 may be seen from Exhibit 1.

The company in 1936 had two main subsidiaries. The Waukegan Generating Company was organized in 1921 for the purpose of building and operating a steam turbine generating station. The Public Service Subsidiary Corporation was organized in 1926 for the purpose of simplifying the handling of miscellaneous investments of the parent company, which were transferred to the subsidiary corporation.

The company's electric generating stations included three steam and two hydro plants. In addition, the company owned, with other utilities, the Chicago District Electric Generating Corporation and the Super-Power Company of Illinois. Both these companies owned and operated large steam electric generating stations, the company's interest therein being 30 and 25 per cent respectively. These two generating companies supplied energy to the owner companies through various contractual arrangements. In 1934 the company assigned its allotment of 60,000 kilowatts in the station of the Chicago District Electric Generating Corporation to Commonwealth Edison Company, one

of the other owners. The company's lines were also interconnected with other utilities in the area.

The company for approximately ten years had obtained the greater part of the supply of gas for its northern territory through arrangements with The Peoples Gas Light & Coke Company. The company also had an interest in the Natural Gas Investment

EXHIBIT 1

PUBLIC SERVICE COMPANY OF NORTHERN ILLINOIS AND SUBSIDIARIES

Classification of Revenues, 1930–1936 (1930 = 100)

Index of Electric Revenues	1930	1931	1932	1933	1934	1935	1936
Residential (Including Farm)	100 00	101.21	101.38	99 01	97.42	99.38	106.52
Commercial	100.00	94.49	86.31	80.25	82.90	87.69	95.20
Large Power and Light	100.00	93.79	78.92	74.09	77.84	78.73	91.80
Railroad Corporations	100.00	99.86	95.90	94.52	96.47	95.88	98.29
Other Utility Corporations	100.00	103.59	98.99	118.48	128 26	134.33	324.63*
Municipal	100.00	107.51	101.08	100.12	93.55	101.13	109.01
Total	100.00	98.58	92.63	90.50	91.64	94.51	115.13*

Index of Gas Revenues	1930	1931	1932	1933	1934	1935	1936
Residential (Including Farm)	100.00	95.55	92.03	85.83	89.45	95.58	98.49
Commercial	100.00	99.73	96.27	85.68	86.30	91.84	98.77
Industrial	100.00	72.78	54.67	52.77	97.29	129.87	174.10
Other Utility Corporations	100.00	91.24	72.48	71.39	78.12	46.50	42.15
Municipal	100.00	142.77	175.37	180.76	186.04	196.30	216.57
Total	100.00	94.06	89.14	83.02	89.80	97.42	104.01

* Includes $2,680,944 of revenues from affiliated and other public utility companies in equalization of generating capacities among such companies.

Company, which was affiliated with other companies in the project for piping natural gas from the Texas Panhandle fields to Chicago. In addition, the company also owned seven gas manufacturing plants.

The growth of the company since 1922 and the course of earnings since that date are shown by the data in Exhibit 2. Comparable figures were not available for 1936, since data given in Exhibit 2 included the Public Service Company of Northern Illinois only, whereas all data for 1936 were presented on a consolidated basis.

In its financial operations the company obtained the larger part of its capital by the issuance of interest-bearing obligations. From Exhibit 3, it may be seen that in 1922, out of a total capitalization of $63,000,302, 59.0 per cent consisted of funded debt, 15.9 per cent of preferred stock, and 25.1 per cent of common stock. After that date, the company continued to finance itself largely by means of funded debt issues. At the end of 1935, of a total

EXHIBIT 2

PUBLIC SERVICE COMPANY OF NORTHERN ILLINOIS
PLANT INVESTMENT AND EARNINGS, 1922–1935

Year	Gross Plant and Investment in Affiliated Companies	Gross Earnings		Times Interest Earned	Times Preferred Dividends Earned	Earnings per Share: Common	Dividends Paid on Common
		Dollars	1931 = 100				
1922	$ 62,852,596*	$13,712,095	38.2	....	3.12	$ 8.12	$7.00
1923	75,455,505	16,014,342	44 6	....	4 07	8.96	7 00
1924	85,108,998	18,003,904	50.1	....	3.29	11.63	7.00
1925	93,371,360	20,646,820	57.5	2.19	3 97	11.90	7.50
1926	114,627,881	23,311,198	64.9	2.28	4.68	12.90	8.00
1927	129,861,624	26,070,067	72.6	2.20	4.96	13.72	8 00
1928	142,255,848	29,516,270	82.2	2.15	5 60	13.76	8.00
1929	159,743,948	33,329,811	92 8	2.31	6.79	13 69	8.00
1930	181,996,243	35,405,094	98.6	2.30	7.24	12.93	8.00
1931	212,580,540	35,916,019	100 0	2 15	7.26	10.58	8.00
1932	213,087,168	34,625,324	96.4	1 69	4.45	5 42	5.50
1933	188,121,673	33,874,530	94.3	1.37	2.59	2.50	2.50
1934	186,879,671	34,814,453	96.9	1.38	2 67	2.71	.....
1935	186,958,332	36,097,079	100.5	1.50	3.22	3.55	.....

* Not comparable with later years.
SOURCE: Poor's *Public Utilities*.

capitalization of $176,407,700, 68.4 per cent consisted of funded debt, 9.3 per cent of preferred stock, and 22.3 per cent of common stock. This mode of financing differed materially from the average of those companies reporting to the United States Census of Central Electric Light and Power Stations, and was in direct contrast to the policy followed by the Boston Edison Company.[1]

During 1922 the Public Service Company of Northern Illinois engaged in two major financial operations. By an amendment to

[1] See case entitled Boston Edison Company (A), p. 271.

its articles of incorporation, authorization was granted for the issuance of common stock of no par value, the new stock to be equal in all other respects to the existing common stock with par

EXHIBIT 3

PUBLIC SERVICE COMPANY OF NORTHERN ILLINOIS

BALANCE SHEETS AS OF DECEMBER 31

	1922*	1927	1932	1935
ASSETS				
Gross Plant and Investment in Affiliated Companies, Less Reserve	$62,852,596	$129,861,624	$213,087,168	$186,958,332
Current Assets	6,220,607	12,255,239	12,462,582	14,889,426
Miscellaneous Debits	5,640,954	9,148,197	21,627,420	16,450,511
Total Assets	$74,714,157	$151,265,060	$247,177,170	$218,298,269
LIABILITIES				
Common Stock (Including Scrip)	$15,123,531	$ 29,580,100	$ 65,887,700	$ 39,086,220
Common Stock Subscribed	716,471	.....	5,069,000	274,980
Preferred Stock (6 per cent)	10,000,000	10,000,000	10,000,000	9,984,800
Preferred Stock (7 per cent)	.....	6,357,600	6,357,600	6,344,700
Funded Debt	37,160,300	82,313,500	125,434,000	120,717,000
Current Liabilities	2,978,349	5,240,192	10,336,492	9,961,775
Miscellaneous Credits	2,693,125	1,265,276	8,301,653	2,200,522
Reserve for Depreciation	3,911,845	8,574,254	14,303,950	16,575,896
Earned Surplus	.....	.....	1,486,775	3,587,969
Surplus	2,130,536	7,934,138	.....	.....
Paid-in Surplus	.....	.....	.....	9,564,407
Total Liabilities	$74,714,157	$151,265,060	$247,177,170	$218,298,269
Total Capitalization	$63,000,302	$128,251,200	$212,748,300	$176,407,700
Per Cent Common Stock	25.1	23.1	33.3	22.3
Per Cent Preferred Stock	15.9	12.7	7.7	9.3
Per Cent Debt	59 0	64.2	59.0	68.4

* 1922 balance sheet not strictly comparable with later years.
SOURCE: Poor's *Public Utilities*.

value of $100. Stockholders of record July 25, 1922, were offered the right to subscribe to 44,150 shares of the new stock at $93 a share.[1] In order to provide a more flexible method of financing its capital requirements, the company in June, 1922, executed a

[1] See Exhibits 4 and 5 for details of security issues since 1922.

new mortgage known as its first lien and refunding mortgage. This indenture provided for the issuance of bonds with varying dates of maturity, rates of interest, and with such other provisions as conditions existing at the time of issuance might demand. In June, 1922, $7,000,000 of bonds were issued under the new mortgage for the purpose of refunding underlying indebtedness and short-term obligations, and for providing funds for extensions and enlargements of the company's property.

Again, in 1923, both common stock and bonds were issued.[1] During the year two issues of collateral notes of the company were

EXHIBIT 4
PUBLIC SERVICE COMPANY OF NORTHERN ILLINOIS
STOCK ISSUES: 1922–1936

Stockholders of Record	Number of Shares	Price per Share	Subscription Rights
July 25, 1922	44,150	$ 93	1–5
August 21, 1923	52,980	94	1–5
July 3, 1924*	63,576	100	1–5
July 3, 1925	76,491	100	1–5
August 15, 1928	93,550	100	1–5
September 30, 1929	94,700	100	1–6
December 15, 1930	111,320	100	1–6
December 15, 1931	97,737	100	1–8

* 7 per cent preferred stock issue.
SOURCE: Poor's *Public Utilities*.

paid off, which conversion resulted in the elimination of all temporary financing from the company's capital structure, and a substantial reduction in the rate of interest paid on borrowed capital.

Continued expansion of operations necessitated the company's obtaining additional fixed capital in 1924. To this end $5,000,000 of bonds were issued as Series B under the 1922 indenture. Authorization was also obtained for an issue of 63,576 shares of 7 per cent preferred stock to be sold at $100 a share.

In the years following, the company continued to expand both by the construction of additional plant and the purchase of other utilities. As indicated in Exhibit 5, financing of these extensions was accomplished largely by the issuance of mortgage bonds or

[1] $10,000,000 of Series A Bonds issued in 1923 were dated June 1, 1922.

EXHIBIT 5

PUBLIC SERVICE COMPANY OF NORTHERN ILLINOIS
BOND AND NOTE ISSUES: 1922–1935

Face Amount	Type of Security	Dated	Due	Coupon Rate, Per Cent	Offering Price*	Yield to Investors, Per Cent
	First Lien and Refunding Mortgage Gold Bonds					
$ 7,000,000	Series A	June 1, 1922	June 1, 1962	5½	92½	6.00
5,000,000	Series A	June 1, 1922	June 1, 1962	5½	94¼	5.88
10,000,000	Series A	June 1, 1922	June 1, 1962	5½	92	6.05
5,000,000	Series B	July 1, 1924	July 1, 1964	5½	96	5.75
7,500,000	Series C	February 1, 1926	May 1, 1966	5	98½	5.08
10,000,000	Debentures	December 1, 1926	September 1, 1931	5	99½	5.10
10,000,000	Debentures	August 1, 1927	August 1, 1932	5	99	5.20
	First Lien and Refunding Mortgage Gold Bonds					
10,000,000	Series D	November 1, 1928	November 1, 1978	4½	94½	4.80
15,000,000	Series E	July 1, 1930	July 1, 1980	4½	94	4.82
40,000,000	Series F	April 1, 1931	April 1, 1981	4½	97½	4.63
15,000,000	Gold Notes	August 1, 1931	July 30, 1932	4	100	4.0
	First Lien and Refunding Mortgage Gold Bonds					
20,000,000	Series G	July 1, 1932	July 1, 1937	6½	98	6.99
	Sinking Fund Convertible Bonds					
10,650,000	Debentures	July 15, 1932	July 15, 1937 $6,400,000 August 1, 1937 $4,250,000	7	.....	....
6,900,000	Notes	June 3, 1935	Serially: 1938–1940	3¼	.....	....
2,670,000	Notes	June 3, 1935	Serially: 1943–1945	5	.....	....
	First Lien and Refunding Mortgage Gold Bonds					
16,000,000	Series I	July 1, 1935	July 1, 1960	4½	100	4.50

* Plus interest.
SOURCE: Poor's *Public Utilities*.

debentures, together with several common stock increases. The company also increased its investment in its subsidiary investment company, the Public Service Subsidiary Corporation. In 1929, 25,435 shares of capital stock of the latter were purchased at $100 per share, while in 1930, 60,000 additional shares were purchased at the same price.

The company engaged in several major financial operations in 1931. Because of the relatively low rates of interest prevailing in the bond market, it was found advisable to sell $40,000,000 of 4½ per cent mortgage bonds, the largest issue in the company's history, for the purpose of refunding bonds of earlier series issued at higher coupon rates. The remainder of the proceeds was used to retire certain underlying bonds and to finance construction activities. In August, $15,000,00 of 4 per cent one-year notes were sold to discharge all bank indebtedness and to provide additional funds for construction. During the latter part of the year, 97,737 shares of common stock were offered to shareholders at $100, the proceeds to be used to acquire mortgage indebtedness and stock of Waukegan Generating Company and to finance extensions of its facilities. Again, as in the two preceding years, the investment in the Public Service Subsidiary Corporation was increased substantially, 156,000 shares of 6 per cent cumulative preferred stock and 10,000 shares of common stock being purchased at $100 per share.

During 1932 and 1933, as a result of the continued depression in business activity, the company experienced some difficulties in financing its capital requirements. In the summer of 1932, $10,650,000 of five-year debentures were issued at a coupon rate of 7 per cent. At approximately the same time $20,000,000 of five-year mortgage bonds were issued at a coupon rate of 6½ per cent. These bonds were convertible into 6½ per cent twenty-year sinking fund mortgage bonds plus a cash payment of $50 per $1,000 of principal amount at the time of conversion.

Because of the shrinkage in investment values, an examination was made, in 1932, of the parent company's holdings in the Public Service Subsidiary Corporation. As a result, a reserve of $6,500,000 was set up against the investment, and the parent company surrendered for cancellation 94,860 shares of the subsidiary's $100 par value common stock. In 1933 it became evident that the reserve for shrinkage was inadequate. For this

EXHIBIT 6

PUBLIC SERVICE COMPANY OF NORTHERN ILLINOIS
SCHEDULE OF INVESTMENTS IN AND ADVANCES TO SUBSIDIARY AND AFFILIATED COMPANIES, ETC., DECEMBER 31, 1932
(Public Service Company of Northern Illinois and Subsidiaries)

	Shares or Principal Amount	
UTILITY INVESTMENTS		
Chicago District Electric Generating Corp:		
Common Stock, No Par (30% Interest)	215,280	sh.
Western United Corp., Common Stock, No Par	73,783.3	sh.
Super-Power Co. of Illinois, Common Stock, No Par (25% Interest)	111,374	sh.
Chicago North Shore & Milwaukee RR. Co. (in Receivership):		
Common Stock (Par $100) and Voting Trust Certificates Therefor	3,068	sh.
6% Non-Cum. Preferred Stock (Par $100) and Voting Trust Certificates Therefor	3,921	sh.
7% Cum. Prior Lien Stock (Par $100)	980	sh.
6% Income Debenture Bonds, Series A, Due December 31, 1955	$ 825,000	
6% Demand Note	300,000	
Accounts Receivable	205,168	
Chicago, Aurora & Elgin Corp.:		
Capital Stock (No Par)	9,286	sh.
6% Gold Debenture Bonds, Due April 1, 1972	$ 1,572,700	
6% Demand Notes	2,145,000	
Chicago, Aurora & Elgin RR. Co. (in Receivership):		
Accounts Receivable	172,990	
Chicago, Waukegan & No. Shore Ry. Company:		
Capital Stock, Par Value $100	995	sh.
North Shore, Waukegan & Western RR. Company:		
6% Demand Notes	$ 86,766	
Advances	8,000	
Midland United Company:		
Common Stock (No Par)	264,481	sh.
5% Demand Notes, Secured	$ 1,062,100	
Midland Utilities Company:		
6% Prior Lien Stock (Par $100)	182	sh.
7% Prior Lien Stock (Par $100)	80	sh.
6% Preferred Class A Stock (Par $100)	164	sh.
7% Class A Stock (Par $100)	40	sh.
Illinois Light & Power Company:		
Capital Stock (Par $100)	9,995	sh.
Advances	$ 1,517,619	
North American Light and Power Company:		
Common Stock (No Par) and Voting Trust Certificates Therefor	277,410.79	sh.
Total Book Value	$28,757,238	
Percentage of Gross Book Value of Total Investments	(71.35%)	

EXHIBIT 6.—(*Continued*)

	Shares or Principal Amount	
NATURAL GAS INVESTMENTS		
Proportionate Part of Investment in Natural Gas Production and Transmission Companies (at Book Value).	$ 2,730,045	
Natural Gas Investment Company—Capital Stock (No Par)	2,808	sh.
Total Book Value	$ 2,744,085	
Percentage of Gross Book Value of Total Investments..	(6.81%)	
COAL INTERESTS		
Peabody Coal Company, 6% Preferred Stock (Par $100).	3,135	sh.
Voting Trust Certificates for Class B Common Stock (No Par)	123,283	sh.
Total Book Value	$ 271,633	
Percentage of Gross Book Value of Total Investments	(0 67%)	
REAL ESTATE		
C.T.C. Safe Deposit Company (Chicago Trust Co. Bldg):		
Common Stock, par $10 (30% Interest)	24,000	sh.
7% 10-year Notes, Due December 1, 1938	$ 63,000	
Metropolitan District Realty Trust, No Par Value:		
Common Beneficial Int. Shares	7,500	sh.
6% Demand Notes	$ 153,375	
Skokie Valley Realty Assn., 6% Demand Notes	648,589	
Certificates of Beneficial Interest (Pledged)	330	ctfs.
Companies Realty Trust No. 7256 (Land under Chicago Trust Company Bldg.)—Trustees' First Lien 6% Demand Notes (30% Interest)	324,703*	
Companies Realty Trust No. 7024 (73–77 W. Monroe Street):		
Trustees' First Lien 6% Demand Notes (30.52% Interest)	214,307*	
Companies Realty Trust No. 15347 (55–59 W. Monroe Street):		
Trustees' First Lien 6% Demand Notes (30.52% Interest)	243,294*	
Companies Realty Trust No. 17141 (107 S. Clark Street):		
Trustees' First Lien 6% Demand Notes (30% Interest)	49,202*	
Waukegan Realty Trust No. 19749 (Land Near Waukegan Generating Station), Trustees' First Lien 6% Demand Notes (100% Interest)	394,115	
61 West Monroe Street Bldg. Corp., 6% First Lien Demand Notes (30.41% Interest)	92,015*	
67–71 West Monroe Street Bldg. Corp., 6% First Lien Demand Notes (30.39% Interest)	278,063*	
Westminster Building Corp., 6% Lien Demand Notes (33.14% Interest)	585,063*	
Miscellaneous Nonoperating Real Estate, etc. (at Book Value)	511,473	
Miscellaneous Rights of Way (at Book Value)	693,668	
Total Book Value	$ 4,998,105	
Percentage of Gross Book Value of Total Investments..	(12.40%)	

EXHIBIT 6.—(*Continued*)

	Shares or Principal Amount	
INCORPORATED DEPARTMENTAL ACTIVITIES		
Lake Lawn Hotel Company, Capital Stock (Par $100)....	1,299	sh.
Utilities Finance Company, Capital Stock (Par $100)....	1,790	sh.
Utility Securities Company:		
Common Stock (No Par).....	5,926	sh.
5% Demand Notes.....	$ 729,227	
5% Demand Notes.....	586,284*	
Miscellaneous.....	57,000	
La Salle-Quincy Corp., 5% Demand Notes.....	129,088*	
Utilities Research Commission, Inc., Capital Stock, Par Value $100.....	14	sh.
Business Research Corp., Common Stock without Par Value.....	286.5	sh.
Chicago Central Station Institute, Advances	$ 4,200	
Capital Stock (Par $100).....	15	sh.
Total Book Value.....	$ 2,332,231	
Percentage of Gross Book Value of Total Investments.	(5.79%)	
MISCELLANEOUS INVESTMENTS		
Board of Education of City of Chicago, Scrip.....	$ 220	
A Century of Progress, 6% Guaranteed Gold Notes.....	200,000	
Tax Anticipation Warrants, Various Municipalities and School Districts.....	671,988	
Autogas Corp., Preferred Stock (Par. $100).....	446	sh.
Common Stock (Par $5).....	2,676	sh.
Great Lakes Broadcasting Company, Capital Stock, Par Value $100.....	649	sh.
Other Miscellaneous Items (at Book Value).....	$ 220,020	
Total Book Value of Miscellaneous Investments.....	$ 1,201,728	
Percentage of Gross Book Value of Total Investments..	(2.98%)	
Total Investments in and Advances to Subsidiary and Affiliated Companies, etc.....	$40,305,021	
Deduct, Reserve as Determined by Board of Directors.	6,500,000	
	$33,805,021	

* Deposited under various escrow agreements.

NOTE: The above schedule is on a consolidated basis and is exclusive, therefore, of intercompany holdings of securities.

SOURCE: Poor's *Public Utility Volume*, 1933, pp. 1445–1446.

reason authorization was obtained for the reduction by the parent company of the par value of its $100 par common stock to $60, and the reduction of the stated value of its no par stock to $60. As a result, a capital surplus of approximately $25,000,000 was created, $12,000,000 of which was appropriated as an additional and specific reserve against any shrinkage in the value of investments, $6,500,000 as a general reserve for the ultimate liquidation of Public Service Subsidiary Corporation, and $6,500,000 was retained in the capital surplus account. Of the 97,737 shares of common stock offered on December 15, 1931, 42,475 shares had

been subscribed for by the subsidiary company. Installment payments on this stock totaled $849,500. In December, 1933, it was found necessary to cancel this subscription, the parent company retaining the amount already paid.

In a letter to stockholders included in the 1932 annual report, the following statement was made relative to the investment policy of the company:

> In the past the management of the company, largely through Public Service Subsidiary Corporation, followed the policy of investing in outside enterprises having to do with the upbuilding and development of the company's territory, such as, electric transportation, home building, and industrial development, with the thought of increasing the demand for electricity and gas.
>
> Since the information regarding these investments presented to the directors from time to time was not in cumulative form, it was difficult for them to realize the comprehensive character of the program to which the company had become committed. An investigation instituted early in the year 1932 caused your board to believe that any possible benefits which might result from these collateral enterprises did not justify the risks involved. The Board of Directors has adopted the definite policy of gradually eliminating investments of this class and restricting the operations of the company, so far as possible to its utility services.[1]

In Exhibit 6 is presented a schedule of investments in and advances to subsidiary and affiliated companies of December 31, 1932.

Beginning in 1933, the company set out on a program of funded debt reduction. To this end, there was accomplished in 1933 a net reduction in principal amount of debt of $1,784,500 through the redemption of bonds and the operation of various sinking funds.

The stockholders were advised in February, 1934, as follows:[2]

> Your management is in full accord with the expressed opinion of the National Administration, that public utilities should adjust their affairs to permit of a gradual retirement of then existing funded debt. This we are doing.

By 1935 the condition of the financial market was such that savings could be effected by the refunding of outstanding bonds. On May 1, 1935, $302,000 of Series G bonds due in 1937 were redeemed, the remainder having been retired earlier or converted into Series H 6½ per cent bonds maturing in 1952, of which there were $15,650,000 outstanding in July, 1935.

[1] *Annual Report*, 1932, p. 4.

[2] Address by chairman presented at the annual meeting of stockholders, February 26, 1934. See *Annual Report*, p. 2.

After this conversion, the company took steps to refund the $10,650,00 of 7 per cent debentures due in 1937. In June, 1935, $1,080,000 of these debentures were retired. The balance of $9,570,000 was refunded through the issuance of serial promissory notes to affiliated companies and to several Chicago banks. It was estimated that the low interest rates on these notes would result in an annual saving of $400,000 to the company.

In July, 1935, the company issued $16,000,000 of Series I 4½ per cent mortgage bonds due in 1960. This issue was for the purpose of retiring approximately the same amount of Series H 6½ per cent 20-year bonds which had been issued as a result of the conversion of the Series G bonds of 1932.

As a result of these operations, the company, by January, 1936, had been able to effect a net reduction in its consolidated funded debt of $9,108,000. Based upon the amount of consolidated funded debt outstanding after such reduction, it was estimated that the annual charges for interest and amortization of debt discount and expense in 1936 would be approximately $1,468,000 less than they were immediately after the financing operations in 1932.

During 1936 consolidated funded debt was reduced another $7,641,000 by the prepayment of $2,500,000 of 3¼ per cent promissory notes, and the redemption of the entire outstanding amount of $5,141,000 of Public Service Subsidiary Corporation debentures.

On December 31, 1936, Public Service Subsidiary Corporation was liquidated, the parent company acquiring all its assets and assuming all its liabilities.

See questions at end of next case.

C. Financing with Emphasis on Stock Issues

38. Boston Edison Company (A)

Throughout its history the Boston Edison Company has followed the policy of meeting more than half its requirements for capital through stock issues. As shown in Exhibit 1, between 1922 and 1936, except for the period 1932 to 1935, approximately two-thirds of the company's capitalization had consisted of stock. This policy was consistent with the laws of the Commonwealth of Massachusetts regulating public utilities, which required that "a [utility corporation, as defined] . . . may . . . issue bonds, at not less than par, to an amount not exceeding its capital stock actually paid in at the time of such issue and applied to the purposes of the corporation, increased by all cash premiums paid to the corporation and likewise applied, and bearing interest at such rate as the [Department of Public Utilities] . . . shall approve. . . . "[1]

Examination of the capital structures of utilities throughout the United States, however, revealed a considerable variation in the proportion of capital raised by means of stock issues as opposed to the issuance of evidences of indebtedness. According to the United States Census of Central Electric Light and Power Stations, there had been a trend toward increasing the percentage of capital raised by means of stock. From Exhibit 2 it may be seen that in 1922 the privately owned and operated companies, listed in the Census as "commercial establishments," reported to the Census Bureau a total capitalization of $4,531,695,259. Of this amount, 53.1 per cent consisted of long-term debt and 46.9 per cent of capital stock. By 1927, the proportion had changed to 51 per cent debt and 49 per cent stock. In 1932, the last year for which figures were available, a total capitalization of $13,614,610,440 was reported. Slightly over half of this, 50.9 per cent, consisted of capital stock, long-term debt having dropped to 49.1 per cent.

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[1] *General Laws of Mass.*, 1932, Chap. 164, Sec. 13.

EXHIBIT 1

BOSTON EDISON COMPANY (A)

BALANCE SHEETS, AS OF DECEMBER 31

	1922	1927	1932	1935	1936
ASSETS					
Total Plant Investment*	$71,688,409	$132,235,607	$170,402,348	$167,433,087	$166,163,663
Cash	973,011	30,113,623†	6,436,027	4,289,651	2,450,592
Net Other Assets	812,021	2,796,651	2,532,800	3,748,416	4,496,236
Total Assets	$73,473,441	$165,145,881	$179,371,175	$175,471,154	$173,110,491
LIABILITIES					
Stock and Premium	$46,326,377	$ 89,992,934	$ 90,403,933	$ 90,403,933	$102,821,897
Bonds	1,250,000			53,000,000	53,000,000
Coupon Notes	16,000,000	64,428,000	75,000,000	16,000,000	
Notes Payable	7,385,000	4,015,000	1,500,000		
Depreciation Reserve	1,909,245	5,869,221	11,280,793	14,589,168	15,412,344
Surplus	602,819	840,726	1,186,449	1,478,053	1,876,250
Total Liabilities	$73,473,441	$165,145,881	$179,371,175	$175,471,154	$173,110,491
Total Capitalization	$70,961,377	$130,257,934†	$166,903,933	$159,403,933	$155,821,897
Per Cent Common Stock and Premiums	65.3	69.1	54.2	56.7	66.0
Per Cent Debt	34 7	30 9	45.8	43 3	34.0

* Including unfinished construction.

† Of the cash on hand, $24,428,000 to be applied to the payment of coupon notes maturing January 15, 1928, and $3,750,000 to the payment of sundry notes payable maturing in January, 1928. The sum of these two amounts has been subtracted to obtain the "Total Capitalization" figure.

SOURCE: Annual reports of the company.

The Boston Edison Company was incorporated in Massachusetts in 1886 as the Edison Electric Illuminating Company of Boston. Effective July 15, 1937, however, the name was changed to Boston Edison Company. From 1901 to 1929 various properties were acquired in and around the city of Boston so that by the end of 1936 the company's lines formed an interconnected system extending into 40 cities and towns in the area northwest,

EXHIBIT 2

BOSTON EDISON COMPANY (A)
CONSOLIDATED BALANCE SHEET FOR COMMERCIAL ESTABLISHMENTS REPORTING FOR THE CENSUS OF ELECTRIC LIGHT AND POWER STATIONS

	1922	1927	1932
ASSETS			
Current Assets	$ 424,308,025	$ 982,201,237	$ 943,026,889
Fixed Capital	4,290,325,135	10,621,095,927	14,370,420,592
Investments	506,709,842	622,449,110	957,027,793
Unamortized Debt Discount and Expense	138,417,432	302,644,874	377,943,409
Miscellaneous Debits	127,874,720	411,414,558	364,284,962
Deficit	16,979,507	10,582,382	19,835,975
Total Assets	$5,504,614,661	$12,950,388,088	$17,032,539,620
LIABILITIES			
Current Liabilities	$ 249,127,564	$ 671,649,928	$ 641,271,132
Reserves	341,318,468	866,710,527	1,381,566,874
Miscellaneous Credits	87,706,450	277,547,030	379,793,348
Long-term Debt	2,406,379,120	5,309,878,337	6,678,761,901
Capital Stock	2,125,316,139	5,095,135,415	6,935,848,539
Cash Investment (for Unincorporated Companies)	17,920,054	6,605,185	6,867,895
Surplus	276,846,866	722,861,666	1,008,429,931
Total Liabilities	$5,504,614,661	$12,950,388,088	$17,032,539,620
Total Capitalization	$4,531,695,259	$10,405,013,752	$13,614,610,440
Per Cent Stock	46 9	49.0	50.9
Per Cent Long-term Debt	53.1	51.0	49.1

SOURCE: *Census of Electrical Industries:* 1922, p. 115; 1927, p. 37; 1932, p. 72.

west, and south of Boston. Electricity was generated by two steam-electric generating stations and one leased hydroelectric plant. In 1928, the company entered into a 20-year contract with the New England Power Company for the purchase of 150,000,000 kilowatt-hours of primary electrical energy per year, together with certain other provisions for the interchange of surplus power by the two companies. In addition to its electrical business the company generated and distributed steam to parts

EXHIBIT 3
BOSTON EDISON COMPANY (A)
KILOWATT-HOURS SOLD BY RATES—12 MONTHS
(1930 = 100)

Rate Schedules	1936	1935	1934	1933	1932	1931	1930	1929	1928
General	102.51	98 82	96.76	93 43	98.66	104 95	100 00	87 54	77.32
Residence	142.47	134 09	128.59	122.27	121.03	113 03	100 00	85 09	74.71
Yearly Lighting (Commercial)	.....	.....	2.16	19.53	47.01	60 97	100 00	236 94	256.89
General Wholesale	121.49	111.68	102.04	96.90	105 35	108 49	100.00	87.71	72.23
Street Lighting	113 08	109.32	107.15	105 10	109 30	102 63	100 00	91.68	79.90
General Power	87 64	86.18	82.77	82 48	84 62	96 41	100 00	107.45	109.02
Wholesale Power	104.95	92.17	86.11	83.15	76.51	86.05	100 00	115.82	104.02
Miscellaneous Energy	113.34	112.53	107.99	119.12	116.37	113.37	100 00	83.19	70.06
Wholesale Cooking	.....	.....	.....	.....	99.78	116 25	100 00	84.02	45.61
Cooperative Wholesale	75.08	63.99	60.74	49.53	59.36	68.50	100 00	81.38	90.64
Supplementary Service	95.50	96.01	90.28	98 80	87.05	103 73	100 00	83.68	71.70
Interchange	173.46	222.26	169 89	164 92	106.25	65 76	100 00	138.05	34.21
Total Kilowatt-hours Sold	120.07	116 99	105.04	101.22	98.41	97 35	100.00	97.69	78.88

EXHIBIT 3.—(*Continued*)

ELECTRIC REVENUE RECEIVED BY RATES—12 MONTHS

(1930 = 100)

Rate Schedules	1936	1935	1934	1933	1932	1931	1930	1929	1928
General	83 15	82 97	87.82	87 73	94 31	100.26	100 00	94.24	84.58
Residence	118.75	113 98	115.58	112.38	111 52	105.68	100.00	89.59	88.32
Yearly Lighting (Commercial)	.....	.....	2.12	19 53	46 45	58 43	100 00	267.04	296.38
General Wholesale	109 11	101.91	94.66	92 95	105.57	106 61	100 00	91.13	81.21
Street Lighting	102 20	100 61	99.15	96.04	103.98	100 23	100 00	95.00	88.25
General Power	82.00	84.99	83.21	82.74	85 43	96 49	100 00	117.34	120.59
Wholesale Power	86.81	79.38	77.61	76.62	81 80	90 39	100 00	107 32	97.18
Miscellaneous Energy	115.21	114.46	110.19	112.14	112 02	110.56	100.00	86.32	72.48
Wholesale Cooking	.....	.....	.....	1.09*	102 70	114 88	100 00	87.35	48.63
Cooperative Wholesale	65.11	58.06	54.67	45 41	54 56	63.71	100 00	83 66	98 04
Supplementary Service	90.00	95.54	90.88	98.74	96.28	104 63	100.00	85 21	77.70
Interchange	213.39	242.79	182 00	168 06	109 03	64.35	100.00	138.93	34.28
Total Revenue Received	100 59	97 49	96.59	94 94	99 29	100.41	100.00	97.03	90.90

* Loss.

of the city of Boston.[1] Of the steam generating plants one was purchased from the Boston & Maine Railroad Company in 1928 and modernized. Another plant was constructed by the company in 1930. Eight other small steam stations, for the most part located on customers' premises, were leased by the company.

Electric service was supplied individual customers throughout a territory having a population of 1,371,380 (1935 State Census). Bulk energy was sold to 10 other electric light and power companies and municipalities. In addition, the company supplied some of the power used by the Boston, Revere Beach and Lynn Railroad Company, the Eastern Massachusetts Street Railway Company, and the Boston Elevated Railway Company.

Some of the characteristics of the company's market may be ascertained from a study of the data in Exhibit 3, which show the trend in the company's sales of electricity from 1928 to 1936. Other data in Exhibit 4 show the growth of the company from 1922 and the trend of its earnings.

Although substantial additions were made to the company's plant from 1915 until the fall of 1921, no increase was made in the company's capital stock. Temporary financing was accomplished through the sale of short-term coupon notes, for which there was a ready market. In 1921 the directors believed that it was advisable to retire some of the outstanding indebtedness by means of a stock issue. Authorization was obtained from the stockholders and the Massachusetts Department of Public Utilities to offer 45,056 shares of common stock at $130 per share to stockholders of record October 25, 1921. Details of security issues from 1921 to 1936 are given in Exhibits 5 and 6.

In each of the three years after 1921, stock was offered by the company, the total of the three subscriptions being approximately $30,000,000. During the same period the company engaged in temporary financing through the issuance of short-term coupon notes. Proceeds from both stock and note issues were used for plant extensions and for the retirement of outstanding indebtedness. In June, 1901, when the company purchased the Boston Electric Light Company, the consolidated first mortgage bonds of the latter company, in an amount of $1,250,000, were assumed. In 1924, this issue was retired together with certain other mortgage obligations totaling $500,000.

[1] See case entitled Boston Edison Company (B) p. 369.

EXHIBIT 4
BOSTON EDISON COMPANY (A)
PLANT INVESTMENT AND EARNINGS: 1922–1936

Year	Gross Plant Investment	Gross Earnings		Times Interest Earned		Earnings per Share Outstanding at End of Year		Dividends per Share Paid in Calendar Year
		Dollars	1931 = 100	Before Depreciation	After Depreciation	Before Depreciation	After Depreciation	
1922	$ 68,403,334	$15,885,820	51 6	3.68	....	$14 96	.....	$12.00
1923	73,977,452	17,877,963	58.0	5.00	....	16.08	. ....	12.00
1924	80,614,451	19,494,784	63 3	6.59	...	16 86	.....	12.00
1925	92,531,852	21,315,241	69.2	5.19	....	14.35	.....	12.00
1926	113,744,599	23,204,901	75.3	5.16	...	16.64	.....	12.00
1927	121,336,865	25,886,945	84.0	5.87	....	17.32	.....	12.00
1928	128,650,119	27,749,658	90.1	6 09	4.17	19 64	$12.24	12.00
1929	138,473,879	29,664,585	96.3	5.17	3.87	19.75	13.58	12.40
1930	149,658,142	30,617,180	99.4	3.94	3.16	18.83	13.87	13.60
1931	160,065,836	30,815,429	100.0	4.06	3.22	18 79	13.65	13.60
1932	165,207,883	30,578,498	99.2	3.23	2 64	16 89	12.40	12.80
1933	168,229,201	29,291,490	95.1	3.01	2 25	16.15	10.03	10.50
1934	167,833,938	29,746,055	96.5	....	2.34	.....	9.70	9.50
1935	166,668,146	30,056,720	97.5	....	2.65	.....	9.43	8.00
1936	166,535,064	31,667,396*	....	....	3.05	. .. .	8.38	8.00

* Figure for 1936 on different basis from those for preceding years.
SOURCE: Poor's *Public Utilities*.

EXHIBIT 5
BOSTON EDISON COMPANY (A)
BOND AND NOTE ISSUES: 1922–1936

Face Amount	Type of Security	Dated	Due	Coupon Rate, Per Cent	Offering Price*	Yield to Investors, Per Cent
$12,000,000	3-year Coupon Gold Notes	Jan. 16, 1922	Jan. 15, 1925	5½	99.15	5.80
4,000,000	1-year Coupon Gold Notes	Jan. 16, 1922	Jan. 15, 1923	5½	100.00	5.50
8,000,000	Notes	Apr. 30, 1924	Jan. 15, 1925	...	.....	4.80
30,000,000	3-year Coupon Gold Notes	Jan. 15, 1925	Jan. 15, 1928	4½	99.31	4.75
2,000,000	6-month Notes	Jan. 29, 1927	Jul. 29, 1927	...	.....	4.125
30,000,000	3-year Notes	Nov. 1, 1927	Nov. 1, 1930	4½	100.00	4.50
10,000,000	1-year Notes	Nov. 2, 1927	Nov. 2, 1928	4	99.75	4.25
30,000,000	3-year Coupon Gold Notes	Jan. 15, 1930	Jan. 15, 1933	5	98.75	5.45
10,000,000	1-year Notes	Nov. 1, 1930	Nov. 1, 1931	3¾	99.87	3.87
20,000,000	2-year Notes	Nov. 1, 1930	Nov. 1, 1932	4	99.62	4.20
20,000,000	1-year Notes	Oct. 1, 1931	Oct. 1, 1932	4½	100.00	4.50
10,000,000	1-year Notes	May 2, 1932	May 2, 1933	4½	99.76	4.75
20,000,000	3-year Notes	May 2, 1932	May 2, 1935	5	98.79	5.44
25,000,000	2-year Gold Notes	Jul. 16, 1932	Jul. 16, 1934	5	99.62	5.20
10,000,000	Discount Notes	Apr. 15, 1933	Oct. 16, 1933	...	.....	3.50
16,000,000	3-year Coupon Notes	Apr. 15, 1933	Apr. 15, 1936	5	99.00	5.36
35,000,000	3-year Coupon Notes	Jul. 16, 1934	Jul. 16, 1937	3	100.00	3.00
20,000,000	3-year Coupon Notes	Nov. 2, 1934	Nov. 2, 1937	3	100.50	2.825
53,000,000	First Mortgage Bonds	Jul. 1, 1935	Jul. 1, 1965	3½	103.79	3.30

* Plus interest.
SOURCE: Poor's *Public Utilities*.

Continuing its policy of retiring liens on property, the company in 1925 and 1926 paid off obligations totaling $1,315,000, thus leaving its entire property free of mortgages. Other financing during this year included the issuance of $30,000,000 of coupon notes for the purpose of refunding maturing obligations, and paying off floating indebtedness incurred during the preceding year as a result of plant expansion.

No further permanent financing was attempted by the company until 1927, when approximately $14,000,000 was obtained

EXHIBIT 6
BOSTON EDISON COMPANY (A)
STOCK ISSUES: 1922–1936*

Stockholders of Record	Number of Shares Offered	Offering Price per Share	Subscription Rights
October 25, 1921	45,056	$130	1–5
November 28, 1922	54,067	150	1–5
November 5, 1923	64,881	140	1–5
November 6, 1924	77,857	155	1–5
May 23, 1927	66,734	215	1–7
August 14, 1929†	1,000	411	.....
November 27, 1935	82,289	150	1–6½

* In addition to the issues listed in the exhibit there were publications of a small number of shares associated with each issue.
† Public auction.
SOURCES: Annual reports of the company; Poor's *Public Utilities*.

through an issue of common stock. In the late autumn of the same year the favorable conditions prevailing in the money market resulted in the company's issuing $40,000,000 of coupon notes to refund outstanding notes and to retire floating debt.

In 1929 the condition of the money market again made a stock issue seem advisable. Accordingly, authorization was obtained for the offering of 1,000 shares of stock at public auction on August 14, 1929. The proceeds were used for the purpose of increasing the company's steam heating business. During the same month, the Massachusetts Department of Public Utilities was petitioned for authority to reduce the par value of the company's stock from $100 to $25. This permission was denied.[1] In

[1] *Re Edison Electric Illuminating Company of Boston*, P.U.R. 1929E, 267. In its decision the Massachusetts Department of Public Utilities stated that approval

October, 1929, at a special meeting of stockholders, it was voted to apply to the state regulatory body for authority to issue 76,411 shares of stock in order to finance permanently additions already made to the company's plant, and to provide funds for future expansion. Before a hearing could be held on this matter, the condition of the security market became such that a withdrawal of the petition seemed advisable.

During the general business depression following 1929 the company found it advisable to do its entire financing by means of short-term borrowing. While the need for additional plant facilities was lessened somewhat, sizable extensions were made, especially in the earlier years of the depression. Furthermore, the frequent maturing of outstanding coupon notes made it necessary for the company to engage in refunding operations almost constantly. On January 1, 1932, outstanding coupon notes had reached a total of $70,000,000. Of this amount $20,000,000 matured on October 1, 1932, and $20,000,000 on November 1, 1932. Because of the serious condition of the financial markets and business in general, special attention was given to possible methods by which these notes could be refunded. At a special stockholders' meeting, authorization was granted for a petition to the Massachusetts Department of Public Utilities for an issue of 178,292 shares of common stock. Since business conditions did not improve, however, and it became evident that stock could be issued only at an unfavorable price, no further steps were taken in this direction. In May and again in July, 1932, coupon notes were sold to provide funds for meeting the impending maturities. As of December 31, 1932, coupon notes outstanding had reached a peak of $75,000,000 with floating debt amounting to $1,500,000.

During 1934 the market for short-term notes was such that in July the company was able to meet its maturities and funded floating debt by an issue of 3-year 3 per cent coupon notes. Later in the year, in view of the continued favorable money market, the company decided to refund an outstanding note issue with a new issue

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should not be granted for a change in the par value of capital stock merely because other companies had seen fit to make such a change. Furthermore, it was felt that the reduction in par value would increase the speculative value of the stock and encourage " . . . small investors to purchase shares at high prices, relying upon hopes of increased dividends unwarranted by either the value or the business prospects of the company."

bearing a lower coupon rate. Both note offerings during 1934 contained callable features favorable to future financing by the company.

In 1935 the Edison company refinanced its debt on a long-term basis. In July of that year authorization was obtained for an issue of $53,000,000 of 3½ per cent first mortgage bonds due July 1, 1965. This issue was offered to investors at 103.79 yielding 3.30 per cent to maturity. Proceeds, together with cash from the treasury, were used to retire $55,000,000 of coupon notes. This operation left $16,000,000 of notes due April 15, 1936, as the only remaining short-term debt. To provide for the refinancing of these notes, a stock issue was authorized in the fall of 1935. To stockholders of record November 27, 1935, 82,289 additional shares of common stock were offered at $150 per share. Of this amount, 77,529 shares were subscribed, the remainder being sold at auction on April 11, 1936, at $166 per share. With the completion of this stock financing the company's capital structure consisted of 66 per cent common stock plus premiums and 34 per cent long-term mortgage bonds.

What are the advantages and disadvantages of the policies of financing pursued by the two companies in the foregoing cases?

In the cases of the Public Service Company of Northern Illinois and the Boston Edison Company (A) is there any significant relationship between the character of the companies' markets and the method of financing used? Should there be any such relationship?

D. Refunding to Lower Cost of Borrowed Capital

39. Public Service Company of New Hampshire[1]

The Public Service Company of New Hampshire in October, 1935, applied to the Public Service Commission for authority to issue $10,379,000 of first mortgage bonds and requested that the series, maturity, interest rate, and minimum price be set by the commission. The funds realized from the proposed issue were to be used to retire an equal face amount of outstanding first and refunding 30-year 4½ per cent mortgage bonds, Series B, due October 1, 1957, which in October, 1935, were callable on 30 days' notice at 103 and accrued interest.

In its application the company stated that prevailing money market conditions were such that substantial savings could be effected by means of refunding operations. As the maturity, interest rate, and price of the proposed issue were undetermined, estimates of savings were worked out on several bases. For bonds having interest rates of 3½, 3¾, and 4 per cent, the annual payments on a principal of $10,379,000 would be $363,265, $389,213, and $415,160 respectively. The annual interest charge on the outstanding 4½s was $467,055. Thus, the yearly savings on interest payments only would be $103,790 on the 3½s, $77,842 on the 3¾s, and $51,895 on the 4s.

The company also considered the yearly and cumulative effects of several other factors. Among the latter were Federal income taxes, bondholders' taxes assumed by the company, payment and amortization of the call premiums on the outstanding bonds, amortization of debt discount and expense on the 4½s, and treatment of the expenses of the proposed issue, together with any discount or premium on it. As a basis for calculation, a maturity of 25 years was assumed for the refunding bonds. Various prices were used, ranging from 95 to 100 for the 3½s, from 98 to 101 for the 3¾s, and from 100 to 104 on the 4s. Taking into consideration the factors mentioned above, and compounding the interest

[1] *Re Public Service Company of New Hampshire*, 12 P.U.R. (N.S.) 408 (1936).

semiannually at the assumed rate on the respective bonds, the company showed gross savings to October 1, 1957, of from $845,594 on 25-year 4 per cent bonds at par, to $2,322,107 on 25-year 3½s at par.

The commission, in accordance with the laws of New Hampshire, found that the issuance of 25-year refunding bonds, if sold on a basis restricting the cost of money to a maximum of 4 per cent, would be consistent with the public good. However, authorization of the issue was subject to the condition that the exact terms and prices should be determined after the securing of competitive bids in compliance with the following requirements:

1. A specimen of the specifications or invitation to bid for the issue should be filed in advance with the commission. Since the company wished to secure offers for bonds of a variety of terms, maturities, and interest rates, such specifications or invitation should be so phrased as to insure the submission of truly comparable bids. Bidders should be directed to name all parties associated in a joint bid or tender entered on behalf of a syndicate.
2. A list of those invited to bid should be filed in advance with the commission.
3. A statement showing in detail all bids, together with the net proceeds and cost of money to maturity, should be filed promptly with the commission, such statement to serve as a basis for a supplemental order fixing the terms and price of the issue.

See questions at the end of the next case.

E. Retirement of Bonds by Sale of Common Stock

40. GRANITE STATE ELECTRIC COMPANY[1]

In May, 1937, the Granite State Electric Company petitioned the Public Service Commission of New Hampshire for authority to issue and sell for cash 3,610 shares of $100 par value common stock for the purpose of redeeming and retiring its entire outstanding funded debt.

The Granite State Electric Company furnished electricity to various towns in the state of New Hampshire, the territory served having a population of about 19,000. In May, 1937, the company's capitalization consisted of 7,790 shares of $100 par value common stock ($779,000), and $361,000 principal amount of 25-year First Mortgage 5 per cent bonds dated August 1, 1917, a total of $1,140,000. All the stock, as well as a small amount of the bonds ($16,000), was owned by the Granite State Electric Company's parent company, the New England Power Association. The bonds were subject to call at 103, the total premium being $10,830. As of December 31, 1936, the unamortized balance of debt discount and expense stood at $8,970.31, but by April 30, 1937, this figure had declined to $8,454.75. It was estimated that on August 1, 1937, on which date it was proposed to retire the bonds, the balance would be reduced to approximately $8,000. For the calendar year 1936, the company reported earnings before interest charges of $107,671.44, almost six times the annual interest of $18,050 on the outstanding bonds.

In its decision the commission commented upon the conditions prevailing in the money market which had been particularly favorable for refunding operations whereby utilities might effect substantial reductions in their payments for borrowed capital. Taking advantage of these conditions, certain of the major electric utilities operating in New Hampshire had, with the encouragement of the commission, engaged in an extensive refinancing program, during the course of which more than $45,000,000 of securities

[1] Public Service Commission of New Hampshire, D-F1844, June 24, 1937.

had been issued. As a result of this refunding, the average coupon rate on the securities involved had been reduced from approximately 5 per cent to about 3½ per cent, effecting a decrease of $675,000 in annual interest charges. The commission believed that when premiums received on refunding issues were compared with the necessary costs of refinancing and the unamortized balances of debt discount and expense outstanding on the retired securities, it was probable that annual savings would be greater than $675,000. Considering the average life of the new issues to be 25 years, it was stated that refunding operations had resulted in an aggregate saving of at least $16,875,000.

In view of the condition of the money market, it appeared to the commission that the failure of utility managements to consider the possibilities of advantageous refinancing might well be questioned. Accordingly, despite the relatively low ratio of debt to total capitalization and of annual interest charges to gross income in the case of the Granite State Electric Company, the desirability of reducing its fixed charges from the existing 5 per cent basis was discussed with officials of the company. As a result of these discussions, the directors and stockholder of the company authorized the creation of 3,610 shares of $100 par value common stock, and petitioned the commission for authority to issue the securities for the purpose of retiring the outstanding funded debt. The entire issue was to be sold at par to the company's sole stockholder, the New England Power Association. The call premiums on the outstanding bonds and unamortized debt discount and expense, which together would total about $19,000 as of August 1, 1937, were to be charged directly to Surplus. The latter item on December 31, 1936, amounted to $153,298.21.

In its decision approving the Granite State Electric Company's petition, the commission said:

> It will be noted that the program here presented for our consideration goes beyond a mere reduction of the rate of interest paid for borrowed capital. By proposing the complete elimination of its funded indebtedness through the substitution of an equivalent amount of common stock therefor, the company has gone to the heart of a matter which from time to time has occasioned serious concern on the part of regulatory authorities and students of public utility finance. A capital structure consisting entirely of common stock in our judgment constitutes from many points of view the most flexible, and therefore the

most desirable, type of financing possible. Not only will this transaction effect an immediate and recurring saving through the elimination of fixed charges of over $18,000 per year without any increase of the total capitalization, but it will also afford a maximum of protection against economic fluctuations which might prove disastrous to a utility overburdened with interest-bearing obligations. The applicant, because of the comparatively small present debt and large surplus, may be in an unusually strong position to take advantage of present favorable conditions to improve its financial situation. The fact that its parent company is able and willing to provide a ready and inexpensive market for a relatively small issue of new stock may likewise be a somewhat rare, although favorable, circumstance. Nevertheless we are convinced that the elements underlying the instant petition are of fundamental importance. We do not hesitate, therefore, to urge upon all utilities operating under our jurisdiction that they give most careful consideration to their financial structures with particular reference to the principles expressed herein.

For the foregoing reasons we conclude and find that the proposed issue of securities may be made consistently with the public interest. . . .

How do you account for the difference in financial policies as illustrated by the Public Service Company of New Hampshire and the Granite State Electric Company?

Should public utilities be required to obtain competitive bids on security issues?

What would be the effect on (*a*) consumers, and (*b*) stockholders, if public utilities generally followed the policy illustrated by the case of the Granite State Electric Company?

F. Customer Ownership of Securities

41. Pacific Gas and Electric Company

The stockholders of the Pacific Gas and Electric Company in June, 1914, approved a reclassification of the company's capital stock by the adoption of an amendment to the articles of incorporation. This reclassification was the result of an order issued by the California Railroad Commission requiring the company to present to it a plan for the payment of existing short-term obligations and for meeting in a broad and comprehensive way the future needs of the company.

On December 31, 1913, the company's balance sheet indicated that out of a total authorized issue of $150,000,000 of common stock, $63,806,166.66 was outstanding. Slightly less than half of this was held by subsidiaries of the Pacific Gas and Electric Company, the remainder being in the hands of the public. A preferred stock issue of $10,000,000 was also outstanding. The company and its subsidiaries had a total bonded indebtedness in excess of $86,000,000, in addition to which there was an issue of $5,000,000 gold notes maturing in June, 1914.

By the terms of the reclassification, the authorized amount of common stock was reduced from $150,000,000 to $100,000,000, and a new issue of first preferred stock to an amount of $50,000,000 was created. This new preferred stock was to bear 6 per cent cumulative dividends and was to have precedence over the old issue of preferred stock as well as over the common with respect both to dividends and to any distribution of assets. All issues of the new preferred stock were to be subject to the approval of the California Railroad Commission, and in any case could be made only for the acquisition of new property, extensions, additions, betterments, and the refunding of existing obligations. The amendment further authorized the exchange, after July 1, 1916, of the old issue of preferred stock for the new first preferred stock at the rate of 1.025 shares of the new stock for each share of the old.

Shortly after the stockholders had approved this reclassification of their company's capital stock, they were tendered the right to

subscribe for and purchase, at the rate of $82.50 per share, 125,000 shares of the new first preferred stock. In July, 1914, the subscription privilege, subject to the prior rights of stockholders, but otherwise upon the same general terms, was extended to the officers and employees of the company, and the offer was also extended to the customers of the company, thereby marking the inauguration of the movement for customer ownership of public utility companies.

The experiment of selling the first preferred stock to employees, customers, and others directly rather than through established investment banking channels proved sufficiently successful to warrant its continuation. In 1915, $3,785,100 par value of additional stock was distributed in this way, in spite of the fact that the per share price was gradually increased during that year from $82.50 to $90. Subscriptions were accepted either for cash or upon an installment basis.

In 1921, an amendment to the company's charter once again resulted in a reclassification of the capital stock. The authorized first preferred stock was increased from 500,000 shares to 799,000 shares, whereas the original preferred stock, practically all of which had been exchanged in 1916 and subsequent years for the first preferred stock in accordance with the provisions of the reclassification plan of 1914, was reduced from 100,000 shares to 1,000 shares. The authorized common stock, was reduced from 1,000,000 shares to 800,000 shares.

By 1921, through the company's activities for customer ownership, its first preferred stock was widely distributed throughout the territory which it served. The company then inaugurated the plan of holding numerous stockholders' meetings at various convenient points, at which representatives of the management addressed the local shareholders. The company's executives believed that this policy resulted in improving very materially the company's public relations. In 1922, of 58,000 investors in the Pacific Gas and Electric Company's stock, more than 40,000 resided in the state of California.

The company's 1927 annual report indicated that the total number of stockholders had more than trebled since 1920 and had increased almost fifteenfold since the company's initiation of the customer ownership plan in June, 1914. The par value of both the preferred and common stocks was reduced from

$100 to $25 in order to facilitate the distribution of both classes of securities.

At a special stockholders' meeting held on February 13, 1928, an increase in the total authorized capital stock of the company from $160,000,000 to $400,000,000 was approved. The capitalization had consisted of 799,000 shares of first preferred stock, 1,000 shares of original preferred, and 800,000 shares of common; it was reclassified as follows:

6%	First Preferred of the Par Value of $25 per Share	$140,000,000
5½%	First Preferred of the Par Value of $25 per Share	40,000,000
5%	First Preferred of the Par Value of $25 per Share	20,000,000
	Common Stock of the Par Value of $25 per Share	200,000,000

The company stated that the 5½ and 5 per cent preferred stocks were created in order better to adapt the company's securities to the conditions prevalent in the investment market. Neither of these issues was used in 1928, the company's expansion program being financed by an additional offering to existing stockholders of common stock below current market prices and from working capital. From 1929 to 1931, however, approximately $17,500,000 of the new 5½ per cent preferred stock was issued, in addition to which $14,158,275 of common stock was sold in 1931. In 1932, despite poor general business conditions, the company experienced no difficulty in selling $5,000,000 of 6 per cent preferred stock to the local public within a period of less than 2 months. Up to August, 1937, no further issues of either preferred or common stock had been brought out.[1]

The details of the customer-ownership plan were handled through the company's Stock Sales Department. When the plan was inaugurated in 1914, actual selling was done largely by employees on a commission basis. In some of the less populous sections of the company's territory, selling was done by independent salesmen also on a commission basis. This latter method was discontinued within a few months. Selling by employees was

[1] During 1935 and 1936 the company engaged in major debt refunding operations, selling $250,000,000 of First and Refunding Mortgage Bonds. These securities, distributed nationally, were registered with the Securities and Exchange Commission.

continued for several years. The company felt that not only did the plan enable employees to earn additional money after working hours, but also encouraged them to familiarize themselves with facts concerning the company's operations in order to do more effective selling. •

For several years before the stock issue in 1932, no commissions were paid to employees. Selling was done directly through the Stock Sales Department at the company's central office. In making its initial offering, and on one or two subsequent occasions, the company circularized all its customers. This method involved the printing and mailing of several hundred thousand circulars. Later on, as the stock became better known, it was found that adequate response could be obtained from the use of local newspaper advertising giving the details of current offerings.

One of the advantages of the direct marketing of stock to customers was the economy with which such distribution could be effected. Despite the relatively small average units of purchase, the company found that its selling cost per share was considerably below the expense ordinarily incurred in marketing issues through the traditional investment banking channels. The company's cost was also substantially lower than the average for the industry in customer-ownership campaigns. For example, in 1922 approximately $10,000,000 of preferred stock was sold at an average cost of 72 cents per $100 share. For the same period, 74 utilities operating in all parts of the United States reported an average selling cost of $4.42 per share. The first issue of common stock offered to the public in 1924 was reported to have been sold at an average cost of 5 cents per share. Altogether, approximately $76,000,000 of preferred stock was sold at an average cost of 63.4 cents per $100 of stock.

During periods in which no new stock was being issued, the Stock Sales Department maintained a skeleton force. The head of the department was also head of the Credit Department, overhead expense during inactive periods being thus reduced to a minimum. Among the services performed by the Stock Sales Department was the handling of stock purchases in the open market for the account of customers when specifically requested to do so, at times when no treasury stock was available for sale. For example, in 1924 the company executed in the open market orders for its own stock aggregating approximately $1,500,000.

This service was maintained without charge by the company for the benefit of purchasers not having brokerage connections.

In order to enable small investors to participate in the customer-ownership plan, the company followed the policy of selling its stock on the installment plan. Despite the fluctuations in security prices and in incomes during the depression, no serious trouble was encountered from defaulted payments. In some cases, it was found that individuals had subscribed for more shares than they could afford. In such instances two alternatives were offered: either the stock would be sold by the company on the open market; or the payments already made could be applied to a smaller number of shares.

The ownership of the Pacific Gas and Electric Company was vested in stockholders owning a relatively small number of shares, the majority being in the wage earning and salaried classes. Ten per cent of the holders had 5 shares of stock or less, while about two-thirds had 50 shares or less.

The company earned and paid preferred dividends during each year of the general business depression. Dividends on the common stock had been paid continuously since 1919. From the last quarter of 1923 until the third quarter of 1933 dividends were at the rate of 8 per cent per annum on the par value of the stock. From the latter date until the last quarter of 1936 a rate of 6 per cent was maintained, subsequent to which the 8 per cent payments were resumed.

Although not the first utility to endeavor to sell its securities to some of its customers, it is believed that the Pacific Gas and Electric Company was the first to undertake a comprehensive and systematic campaign for such local ownership.

What types of securities should make up capital structure under a customer-ownership plan?

What types of securities are best suited to customer distribution?

Should a company's employees market utility securities?

Should utility securities be sold to employees and customers on the installment plan?

Should a public utility maintain a market for securities sold to employees and customers?

What effect will customer ownership have upon the public relations of public utilities?

G. Financing Subways

a. At Expense of Taxpayers

42. PHILADELPHIA RAPID TRANSIT COMPANY (B)[1]

In the fall of 1928 the mayor of Philadelphia received a detailed report from the Transit Tax Commission. This commission had been appointed by the mayor for the purpose of investigating the effect of the construction of rapid-transit facilities on real estate values and on the increased taxable return to the city. The necessity for the Transit Tax Commission's research arose in connection with the construction of a subway under Broad Street from City Hall to Olney Avenue. The cost of this construction was approximately $100,000,000 as far as the City Hall, and $120,000,000 when completed to South Street. The subway was constructed by the city, which leased it to the Philadelphia Rapid Transit Company at $65,000 per month. At this rental, the city obtained 0.65 per cent return on its investment. The transportation company, however, proved that it could not afford to pay a rental sufficiently large to yield a reasonable return on the city's investment. The deficit, thus occasioned by the difference between the fixed charges on the $120,000,000 borrowed by the city for the construction of the subway and its income from the rental thereof, was saddled upon the shoulders of the taxpayers of Philadelphia.

The chairman of the mayor's Transit Tax Commission found, however, after careful investigation, that the greatest benefits derived from the construction of this subway, as well as from other rapid-transit facilities, did not accrue to the city as a whole in a major degree, but did accrue to the owners of real estate served by the new facilities. In his opinion the very existence of a subway or of an elevated line sometimes proved detrimental to other

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[1] Acknowledgment is made to Mr. Horace Groskin, chairman of the Transit Tax Commission, who, in a personal interview, furnished data used in the preparation of this case. Material was secured also from the commission's report to the mayor of Philadelphia, as reproduced in the *Real Estate Magazine* of September, 1928, and from an article by Mr. Groskin in the *Electric Railway Journal* of September, 1931.

sections of a city which were not within the sphere of its influence. He said in part:

> Some of these adjacent or outside districts are in direct competition with the elevated or subway territory and, by reason of the high speed territory having greater accessibility, the adjacent district suffers from a decrease in the normal demand for its location and has its trade and other activities retarded so that its rentals from real estate begin to recede and its real estate values either remain dormant or decline.
>
> In fact, real estate values are often practically extracted from adjacent territory and carried to the rapid transit area where general activity and trade is accelerated and rentals and real estate values are increased at the expense of the adjacent territory. The demand for property naturally gravitates towards the rapid transit area.[1]

As an illustration of such a train of events, the experience of Philadelphia with the West Philadelphia Subway-Elevated was cited. In 1900 the trend of building development was moving in a northerly direction where the city had thousands of acres of undeveloped land. In 1907, however, when the new high-speed line in West Philadelphia was put into operation, it began to take away thousands of people from other sections. The city's transit department stated that during the first 10 years of the operation of this high-speed line, the number of passengers carried registered an increase of 182 per cent. Similarly, when the construction of the Market Street Subway-Elevated started in the western part of the city, builders purchased land in the new high-speed territory so that when the new line was opened there was a concentration of building in that part of the city, accompanied by a very definite check to the development of the north and northeast sections.

According to the records of the Bureau of Building Inspection in Philadelphia, the three principal West Philadelphia wards, the acreage of which was about one-third less than that of the two principal wards of North Philadelphia, built 62 per cent more houses than were built in the latter section in the 10-year period following the opening of the high-speed line in West Philadelphia in 1907. This development was accompanied by a large increase in real estate values which was not shared by other sections of the city.

A somewhat similar growth followed the building of the Frankford Elevated in the northeast section of Philadelphia in 1922. In

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[1] *Electric Railway Journal*, September, 1931, p. 460.

the 8-year period from 1914 to 1922, before the opening of the Frankford Elevated, 2,912 houses were built in the principal wards in the northeast section of the city, while during the 8-year period following the opening of the rapid-transit line, from 1922 to 1930, there were 21,078 houses built in these same wards. Although this 600 per cent increase in the volume of construction after the completion of the elevated line coincided with the period of general prosperity and building activity throughout the entire country, experienced real estate men believed that it indicated that this northeast section would have been built up years ago had it not been for the development of rapid-transit facilities in West Philadelphia.

This analysis seemed to indicate that, although the benefits secured by the property owners in the rapid-transit territory were of major proportions and were special and direct, the general benefits to the entire city were limited and indirect. As an example of the extent of the direct local benefits secured by some individual property owners in the territory served by the West Philadelphia Subway-Elevated line, the case of a tract of land in this section which was originally purchased in 1908 for $100,000 and which was sold in 1928 for $1,000,000 might be cited. Similarly, large increases in land values were recorded in northeast Philadelphia after the completion of the Frankford Elevated line. During the 9-year period from 1922 to 1931, the assessments on real estate in this territory increased 225 per cent, whereas the increase throughout the entire city was only 60 per cent.

The Transit Tax Commission investigated the history of the development of different sections of the city with a view to ascertaining the extent to which the construction of rapid-transit facilities had affected real estate values. It also investigated the assessments and sales of real estate in the territory influenced by the construction of the Broad Street Subway, with the same purpose in view as regards the territory which it affected. The commission was convinced that by this method it could determine the increase in real estate values along the route of the new subway attributable to its projection and construction. The commission divided the territory served by this development into 16 zones of four blocks each, and made a separate investigation in each zone. It found that during the 14-year period of projection and construction, beginning in 1914, real estate assessments in the entire area

influenced by the subway had increased from $445,638,629 to $815,893,296. It concluded that, out of this total gain of over $370,000,000, more than $68,000,000 in assessed value was directly attributable to the influence of the Broad Street Subway. The commission reported that during this 14-year period the city had collected $14,617,204 in additional taxes, resulting from the increased values created by the subway, while the property owners had received increased real estate values amounting to $134,000,000, a sum considerably in excess of the entire cost of the subway.

The commission's report disclosed that the city of Philadelphia had spent about $120,000,000 on the subway and that the subway had benefited property owners by some $134,000,000 in increased property values. The report pointed out that if the $14,000,000 paid by the benefited property owners in additional taxes were deducted from the $134,000,000 in increased values, the benefited property owners would have been shown to have gained $120,000,000 practically at the entire expense of the general taxpayer. The general taxpayers were required to pay almost the entire carrying charges on the $120,000,000 subway with the exception of the $780,000 obtained from the transit company operating the line, while certain property owners, who had secured this tremendous increase in property values, did not pay any more towards the cost of the improvement than other taxpayers.

The commission estimated that by 1936 there would be a further increase in assessments in the territory affected by the Broad Street Subway amounting to over $842,000,000, out of which amount nearly $196,000,000 would be directly attributable to the actual operation of the Broad Street Subway.

In addition, certain other classes were greatly benefited by the construction of the subway. The partial relief of congestion in the downtown business districts resulted in expediting the movements of private vehicles in these areas. The large number of citizens using such vehicles, who thus benefited materially as a result of the development of the new subway, bore practically no share of the expense of its maintenance or construction.

Should the mode of financing rapid-transit facilities differ in any radical respects from the financing of other public utilities?

Compare this case with the Boston Elevated Railway Company (A) case, page 296.

b. At Expense of Car Riders with Contingent Expenses to be Borne by Taxpayers

43. BOSTON ELEVATED RAILWAY COMPANY (A)

The Boston Elevated Railway Company was chartered in Massachusetts in 1894 to construct and operate an elevated railway in Boston and vicinity.[1] By its charter it was also authorized to lease certain properties and franchises belonging to railway companies already operating in the territory. A lease agreement was made with the West End Street Railway Company in 1894 and with the Old Colony Street Railway in 1903. In 1911, an act of the Massachusetts legislature, approved by the stockholders of both companies and by the city of Boston, provided that the Boston Elevated Railway's lease of the West End properties should continue until 1922, at which time the two companies should be consolidated.[2]

In 1897 the company had accepted, as a condition of its receipt to certain franchise rights, the requirement that for a period of 25 years its fare be limited to 5 cents.[3] As early as 1910 the heavy increase in carrying charges for subways and rapid transit lines imperiled the earning of the regular dividends of 6 per cent on the common stock. In 1917 the mounting costs of labor and materials caused by the World War involved the company in financial difficulties from which it could not, in view of its maximum fare agreement, extricate itself and at the same time render adequate service to the public. In addition to this major financial embarrassment, there existed other difficulties which made it seem advisable for the stockholders to cede the management of their company to a board of five public trustees appointed by the governor of Massachusetts under the Public Control Act effective July 1, 1918.[4]

At the time of this transfer of managerial control, the trustees were required to operate the system on a service-at-cost basis, the

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[1] *Mass. Acts*, 1894; Chap. 548.
[2] *Mass. Acts*, 1911; Chap. 740.
[3] *Mass. Acts*, 1897; Chap. 500.
[4] *Special Acts of 1918*, Chap. 159.

fare being raised or reduced as the revenues were insufficient or more than necessary to meet the cost of the service. The cost of service was to include all operating expenses, the carrying charges on publicly owned extensions, dividends on the various classes of stock of the Boston Elevated Railway then outstanding, as well as all other charges and costs of operating and maintaining the system. It was further provided that a reserve fund of $1,000,000 be set up from which deficits in any fiscal year were to be met, but it was also provided that, should the deficit in any year be greater than the amount available from the reserve fund, the excess was to be met, in the first instance, by a payment from the Commonwealth, which sum was to be repaid to the Commonwealth by means of an assessment upon the cities and towns served by the railway in proportion to the number of persons in these cities and towns using the service of the railway at the time of the payment by the Commonwealth. Such a condition in turn required the trustees to initiate a fare increase in order to prevent a recurrence of the deficit. Similarly, the act provided that if at the end of any fiscal year the reserve fund exceeded the original amount, the excess should be applied to reimbursing the Commonwealth for any amounts which might have been paid to the company, and that the Commonwealth should thereupon distribute the amount so recovered to the cities and towns in proportion to amounts which they had been assessed.

In 1931 the Massachusetts legislature passed a law extending public control for a period of 28 years. This law provided for the retirement of all classes of preferred stock through the issue of bonds of the Metropolitan Transit District,[1] and reduced the dividend on the outstanding common stock from 6 to 5 per cent. It made one important change with respect to the service-at-cost principle and the management of the railway by public trustees, in that, in the event of a deficit, the obligation to increase fares did not arise until the Metropolitan Transit Council so determined.[2]

The problem of relieving traffic congestion in Boston by means of rapid transit lines was first dealt with in 1893 when the Massa-

[1] The Metropolitan Transit District included Boston and the 18 surrounding towns.

[2] The Metropolitan Transit Council consisted of the mayors and chairmen of the boards of selectmen of all cities and towns of the Metropolitan Transit District. There was one vote for each $100,000,000 of valuation. A two-thirds vote was required for affirmative action because Boston had more than a majority of the entire number of votes.

chusetts legislature passed an act authorizing the city of Boston to construct a subway under parts of Tremont Street and adjacent land.[1] It was ruled that streetcar tracks along these streets should be removed and that cars should be operated exclusively under ground. In 1894 the Boston Transit Commission was created by the legislature[2] for the purpose of building this subway, which was to be owned by the city of Boston and leased to the West End Street Railway Company, and subsequently to the Boston Elevated Railway, which was required to pay an annual charge of 4⅞ per cent on the cost of the construction. In 1911 the rental charge was reduced to 4½ per cent. This sum was sufficient to cover the interest charges on the funds borrowed by the city for the construction, and provided for a sinking fund to retire the bonds issued in conjunction with this financing.

The operation of this subway, the first in America, provided faster transportation for those using the trolleys which were operated therein, and aided materially in clearing Tremont and Boylston Streets, in the heart of the city, for other traffic. The success of this venture established the desirability of rapid transit facilities in the mind of the general public. In 1897, the year in which the first subway was completed, the Boston Elevated Railway Company leased the West End Street Railway and undertook to construct additional rapid transit facilities in order to furnish a unified service by surface, elevated, and subway lines with a 5-cent fare and free transfer privileges for a single journey of any length in the same direction.

After 1900, the development of rapid transit facilities in Boston and the metropolitan area gained considerable momentum. Not only were lines constructed in the more congested sections of downtown Boston, but also extensions were built to serve outlying residential districts. Except in the case of the Cambridge subway, owned by the Commonwealth, the lines were owned by the city of Boston and leased to the Boston Elevated Railway. That this development was of incalculable value to the city of Boston and to its adjoining territory was indicated by the great saving of time afforded passengers availing themselves of the rapid transit facilities provided. Congestion on the streets was relieved by the possiblity of eliminating a large number of surface cars.

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[1] *Mass. Acts*, 1893; Chap. 478.
[2] *Mass. Acts*, 1894; Chap. 548.

Although there could be no reasonable doubt that all parties concerned had been greatly benefited by the development of rapid transit facilities in Boston and its environs, nevertheless it became evident in 1930 that additional rapid transit facilities would have to be provided if the rapid growth of the metropolitan area was not to overtax the existing facilities. The capacity of the Boylston Street Subway, for example, was greatly restricted by the serious congestion of street traffic in Governor Square, at which point the streetcars entered and emerged from the subway. The congestion prevented the free ingress and egress of subway cars at the Kenmore station located at this point. Furthermore, it became apparent that, in order to secure the maximum efficiency in the use of existing rapid transit facilities, it was highly desirable to operate a number of subway cars as a "train" in existing subways in which trolley cars were also operating, and to establish terminals sufficiently distant from the center of Boston so that the number of passengers forced to transfer within congested areas would be minimized.

Obviously, one solution to such problems was to make certain extensions of the Boylston Street Subway. Since it cost approximately $5,000,000 per mile to construct a double track subway in Boston, it was thought best, in the less congested portions of the city, to have subway trains emerge from the tunnel and operate over a private right-of-way. Such trains would have to be operated with an overhead pantagraph or trolley in order to eliminate the danger of a third rail. It was thought possible that such trains could attain an average speed of from 18 to 20 miles an hour on such reserved ways, and, while a slightly higher speed could be obtained in subways, the saving in time would not warrant the added cost in less congested sections.

It was estimated in 1931 that the proposed extension would cost $4,935,000. The subway was to be constructed by the city of Boston and leased to the Boston Elevated Railway. It was estimated that the carrying charges on this improvement would be $222,075.

When the legislative measure authorizing the construction of this extension was proposed in the Massachusetts legislature, it was pointed out that under the existing agreement the addition of almost a quarter of a million dollars annually to the burden of fixed charges already borne by the Boston Elevated Railway

might result in the necessity for increasing the fare, which was already 10 cents and one of the highest in the country. It was argued that the passengers were not the only class benefited by such improvements. The property of abutting real estate owners would be enhanced in value by the construction of a subway; through higher assessments on such properties, and because of the general development of the city, the taxpayers as a whole would be benefited; and finally, the removal of surface cars from the streets would relieve congestion and thereby be directly beneficial to the users of private vehicles. For all these reasons, it was maintained that the passenger alone should not be saddled with the entire cost of the construction of rapid transit facilities. The cost, it appeared, should be shared by all classes benefiting by the improvement in proportion to the benefits which they obtained. It was argued that, if, for example, the city attempted to relieve street congestion by widening the streets, the passengers would not be required to pay any part thereof. Yet, when congestion was reduced to the same extent through the elimination of surface cars, under the existing agreements the car riders were expected to finance the entire cost of this improvement.

The problem of allocation of costs was argued before the legislature, which was ultimately swayed by these arguments to the extent that it was provided in the Governor Square Extension Act[1] that, if the receipts of the railway from car fares were insufficient to meet the full carrying charges on this improvement, the city of Boston was to pay one half the balance, and the Metropolitan Transit District, the other half. The extension was completed in October, 1932. At the end of 1936 the total investment of the city of Boston in the project was $4,942,300. Because of insufficient earnings no rentals had been paid by the company up to that time.

Early in 1931, while the subway was still under construction, it became apparent that if existing costs, number of passengers carried, and rate of fare continued unchanged, a part or all of the carrying charges upon this extension would have to be met through general taxation. Furthermore, it appeared that, in Boston as well as in most other cities, unless some unforeseen change

[1] An act providing for the elimination of the crossing at grade at Governor Square in the city of Boston by street railway cars using the Boylston Street Subway. *Mass. Acts*, 1930; Chap. 394.

occurred in the riding habits of the general public in the future, the construction and operation of rapid transit facilities could not be expected to become self-supporting. Transportation companies' facilities had to be adequate to provide rapid transit during the peak hours, thus necessitating the expense of construction and upkeep of facilities which were utilized at only a fraction of capacity during the off-peak hours. Under the conditions indicated it appeared unlikely that any rapid transit facilities could be constructed and operated without incurring a substantial deficit.

The company was faced with the problem of refunding an issue of $3,000,000 of bonds maturing in June, 1933, and another issue of $2,098,000 maturing in March, 1934. In May, 1933, the Massachusetts legislature authorized the Boston Metropolitan District (formerly the Metropolitan Transit District) to issue notes or bonds for terms not longer than three years to obtain funds with which to purchase bonds of the railway in an amount sufficient to retire the latter's maturing issues.[1] In the opinion of company officials, this substitution of the district's credit for that of the company resulted in a saving in interest charges of from $75,000 to $90,000 annually for three years.

Again, in 1934 the district was authorized to issue bonds for terms not less than 15 years nor longer than 25 years.[2] Funds obtained from the sale of these securities were used to purchase additional railway bonds, which, in turn, were issued to obtain funds to retire approximately $10,000,000 of maturing issues, and to call $6,309,000 of bonds maturing in 1957. It was required that the bonds of the railway should bear an interest rate 2 per cent higher than the rate of the district bonds issued to purchase the railway bonds. This 2 per cent differential was to be used to retire outstanding bonds of the district. Commenting upon the use of the district's credit for refinancing, the trustees of the Boston Elevated Railway in their annual report for 1934 said:

> At no expense to the district the tax payers and car riders within it are saved substantial sums annually in interest charges, and the district, as a whole, acquires a large ownership of railway bonds representing property. We believe that these large annual savings in interest costs accomplish the principal advantage that would accrue

[1] *Mass. Acts*, 1933; Chap. 235.
[2] *Mass. Acts*, 1934; Chap. 334.

from outright public ownership, and that, in effect, this gradual acquisition of railway bonds made possible from the savings through the use of the district's credit is a sound and conservative method of acquiring the ownership of the railway's property represented by its bonded indebtedness.

The use of the district's credit to aid the refunding of Boston Elevated Railway bonds was continued in 1935 and 1936. At the end of the latter year it was estimated that since the inauguration of the policy in 1933 there had been a saving of $491,512 in the cost of service to the railway.

A committee of the Massachusetts legislature in 1935 approved a bill providing for public ownership of the Boston Elevated Railway. The purchase of the company's common stock was to be financed by bonds of the Boston Metropolitan District. In 1936 similar bills were filed in the Massachusetts House of Representatives, providing in addition that the facilities of the company when purchased should be placed under the control of a Board of Transportation composed of the trustees of the company.

To what extent and in what manner should rapid transit lines be financed by taxation?

What groups of persons are benefited by subways in large cities?

H. Intercorporate Relationships Affecting Financing and Management

a. Effect of Intercorporate Relationships on Capitalization

44. Northwest Cities Gas Company[1]

In 1936 the Northwest Cities Gas Company applied to the Public Utilities Commissioner of Oregon[2] for retroactive approval of the issuance to its parent company, the Lone Star Gas Corporation, of two demand notes, dated January 1, 1934, and December 31, 1934, amounting to $1,705,000 and $45,000 respectively. An Oregon statute effective June 13, 1933, stated that "no public utility shall issue notes or loan its funds or give credit on its books or otherwise to any person or corporation having an affiliated interest, either directly or indirectly, without the approval of the commission."[3]

The Northwest Cities Gas Company owned and operated gas manufacturing and distributing systems in six small communities[4] in Oregon, Washington, and Idaho. The territory served by the company was estimated in 1935 to have a population in excess of 95,000. All the properties except those in Eugene were acquired in February, 1929, from the Pacific Power & Light Company by means of an intermediary known as the Union Utilities Company, Inc. In June, 1929, the Eugene property was also acquired through the same intermediary. Before October 1, 1929, the Northwest Cities Gas Company was owned by the Union Utilities Company, Inc., and managed by a subsidiary of the latter company, the Union Management and Engineering Corporation. On October 1, 1929, ownership of Northwest Cities Gas Company passed to the Lone Star Gas Corporation, which obtained control of the entire issue of 100,000 shares of its no par common stock.

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[1] *Re Northwest Cities Gas Company*, 13 P.U.R. (N.S.) 167 (1936).

[2] From 1915 to 1931, this commission was the Public Service Commission of Oregon. It was changed to a single commissioner in 1931.

[3] *Oregon Laws*, 1933; Chap. 441, Sec. 2.

[4] These were Eugene, Astoria, and Pendleton, Oregon; Walla Walla and Yakima, Washington; and Lewiston, Idaho.

As of December 31, 1935, securities of the Northwest Cities Gas Company in the hands of the public consisted of $1,275,000 of 20-year 6 per cent gold bonds, due January 1, 1949. Other indebtedness included the two notes under consideration, totaling $1,750,000, and an open account balance of $4,311.69 payable to the Lone Star Gas Corporation. The demand note for $1,705,000 dated January 1, 1934, resulted from the consolidation of six notes issued over a period of several years, as follows:

Note of	$ 415,000	Dated May 1, 1930
Note of	850,000	Dated March 1, 1931
Note of	15,000	Dated April 17, 1931
Note of	25,000	Dated July 16, 1931
Note of	225,000	Dated December 31, 1932
Note of	175,000	Dated December 31, 1933
Total	$1,705,000	

The indebtedness evidenced by these notes resulted from transactions which originated at the time of the acquisition of the Northwest Cities Gas Company by the Lone Star Gas Corporation. As of October 1, 1929, the former company owed the Union Utilities Company, Inc., on open account, $256,001.53, and the Union Management and Engineering Corporation, $6,652.78. There was no record as to the purposes for which these obligations were incurred. Both of the accounts were transferred to the credit of the Lone Star Gas Corporation, and were increased up to May 1, 1930, by additional credits amounting to $110,215.74. At that time a note for $415,000 was given to the latter company, leaving in the open account a debit balance of $42,129.95.

In 1931, three more notes were issued to the Lone Star Gas Corporation. On March 1, 1931, the Northwest Cities Gas Company's two-year gold notes matured and were retired by the issuance of a demand note for $850,000. On April 17, 1931, a note was issued to cover $15,000 in advances to meet operating expenses; on July 16, 1931, another note, amounting to $25,000, was issued for the same purpose. From May 1, 1930, to December 31, 1932, entries in the open account with the Lone Star Gas Corporation were as shown in the table at the top of p. 305.

The credit balance in this account was reduced to $18,308.70 on December 31, 1932, by the issuance to the Lone Star Gas Corporation of a note for $225,000.

In 1933 additional advances were made to the Northwest Cities Gas Company on open account. At the end of the year a

	Debit	Credit
Bond Interest	.....	$153,000.00
Interest on Notes	.....	147,018.34
Management Fees	.....	11,525.37
Miscellaneous Charges	.....	144.94
Cash Payment on Account	$26,250.00	.....
Total	$26,250.00	$311,688.65

note for $175,000 was given to the parent company, reducing the amount owed to $24,518.51. In 1934, entries in the account were as follows:

	Debit	Credit
Bond Interest	.....	$76,500.00
Advance to Pay Taxes	.....	20,000.00
Miscellaneous Charges	.....	1,023.79
Cash Payment on Account Coos Bay Gas Company	$60,000.00	.....
Receivables	12,730.61	.....
Total	$72,730.61	$97,523.79

By means of a note for $45,000 dated December 31, 1934, the balance owed the Lone Star Gas Corporation was reduced to $4,311.69.

In May, 1934, the parent and subsidiary companies entered into an agreement concerning the payment of interest on indebtedness to the former evidenced by either notes or open account balance. Because of the decline in the subsidiary's earnings, all such indebtedness was placed on an income basis. The subsidiary was required to pay interest not exceeding 6 per cent on its obligations to the parent only to the extent of any income available after deducting all operating expenses, depreciation, taxes (except Federal income taxes), and interest on all other obligations.

Under an Oregon statute of 1933, definite restrictions were placed upon the right of utilities to issue evidences of indebtedness for any purpose reasonably chargeable to operating expenses or income. While the notes issued before 1933 were, at least partly, for purposes of this type, the question was raised as to whether the Public Utilities Commissioner, in an application for issuance of a refunding note, had authority to investigate the circumstances

under which the original notes were issued, if such issuance took place before the effective date of the law in question. In view of prior decisions concerning this subject, the commissioner believed he had such authority.[1]

In reaching a decision on the Northwest Cities Gas Company's application, the commissioner considered the effect of the note issues on the financial structure of the company. It was found that the cost of the company's properties to the original owner was $2,245,018.55. These same properties were later bought by the Union Utilities Company, Inc., for $2,016,164.58, including materials and supplies. Assuming the difference to have been accrued depreciation, the commissioner found that the fixed asset account of the Northwest Cities Gas Company would contain the follcwing:

Original Cost of Property	$2,245,018 55
Less: Estimated Depreciation	228,853.97
Depreciated value	$2,016,164.58

The following securities were issued against this property at the time of acquisition:

First Mortgage Bonds	$1,275,000
Two-year Gold Notes	850,000
Common Stock	100,000
Total	$2,225,000

Assuming that the difference of $208,835.42 between the above totals was represented by current and other assets, the commissioner found that 95.5 per cent of the total capitalization of the company in 1929 consisted of funded debt. From 1929 to December 31, 1934, there was added to the fixed capital account a net amount of $241,202.36, while the depreciation reserve increased by $60,819. Net current, miscellaneous, and deferred assets amounted to $178,140.24 on December 31, 1934. By adding this figure to fixed capital on the assumption that it was properly capitalizable, the capital structure of the Northwest Cities Gas Company as of December 31, 1934, was found to be as follows:

[1] *Re Mill Valley & Mt. T. Scenic Railway* (1912) 1 R.C.R. 422; *Re United Gas & Electric Co.*, P.U.R. 1918E, 311; *Re Peoples ex. rel. Dry Dock, E.B. & B.R. Co.* v. *Public Service Commission*, 167 App. Div. 286, 308; 153 N.Y. Supp. 344.

Fixed Capital	$2,486,220.91
Less: Depreciation	289,672.97
	$2,196,547.94
Other Assets	178,140 24
Total Assets	$2,374,688.18
First Mortgage Bonds	$1,275,000.00
Notes	1,750,000 00
Capital Stock	100,000.00
Total	$3,125,000 00

On the basis of these figures total indebtedness was equal to 127 per cent of the capitalizable assets.

During hearings before the commission's examiners, the witness for the Northwest Cities Gas Company testified as to the prospects for satisfactory earnings in the future. He stated that the company's properties were somewhat overbuilt, and that without the aid given by the parent company, operations could not have been continued. While no definite predictions could be made as to future earnings, in view of uncertain factors such as the development of competitive power projects, the witness expressed considerable doubt as to whether the company would be self-supporting in the near future. It also appeared that bond interest would not be covered for an indefinite period, despite the continuation of inadequate allowances for depreciation.

In his decision refusing to accept the company's application for approval of the issuance of the two demand notes, the Oregon Public Utilities Commissioner stated:

> For the years 1929 and 1935, inclusive, the net income was a loss of $619,317.17. Were it not for the fact that interest on the note indebtedness was not charged during the years 1934 and 1935 the loss would have been approximately $200,000 greater than that shown on the books. To approve this application would in effect permit the capitalization of this operating loss. Losses are the risk of the stockholders and must be borne by them. While in the instant case the stockholder and the payee are identical, the principle that operating deficits cannot be treated in this manner must be maintained or a higher value will be placed on failure than success. A stockholder should not be permitted, though the medium of voting control, to place his loss in the status of a preferred claim on the corporation.
>
> It is urged by the applicant that the advances of funds by the [parent company] . . . to pay operating expenses and bond interest have been the means of continuing the company's operations during its existence, and that the [parent company] . . . should be commended

for trying to maintain a losing proposition. The implication is, of course, that lacking said advances the company would have been forced into receivership. While not material to this proceeding, it is our opinion that such a course under section 77-B of the Bankruptcy Act would have been far less costly to the applicant's stockholder.

How do you account for the purchase by the Lone Star Gas Corporation of the Northwest Cities Gas Company?

To what extent are utilities obligated to render service to the public at a loss?

Is there any relation between a utility's capitalization and the service it renders to customers?

45. PENNSYLVANIA GAS & ELECTRIC COMPANY[1]

The Pennsylvania Gas & Electric Company in 1935 petitioned the Pennsylvania Public Service Commission for authority to issue $150,000 of common stock to its parent corporation in exchange for additional common stock in a company already controlled by the Pennsylvania Gas & Electric Company.

The latter company was incorporated in Pennsylvania for the purpose of furnishing gas to the city of York and certain other sections of York County. All the company's voting stock was owned by a Delaware holding company, the Pennsylvania Gas & Electric Corporation, which also controlled the Old Dominion Gas and Electric Corporation, a Virginia utility. The Petersburg Gas Company, another Virginia utility adjacent to the Old Dominion corporation, and from which the latter purchased all the gas it sold, was controlled through stock ownership by the Pennsylvania Gas & Electric Company.

Under a plan of reorganization of the holdings of the Pennsylvania Gas & Electric Corporation, it was proposed that the Old Dominion corporation should be merged with the Petersburg company. This action, involving the two Virginia utilities, did not come under the jurisdiction of the Pennsylvania commission. At the time of the petition, the Old Dominion corporation had outstanding $50,000 of stock, all of which was owned by the Pennsylvania Gas & Electric Corporation. The latter company also had claims against the former on open account amounting to $148,500. Thus, the total amount advanced by the parent company was $198,500, which represented money used for the construction of fixed plant and for the partial payment of unearned operating expenses. The Old Dominion corporation had on its books a deficit from operations amounting to $45,192. According to the plan of reorganization, the Old Dominion corporation was to issue to the Pennsylvania Gas & Electric Corporation $100,000 of stock in full payment of its debt of $148,500, thus eliminating the aforementioned book deficit and creating a surplus of $3,308.

[1] *Re Pennsylvania Gas & Electric Co.*, 10 P.U.R. (N.S.) 236 (1935); 17 P.U.R. (N.S.) 473 (1937).

After this adjustment, the Old Dominion corporation was to be merged with the Petersburg company. In exchange for its holdings of $150,000 of Old Dominion stock, the parent corporation was to receive an equal amount of newly issued Petersburg stock, the previous outstanding stock of the latter company remaining in the hands of the Pennsylvania Gas & Electric Company.

The final step in the reorganization plan was the one which was under consideration by the Pennsylvania Public Service Commission. In its petition, the Pennsylvania Gas & Electric Company asked permission to issue to its parent corporation $150,000 of common stock in exchange for an equal amount of Petersburg stock which was to be acquired by the Pennsylvania Gas & Electric Corporation as a result of the merger of the two Virginia utilities. Thus the Pennsylvania Gas & Electric Company would again own all the stock of the Petersburg company, including the additional stock issued against the assets acquired from the Old Dominion Gas & Electric Corporation.

In considering the application for the issuance of stock, the commission analyzed the capital structure of the Pennsylvania Gas & Electric Company. According to figures submitted to the commission, the company's capital assets and securities outstanding were as follows:

Outstanding Capitalization:		
Common Stock (All Held by Penn. G. & E. Corp.)	$1,200,000	
Preferred Stock	1,500,000	
Bonds	5,014,048	$7,714,048
Fixed Capital Undepreciated	3,896,135	
Fixed Capital Advances to Subsidiaries	459,000	4,355,135
Excess of Capitalization over Fixed Capital		3,358,913
Working Capital (Estimate: Representing 2 Months' Operating Expense)		55,000
Capitalization Applicable to Investments		3,303,913
Investment in Adjacent Properties:		
Interborough Gas Company	184,210	
Conewago Gas Company	892,482	1,076,692
Amount Applicable to Other Investments		$2,227,221

The commission found that the Interborough Gas Company and the Conewago Gas Company were two subsidiaries operating in territory adjacent to that served by the Pennsylvania Gas & Electric Company. Together, the three companies held franchises for gas service throughout York County. The Interborough Gas

Company, a distributing company, bought all its gas from its parent company.

The commission also found that a considerable proportion of the Pennsylvania Gas & Electric Company's securities were issued against various holdings in other companies, as follows:

Investment	Amount Invested
North Penn Gas Company (Preferred Stock)	$1,317,960
Peoples Light Company of Pittston (Common Stock)	816,008
Petersburg Gas Company (Common Stock)	548,911
Total Invested	$2,682,879

The proposed plan, if carried out, would in effect add $150,000 to the common stock of the Pennsylvania Gas & Electric Company, such increase to be offset by an equal addition to the $548,911 already invested in the Petersburg Gas Company.

In denying the company's petition for the issuance of additional common stock, the commission said:

> Not one of . . . [the companies listed above] is in any way concerned with petitioner's gas business. There is no connection of lines, no contiguity of territory, no product sold to or bought from any of them by petitioner. In reality, they are merely other companies belonging to the Pennsylvania Gas & Electric Corporation system, into which the holders of petitioner's securities, without intention on their part, have poured their funds. Yet this application contemplates a further investment in the securities of one of these companies.

The commission stated that the Petersburg Gas Company and the Old Dominion Gas & Electric Corporation were both Virginia public service companies. Thus, their operations were entirely outside the jurisdiction of a Pennsylvania regulatory body. However, available figures disclosed that since its incorporation in 1928 the Old Dominion company had accumulated a book deficit of $45,192. Actually the commission believed this figure to be too low since annual depreciation charges were regarded as inadequate. For example, the results of seven years of operation showed a depreciation reserve equal to 3 per cent of the original cost of the plant. Furthermore, the most recent annual allowance for depreciation was approximately 1.26 per cent of fixed plant. In the case of the Petersburg Gas Company also, the commission did not approve of the depreciation policy pursued. It was stated that an annual charge of $10,000 was being made to allow for depreciation on plant amounting to $820,137.

In its decision the commission set forth some general principles that had guided it since 1933 in determining whether security issues should be approved or disapproved.[1] It believed that the functions to be performed consisted of the maintenance of the credit of Pennsylvania utilities, and the protection of the interests of utility investors, so far as the objectives could be attained by means of regulation. In further explanation of its position the commission said:

> Maintenance of company credit is most important from the standpoint of consumers. Extension of facilities to new areas and improvements to existing plants require funds which most utilities can raise only through the flotation of stocks or bonds to the investing public. If, because of impairment or destruction of a company's credit, this source of funds is shut off, either the company must continue to operate without up-to-date equipment and without extending service to new consumers, or the necessary funds for these things must come by a diversion of such earnings as may be available into capital channels.
>
> The protection of the investor is necessary, not only for his sake, but for that of the consumer as well, because from the investor comes all or nearly all of the funds necessary to install public service properties. In fact, from this viewpoint, protecting the investor and maintaining company credit are identical functions.

Early in 1937 the Pennsylvania Gas & Electric Company applied to the commission for authority to sell to the Pennsylvania Gas & Electric Corporation certain of its holdings of the preferred stock of the North Penn Gas Company.

The North Penn Gas Company, all of whose common stock was owned by the Pennsylvania Gas & Electric Corporation, was engaged in furnishing gas to various communities in three counties in northern Pennsylvania. This area was not sufficiently close to properties controlled by the Pennsylvania Gas & Electric Company to make practicable the operation of the North Penn Gas Company as part of an integrated gas system.

At the time of the application, the Pennsylvania Gas & Electric Company had a capitalization, including stock and funded debt, of approximately $7,600,000. The undepreciated book value of its fixed capital used in furnishing service to its own consumers was $3,937,773. Investments in affiliated companies were as follows:

[1] The commission obtained jurisdiction over the issuance of securities by public service companies on July 1, 1933, by an act of the Pennsylvania legislature (Act of June 3, 1933, P.L. 1526).

Company	Amount Invested	
Adjacent:		
Interborough Gas Company	$ 135,718	
Conewago Gas Company	592,482	$ 728,200
Nonadjacent:		
North Penn Gas Company	$1,317,960	
Peoples Light Company of Pittston	816,008	
Petersburg & Hopewell Gas Company*	548,911	
Penn Western Service Corporation	1,020	2,683,899
Total		$3,412,099

* Incorporated March 26, 1901, in Virginia as the Petersburg Gas Company; name changed to title above on February 23, 1935.

In 1937 the North Penn Gas Company had outstanding 13,160 shares of $7 no par cumulative preferred stock. In May 1927, the Pennsylvania Gas & Electric Company purchased 6,190 shares of this stock from the issuing company, and in June, 1927, it bought the remaining 6,970 shares from its parent, the Pennsylvania Gas & Electric Corporation. All the stock was purchased at $100 per share. As the preferred stock did not carry voting rights, the control of the North Penn Gas Company remained in the hands of the parent corporation. Dividends on the preferred stock had been paid regularly at the rate of $7 per year since the issuance of the stock.

In its petition to the commission, the Pennsylvania Gas & Electric Company applied for approval of an agreement made on January 25, 1937, to sell 6,500 shares of the North Penn preferred stock to its parent corporation on or before March 1, 1937, at $100 a share plus accrued dividends to the time of delivery. By the same agreement the parent corporation was given an option to purchase at the same price all or part of the remaining preferred stock held by the Pennsylvania Gas & Electric Company, such option to expire September 1, 1938.

It was stated that the $650,000 received from the sale of the first block of preferred stock would be used to retire funded debt of the petitioner. Specifically, it was planned to call at 103 the entire issue of $627,300 principal amount 15-year 6 per cent sinking-fund gold debentures, Series A, due December 1, 1940. As a result of various tax covenants in the indenture, the actual annual cost to the company of a debenture held by a Pennsylvania resident was 6 per cent interest, plus 0.8 per cent corporate loans tax, plus 0.12 per cent Federal income tax, or a total of 6.92 per cent, excluding various incidental costs such as filing tax returns and mailing checks.

In case the Pennsylvania Gas & Electric Corporation elected to exercise its option and purchase the remaining shares of preferred stock, it was planned that the proceeds would be used by the Pennsylvania Gas & Electric Company to retire additional outstanding funded debt.

The Pennsylvania Public Service Commission in approving the application under consideration said:

> The commission is of the opinion that the funds obtained by public service companies from the issuance of securities should be used in a manner related to the rendition of public service by the issuers. The application before us is a step in that direction. If the proposed sale were not permitted, petitioner would continue to hold its North Penn Gas Company investment, and would probably continue its present capital set-up by refunding the debentures, when they mature in 1940, through the issuance of new securities. On the other hand, by obtaining our consent, petitioner will be enabled to reduce both its "unrelated" investments and its own securities outstanding against them.

How do you appraise the managerial policies which are evidenced by this case? What constructive suggestions for improvement can you offer?

b. Irregularities in Construction Accounts

46. Clarion River Power Company[1]

On October 13, 1922, the Federal Power Commission issued a 50-year license to the Clarion River Power Company to construct and maintain a water-power development on the Clarion river, in the state of Pennsylvania, known as the Piney project, to be commenced by June 1, 1923, and completed by September 1, 1927. The project was completed within the time limit.

In October, 1930, the Clarion River Power Company brought suit in the District of Columbia Supreme Court against the commission to restrain it from conducting a hearing to ascertain the original cost and net investment of the company in this project. The commission contended that it was authorized by law to hold the hearing in question. The case depended upon the construction to be given to the act of June 10, 1920, commonly known as the Federal Water Power Act.[2]

Section 4a of the act provided that in order to aid the commission in determining the net investment of the licensee in any project, the licensee should upon oath, within a reasonable time after construction of the original project or any addition or betterment, file with the commission a statement, in duplicate, showing the actual legitimate cost of such project, addition, or betterment. The same section also provided that the licensee should grant to the commission or its agents free access to all books, records, papers, and documents relating to the project.

On April 11, 1930, the Clarion River Power Company filed with the commission its statement in duplicate, as required by Sec. 4a, which showed "the actual legitimate cost of the construction" to be more than $11,000,000.

The license to the company provided that each item of cost should be supported by proper voucher or other record, and that such voucher or record in support of any item which was a proper

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[1] *Clarion River Power Co.* v. *Patrick J. Hurley et al.*, P.U.R. 1931B, 262.
[2] 41 *Stat.* 1065.

charge to the cost should become part of the permanent records of the project and should be kept and retained by the licensee in the manner required by the commission.

The accounting division of the commission made an examination and audit of the books, records, and accounts of the company after the company's report was filed, and in August, 1930, filed with the commission its preliminary accounting report on the actual legitimate investment in the company's project.

The commission's accountants recommended eliminating from the company's statement of actual legitimate investment a total of $6,213,904.78, or approximately 55 per cent of the amount claimed by the company. Some of the items in the company's report to which objection was made by the accounting division were expenditures of $448,772.50 made between 1912 and 1922, during the preconstruction period. The elimination of these items was recommended on the ground that they were wholly unsupported by vouchers. The commission's accountants proposed to eliminate expenditures of $5,765,132.28 during the construction period, which occurred after issue of the license. The license contained the provision that vouchers should be taken and preserved for every item of expense. It was alleged, as to items aggregating more than $1,400,000, that the company had not furnished supporting evidence of such expenditures. Net interest costs to the company on its securities covering the period accounted for were claimed to be more than $730,000. This was eliminated because information as to the proceeds received from the securities and final disposition thereof had been withheld from the examiner. It was recommended that more than $2,500,000 be eliminated on the ground that it represented profit made on the construction of the Piney project by a construction company which was said to be affiliated with the power company. It was also recommended that $800,000 be eliminated on the ground that it represented profit made by one of the concerns affiliated with the company in connection with the sale of its securities and the development of the entire project. It was claimed not to be an item of actual cost of the project itself.

Thus the accounting officers of the commission reported that approximately 30 per cent of the actual legitimate cost of the project as claimed by the company was in reality profit made by one or more corporations affiliated with the power company, that

about 15 per cent of such claimed cost was not supported by vouchers, and that as to more than 5 per cent of capital expenditures the company refused to submit evidence in its possession from which it might be determined how much of this item was actually expended.

The commission asserted that the duty was imposed upon it to hold a hearing after the project was completed, to take evidence, and to determine whether or not certain items were legitimate expenditures. The company contended that the commission was wholly without power to do anything more at that time, and that under the statute the commission must wait for at least 20 years, and possibly 50 years, before it could determine the facts in dispute.

The question before the District of Columbia Supreme Court involved consideration of the purpose and objects of the Federal Water Power Act, as well as a careful analysis of the rules and regulations issued by the commission under this act, and finally of the conditions contained in the license issued to the Clarion River Power Company.

The court pointed out that the subject of the Federal Water Power Act was one peculiarly within the province of Congress; that the statute marked a departure in the method of dealing with the public domain; that while it was clear that water power was to be developed by private capital, excessive profits were to be prevented, either by regulation of the rates or recapture of a portion of the profits either by the states in which the projects were situated or by the United States, and by the application of the excess profits to the reduction of the net investment in the property; that finally at the end of 50 years the United States had the privilege of taking over the project at the then net investment.

For the purposes of the act, there were three periods or points involved in each license: the first 20 years; the ensuing 30 years; and the termination of the license period.

During the first period of 20 years, excessive profits were to be prevented by permitting rates to be fixed by the state in which the project was located; if the state in which the power project was located had not created a body with power to fix rates, then the excess profits were to be expropriated by the United States and the amount thereof was to be fixed by the Federal Power Commission.

During the ensuing period of 30 years (known as the amortization period) it was provided in the statute that the excess profits should be applied in part to reducing the net investment. This provision was repeated in the Federal Power Commission's own rules and regulations, and it was also contained in the license granted to the Clarion River Power Company.

The rate of fair return was specified both in the commission's regulations and in the company's license to be one and one-half times the weighted average annual interest rate payable on the par value of the bona fide interest-bearing debt of the licensee; except that, if such debt was less than 25 per cent of the licensee's actual legitimate investment, the rate of return should be twice the legal rate of interest in the state in which the project was located. It was also provided that during the amortization period certain named percentages of the surplus earnings should be applied to certain named amounts—the effect of all the provisions being to reduce the net investment by that percentage of this surplus. But there was inserted the following proviso:

> If at the end of any calendar year during this amortization period *the commission shall find that the accumulated earnings of the licensee during the period of operation including the first 20 years have not yielded a fair return upon the actual legitimate investment,* the proportion of the surplus earnings to be paid into the amortization reserves shall be a small fraction of the amounts theretofore provided until such time as the accumulated earnings of the licensee will be in the *judgment of the commission* a fair return upon such investment for the entire period of operation.[1]

At the end of the license period of 50 years the United States was authorized to take over the property or permit a state, municipality, or other corporation to take it over upon condition that the licensee should be paid the then net investment in the project taken.

Concerning certain provisions of the law and the issues involved in the case, the District of Columbia Supreme Court said:[2]

> The determination at the end of 50 years mentioned in section 14 is necessarily a judicial determination; it is the amount to be paid if plaintiff's property is then taken from it.
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> But the requirements of the statute under the first and second periods would be difficult if not impossible of enforcement unless there

[1] Italics as given in decision of the Supreme Court of the District of Columbia.
[2] P.U.R. 1931B, 262, 267, 268.

be a determination of the net investment by the commission. This determination is a legislative or administrative question. There is no provision in the statute for the making of such determination by the courts.

It is apparent from the foregoing that it is of the utmost importance both to the owner and to the United States that the actual legitimate cost of an original project should be known to all parties concerned promptly upon the completion of the project.

The commission asserts that the statute confers the power and imposes the duty upon it to now make this determination in the present case. Plaintiff contends that the determination of the actual legitimate cost is a judicial determination to be made by the proper district court at the end of 50 years, if at all. Plaintiff also contends—should the foregoing question be decided against it—that the determination is not to be made until 20 years have elapsed, that is, at the end of the first period, and before the beginning of the amortization period.

. . . . . .

If the items of capital account already incurred and those involving subsequent additions and betterments are to be opened up for correction 20 or 50 years hence, corresponding changes will be necessary in a large portion of the company's accounts during that period. The resulting confusion would be so great as probably to make it impossible to reconstruct from the then existing data a correct set of books.

If during this period some of these items erroneously have been treated as part of the actual legitimate project cost, the mere lapse of time will have other serious effects. On the one hand, it will have a tendency to cause these items to assume the nature of vested interests; on the other, if these items, years hence, are finally eliminated from the capital, the value of plaintiff's securities will be suddenly and greatly lessened. And much more important—if items are erroneously retained in the capital account, the rates to be charged by the company during this long period will be higher than if they should be eliminated from the actual net investment at the present time.

The serious objections to the contentions advanced by plaintiff were apparent when the statute was passed.

I am of opinion that it was the intention of Congress to give the commission power to make this determination upon completion of a project, and from year to year thereafter; that such power is necessary to the administration of the statute; that such power was conferred by statute; and that the exercise of this power has been provided for by the rules and regulations adopted by the commission under the statute and by the conditions inserted in the license which plaintiff accepted and under which it is now operating.

Appraise the type of regulation involved in this case from the point of view of (*a*) the investor; (*b*) the public; (*c*) the utility.

c. Centralization within a Holding Company of Major and Minor Management and Financial Transactions

47. New Hampshire Gas & Electric Company[1]

In May, 1930, the New Hampshire Public Service Commission ordered representatives of the New Hampshire Gas & Electric Company and of the Derry Electric Company, doing business in Portsmouth and Derry respectively, as well as elsewhere in the state of New Hampshire, to appear at a hearing which was to be held in June, 1930, to inform the commission whether or not these companies and the companies which in turn controlled the New Hampshire companies had complied with all provisions of the law and orders of the commission. The local companies were also ordered to furnish detailed evidence as to their capitalization, franchises, and the manner in which the properties were managed and operated.

The defendant companies obtained an injunction from the court postponing the hearing and specifying that the commission could demand only such information as pertained directly to the New Hampshire utilities involved, but could not require these companies to obtain evidence outside the state which was not in their possession or control. Hearings were held, therefore, under the limitations of this order in September, October, November, and December of 1930, and finally in February, 1931.

The Associated Gas & Electric Company, which was involved in these hearings, was incorporated in 1906, under the laws of New York, by the owners of a group of gas and electric companies doing business in that state. In its subsequent program of expansion, it acquired numerous properties in 18 states, in Canada, and in the Philippine Islands. Collectively the various companies which were thus owned or controlled by common interests came to be known as the "Associated Gas & Electric System," although legally there was no such "system."[2] The latter was claimed to

[1] Decision D-1370, 14 New Hampshire Public Service Commission 82 (June, 1931); P.U.R. 1931D, 225.

[2] Throughout this case "Associated System" is used instead of the longer title "Associated Gas & Electric System," except as it appears in quotations. This title

be only a name like the Vanderbilt System, having no officials or employees, being owned and controlled by common interests.

The Associated System first began its activities in New Hampshire in 1924 when the Associated Gas & Electric Company acquired control of the Portsmouth Power Company, in connection with certain properties formerly owned by the New Hampshire Electric Railways. The name of the Portsmouth company was changed to the New Hampshire Gas & Electric Company, and later small utilities operating in contiguous territory were acquired and consolidated with the New Hampshire Gas & Electric Company. In the early fall of 1927 the Derry Electric Company was acquired, which continued to operate under that name until March 18, 1930, when it was purchased by the New Hampshire Gas & Electric Company for $547,591 at a mortgage foreclosure sale at public auction. The foreclosure was brought about through a default on a bond issue at a time when, according to the record, earnings were ample to cover the interest charges thereon. The purchasing company later voluntarily increased the bid price to $873,950.29. The approval of the commission was not secured, either to the purchase or to the subsequent increase in the bid price.

In December, 1926, the New England Gas & Electric Association was created and became a unit of the Associated System. It was organized as a Massachusetts trust, apparently for the purpose of centralizing legal stock control of utilities owned by the Associated System in Massachusetts, New Hampshire, Maine, Nova Scotia, and New Brunswick. It was stated by counsel for the Associated System that a "trust" was formed because of a Massachusetts statute which did not make it illegal for a foreign corporation to own a Massachusetts utility, but did prohibit the issue of stock by such a foreign corporation, or the issue of securities based upon a Massachusetts utility. Subsequently a Massachusetts attorney general ruled that the statute did not apply to a Massachusetts trust or to the companies owned by it, provided the stock in the trust was "owned not by the Associated Gas & Electric Company, but merely by individuals who happen also to own a large interest in the Associated Gas & Electric Company."[1] The common stock of this Massachusetts trust was,

should not be confused with the "Associated Gas & Electric Company," to which reference has already been made.

[1] On this point the commission said: "Whether or not the facts justify the claim

therefore, placed in the name of the Manson Securities Trust, and a large block of preferred stock was placed in the same name and in the name of Daly & Company. The nominee of the Manson Securities Trust was a young attorney in "Mr. Hopson's office. . . . Mr. Hopson in turn is Treasurer of the New England Gas & Electric Association, . . . Vice-President, Treasurer, and Director of Associated Gas & Electric Company," a "Vice-President of the New Hampshire Gas & Electric Company," and "recognized" by the "Assistant Treasurer of said Massachusetts Trust and Treasurer of the New Hampshire Gas & Electric Company" as "the guiding spirit of the whole Associated Gas & Electric System."[1] Daly & Company was itself a nominee. Although it was claimed that the New England Gas & Electric Association was not a subsidiary of the Associated Gas & Electric Company, the company was owned and controlled by individuals who were also stockholders of the Associated Gas & Electric Company.[2]

In July, 1927, the New England Gas & Electric Association bought the stock of the Portsmouth Power Company for $1,950,860.09, which was equivalent to approximately $130 per share. The purchase was made, according to the commission, "from some association or company also in the Associated System." Substantiating vouchers for this payment were said to be "not available."

The commission concluded that if it looked through the shell to the substance, both the New Hampshire Gas & Electric Company and the Derry Electric Company were controlled and operated by the Associated Gas & Electric Company, although it was claimed that from a technical legal standpoint neither was so controlled or operated, although they were affiliated. The commission believed that according to the evidence the local utility officials, irrespective of their titles, acted merely as subordinates to the real voice of management and control located in New York; that from there authority was transmitted to the office of the New England Gas & Electric Association in Cambridge, Massachusetts, and was thence sent to the employees of the local utilities in New Hampshire.

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that the application of the Massachusetts statute has been successfully evaded is not for us to decide."

[1] 14 N. H. Public Service Commission 82, 95.

[2] *Ibid.*, p. 96. See also *Report of the Special Commission on Control and Conduct of Public Utilities* (The Commonwealth of Massachusetts), March, 1930, pp. 146–154.

No substantial bank account was maintained in the name of the New Hampshire Gas & Electric Company, or in that of the Derry Electric Company. Deposits were made in the name of the New England Gas & Electric Association in a Portsmouth bank, and although the New Hampshire companies in their annual returns to the commission showed certain funds on hand as cash at the close of the year, it appeared from the evidence that the same funds were shown as cash of the New England Gas & Electric Association in its returns to the Massachusetts authorities. The commission declared that the same "cash on hand" could not represent the cash balance of both companies.

The executives of the Associated System conceived a plan which was, in effect, the loaning of money to the operating utilities on a so-called "open-account" basis. Under this plan, funds were made available to the New Hampshire Gas & Electric Company and the Derry Electric Company by their stockholder, the New England Gas & Electric Association. If necessary, the funds were obtained from some other corporations or trusts within the Associated System. Such advances of funds to the local utilities resulted in the stockholder's entering both upon its books and upon those of the local utilities the amount loaned. In effect, therefore, this was simply a bookkeeping transaction. The indebtedness so incurred by the local utilities, however, was subjected to a monthly interest charge which was made in like manner. The only evidences of the debt were the book entries and the intercompany vouchers. The control through such devices as direct or indirect stock ownership or interlocking officers and directors was such as to make unlikely, if not impossible, any failure of the local utility to pay the amount due if, as, and when demanded. From the inception of this open account until May 31, 1926, interest was added each month at 8 per cent. After that date, instead of being compounded monthly, it was paid in cash at 8 per cent, at times from money advanced by the creditor. After the formal investigation of the New Hampshire Gas & Electric Company and the Derry Electric Company was started, however, the interest rate was reduced to 6 per cent. The investigation disclosed that there was never any action by the board of directors of the New Hampshire Gas & Electric Company on the question of interest charged on its open-account indebtedness and that neither the stockholders nor the directors had ever voted to pay interest at 8 per cent or at any other rate on their open account.

When the New Hampshire Gas & Electric Company was acquired by the Associated System, it had outstanding $1,394,000 face value of 6 per cent gold bonds, and $500,000 par value of 7 per cent preferred stock. On April 6, 1926, the directors voted to call said bonds at 105, as permitted by the mortgage. On May 21, 1926, the directors voted to call the preferred stock at 110. The premiums paid were, on the bonds, $69,700, and on the stock, $50,000, plus Federal stamp taxes and other charges, which made the aggregate cost of these transactions $150,000. On May 31, 1926, the Associated Gas & Electric Company charged the local utility $2,013,700 for funds advanced to carry out these refunding operations. The premiums paid on these issues, as well as the interest on them, were originally charged to the local utility. Later the premium charges were removed, but there was no adjustment of the interest charges. It was admitted at the hearing that the premiums should never have been charged to the local utility. Any benefits from the calling of these senior issues accrued to the Associated Gas & Electric Company as the beneficial owners (directly or indirectly) of the local utility's common stock.

Following the calling of the $1,394,000 6 per cent bonds, a series B 5 per cent bond to the amount of $1,394,000 was issued without authorization by the commission. This was claimed to be a treasury bond, but was held for a time by the Associated Gas & Electric Company as collateral security for the open account. This practice was later discontinued.

Among numerous other items entering the utility company's open account was one of $150,000 for dividends on common stock paid to one of the Associated System's nominees. An item of $75,000, representing dividends paid in August, 1926, was neither authorized nor approved by the New Hampshire Gas & Electric Company until about two months after the hearings had begun.

The commission quoted from the U. S. Supreme Court decision in the case of *Southwestern Bell Telephone Co.* v. *Public Service Commission*,[1] to the effect that it had not "forgotten that while the state may regulate with a view to enforcing reasonable rates and charges, it is not the owner of the property of public utility companies, and is not clothed with the general power of management incident to ownership." It found, however, that the financial

[1] 262 U.S. 276, 289 (1923).

obligations created by this open-account method, unless approved by it, were illegal.

Both the New Hampshire Gas & Electric Company and the Derry Electric Company were managed by the J. G. White Management Corporation under contracts entered into in June, 1929. Before this time, the Portsmouth Power Company, later named the New Hampshire Gas & Electric Company, employed the Associated Gas & Electric Company as general operating and financial manager of its properties. This contract ceased to be effective May 1, 1928, on which date the Associated Gas & Electric Company acquired control of the J. G. White Management Corporation.

By the terms of these management contracts which were made with subsidiaries of the New England Gas & Electric Association by the J. G. White Management Corporation, this corporation was to receive a fee of 2½ per cent of the gross earnings of the operating utilities annually. This fee was payable monthly. Among other provisions, the management company agreed to employ on behalf of the local utilities such persons as it deemed proper in the operation of the properties, and to fix their compensation; to advise and consult with the local utility, and/or its purchasing agent; to supervise the bookkeeping; to advise regarding the relative merits of appliances sold to customers, and the manner of their sale; to supervise finances, and to cooperate with the local utility's "financial experts" (hired by the J. G. White Management Corporation) in the formulation of financial policies; to advise on legal problems; to furnish at its expense a divisional general manager and a divisional accounting officer; to assist in the formulation of rate schedules; and to render engineering advice when requested. It was stated, however, that the J. G. White Management Corporation would have only such powers as could be legally delegated to it by the boards of directors of the local utilities. The operating companies agreed to give to the management company full access to all their properties, books, and records. The local utilities were to reimburse the management company for any traveling, accounting, or similar expenses, incurred on their behalf. In the course of the testimony rendered in connection with the commission's investigation of these contracts, it was stated that the management company's profits from these contracts could not be ascertained.

The commission concluded from the evidence presented that the J. G. White Management Corporation was in effect operating the New Hampshire Gas & Electric Company and the Derry Electric Company, and since the commission had not assented to such operation, these management contracts were declared null and void. The commission quoted the following from the decision of the U. S. Supreme Court in the case of *Smith* v. *Illinois Bell Telephone Co.:*

> If the owner of a utility increases operating expenses by payments to himself, subsidiary corporations or affiliated companies, those payments may or may not provide an unconscionable profit through the position occupied by said owner. Funds for operating expenses are received from the application of rates paid by the public. A regulatory body is entitled to know what profit results from each such transaction.[1]

Both the New Hampshire Gas & Electric Company and the Derry Electric Company had construction contracts dated June 1, 1929, with W. S. Barstow & Co., Inc., which superseded previous construction contracts with the Consumers Construction Company. The Associated Gas & Electric Company acquired control of W. S. Barstow & Co., Inc., in February, 1929. The Consumers Construction Company was also affiliated with the Associated System. By the terms of these contracts, W. S. Barstow & Co., Inc., agreed, among other things, to plan and direct the carrying out of construction programs and policies, and to suggest improvements, but they were exempted from the preparation of plans and specifications and other detailed engineering service, as well as from the field supervision of construction work; to contract in the name of the local utilities for labor, engineering services, and materials necessary for construction; to advise upon the possibility, desirability, and terms of acquisition of other plants and properties; and to furnish consulting engineering service. Like the J. G. White Management Corporation, however, it was to have only such powers and authority as could be legally delegated to it by the utility's board of directors. W. S. Barstow & Co., Inc., was to receive a fee of 7½ per cent of the gross amount charged or chargeable after June 1, 1929, to the plant or property accounts of the local utility, payable monthly. Furthermore, it was to be reimbursed for all special expenses incurred

[1] 282 U.S. 133 (1930). See case entitled Illinois Bell Telephone Company (A), p. 207.

for the benefit of the local utilities. No witnesses were able to state what profits accrued to W. S. Barstow & Co., Inc., from these contracts.

Both the New Hampshire Gas & Electric Company and the Derry Electric Company, like all other companies in the New England Gas & Electric Association group, had agreements with the Utilities Purchasing and Supply Corporation, which authorized this corporation to act as their purchasing agent. The Associated Gas & Electric Company acquired control of the Utilities Purchasing and Supply Corporation in July, 1929. By the terms of this agreement, the Utilities Purchasing and Supply Corporation agreed, among other things, to purchase or supervise purchases of all apparatus, supplies, and materials, to consult with the local utilities regarding their needs, and to supervise the shipping, transportation, delivery, inspection, and distribution of such purchases. The utilities agreed to pay a fee of 1½ per cent of the amount of the purchases. The Utilities Purchasing and Supply Corporation was authorized to contract on behalf of the utilities and to combine their purchases with those of other utilities for which it acted as a purchasing agent. The utilities were given the right to examine their purchasing agent's books, but only in so far as these pertained to the performance by the purchasing agent of his duties under this agreement and/or to the compensation and reimbursement of the purchasing agent. The purpose of the agreement was stated to be that all the apparatus, supplies, and materials required by the utilities for their business should be purchased under the supervision and/or through the agency of the purchasing agent. The local utilities could buy small tools, stationery, pencils, and similar items directly, provided such orders did not exceed $10.

The purchasing agent had contracts with various manufacturers covering the purchase of equipment. Discounts from the list price allowed by these manufacturers, contrasted with discounts that would have been allowed the local utilities, are shown in Exhibit 1.

The commission stated that since the purchasing agency was so controlled and affiliated, it should not be a profit-making organization to its common owners and to the utilities which it served, and that the local utilities should have been given the full advantage secured by centralized purchasing.

Before December 1, 1928, both the New Hampshire Gas & Electric Company and the Derry Electric Company engaged in the business of selling electrical appliances, on which there was a gross margin of 30 per cent. This business was generally considered to be profitable and of importance as a load builder. After December 1, 1928, however, both local utilities ceased to conduct an appliance business, and either the Associated Utilities Merchandising Company or the Associated Appliance Corporation conducted this business. These companies were controlled by individuals connected with the Associated System.

The business of the Associated Appliance Corporation was carried on from the offices of the operating companies. It consigned all appliances required by the operating companies at cost, the operating companies selling the appliances, through their new business departments, to their consumers. The operating com-

EXHIBIT 1

NEW HAMPSHIRE GAS & ELECTRIC COMPANY
UTILITIES PURCHASING AND SUPPLY CORPORATION
COMPARATIVE DISCOUNTS ALLOWED THE PURCHASING AGENT AND THE LOCAL UTILITIES

	Discounts to Purchasing Agent	Discounts to Local Utilities
General Electric Company		
Transformers	50–5–10	50–5
Meters	55–8–4	55
Regulators	59–2–5	59
Lightning Arresters	57–4	57
Street Lighting Equipment	20–8	10
Flood Lighting	25–5–8	25
Westinghouse Electric & Manufacturing Company		
Transformers	43–10	43
Meters	33–8–½–4	33
Lightning Arresters	47–4	47
Regulators	19.7–4	19.7
Street Lighting Equipment	42.8	....

panies then billed the goods and made the collections therefor in their own name, although it was understood that title to the

appliances was at all times vested in the Associated Appliance Corporation until the appliances were sold to the consumers. At the end of each month the operating companies were required to remit to the Associated Appliance Corporation the proceeds from sales made during that month, less all losses and expenses, with the exception of those expenses which were purely selling and promotional, and also less a commission allowed for the sale of appliances. This selling commission amounted to 2½ per cent of the actual proceeds from all appliance sales and was designed to reimburse the operating companies for checking the appliances received against the order and the vendor's invoice and for the storage, handling, insurance, light, heat, and other storeroom overhead, as well as for the clerical work involved in handling such merchandise. The Associated Appliance Corporation obligated itself to deliver on consignment to the operating companies a full line of appliances, and to maintain them at its own expense until they were sold. It was also to provide experienced appliance sales directors at its own expense who were to assist the operating companies in planning sales campaigns and in directing sales activities. The operating companies were to be reimbursed for carrying charges on all appliance sales and for the cost of installing appliances upon consumers' premises. The Associated Appliance Corporation assumed all inventory losses due to depreciation, obsolescence, wear and tear, etc., and permitted the operating companies to sell worn or damaged appliances at reduced prices. It also agreed to bear the expenses and losses of repossessions, and to reimburse the operating companies for reconditioning repossessed appliances. Furthermore, it assumed all discounts on sales of appliances to employees of the operating companies, and guaranteed to furnish operating companies with such appliances as they consumed in their own operations at cost. It also agreed to reimburse the operating companies for payments made by them on behalf of the Associated Appliance Corporation against vendors' invoices and for in-freight and in-delivery expenses.

As a result of this agreement the local utilities had not made any reduction in the number of salesmen employed, or in the amount of space used, but in the opinion of the commission the general expense of their sales departments had increased.

The commission made the following statement with reference to the plan:

This handling of the appliance business illustrates how the profits of an operating utility can be milked through the holding company and subsidiary device. It is not to be presumed this practice would be followed if the benefits derived accrued to local merchants or an unaffiliated concern. It is merely a scheme whereby the utility does the same business it did before, in the same way, with the same facilities, through the same office and working force, and the profits are diverted to another subsidiary of the "System" for the benefit of the same ultimate owners.

If it is the will of those directing the affairs of the local utilities that they no longer engage in the appliance business, their operating expenses should not longer be loaded to carry the business for an affiliated company.[1]

Approximately 90 per cent of the total number of employees of the Derry Electric Company and 27 per cent of the total number of employees of the New Hampshire Gas & Electric Company were licensed to sell securities of the Associated Gas & Electric Company. Sales were made by these employees during regular working hours, as well as at night. Only the salaries of those employees who devoted their full time to the selling of securities were charged to the Associated Gas & Electric Securities Company. This company paid the employees of the local utilities which sold its securities a commission of $2 per $100 of face value for the sale of Associated Gas & Electric Company debentures, and $1 per share for sales of its class A stock. The commission declared that, although there might be some justification for the sale of the local utility's securities by its own employees, there was no justification for the sale of the securities of another company, especially at the expense of the local utility.

Another scheme that was adopted to increase the sale of holding-company securities was the so-called "Stock Investment and Savings Plan for the Benefit of Employees of the Associated Gas & Electric System." In 1927 the employees were offered Associated Gas & Electric Company stock at 25 per cent below its market price, the local utility companies contributing the difference. In 1929 employees were offered stock of the Associated Gas & Electric Company at $36 per share, payable in installments, against the existing cash market price of $51 per share. The amounts paid by the local companies were listed as "additional compensation" and, as such, were charged to operating expenses

[1] 14 N. H. Public Service Commission 128.

or to the capital account, depending upon the type of work performed by the employee who availed himself of this offer.

It was agreed that all advertisements placed by the operating utilities in the local papers must go through a New York advertising agency. A certain fee was charged for this service. The head of the advertising agency was a trustee of the New England Gas & Electric Association. The New York agency acted as advertising counsel for nearly all the constituent properties of the Associated System. If the New England Gas & Electric Association, the stockholder of the local New Hampshire utilities, advertised, whether the advertising was in New Hampshire or elsewhere, the local utilities were required to pay their proportionate share of this expense based upon their gross revenues, regardless of the cost of the advertising in their territories. The commission stated that the consumer of electricity in New Hampshire derived little if any benefit from such advertising, and held that if the New England Gas & Electric Association benefited thereby, that company, and not the local utility, should bear the expense.

The books of the local utilities were audited by a firm which was in turn controlled by a vice president of the Associated Gas & Electric Company. Only certified public accountants affiliated with the Associated System were employed. The payment for the audits was made by the New England Gas & Electric Association, and each company was charged its proportionate expense, allocated on the basis of gross earnings.

All books and accounting records of the New Hampshire utilities were kept in Cambridge, Massachusetts, at the offices of the New England Gas & Electric Association. The expenses of running the Cambridge office were divided pro rata among all subsidiaries on the basis of gross revenue. The commission pointed out that "no independent representative of the local utilities had anything to say about the division." Certain savings were effected on Federal income taxes through consolidated returns, but all benefits in the way of tax reductions were appropriated by the New England Gas & Electric Association without credit to the local utilities. The commission made the following comment concerning the method of keeping the books and accounts:

Wholly outside of the question of expense it was the experience of those engaged in this investigation that under the present method

employed, papers and records relating to the local companies, which might also relate to other companies in the system, were filed in such a way as to make complicated ready access to the representatives of the commission.[1]

The commission ordered the New Hampshire Gas & Electric Company and the Derry Electric Company to show cause why they should not be prohibited from borrowing by the open-account method, except with the approval of the commission; why they should not refrain from paying interest upon any sums owed on open account until after a hearing upon this subject by the commission; why the contracts with the J. G. White Management Corporation should not be suspended until the commission found that they were for the public good; why they should not discontinue the sale of appliances for, and on behalf of, the Associated Appliance Corporation; why they should not cease to provide storage space for appliances, until they themselves engaged in the business of selling them; why the New Hampshire Gas & Electric Company should not refrain, until it obtained the commission's consent, from doing a public utility business in the territory served by the Derry Electric Company; why the New Hampshire Gas & Electric Company should not strike from its books all entries in connection with its acquisition of the Derry Electric Company; why the New Hampshire Gas & Electric Company should not be forbidden, until properly authorized, to pay either the principal or the interest on the purchase price of the Derry Electric Company; why both companies should not be required to discontinue the practice of allowing their employees to sell the stock of the Associated Gas & Electric Company during business hours; why both companies should not be required to maintain in New Hampshire original books and records relating to all details of operation and management until the commission should otherwise order; and finally, why both companies should not cease to contribute funds for the maintenance of a general office and staff in association with foreign trusts or corporations outside the state of New Hampshire, except such as might be approved by the commission.

In September, 1931, the New Hampshire Gas & Electric Company and the Derry Electric Company appealed from the orders of the commission to the New Hampshire Supreme Court. In the brief for the companies, it was contended among other things

[1] *Ibid.*, p. 165.

that the order of the commission "as a whole" was "beyond the authority" of the commission and was invalid;[1] that the orders relating to the open accounts were "based upon an improper construction of the statutes";[2] that the order relating to the management contracts was unauthorized and void;[3] that the orders with reference to sale of appliances were "an unwarrantable interference with management, unauthorized by law and invalid"; that the orders relating to the Derry transfer were "in excess of the powers of the commission and invalid."

In criticism of the brief for the state, it was said:[4]

A large part of the brief for the state is devoted to an attack, at times venomous, upon the management of the New Hampshire companies rather than to an argument on the validity of the particular orders in question.

What appears particularly to excite comment is the fact that the New Hampshire companies are owned by non-residents and are controlled by their owners rather than by somebody else. The ultimate owners are not foreign corporations. They are individuals residing in New York who have a perfect right to own the stock of the New Hampshire companies. Their interest in these companies has undoubtedly been of marked benefit to the companies and their customers whose rights and interests the Public Service Commission is charged with the duty of protecting. In reality the attack is upon the economic trend, which has brought a large proportion of all the utility companies of the country into the control of holding companies or groups.

Much of the critical comment in the brief is made with apparent forgetfulness of the fact that there are no minority stockholders of the New Hampshire companies and that the persons who own all the stock have a right to use for their own benefit the surplus earnings resulting from lawful rates.

Many statements, in the highest degree unfair and unwarranted, are made in the brief.

. . . . . .

In the brief much concern is expressed over the fact that those who own all the stock of the New Hampshire companies seem to "control" those companies. Apparently the feeling exists that some one other than the owners and their chosen representatives ought to manage the business. Thus the directors of New Hampshire Gas & Electric

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[1] *Brief for New Hampshire Gas & Electric Co. and Derry Electric Co.*, The Concord Press, 1932, p. 13.
[2] *Ibid.*, p. 20.
[3] *Ibid.*, p. 26.
[4] *Ibid.*, pp. 49–52.

Company are spoken of as "a lot of puppets subject to System control," and it is suggested that "the court will note a multitude of other details showing control and submergence of the local utility corporations," overlooking the fact that the board of directors is made up of the owners of the company and men selected by them and that "System control" and "control and submergence" are empty phrases as applied to a company which happens merely to be controlled by its owners.

. . . . . .

If it be the fact that "the local company has become a mere shell" and that there is a "mysterious unity of control which has overwhelmed the local utility," it must follow that most utility companies in the country have now been overwhelmed and are mere shells. Public utility commissions in other states do not seem to have discovered such a situation.

Counsel for the commission in a supplemental brief in August, 1932, made the following statements:[1]

If the record justifies charges of evasion, misrepresentation, or concealment, the argument of such charges can not be met by a mere assertion that it is venomous. The contempt of counsel for those persons or corporations responsible for this set-up (even if it were a fact) is immaterial to the merits of the situation. But just as fraudulent conduct to secure one's end is evidence of a consciousness of guilt —as in the case of a release fraudulently obtained by a defendant charged with negligence, so it is submitted here a sustained policy of concealment of management activities justifies a finding of mismanagement. Where there is smoke there must be some fire; and in the case at bar it is respectfully and not venomously submitted to this court that when a regulatory body finds the local corporations, to which its inquiries are limited, entirely surrounded by and engulfed in a smoke screen of foreign corporations, absentee directors, and unknown control, it may properly reach a conclusion that the affairs of the local corporations are not being handled properly or independently.

. . . . . .

Even though it be admitted that these utilities are held in private rather than public ownership, nevertheless the power of regulation implies the right to full knowledge of all the details of the business and a prohibition of secrecy. Even a suspicion of wrong tends to destroy trust and trust is vital as between the public and any business or person subject to supervision and regulation. No reason exists why the business of this system should be carried on behind a financial and corporate smoke-screen.

Is it not therefore apparent upon this record that the plan of doing business, adopted and pursued by those in control of these companies

[1] Brief of attorney general of New Hampshire and of special counsel for the commission, pp. 24, 41–42.

through many years leading up to the present system, includes a design to place the maximum load on the local utilities and to segregate and secrete for the owners the entire benefit if any that may result from System control? In new construction, in management, in purchasing supplies, in selling appliances, and in other particulars the scheme is to exact toll from the local utilities for the exclusive benefit of the owners and without consideration of the consumer. The authority of the commission is denied and defied. Under all the circumstances the dignity of the state and the full performance of the commission of the supervisory duties imposed on it by the state demanded the issuance of these orders and they should be upheld.[1]

What light does this case throw: (1) on the significance of the division of managerial functions between centralized and local management; (2) on the division of the functions of regulation and management; (3) on the advantages and dangers of unified control through so-called "common interests"?

[1] The two public utility companies involved in this case appealed to the New Hampshire Supreme Court from various orders of the commission regarding points raised in this case. These appeals were sustained on the ground that the Commission had exceeded its statutory authority. For details see P.U.R. 1932E, 369.

d. Issue of Securities by a Subsidiary to Provide Funds for a Loan to Parent Company

48. LOWELL GAS LIGHT COMPANY

In 1929 a large percentage of the common stock of the Lowell Gas Light Company was acquired by the American Commonwealths Power Associates, a voluntary association organized in Massachusetts by a declaration of trust dated November, 1929. This trust was apparently established for the purpose of enabling the American Commonwealths Power Corporation of Delaware to secure control of certain Massachusetts utility corporations. The Delaware company experienced serious financial difficulties in 1931 which led to receivership late in that year. One of its wholly owned subsidiaries, the American Gas & Power Corporation, made an investment of over $6,000,000 in the American Commonwealths Power Associates.[1] In addition, the Lowell Gas Light Company raised $1,500,000 by an issue of 1-year notes in June, 1931, and loaned the proceeds to the American Commonwealths Power Associates.

The 1931 report of the Lowell Gas Light Company, filed with the Massachusetts Department of Public Utilities, stated that the note issue was intended to retire the current indebtedness of the company and to meet "other corporate purposes." Before the note issue, however, current indebtedness totaled only $350,000, which was less than 25 per cent of the note issue. The remaining amount, or $1,150,000, was evidently not required for the extension of producing or distributing facilities in the vicinity of Lowell in 1931. Evidence given in hearings before the Massachusetts Department of Public Utilities indicated that the funds were at once advanced to the American Commonwealths Power Associates.[2] The balance sheets of the Lowell Gas Light Company or available statistical data on productive equipment revealed no evidence of the utilization of any substantial sums for construction

[1] Poor's *Public Utility Volume*, 1932.

[2] Mass. Dept. of Public Utilities Docket No. 4474. See also the dissenting opinion of Commissioner Webber, P.U.R. 1933A, 464.

purposes in 1931 or 1932. The total cost of all property added in the two years was less than $500,000.[1]

The importance of the financial transactions of 1931 is shown by the balance sheets of the Lowell Gas Light Company in Exhibit 1. It may be noted that there was a marked rise in assets and liabilities between December 31, 1930, and December 31, 1931. The 36 per cent increase in total assets was attributable largely to the increase of nearly $1,500,000 in advances to "affiliated com-

EXHIBIT 1

LOWELL GAS LIGHT COMPANY

CONDENSED BALANCE SHEETS, AS OF DECEMBER 31

	1933	1932	1931	1930	1929
ASSETS					
Property and Plant	$3,674,440	$3,652,622	$3,755,091	$3,563,131	$3,528,707
Current Assets	398,130	453,435	522,704	609,555	578,003
Affiliated Companies	1,328,964	1,528,418	1,542,070	86,725	.....
Other Assets	64,963	24,385	15,735	18,688	14,865
Total Assets	$5,466,497	$5,658,860	$5,835,600	$4,278,099	$4,121,575
LIABILITIES					
Common Stock	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000
Class A Shares	24,050	24,050	24,050	24,050	24,050
Premium on Stock	.....*	.....*	778,687	778,687	778,687
Funded Debt	950,000	.....	1,500,000	.....	.....
Notes Payable	368,680	1,500,000	150,000	350,000	350,000
Other Current and Accrued Liabilities	133,377	69,186	143,216	121,199	151,330
Retirement and Other Reserves	704,330	678,504	731,376	703,600	625,863
Other Liabilities	61,448	57,070	155,542	69,302	67,967
Surplus	1,724,612*	1,830,050*	852,729	731,261	623,678
Total Liabilities	$5,466,497	$5,658,860	$5,835,600	$4,278,099	$4,121,575

* Letter from the Treasurer of Lowell Gas Light Co. suggested that for these years $328,687 be shown as Premium on Capital Stock, and $450,000 be shown as Surplus Invested in Plant. Deduction of $778,687 to be made from surplus.

SOURCE: Poor's *Public Utilities*.

panies." There appeared under liabilities for December 31, 1931, a new item of $1,500,000 for funded debt.

In June, 1932, the Lowell Gas Light Company was confronted with the problem of refinancing the $1,500,000 issue of 1-year notes. Under ordinary conditions these notes could have been extended, but the financial situation in 1932 made the national banks and savings banks which held the majority of the notes anxious to be paid off in cash at the maturity date. Extension of the notes would have been advantageous to the utility in that it would have furnished a flexible capital structure that could have

[1] Annual reports of the Lowell Gas Light Company, 1931 and 1932, as submitted to the Mass. Dept. of Public Utilities.

been conveniently modified in accordance with the earnings of the company. The satisfactory relationship between the net earnings and the fixed charges, as shown in Exhibit 2, indicated that such a solution might under normal conditions have proved acceptable to the holders of the notes.

The recall of the funds loaned to the American Commonwealths Power Associates was clearly not a feasible solution. Since officers of that company were also directors of the Lowell Gas Light Company, the unsecured loan could not be regarded as one that had been freely negotiated between independent parties. Moreover, the receivership proceedings of the uppermost holding company in

EXHIBIT 2

LOWELL GAS LIGHT COMPANY

INCOME ACCOUNTS, YEARS ENDED DECEMBER 31

	1933	1932	1931
Gross Operating Revenue	$754,308	$826,706	$882,937
Operations and Maintenance	405,761	378,835	377,321
Taxes Other than Federal Income Tax	113,911	130,902	116,554
Net Operating Income	234,636	316,969	389,062
Nonoperating Income	3,654	81,860	46,817
Total Income	238,290	398,829	435,879
Depreciation	49,251	53,249	56,469
Interest (Debit)	81,099	74,130	38,783
Interest during Construction (Credit)	.....	.....	1,434
Amortization	3,725	7,233	8,619
Interest on Advances to American Commonwealths Power Associates (Credit)	83,304*	.....	.....
Net Income before Federal Taxes	$187,519	$264,217	$333,442

* The treasurer of the Lowell Gas Light Co. suggested that this item be shown as part of Nonoperating Income, as it was in preceding years.

SOURCE: Poor's *Public Utilities*.

the American Commonwealths Power system indicated that repayment of the advance was probably out of the question.

The scheme finally worked out was a compromise with the demands of the noteholders for immediate payment in cash. These holders were to receive for the greater part of their claims cash raised by the sale of $950,000 first mortgage bonds; the balance was to be paid in three series of short-term notes, $150,000 maturing in 1 year, $200,000 in 2 years, and $200,000 in 2½ years.

The plan for the several security issues required the approval of the Massachusetts Department of Public Utilities. Before 1932 no control had been exercised by the Massachusetts Depart-

ment over securities issued for a period of less than three years. In that year, partly as a result of the loan made in this case, a law was passed which provided that:

> No gas or electric company shall, except in accordance with such rules and regulations as the department shall from time to time prescribe, loan its funds unless the loan is approved in writing by the department. A director, treasurer or other officer or agent of a gas or electric company who makes a loan or votes to authorize a loan in violation of this section shall be punished by a fine of not more than $1,000, or by imprisonment for not more than 1 year, or both.[1]

The refinancing plan of the Lowell Gas Light Company was approved by the Massachusetts Department of Public Utilities in October, 1932, by a three to two decision.[2] This decision was largely concerned with two matters: first, the general policy with regard to the capitalization of expenditures; and second, a consideration of the conditions under which such general policy ought to be set aside.

The Massachusetts Department pointed out that it would have been obliged to approve an issue of $500,000 because the 1931 note issue had been intended in part to retire floating indebtedness of $350,000 incurred for construction purposes, and because there had been subsequent borrowing of $150,000 for similar purposes.[3] Before December 31, 1925, the Lowell Gas Light Company had made expenditures of $415,804 which had not been capitalized, and between December 31, 1925, and June 30, 1932, similar expenditures totaled $632,596. These outlays were in excess of the sum to be borrowed by the company in connection with its petition, but the Massachusetts Department raised the question whether such outlays should provide a basis for the issuance of securities inasmuch as they had been made out of earnings and were not at the time of the decision represented by outstanding indebtedness. The point of view of the Massachusetts Department of Public Utilities is indicated in the excerpt from its decision given on the next page.

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[1] *Acts and Resolves of Massachusetts, 1932;* Chap. 132.

[2] P.U.R. 1933A, 460–467.

[3] It is a fairly common practice for Massachusetts utilities to incur floating debts for the purpose of construction and additions, and subsequently to apply to the Department of Public Utilities for the privilege of capitalizing the expenditures through the issue of securities.

The custom of authorizing the issuance of stock or bonds to reimburse the treasury, for capital expenditures made which is in effect in most states, and which has been recognized by the Interstate Commerce Commission, has not been adopted in this Commonwealth. It has been felt that to adopt such a policy would be inconsistent with and lead to the violation of the provisions of Section 11 of Chapter 164 of the General Laws, which provides that "No gas or electric company shall declare any stock or scrip dividend or divide the proceeds of the sale of stock or scrip among its stockholders; . . . "

Certain practical considerations led the Massachusetts Department to approve (3 to 2) the proposed issue, even though it believed the action of the Lowell directors in 1931 to have been "reprehensible."[1] The view of the majority of the commissioners is contained in the following section from the official decision:

. . . the denial of the application would probably result in receivership proceedings, which are apt to be expensive and protracted, and which probably would result in the reorganization or sale of the property and franchises of the company. Such a result would be likely to effect a larger capitalization which the ratepayer would be called upon to sustain.

After careful consideration, we are of the opinion that it is better for the public which is served by the Lowell Gas Light Company that receivership proceedings, if possible, should be avoided, if no burden thereby is thrown upon the ratepayer. If, as a result of our action, the outstanding capital is made no greater than it would have been if the notes of $1,500,000 had not been issued, no burden will be thrown upon the rate-paying public. Earnings which otherwise would be distributed to the stockholders as dividends will be used in the retirement of the notes, and the company will thus be able to work out its difficulties and receivership proceedings will be avoided.

Two important provisos were attached to the approval of the proposed security issue. First, the account for paid-in premium on capital stock was to be reduced by $450,000, an amount corresponding to that portion of the bond issue which the commission felt was not justified under a strict interpretation of the Massachusetts statutes. The commission stated:

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[1] "Undoubtedly the action of the directors of the Lowell Gas Light Co. in loaning its funds was reprehensible. As a consequence of this action and similar action by other operating companies, upon the Mass. Department's recommendation, Chap. 132 of the *Acts of 1932*, which prohibits the loaning of money by gas and electric companies except in accordance with regulations adopted by the Department or with its approval was passed." From majority opinion of the Department, P.U.R. 1933A, 460, 462.

That the outstanding capital of the company will be no larger than if the issue of bonds was limited to $500,000, we think that our approval of the issue of $950,000 should be conditioned upon the reduction by the company of its premium account by $450,000,—thus leaving the outstanding capital upon which the rate-payer is required to pay a return the same as if $500,000 of bonds only were approved and the premium account was left as it is at present.

The second proviso attached to the approval was that any money recovered on the loan made to the parent company should be applied toward the repayment of the new notes and bonds, or toward additions and betterments.

Commissioner Stone in a dissenting opinion pointed out that the company showed net earnings of nearly three and one-half times the interest on the floating debt of $1,500,000 at 6 per cent. He was therefore unwilling to accept the majority view that receivership was the inevitable alternative to the approval of the issue of mortgage bonds.

A second dissenting opinion, written by Commissioner Webber, expressed a somewhat similar view with respect to the danger of a receivership. Commissioner Webber held, furthermore, that it was about as improper in principle to ratify "reprehensible" conduct after it had taken place as to approve of it in advance. He raised the question whether the commission ought to assume the role of a collection agency by giving unsecured creditors a first lien on the property. He asserted that the approval of a mortgage of the size contemplated would affect the ability of the company to finance its future capital requirements, and would raise the rate of interest with the ultimate result of increasing the cost to the rate-payer.

What bearing does the 1932 amendment of the Massachusetts law in regard to public utilities have upon the relationships between management and regulation?

What special problems are raised by the financing of a parent company through its subsidiary?

Do you approve of the Massachusetts rule with respect to the capitalization of expenditures?

e. Ratio of Investment to Control

49. Lowville Gas Corporation[1]

The Lowville Gas Corporation, a New York corporation, was organized September 27, 1930, pursuant to the provisions of the Transportation Corporations Law, for the purpose of manufacturing, supplying, and selling gas and electricity for light, heat, and power within Lewis County, New York. On March 18, 1931, and on April 29, 1931, this corporation petitioned the New York Public Service Commission, under Public Service Law Sec. 69, for authority to issue 11,000 shares of capital stock without par value, comprising all its authorized capital stock, consisting of 3,000 shares of class A stock, to be sold at $31.50 per share and 8,000 shares of class B stock, to be sold at $1 per share, and to apply the proceeds thereof, aggregating not less than $102,500, to the following purposes:

Construction and Completion of a Plant and the Purchase of Equipment	$ 91,605
Working Capital for a Period of Two Months	5,000
Organization Expenses, Including Office and Equipment and Miscellaneous Expenditures	5,000
	$101,605

On March 31, 1931, the commission approved construction by the Lowville Gas Corporation of a butane gas plant in the incorporated village of Lowville, New York, and permitted the exercise of franchise by the corporation and consented to the transfer to that corporation of a certain gas franchise which had been previously granted by Lowville to certain other parties.

According to the original plans, the Lowville Gas Corporation proposed to construct in Lowville, at an estimated cost of $91,605, a butane gas plant and distributing system said to be capable of serving about 500 customers. The estimated cost comprised lump sums for land, generating plant, and distributing facilities in amounts of $3,500, $22,117, and $65,988, respectively. Details of these property units were examined by the engineering division

[1] *Re Lowville Gas Corporation*, P.U.R. 1932A, 446.

of the commission, and it was reported that the expenditures proposed seemed to be reasonable.

To finance the foregoing construction, and to provide for working capital, organization, and miscellaneous expenditures, "the petitioner proposed to issue and sell to Mr. J. Roy Allen, as incorporator, the stock herein prayed for. As consideration therefor, Mr. Allen was to return to the company a plant, and sufficient funds for working capital and organization expenses."[1]

The 3,000 shares of class A stock, proposed to be sold at $31.50 per share, were to be preferred as to noncumulative dividends of $2.45 per share and were to share proportionately with the class B stock after dividends of like amount had been paid on the latter. Class A stock was also to be entitled, on corporate dissolution or liquidation or any other distribution of capital, to receive $35 per share and to be redeemable in whole or in part at any time on 60 days' notice at $35 per share. Pursuant to privileges granted in the certificate of incorporation, holders of this stock were to be entitled to subscribe for one share of class B stock at $1 per share for each share held. The class A stock was to carry no voting rights under any circumstances.

The 8,000 shares of class B stock, to be sold at $1 per share, were to be entitled to dividends, if, when, and as earned and declared, of $2.45 per share after payment of that amount on each share of class A stock outstanding, and to share proportionately with the latter in any remaining dividends. On corporate dissolution or liquidation, or other distribution of capital, this stock was to receive the capital remaining after payment of $35 per share on class A stock. Class B stock was to be the sole voting stock.

Concerning this proposed capital structure, the commission said:

> The serious objections to the proposal as outlined are obvious. If it were carried out, the owner of a majority of the class B stock, representing an investment of less than $4,500, would control a corporation having property costing $100,000; and the owners of the stock who had provided over 95% of the capital could never come into control of the corporation, even if they never received any dividends and the controlling interests were badly mismanaging the corporation. *This commission should not permit any such plan to become effective.*[2] Approval by the commission should be equivalent to a declaration

[1] P.U.R. 1932A, 446, 448.
[2] Commission's italics.

that the financial set-up is reasonable and proper. If there is to be a preferred stock, it should be something more than a mere name, and preferred stock which may never obtain control of the property, regardless of what is done, is an empty shell, misleading investors and giving no adequate protection. The proposal really provides for common stock with no possible control.

These and other objections to the proposal were stated to those interested in the company last June, and the commission was then informed that our objections to the control of a corporation through an investment of less than 5% of the cost of its property were considered serious and perhaps fatal. It was stated to us that the promoters of the Lowville Company contemplated the construction of a number of plants in various places in this state and elsewhere, that they wanted to control the local corporations through a small investment in each, and that they might drop their plans for the construction of a plant in Lowville unless they were permitted to do so.

The issue thus raised was that unless the promoters of the Lowville Gas Corporation were allowed to control this and other corporations in this state, through the investment of a small amount of money, they might not build plants.

Of course, there was but one answer to such a proposition. It would be better that no plant be built than that a financial plan should be approved which might easily be made to work injustice to investors. Unless those responsible for the conduct of a corporation have a substantial investment in the property, there is every temptation through management, engineering, and purchasing contracts, to mulct the local corporation and to place in the coffers of the holding company funds which ought not to have been so diverted. Assume the voting stock received no dividends upon an investment of $4,500, this would mean a loss of less than $500, even assuming a 10% dividend. But management contracts made between the holding company and the local company which it controls could be made to yield a far greater amount, resulting in promoters paying themselves a handsome profit for assuming entire directorial power, to the possible exclusion of corporate profits and earned dividends to class A stockholders, without redress to the latter.

It may be said that under the present law holding companies are subject to investigation and limited control by this commission. But that is no justification for the approval of a plan which is fundamentally wrong and invites improper relations. This commission may not be expected to protect stockholders against their own acts or failures to look after their own interests, but it can and should see that when a corporation is organized, provision should be made whereby stockholders may, if they desire, control the operations of a company which they own and into which they have placed their funds. The proposal above set forth makes no such provision.

At a conference in June, 1931, the promoters of the Lowville Gas Corporation were advised to consider the objections frankly

stated to them and to submit a new plan. Under date of September 28, a second proposition was submitted, involving the issuance of stock as follows: 3,000 shares of no par class A stock, and 15,000 shares of no par class B stock. At $30 per share for class A stock and $1 per share for class B stock, the amount raised by these issues would be $105,000. The company did not state in detail exactly what rights these two classes would have, but apparently it was the purpose of the proposal to make class B stock the only voting stock.

This proposal merely increased the number of shares of voting stock from 8,000 to 15,000 and the amount necessary for control from something over $4,000 to something over $7,500, the percentage of control being raised from less than 5 per cent to less than 8 per cent of the cost of the property.

Concerning the revised proposal of the company, the commission said:

This proposal did not meet, in any substantial way, the objections to the original plan and the company was so advised.[1]

On October 8 a third proposal was submitted. According to this plan 4,001 shares of class B voting stock, having a paid-in value of $8,002, would control a company having an immediate investment of $65,000, and later an investment of $100,000. The percentage of control would be about 12 per cent immediately, and ultimately about 8 per cent. The commission refused to approve this plan.

The company finally presented a plan with a capital structure as follows:

Preferred stock, no par value, 3,000 shares, $75,000 paid in.
Common stock, no par value, 25,000 shares, $25,000 paid in.

The preferred stock would bear 7 per cent cumulative dividends, payable quarterly. It would have preference also in case of liquidation or dissolution, voluntary or involuntary, over the common stock, and in such event it would be entitled to receive $27.50 per share plus accrued dividends before the common stock received anything. It would be callable at any time on 30 days' notice upon the same terms.

Until 12 quarterly dividend payments were in default, the preferred stockholders would have no voting rights, except as

[1] Commission's italics.

might otherwise be provided by statute; but in the event of such default, the common stock would cease to have voting rights and the preferred stockholders would have such rights until all back dividends had been paid in full, whereupon the common stockholders would again have voting rights.

The purposes for which the funds obtained by the issue of stock were to be used were as follows:

Construction and Completion of Plant and Purchase of Equipment	$ 90,000
Organization Expenses, Including Office Equipment, Not to Exceed 6 Per Cent of the Cost of the Above, but in Any Event Not to Exceed	5,000
Working Capital, Not to Exceed	5,000
Total	$100,000

If the amounts received were not needed for the purposes mentioned, the securities actually issued were to be reduced accordingly, and the amount of preferred stock at $25 per share was in no event to exceed three-fourths of the total amount necessarily expended for the purposes named and raised by the issuance of preferred and common stock. The amount of common stock at $1 per share might exceed one-fourth of the total amount necessarily expended for capital purposes and raised by the issuance of securities, but it was never to be less than one-fourth.

Under this plan the company would be controlled by the common stockholders, who would provide at least one-fourth of the capital funds needed, so long as they paid the charges against the company and 7 per cent upon the preferred stock. When and if the company ceased for three years to pay such dividends, the preferred stockholders would control the company and the common stockholders would have no voice in the management at all until all back dividends had been paid. The commission believed the final plan would protect the interests of the preferred stockholders and it therefore authorized the issuance of the stock described.

Commissioner Van Namee, in a concurring opinion, commented upon the fact that there was sufficient difference between the original and final proposals of the company to show "a desire on the part of the promoters to cooperate with the commission in safeguarding the interests of the investors."

Concerning the issues involved in this case, Commissioner Van Namee said:

I agree with Chairman Maltbie that the commission should not authorize the formation of a corporation on an issuance of stock in

which a small capital investment made by a holding company maintains its control of the corporation. I also am fully cognizant of the evils of allowing none but the common stockholders to have voting rights. In this case I believe that the class A stock should be given voting rights, enabling them to control the corporation, if no dividends are paid on this stock for three years. Such control should continue until the back dividends are paid up. This proposal is acceptable to the promoters and should be imposed by the commission upon any set-up allowed in the formation of this company.

I appreciate the evils of the holding company and of management, engineering, and purchasing contracts between holding and operating companies. The legislature of the state of New York recognized all these evils and enacted in 1930, Chapter 792 of the Laws of 1930. This additional article in the Public Service Law gave the commission control over any such abuses, and the commission at the present is engaged in enforcing its provisions in relation to several existing companies. If the provisions already contained in the law are found insufficient to enforce a fair and reasonable control over holding companies, and to eliminate any abuses in this form of financing utility companies, the provisions can be enlarged and strengthened.

Whoever may be the ultimate owners of operating utility companies, or wherever the control of such companies might lie, the commission can see, and it is its duty to see, that the charges for the product are not unreasonable and that the public receives safe and adequate service. It may be that the legislation already enacted to control holding companies is not sufficient to eradicate the evils that are known to exist, but certainly it is not for the commission itself to admit that it cannot control these corporations; and, as one who believes in public regulation, I cannot admit that we are powerless in the situation and that, therefore, we should deny this community the privilege of having its own gas sytem because the money with which to build it is to be furnished by a holding company.

The capital invested in public utilities such as railroads, gas and electric companies, telephone and telegraph companies, and others, is probably the largest amount invested in any one class of business in our country. It has been estimated to be upwards of $25,000,000,000. The electrical industry alone was fifth in order of invested capital, with an estimated value of plant and equipment as of May 31, 1931, of $12,250,000,000. Over $900,000,000 of new capital was expended in 1930 alone. The construction program for 1931 estimated an expenditure of $700,000,000. This condition has come about largely through the device of the holding company. Because of their financial strength and larger resources, they are able to sustain the small operating company and enable it to expand, where in many cases its own financial resources would not allow it to do so. Were it not for the financial backing and larger credit of these holding corporations, to say nothing of the higher grade of executive direction which they are able to obtain as against that which small independent companies

can command, the enormous expansion of gas and electric systems throughout our country in the last 15 years would not have been possible. I believe in curing the evils, but not in destroying the device of the holding company in doing so. Let us not forget that rates are not fixed on the amount of securities issued by either the holding company or the operating company, but upon the fair value of the property used and useful in the public service.

. . . . . .

There are distinct advantages for a village, situated such as is Lowville, in having a holding company willing to invest its money in a gas plant in the village. Lowville is a small village of 3,427 inhabitants and has neither grown nor decreased in size in a number of years. There is really little prospect of any substantial increase, and its situation is such that no industrial development of any size can be looked for. Therefore, the field for a gas plant is limited and the chance of profit is very small. For many years gas has been served in other communities in this section of northern New York but no company, or person, has been willing to invest in a gas plant in Lowville; and thus, it was only after the introduction of the butane gas system, with its lower construction and operating costs, that this proposition was made, and then only made in connection with a plan to build and control a number of such plants in small villages at different points throughout the state.

If this application is granted and the company authorized to issue its stock, the holding company itself must provide the capital in the first instance, and unless it can succeed in selling to local investors a large part of this stock, it will have the whole investment on its hands. There is a reasonable demand for gas in this vicinity, but at the present time it is doubtful whether any amount of stock could be subscribed and taken up in the village; and it may well be that the holding company in this case will have to, of necessity, retain more than 50% of the stock issued. It is the intention of this holding company to build other plants and in connection with the operation of all of them, to give each individual plant the benefit of the lower costs obtained by operation as a system rather than as an isolated plant. It is certain that the citizens of Lowville will never obtain the benefits and conveniences of a gas system unless some outside interest is willing to risk its money in the proposition.

I believe in encouraging the investment of such money and the extending to all parts of the state the benefits of gas and electric service. The commission has power to enforce safe and adequate service and reasonable rates, whether the control is in a holding company or in local hands. If we do not do this there is little reason for the continuance of state regulation.

Those interested in the promotion of this company, having, after several conferences, suggested a capital structure which amply protects those who invest in its class A stock, and which also compels the pro-

moters to retain at least a substantial financial investment in its class B stock in order to hold voting control of the corporation, I vote to grant the application under the final terms as set forth in Chairman Maltbie's memorandum.

50. TIDEWATER TOLL PROPERTIES, INC.[1]

In January, 1931, Tidewater Toll Properties, Inc., petitioned the Maryland Public Service Commission for approval of a financial plan (and an issue of securities under that plan) for the building of a highway toll bridge across the Choptank River near Cambridge, Maryland. By acts of Congress Tidewater Toll Properties, Inc., a Maryland corporation, previously had acquired franchises for the construction of bridges across the Choptank and Patuxent Rivers. The case which came before the commission in 1931, however, involved only the securities to be issued for building the Choptank River bridge and for meeting certain obligations resulting from relations of Tidewater Toll Properties, Inc., with American Toll Properties Corporation. The latter was a dormant corporation which formerly owned congressional franchises for bridges across the Choptank and Patuxent Rivers, which franchises expired by limitation shortly after they had been acquired by Tidewater Toll Properties, Inc. The franchises of the American Toll Properties Corporation were predecessor franchises to those held by Tidewater Toll Properties, Inc.

Tidewater Toll Properties, Inc., had also applied to the commission in an earlier hearing, held in February, 1930, for approval of securities and a financial plan, but at that time the corporation's congressional franchises were not complete. The original franchises to American Toll Properties Corporation having lapsed, new bills were introduced in Congress to revive them in the name of Tidewater Toll Properties, Inc. The Senate had passed them, but they had not been passed by the House of Representatives or signed by the President. The commission dismissed the application, specifically, because the corporation had no lawful right to build the bridges at that time, or to issue securities for such purposes, but also because it did not approve the financial plan which was proposed.

Under the financial plan submitted at that time, the corporation asked for authority to issue 100,000 shares of 7½ per cent

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[1] *Re Tidewater Toll Properties, Inc.*, P.U.R. 1930C, 248; P.U.R. 1931B, 135.

cumulative participating preferred stock of a par value of $10 a share; 33,333 shares of class A common stock of no par value; and 166,667 shares of class B common stock of a par value of 1 cent a share. Class A and class B common stock were to have equal voting rights, and under certain conditions, such as failure to pay dividends upon it, the preferred stock was to have voting rights.

The Tidewater Toll Properties, Inc., planned to sell to the Security Sales Corporation of Maryland 60,000 shares of its preferred and 20,000 shares of its common stock for $600,000. The Security Sales Corporation was to sell this stock to the public in units of 3 shares of preferred and 1 share of class A common stock at $40 per unit, thus receiving $10 for selling each unit. If it could have sold the 20,000 units necessary to produce the $600,000, said at that time to be required for the building of the bridge, it would have received $200,000 for selling the stock. In addition, it would have received 17,500 shares of the class B common stock.

In dismissing the case the commission stated that in fairness it felt the applicant ought to be advised of the commission's views as to the financial plan, so that the plan might be modified to meet commission approval if submitted later. The commission, in its opinion of April 8, 1930, said that it would be unwise to approve such a plan of financing as had been submitted; that it appeared to be unsound and failed to afford sufficient protection to those who would invest their money in the enterprise; that the spread between what the investors would pay and what the company would receive for the stock, 25 per cent, was far too great; that if, as counsel for the applicant explained, it could not be done in any other way, then it seemed to the commission that it had better not be done at all. The commission contended that in the plan as outlined no one seemed to take any risk except those who were to be asked to buy these units of stock at $40 per unit, and after they had bought their stock and taken their risk, they were to have but slight voice in the management and control of the enterprise.[1]

After Congress had granted the franchises and the War Department had approved the plans for the bridge, the petition was amended and submitted to the commission in December, 1930. At this time the financial plan was modified with respect to the class B stock.

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[1] P.U.R. 1930C, 248, 250.

It was proposed to issue stock units consisting of three shares of preferred, one share of class A common, and three shares of class B common at $40 per unit to the public, netting the corporation $30 per unit. Just how this stock was to be marketed was not disclosed by the testimony, which was very indefinite on this point. The president of Tidewater Toll Properties, Inc., testified that the project might be financed within one corporation and that this corporation might take the whole issue and turn the proceeds over to the Tidewater Toll Properties, Inc., for construction and other proper purposes. The commission was not informed of the name of the corporation which was to do the underwriting, the manner in which it was to be done, or the price at which the stock was to be sold to the public. The president of Tidewater Toll Properties, Inc., did state that the underwriting corporation would receive no more than $800,000 for the stock it sold and would retain $200,000 as underwriters' charges.

After analyzing the plan proposed in the application of December, 1930, the chief auditor of the commission made the following statement:

> The total shares to be issued under this plan was 60,000 preferred, 20,000 Class A common, and 60,000 Class B common. . . .
>
> The petition further states that no further issues of Class A common stock are contemplated, but that 50,000 shares of Class B common (par value 1 cent or a total par value of $500) are to be issued individually and 16,666 shares of the same stock are to be issued in consideration for the assignment of Federal franchises.
>
> From the above it would appear that the preferred stockholders would have 80,000 votes, whereas the other stockholders would have but 66,666 (50,000 plus 16,666) votes, but this is not in agreement with the statement in . . . the petition, to the effect that the voting powers of the purchasers of the preferred will be equal to the total voting powers of the stock to be issued under the plan. In other words, the petition indicates that 80,000 shares of Class A and Class B common together are to be issued to others than purchasers of the preferred, whereas only 66,666 shares are accounted for.
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> It is further noted that in . . . the petition it is stated that all the Class B stock except 667 shares is to be issued, whereas the petition accounts for only 126,660 shares out of a total authorized issue of 166,667 shares, leaving a balance to be accounted for of 40,000 shares instead of 667 shares.
>
> The total voting rights amount to 200,000. The preferred stockholders under the proposed plan are to get 80,000 of such rights. This leaves a balance of 106,667 voting rights in the Class B common alone, 16,666 of which are to be exchanged for Federal franchises and the

balance has a par value of but $900.01. Thus an investment of the franchises plus a cash investment of less than $900 would give voting control of the corporation, subject to the approval of this commission as to the issuance of the additional stock.

As stated above, there are several discrepancies in the petition, but assuming the petition to mean that the purchasers of preferred would have equal voting rights with the other stockholders, it necessarily follows that the persons who really put up the money would not have control of the corporation but would [have] only equal control of the corporation with the other stockholders, and this equality could be destroyed by the issuance of one share to either side for the consideration of 1 cent.[1]

There were other features of the situation involving Tidewater Toll Properties, Inc., upon which the commission did not look with favor and which it regarded as inimical to the public interest. One of these was its subsidiary relationship to American Toll Properties Corporation, which was to receive a large block of class B common stock in exchange for franchises that had lapsed. The evidence showed that American Toll Properties Corporation had acquired congressional franchises for the building of 57 bridges across streams in various parts of the United States. All these franchises had expired by limitation except those for the Choptank and Patuxent Rivers, and for one across Bear Creek near Sparrows Point, Maryland. The Choptank and Patuxent River franchises were transferred to Tidewater Toll Properties, Inc., but, as heretofore stated, later lapsed, and new franchises were acquired in the name of Tidewater Toll Properties, Inc.

American Toll Properties Corporation appeared to have been organized by the head of the Manhattan Capital Corporation, and others, for the purpose of marketing securities for the erection of bridges under the corporation's congressional franchises. The evidence before the commission indicated that American Toll Properties Corporation had "properties" in the shape of franchises, contracts, etc., which had been acquired at a cost of $255,730.63, which were said to have a resale value of $6,153,230.63; the petitioners claimed that "custom and precedent" established $6,153,230.63 as "a fair worth" of these properties which were said to have cost $255,730.

The president of Tidewater Toll Properties, Inc., testified that American Toll Properties Corporation did not "own anything" at

[1] P.U.R. 1931B, 138, 139.

that time, although it would own a large block of the class B common stock of Tidewater Toll Properties, Inc., he said, if such stock was permitted to be issued.

The commission pointed out that it was a matter of common knowledge that the Manhattan Capital Corporation and the American Toll Properties Corporation entered into an extensive campaign for the sale of toll-bridge stock early in 1929; that after an exhaustive investigation the attorney general of Maryland, on July 8, 1929, made a finding that the Manhattan Capital Corporation and the American Toll Properties Corporation, as well as various officers, agents, employees, and stock salesmen of said corporation, had been making false, misleading, and deceptive statements to citizens of Maryland, in an effort to promote sales of the stock of the American Toll Properties Corporation; that these false, misleading, and deceptive statements and representations constituted a scheme or artifice to defraud the citizens of Maryland. The attorney general ordered the stock selling stopped. It appeared that the head of the Manhattan Capital Corporation and his associates allowed that organization to die, or become moribund, and organized the Security Sales Corporation in its place. Under the original application before the commission, the Security Sales Corporation was the agency chosen for marketing the stock of Tidewater Toll Properties, Inc.

A statement of receipts and disbursements of Tidewater Toll Properties, Inc., from October 8, 1929, to July 14, 1930, showed receipts of $1,791.50 and disbursements of $1,789.90, leaving a balance of only $1.60. Evidence was before the commission that certain units of stock of Tidewater Toll Properties, Inc., had been sold to the public by Securities Sales Corporation without authorization by the Public Service Commission for the issuance of such stock, and that, upon complaint having been made by at least one purchaser, he was assured by counsel for Tidewater Toll Properties, Inc., that proper adjustment could be made with those persons to whom stock was previously sold, "even if the Public Service Commission should withhold its consent to the sale of additional stock." This assurance of a proper adjustment was based on the right of Tidewater Toll Properties, Inc., to receive 1,035 shares of no par common stock of the Sparrows Point Bridge Company, if and when such stock was authorized to be issued by the commission. The commission pointed out that it was obvious that no

proper adjustment could be made out of a balance on hand of $1.60 in the treasury of Tidewater Toll Properties, Inc.

Concerning the activities of the petitioners, the commission said:

> It is such matters as these, which, aside from manifest objections to the financial plan, raise grave doubts in the mind of the commission as to the soundness of the project.

The commission recognized that a bridge would be desirable in the location indicated; that such a bridge would undoubtedly be a convenience to the public, and, with a proper charge for tolls, ought to be reasonably sure of earning a fair return on the fair cost of the bridge. The cost of the bridge was estimated to be $512,000 for construction, and the commission said it might not be unreasonable to add $88,000 for preliminary expenses for organization, working capital, and the like, and such expenses as might be incidental to the early operation and maintenance of the bridge until the public could become accustomed to using it. This would amount to the $600,000 which Tidewater Toll Properties, Inc., expected to secure from the sale of the stock, for which the public was expected to pay $800,000. An 8 per cent return on this $600,000 would be $48,000 per annum, and in the opinion of the commission the bridge might reasonably be expected to earn this, plus the actual operating costs and a proper allowance for depreciation.

In its decision the commission pointed out that it considered the plan of financing as submitted to it to be unsound, and one that failed to afford proper protection to investors. Therefore, it could not approve such a plan. The commission felt that if a $600,000 enterprise could not be financed without having the public pay $800,000 for it, the extra $200,000 being the cost of financing, then it had better not be undertaken at all; that certainly in a valuation proceeding the commission would never approve a 33⅓ per cent allowance for cost of financing.

The commission said that in an effort to be helpful and to facilitate the construction of a bridge which it believed would be of convenience to the public, it felt free to make certain suggestions, compliance with which would meet its objections to the plans of the applicant, so far as financing the project was concerned. The suggestions were as follows:

> 1. Tidewater Toll Properties, Inc., should withdraw from all entangling alliances such as those with the American Toll Properties

Corporation whose record, in view of the action of the attorney general of Maryland, is none too savory, and stand on its own feet. So far as the record discloses, it has received nothing of value from the American Toll Properties Corporation, nothing of value which it could not obtain and has not actually obtained in its own name, viz., congressional franchises for bridges across the Choptank and Patuxent Rivers. The commission cannot admit value for the Patuxent River franchise which will lapse in a few months unless the bridge is built, and there seems to be no immediate prospect of its building. Moreover, such franchises could probably be secured from the general assembly of Maryland if the conditions under which the bridge were to be erected and the rates of toll to be charged were fair to the public. The general assembly is now in session.

If Tidewater Toll Properties, Inc., feels itself obligated to American Toll Properties Corporation for bridge franchises which it allowed to lapse, the commission will raise no objection to the payment to it in cash, the amount of the par value of the 16,666 shares of class B stock it was to receive in exchange for franchises, or $166.66.

2. A definite value in dollars ought to be put on the services rendered or to be rendered the applicant by its organizers and promoters and these services paid for in cash; or if stock should be taken in lieu of cash, it ought to be stock of the same character, in the same ratio and at the same price as that sold to the investing public.

3. Plans for the issuance of class B common stock of 1 cent par value, or stock of such character, ought to be abandoned. The commission feels that this stock is for the purpose of giving control of the enterprise to a few persons at a purely nominal price and that this ought not to be permitted.

4. While sales of stock in units of preferred and common may be made, if this is done all the stock issued ought to be in units and at the same price per unit. There ought to be no separate blocks of no par or nominal par stock issued or held for purposes of control.

5. The entire issue of stock ought to be underwritten in such manner that the whole amount required for the construction of the bridge may be available in advance of the beginning of construction and drawn down as construction proceeds.

6. The spread between the selling price of the stock and the net price to Tidewater Toll Properties, Inc., ought not to exceed 10 per cent.[1]

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[1] These suggestions were made in view of the decision of the court of appeals of Maryland in *Laird* v. *Baltimore & Ohio R. R. Co.* (1913), 121 Md. 179, 187, which said: "The evils which this section [27 of the Public Service Commission Law] was intended to correct are perfectly well recognized and understood. That issues of stocks and bonds have been made fraudulently and palmed off on a credulous public to their ultimate serious loss is a matter of common knowledge. Facts in relation to such issues, especially with regard to local public utilities, have been difficult, if not impossible, to obtain, leaving it to the stimulated imagination of some broker or syndicate who, actuated by a heavy commission to be realized by creating a market

In its decision the commission pointed out that the legislatures of many states had, through the media of public service commissions "seen fit to establish a quasi-guardianship over prospective investors." The commission pointed out that many legitimate enterprises were under the same sort of suspicion which attached to the more hazardous schemes, devised and carried on for the improper enrichment of a few individuals; that as a check upon such "wild financing" it was entirely proper, even upon the basis of the exercise of the police power, to require all corporations conducting public utilities to lay before the local public service commission the facts relating to any such issue of stocks and bonds or debentures or certificates of indebtedness, thus placing such facts where they would be readily obtainable by anyone who had an interest therein other than mere idle curiosity; that such statements should include the amount of the issue, and in a general way the purposes for which it was desired to be made.

Because the financial plan as proposed in the amended petition did not meet the objections stated by the commission in its opinion filed April 8, 1930, and because it regarded the plan proposed in the amended petition "still to be unfair to investors and the public generally," the commission (January, 1931) withheld its approval and dismissed the application.

To what extent should public utility commissions attempt to protect the interest of investors through the financial regulation of public utilities?

Do you agree that rates are based "on the fair value of the property used and useful in the public service"?

Do you believe that costs of operation could probably be reduced by interconnecting some butane gas plants? By centralized management of such gas plants?

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until such stock or bonds could be unloaded, have reaped a reward in dollars and cents at the cost of those who were induced to give full faith and credit to their representations."

SECTION IV

WHOLESALE MARKETING OF PUBLIC UTILITY SERVICE

1. Competitive Position of Customers Using Both Power and Steam

A. Power Problems of Railroad Terminals

a. A Railroad Terminal with By-product Power during Heating Season

51. ADAMS & MASON TERMINAL COMPANY

In 1938 the Adams & Mason Terminal Company was supplying its entire requirements of steam and electricity from its own generating station. In 1925 the company had been faced with the necessity of replacing certain electrical equipment or of making an arrangement for the purchase of electricity from the Brunson Utility Company. At that time the terminal company had decided to install two new turbogenerators and to continue to supply its own needs for both steam and electricity.

During the winter season, the Adams & Mason Terminal Company required large quantities of steam for the purpose of heating its terminal properties, which included a number of small stores, and the railway cars of the companies using the station. Steam production for approximately 200 days of the year was about 425,000 pounds per day. For more than half of this period, about 385,000 pounds were utilized daily for heating purposes. Thus, during this period, electrical energy was very largely a by-product. In the summer season the production of steam amounted to 320,000 pounds per day. None of the cost of this steam could be charged to heating.

When considering the installation of new electrical equipment in 1925, the company had made no exhaustive analysis of the condition of its boiler plant. The plant was known to be in satisfactory condition, however, and the terminal company had decided

not to consider any proposal by which the Brunson Utility Company might take over the former's boiler plant and furnish the station with both steam and electricity.

Thus, in 1925, consideration had been given by the Adams & Mason Terminal Company to three possible courses of action in the solution of its power problem:

1. Installation of new steam-driven prime movers with adequate capacity to produce all electricity needed by the company.
2. Purchase of all electricity from the Brunson Utility Company.
3. An arrangement whereby the terminal company would supply its own power needs during the winter season when it could produce electricity at a very low cost as a by-product, and purchase power during the summer months when its heating plant was shut down.

If the terminal company were to produce its own power, it would be necessary to install two new turbogenerators, each of 500 kilowatts capacity. These units would be equipped with condensing equipment and would be arranged for bleeder operation so that the exhaust might be bled off the intermediate stages of the turbines during the winter months to serve heating system demands. During the summer, when steam would not be required for heating, the turbines would exhaust directly to condensors. By means of the bleeder arrangement it was anticipated that a better adjustment would be obtained between the amount of available exhaust steam and the heating requirements than had been possible with the old generating plant.

The two proposed turbogenerators were to be of such rated sizes and overload capacity as to permit installing them in place of two of the engine generators being used by the terminal company at the time. Size and capacity were to be such that one unit could be used for continuous operation at economic loading through a summer day, with the other turbine serving as stand-by equipment. During the winter it was estimated that one unit would be sufficient except for three hours' peak operation, at which time either the second turbine or one of the old generator sets could be placed in service, depending upon, the size of the load. Turbines and generators, however, were to have such characteristics as to permit continuous operation of one machine throughout a winter day, with overload conditions during the peak hours that could be handled by one turbogenerator if the occasion arose.

It was expected that the new turbines would provide an installation that would be thoroughly reliable at all times and would give virtually 100 per cent spare capacity in the form of one of the turbogenerators. In the opinion of the company this plan had the added advantage of providing plant capacity sufficient to absorb any increase in demand that might reasonably be expected in the future.

The estimated cost of installing the new equipment is shown in Exhibit 1. In Exhibit 2 is presented an estimate of the cost to the

EXHIBIT 1

ADAMS & MASON TERMINAL COMPANY

COST OF INSTALLATION—PRIME MOVER EQUIPMENT

2 Generating Sets, Each Rated at 500 Kw. Continuous Capacity; 750 Kw. for 2 Hours; Turbine Driven through Reduction Gears; Complete with Individual Jet Condensers; Erected on Steel Foundations; and Complete with Necessary Switchboard Panels for Connections to Main Bus.

1.	Turbogenerators and Gears	$47,000 00	
2.	Jet Condensers and Pumps	8,200 00	
3.	Switchboard Panels	2,800 00	
4.	Cost of Prime Movers Erected		$58,000.00
5.	Clearing Old Site	3,000 00	
6.	Net Steel Foundations	2,000.00	
7.	Piping, Valves, Etc	4,000 00	
8.	Total Items 5-6-7		9,000.00
9.	Contingencies	3,000.00	
10.	Engineering	2,000.00	
11.	Total Engineering and Contingencies		5,000.00
12.	Total Cost of Prime Mover Installation		$72,000 00
13.	Annual Fixed Charges at 12%		$ 8,640.00

terminal company of generating its own electricity with the new units, based upon the quantity of electricity produced in 1924 with coal at the mean figure for 1924 of $6.61 per net ton.

If the terminal company decided to purchase all its electricity from the Brunson Utility Company, an investment of $28,000 would be necessary. This would include two rotary converters, switching equipment, and certain other items. A considerable part of this expense would result from the fact that the terminal company required direct current to operate elevators, baggage lifts, and a number of fans which were part of the heating system. The Brunson Utility Company had available only a limited amount of direct current in the vicinity of the Adams & Mason Terminal Company.

In Exhibit 3 is presented an estimate of the cost of purchasing electricity from the utility company.

Under the third plan considered by the terminal company in 1925, turbogenerators such as would be required under the first proposition would be installed for use during the winter. During the summer, however, the entire plant would be shut down and

EXHIBIT 2

ADAMS & MASON TERMINAL COMPANY

STEAM CONSUMPTION BLEEDER TURBOGENERATORS AND COST OF ELECTRICAL ENERGY

1. Rated Capacity, Each Proposed Turbine Unit....	500 kw.
A. Summer Conditions:	
2. Average Steam per Hour.....	7,000 lb.
3. Total Steam, 165 Days.....	27,700,000 lb.
B. Winter Conditions:	
4. Total Steam to Condensers Not Bled to Heating System, 200 Days.....	11,600,000 lb.
C. Annual Conditions:	
5. Total Steam for Electrical Energy.....	39,300,000 lb.
6. Cost of Steam at 52 Cents per 1,000 Lb.....	$20,436.00
7. Cost of Steam with Old Engine Generators.....	40,539.00
8. Saving in Steam with Proposed Turbogenerators..	$20,103.00
9. Saving in Maintenance with Proposed Turbogenerators.....	6,000.00
10. Total Saving with Proposed Turbogenerators.....	$26,103.00
11. Cost of Energy, Old Plant.....	64,886.76
12. Savings with Proposed Turbogenerators.....	26,103.00
13. Difference, Item 11 Minus Item 12.....	$38,783.76
14. Fixed Charges, Proposed Turbogenerators.....	8,640.00
15. Cost of Energy, Proposed Turbogenerators.....	$47,423.76
16. Using 1924 Output of.....	3,131,000 kw.-hr.
17. Unit Cost of Energy per Kilowatt-hour, Proposed Turbogenerators.....	1.52 cents

power requirements would be supplied by the Brunson Utility Company. From Exhibit 4 it may be seen that in addition to the investment in turbogenerators, this plan would necessitate the expenditure of $20,000 for other electrical equipment.

Compared with the first plan of generated power, the composite arrangement showed an annual deficit of slightly more than $1,300. While the auxiliary power from the utility company could be obtained at a very favorable rate, it would be available only during the summer months and at off-peak hours in the winter, except in case of emergency.

Exhibit 5 presents a summary of the costs that would be incurred and the savings that would be effected under each of the

three plans. On the basis of the data presented in Exhibits 1 to 5 the Adams & Mason Terminal Company had decided in 1925 to install new turbogenerators and to continue to generate all its electricity rather than purchase it from the Brunson Utility Company.

EXHIBIT 3
ADAMS & MASON TERMINAL COMPANY
COST OF ELECTRICAL ENERGY—PURCHASED

	Per Month	Season
Summer Schedule		
1. Demand Charge	$ 580.00	$ 3,190.00
2. Secondary Charge	2,109.20	11,600.60
3. Coal Adjustment	284 40	1,564.20
4. Total Summer Charge	$ 2,973.60	$16,354 80
Winter Schedule		
5. Demand Charge	745 00	4,842.50
6. Secondary Charge	2,383.00	15,489.50
7. Coal Adjustment	328 80	2,137 20
8. Total Winter Charge	$ 3,456.80	$22,469 20
9. Annual Bill for Purchased Power, Item 4 Plus Item 8	.....	38,824.00
Investment for Electrical Equipment		
2 Rotary Converters	$11,000 00	
Switching Equipment	12,000.00	
Installation, etc	5,000 00	
10. Total Cost of Equipment	28,000 00	
11. Annual Fixed Charges at 12%		3,360.00
12. Annual Saving, Maintenance	6,000.00	
13. Annual Saving, Steam (Mainly during Summer Months)	40,539.00	
14. Annual Saving, Boilerroom Labor (during Summer Months)	1,800.00	
15. Total Annual Saving, Items 12, 13, 14	48,339.00	
16. Cost of Power, Old Plant	64,886.76	
17. Difference, Item 16 Minus Item 15		16,547.76
18. Total Cost of Purchased Power under Plan II	.....	$58,731.76
19. Using 1924 Output of		3,131,000 kw.-hr.
20. Unit Cost of Energy per Kilowatt-hour, Purchased Power	.....	1.88 cents

In 1938 the terminal company was still operating under the plan adopted in 1925. In the opinion of an official of the company, experience during the intervening years had demonstrated that, under the conditions facing the company, it was cheaper to generate power than to purchase it. There had been no significant changes in the demand for either steam or electricity, and it was

expected that the existing arrangement would be adequate for a number of years. It was estimated that the company's boiler plant could be operated for another ten years before replacement

EXHIBIT 4

ADAMS & MASON TERMINAL COMPANY

COST OF ELECTRICAL ENERGY—COMPOSITE ARRANGEMENT

Summer Season: Purchased power (through motor generator set) but not available during winter months. During the summer months the turbogenerators would be shut down.

Winter Season: Turbogenerators in operation and purchased power cut out.

Savings from Shutdown of Turbogenerators during Summer Season		
1. Steam: 27,700,000 lb. at 52 cents per 1,000 lb.		$14,404.00
2. Boiler Room Labor		1,800.00
3. Total Savings, Item 1 Plus Item 2		$16,204.00
Investment for Electrical Equipment		
1. Motor Generator Set	$ 8,800.00	
Switching Equipment	6,000.00	
Installation	5,200 00	
Total Investment	$20,000 00	
2. Fixed Charges at 12%		$ 2,400 00
3. Bill for Power at $2,751.50 per Month		15,133 25
4. Total Electrical Bill, Item 2 Plus Item 3		17,533 25
5. Total Savings		16,204 00
6. Annual Deficit through Plan III		$ 1,329.25

EXHIBIT 5

ADAMS & MASON TERMINAL COMPANY

	Plan I Turbo-generators	Plan II Purchased Power	Plan III Composite Arrange-ment
1. Annual Cost of Power	$47,423.76	$58,731.76	$48,753 01
2. Annual Saving Based on the Old Plant	17,463.00	6,155.00	16,133.75
3. Loss in Saving Based on Plan I		11,308.00	1,329.25
4. Investment for Equipment	72,000.00	28,000.00	92,000.00
5. Return on Investment	24.3%	21.9%	17.5%

would be necessary, and no changes in the company's policy were anticipated within this period.

What problems confront a public utility which attempts to sell electrical energy to large consumers who have substantial needs for both steam and power?

b. A Railroad Terminal with Inadequate Private Plant for Expanding Needs

52. KNOX TERMINAL COMPANY

The Knox Terminal Company in 1938 was purchasing from the Butler Electric Company both the steam and the electricity necessary for the operation of its terminal properties.

Before 1928 the company had supplied its needs for power through the operation of its own plant. In the latter year, as a result of a substantial expansion of the terminal properties, the company had been faced with the problem of deciding whether to construct an addition to its power plant or to purchase its requirements from the utility company. At that time the condition of the plant of the Knox Terminal Company was such that major replacements were necessary, the plant being inadequate to supply even immediate demands.

It was decided at the outset that the company would not divide its steam and electric service; that it would either provide both these services itself, or it would purchase both from the Butler Electric Company.

During the 12 months ending November, 1927, the total electric energy generated by the terminal company amounted to approximately 4,600,000 kilowatt-hours. With the marked expansion of the terminal properties contemplated in 1928, including a large coliseum and a hotel, it was estimated that the demand for electricity would be doubled. During the same period, steam consumption amounted to 108,000,000 pounds, while in the calendar year 1926, 120,000,000 pounds of steam had been used. The maximum steam heating demand was approximately 35,000 pounds per hour. Estimates of maximum future demands for steam were from 40,000 to 55,000 pounds per hour, while the annual demand was expected to be between 90,000,000 and 168,000,000 pounds. An estimate below the amount which station records showed for 1926 and 1927 was considered possible for two reasons: first, the metering for those years was believed to have been somewhat inaccurate; second, it was expected that

the new terminal buildings would have a more efficient distributing and heating system. There did not appear to be any great likelihood that the steam-heating needs of the company would increase materially beyond the requirements of the group of buildings planned at that time.

In reaching a decision as to whether it should supply its own power or purchase from the Butler Electric Company, the Knox Terminal Company realized the absolute necessity of providing the most reliable possible lighting and power service for the new hotel and coliseum, where large numbers of people would assemble, and where interruptions of service could not be permitted in the interests of public safety. If the terminal company undertook to furnish its own service, it would either have to provide certain duplicate equipment, or purchase standby service from the utility company. Furthermore, if a private plant should be constructed, it would be necessary to install steam boiler and electric generating equipment of sufficient capacity to meet maximum momentary demands.

If power should be purchased from the utility, however, the terminal company would be called upon to pay for somewhat less than these momentary maximum demands. According to the wholesale power rate that would be available to the terminal company, "monthly demand" was defined as the average of the 20 highest half-hour demands occurring during the month. "Billing demand" was defined as the highest monthly demand in the 12-month period preceding the date of each bill. A study of available records indicated that on these bases the billing demand for electric service would be approximately two-thirds of the peak for which the terminal company would have to make provision if it supplied its own service. It was estimated that the billing demand for steam would be about 90 per cent of the maximum steam demand that would have to be met by a private plant.

The condition of the Knox Terminal Company's steam and power plant was an important factor in the solution of the problem facing the company. Even the newest boilers in the plant had been in service more than 17 years, and, if the plant continued to generate electricity, would require replacement within a few years because of reductions in pressure rating by the insurance companies. After such reductions, it would not be economical for the terminal company to operate these boilers separately for heat-

ing service with new boilers supplying high-pressure steam for power generation. If the Butler Electric Company purchased the old plant, however, it might be used for heating purposes only.

EXHIBIT 1

KNOX TERMINAL COMPANY

ESTIMATED ANNUAL COSTS, INDEPENDENT OPERATION v. PURCHASED POWER

SERVICES TO BE SUPPLIED FOR IMMEDIATE REQUIREMENTS

Electric:	
Maximum Demand	2,250 kw.
Annual Consumption	9,286,000 kw.-hr.
Steam:	
a. High Pressure	
Maximum Demand	22,000 lb. per hr.
Annual Consumption	20,000,000 lb.
b. Low Pressure	
Maximum Demand	49,000 lb. per hr.
Annual Consumption	87,000,000 lb.

Old Plant Costs		Purchased Power Costs	
Investments:		Heating Steam:	
Land	$ 25,000	Standard Rates ($5.50 Coal)	$ 84,780
Old Plant Investment	175,000	Electricity:	
Plant Investment (New)	250,000	Demand	21,220
Pipe Tunnel (New)	60,000	Energy ($6.00 Coal)	84,210
Resetting Old Boilers	25,000	High-tension Substation Charges	7,000
Fixed Charges:			$112,430
Land (Interest and Taxes Only) 7%	1,750		
Old Plant	30,000		
New Plant at 12½%	31,250		
Pipe Line at 12½%	7,500		
Resetting Old Boilers	3,100		
Total Fixed Charges	$ 73,600		
Operating Costs:			
General Expense	$ 5,000		
Fuel	68,000		
Operating Factor and Auxiliary and Losses	10,200		
Distribution Losses	1,000		
Labor	29,000		
Miscellaneous	6,500		
Maintenance	18,000		
Distribution Maintenance	1,000		
Total Operating Costs	$138,700		
Total Annual Cost	$212,300	Total Annual Cost	$197,210

Under such an arrangement, electricity would be supplied to the terminal company from the large central generating stations of the utility.

For comparative purposes, estimates were developed of the cost of operating a private power plant and the cost of purchasing

EXHIBIT 2

KNOX TERMINAL COMPANY

ESTIMATED ANNUAL COSTS, INDEPENDENT OPERATION v. PURCHASED POWER

SERVICES TO BE SUPPLIED FOR FUTURE REQUIREMENTS

Electric:	
Maximum Demand	2,900 kw.
Annual Consumption	10,500,000 kw.-hr.
Steam:	
a. High Pressure	
Maximum Demand	22,000 lb. per hr.
Annual Consumption	20,000,000 lb.
b. Low Pressure	
Maximum Demand	49,000 lb. per hr.
Annual Consumption	87,000,000 lb.

Old Plant Costs		Purchased Power Costs	
Investments:		Heating Steam:	
Land	$ 25,000	Standard Rates ($5.50 Coal)	$ 84,780
Old Plant Investment	175,000	Electricity:	
Plant Investment (New)	388,000	Demand	27,020
Pipe Tunnel (New)	60,000	Energy ($6.00 Coal)	94,200
Resetting Old Boilers	25,000	High-tension Substation Charges	7,000
Fixed Charges:			$128,220
Land (Interest and Taxes Only) 7%	1,750		
Old Plant	30,000		
New Plant at 12½%	48,450		
Pipe Line at 12½%	7,500		
Resetting Old Boilers	3,100		
Total Fixed Charges	$ 90,800		
Operating Costs:			
General Expense	$ 5,000		
Fuel	77,000		
Operating Factor and Auxiliary and Losses	11,500		
Distribution Losses	1,000		
Labor	29,000		
Miscellaneous	6,500		
Maintenance	18,000		
Distribution Maintenance	1,000		
Total Operating Costs	$149,000		
Total Annual Cost	$239,800	Total Annual Cost	$213,000

power. These cost studies were made for both the immediate requirements of the terminal and for the estimated future requirements. In each case, the additional investment in plant on the

part of the Knox Terminal Company was included. A summary of these studies is presented in Exhibits 1 and 2. The total annual cost to the company of supplying its own immediate needs was estimated to be $212,300, as compared with an annual cost of $197,210 for purchased power.

EXHIBIT 3
KNOX TERMINAL COMPANY
STEAM AND ELECTRIC CONSUMPTION BY MONTHS
1936–1937

	Steam	Electricity Kw.-hr.	Billing Demand, Kw.
1936:			
January	18,946,000	1,062,000	2,424
February	21,884,000	1,070,000	2,372
March	12,727,000	998,000	2,346
April	10,804,000	836,000	2,346
May	5,781,000	838,000	2,346
June	3,427,000	894,000	2,346
July	1,867,000	990,000	2,346
August	1,779,000	958,000	2,346
September	2,778,000	1,104,000	2,346
October	6,861,000	958,000	2,346
November	13,762,000	1,060,000	2,346
December	16,153,000	1,132,000	2,414
Total	116,769,000	11,900,000	
1937:			
January	15,079,000	1,136,000	2,415
February	17,256,000	1,108,000	2,424
March	14,558,000	1,202,000	2,501
April	11,791,000	1,076,000	2,501
May	5,970,000	932,000	2,501
June	2,350,000	1,148,000	2,501
July	1,846,000	1,128,000	2,501
August	1,906,000	1,222,000	2,501
September	3,339,000	1,092,000	2,501
October	8,514,000	964,000	2,501
November	12,207,000	1,008,000	2,501
December	17,135,000	1,102,000	2,501
Total	111,951,000	13,118,000	

From Exhibit 2 it may be seen that the annual cost to the terminal of supplying its own power in the future would be $239,850, while service could be purchased from the Butler Electric Company for $213,000. Furthermore, an additional saving would accrue to the terminal company if it sold its plant to the utility. The Butler Electric Company engaged a firm of con-

sulting engineers to appraise this plant. They found its depreciated value to be approximately $200,000 and its reproduction value, new, to be about $500,000. It was pointed out that the plant would be worth much more to the utility than it would to the terminal company inasmuch as the former could operate the boilers at low pressure for heating purposes. Moreover, by taking on other steam-heating customers, the utility could attain greater production economies than could the terminal. On the basis of its investigation, the Butler Electric Company offered to take over the land and plant at a price of approximately $450,000.

In view of the foregoing considerations, the Knox Terminal Company decided in 1928 to sell its plant to the Butler Electric Company and to purchase both steam and electricity from the latter company.

In 1938 the arrangement with the utility company was still in effect. During the intervening years, the steam needs of the terminal company had remained relatively stable, while there had been some increase in the requirements for electricity. Data on consumption of both steam and electricity during 1936 and 1937 are presented in Exhibit 3. In 1938 no change was contemplated in the existing method by which power was furnished to the terminal company.

What problems confront a central station which attempts to sell electrical energy to large consumers with substantial needs for both steam and electricity?

What problems confront a large business which attempts to furnish itself with steam and power rather than purchase these services from a utility?

What do you believe were the essential factors which led to opposite conclusions in the cases of the Adams & Mason Terminal Company and the Knox Terminal Company?

B. Relation of Steam-heating Service to Sale of Electricity

53. Boston Edison Company (b)

Although as early as 1887 The Edison Electric Illuminating Company of Boston[1] was supplying various properties immediately adjoining its generating plants with steam, comparatively little was done to extend this service until about 1905, when the company took over the operation of the fully equipped steam-heating plant of Houghton & Dutton Company, a large Boston department store.

This steam-heating plant generated electricity as a by-product, because the management of Houghton & Dutton Company had assumed that with the company's investment in boiler equipment already made for heating, it could supply its own electric power more cheaply than by buying it from the Edison company. On the other hand, as explained below, the demand of the store for steam was seasonal, and an hourly off-phase relationship existed between the demands for heating and electricity, so that the Edison company's engineers estimated that the store could buy both heat and power more cheaply. In the winter when the store had to generate a large amount of steam for heating purposes, the cost of putting this steam through a prime mover to generate electricity was very small; but in the summer, after generating the required electricity, the store had no use for the exhaust steam. This unbalanced operation in the summer was very expensive, since at least "skeleton" boiler and engine-room crews had to be maintained. The off-phase relationship between the demands for heating and electricity was also important. For example, during the winter season considerable heating was required early in the morning, while the lighting load of the store was at its minimum. In the late afternoon, however, when the store was well heated and was preparing to close for the day, the lighting load was generally at its peak.

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[1] Effective July 15, 1937, this name was changed to Boston Edison Company.

According to computations of the Edison company, even if the Houghton & Dutton Company bought only its electricity instead of generating it, it could probably effect a saving. In order to obtain the store's electric business, however, the Edison company offered to take over the steam plant located in Houghton & Dutton Company's building and supply the store with both heat and power. The over-all cost of this service to the store was substantially lower than the cost at which it could supply these services itself. Furthermore, the greater reliability of the utility company's electric service as compared with that of the store's own plant was a factor to be considered. To secure comparable reliability, the store would have to make additional investment for stand-by equipment.

In the light of all these considerations, Houghton & Dutton Company made a contract with the Edison company, by the terms of which the utility was to operate the store's steam plant for heating only and to furnish electric power from the utility's own system. Upon the conclusion of this contract, the Houghton & Dutton Company disposed of its electrical generating equipment.

Shortly afterward, similar arrangements were made with other leading mercantile establishments in Boston, such as R. H. Stearns & Company, R. H. White Company, and Jordan Marsh Company. In many cases the space made available by the elimination of the engine room was utilized for bargain basements, extension of shipping-room space, or other purposes. The additional rental value of such space when utilized for the business of merchandising was in some instances greater than the annual charges made by the utility for the steam service.

In 1922, in order to effect operating economies, the Edison company interconnected with underground steam mains some of the steam plants which it controlled. In 1928 the Edison company purchased a power plant from the Boston and Maine Railroad, which at that time was rebuilding its terminal and expanding its electric and steam requirements. The utility removed the electric-generating equipment which had hitherto supplied the needs of the terminal, and modernized the boiler equipment for the purpose of supplying the entire steam requirements of the North Station and its associated buildings. It was expected that other steam customers in this district would gradually be added to the load of this plant. In 1930 a new steam-generating plant of

large capacity and high efficiency was completed at Kneeland and Utica Streets. This plant was designed solely for the generation of steam to supplant the less efficient small plants which had been acquired and were being operated by the utility in the business district. It was not interconnected with the North Station district, although the same rates applied to both districts. The original installation in this new plant consisted of two boilers, each of which was capable of delivering 250,000 pounds of steam per hour; a third boiler, added later, had a capacity of 350,000 pounds of steam per hour, which, if the by-product electricity was generated with a back pressure or bleeder turbine, would represent an electrical capacity of approximately 14,000 kilowatts, depending on the steam pressure and equipment used. All the mains in the company's system received steam at a pressure of between 100 and 200 pounds per square inch, depending on the load on the system.

After the inauguration of central steam-heating facilities, many new customers were added to the system, although these were within a restricted area so that no major extensions of mains had to be made until 1932.

The following record of an office building built in 1930 is an example of the savings realized by many customers through utilization of the steam service of the Edison company. The building was constructed at a total cost of $100,000 less than would have been required had an additional sub-basement been included for housing a boiler room. This represented an annual saving of $5,000 in interest charges at 5 per cent. An additional estimated saving of $100,000 was effected since no investment in plant equipment was made. Depreciation and interest charges on plant equipment worth $100,000 would have amounted to $12,000 annually. Insurance on the boiler plant itself was, of course, eliminated, and the insurance rate for the whole building was reduced. A power plant in this building would have necessitated the construction of a smokestack occupying 64 square feet of space inside the building on each of the 23 floors. The rental value of this amount of floor space was estimated to be approximately $6,000 annually. Thus, even without taking into consideration any operating costs for the individual plant, a total annual saving of over $23,000 was effected. The Edison company supplied steam to this building at a price of approximately $16,000 annually. Furthermore, electric power was furnished by the Edison company

at a rate materially below that at which an individual plant in the building could have supplied it.

There were other advantages in buying steam from the utility, the monetary value of which was difficult to estimate, since they involved considerations of goodwill, civic pride, and public health. These included freedom from dirt, smoke (annoyances which generally accompany the operation of individual heating plants), and the elimination of traffic obstructions which often result from the handling of fuel and ashes in congested districts. Moreover, buying steam from the utility relieved the individual managements from the distractions and complications involved in considering problems which were widely divergent from the principal policies of their businesses.

When the First Church of Christ, Scientist, planned to erect a new building for its publishing plant in 1931, there were three possibilities for supplying the steam requirements: (1) to continue purchasing electricity and rebuild the existing boiler plant in the old publishing house in order to add about 10 years to its life; (2) to build a power plant to supply both steam and electric requirements; (3) to purchase both electricity and steam from The Edison Electric Illuminating Company of Boston. The old boiler plant had been supplying steam to a group of the Christian Science buildings which with the addition of the new building would total nearly 11,000,000 cubic feet in volume. The utility favored the first possibility because the second meant the loss of an important electric customer, and the third involved a considerable investment in steam mains in order to connect this load with the existing system. On the other hand, representatives of the church felt that the choice lay between the second and third possibilities, and as a result, the final decision was to buy both steam and electric service starting November 1, 1932, with an agreement to allow the utility to use the old heating plant for the first year.

This agreement resulted in a serious construction problem for the utility, as the nearest point of its downtown loop, supplied by the Kneeland Street station, was 1½ miles away, and the space intervening through the Back Bay district was largely composed of filled land in which the high water level was in places only a few feet below the street surface. The time element also meant that whatever moves were made had to be made quickly. Construction was started in the street on May 31, 1932, and steam was

turned on in the last section of the pipe on October 31, 1932. About halfway along the route a connection was made with the steam plant of the Copley Plaza Hotel on a two-year stand-by agreement so that if the utility's supply failed, it could draw upon this reserve. During the year 1931, additional lines were laid to complete loop service to all points on the initial line, thus insuring greater reliability of service. In routing this loop extension, not only the physical problem of laying the pipe but the potential market had to be considered. Of this potential market, the utility was able to connect 13 per cent during the process of construction and 25 per cent during the first year. These customers, some of which had generated electricity for their own use, included Symphony Hall, Boston Storage Warehouse Company, Lenox Hotel, Brunswick Hotel, Vendome Hotel, and the Chilton Club. Among the other prospects were several other hotels, the buildings of Boston University, the Museum of Fine Arts, and the Boston & Albany Railroad yards.

The results of this extension of facilities were immediately satisfactory, as may be seen from Exhibit 1. The company was insistent that it was selling steam-heating service and not steam. As a result, the engineering department was often called in by customers to check the efficiency of their heating systems and to point out methods of saving.

In its steam-heating service, the utility was subject to competition at several points since its charter granted no exclusive privileges. Some isolated private plants had extended their pipes across alleyways and streets and supplied surplus steam to their neighbors, in many instances at prices lower than those scheduled by the utilities. The utility's expansion of its steam service had been entirely by gaining goodwill and giving superior service, since it had not been adjudged a common carrier in this respect and therefore did not come under the supervision of the Massachusetts Department of Public Utilities. This department did, however, pass upon the issue of stock by this company, for whatever purpose, and had approved an issue of 1,000 shares for constructing a steam-heating system. These were sold at auction on August 14, 1929, at a price of $411.50 a share.

Throughout the district served, groups of buildings were operated by so-called "building managers" who employed a janitor to run the heating plants of several buildings, thus making

EXHIBIT 1

BOSTON EDISON COMPANY (B)

ANNUAL REVENUES FROM SALE OF STEAM AS COMPARED WITH ELECTRICITY, 1928–1937

	1928	1929	1930	1931	1932	1933	1934	1935*	1936*	1937*
Number of Steam Customers	11	130	143	170	197	216	253	282	311	347
Annual Sales in Thousands of Pounds	284,078	437,928	492,554	545,430	709,959	824,770	892,104	888,979	972,078	1,034,891
Revenue	$273,156	$404,510	$472,973	$550,819	$691,238	$778,773	$883,168	$887,094	$932,249	$960,704
Peak Hour in Thousands of Pounds	143	213	244	256	347	430	420	403	432	497
Number of Electric Customers	375,829	400,926	413,296	421,803	426,046	427,096	429,180	389,472†	395,587†	412,703†
Total Gross Revenue	$27,749,657	$29,664,585	$30,617,179	$30,815,429	$30,578,497	$29,291,489	$29,746,055	$30,673,107	$31,667,395	$32,911,188

* New classification of accounts since 1935.
† Based on number of bills rendered in December.

the cost of this service very low. The utility had been inquiring into the possibility of securing this business. In New York the practice of the New York Steam Corporation was to serve such a group as a unit, thus giving the benefit of reduction in rates for larger consumption, provided the buildings were within 100 feet of each other and might be served from one plant. The Boston Edison Company proceeded very cautiously in setting up any such dividing line for fear that such groups might also claim the right to electric service as units, thus opening up a field similar to submetering in its effect on the utility.

A booklet issued by the company stated that "the rates at which steam is sold are so designed that they compare favorably with the cost of producing steam in the isolated plant. Wherever the initial investment in boilers can be omitted from building construction, the cost of steam service shows a distinct saving over other methods of heating." In most cases the utility sold its steam service on the basis of the completeness of the engineering advice, the reduction in cost, and the reputation of the company for reliability of service.

In order to expand business in residential areas where there were steam mains, the company in May, 1935, inaugurated a new steam rate for residential service. This rate was made in recognition of the fact that additional demands for steam could be met by a small increase in capital investment.

Although the over-all thermal efficiency of generating electricity from steam, subsequently used for heating, is somewhat greater than that obtained from generating an equivalent quantity of electricity in a condensing plant, the engineers of the Edison company believed that it was not generally feasible to operate a central heating system in conjunction with electric-generating equipment. The average annual steam load factor on such a central system in a climate similar to that of Boston is approximately 26 per cent. With such a low average load compared with the maximum demand, it was not considered economical to invest additional sums of money in generating equipment.

Data showing the growth of the company's steam business from 1928 to 1937 are presented in Exhibit 1.

How will the development of district steam heating affect the marketing policies of electric utilities?

C. Utilization of an Industry's By-products as Fuel and Sale of Steam and Power to the Industry

54. Louisiana Steam Generating Corporation

Early in 1929 the Baton Rouge Electric Company, serving the city of Baton Rouge, Louisiana, and adjacent territory, was faced with the problem of providing additional capacity to meet the requirements of its steadily expanding market. The utility's existing plant had a total installed capacity of 6,500 kilowatts, which consisted of one 3,500 kilowatts and two 1,500 kilowatts condensing turbines.[1] As an alternative to the construction of additional generating capacity in Baton Rouge, it was decided to provide at that time for the increased demand by effecting an interconnection with the lines of an affiliated company, the Gulf States Utilities Company. This interconnection was completed in March, 1929. As a result, the power facilities of the Baton Rouge Electric Company were supplemented by power from the Neches station of the Gulf States Company at Beaumont, Texas, 185 miles distant.

The Baton Rouge Electric Company was owned by Engineers Public Service Company, at that time an affiliate of Stone & Webster, Inc. The Gulf States Utilities Company was managed by the same firm through an intermediary subsidiary company. The system was, in a sense, under a unified control. It appeared to be desirable from the point of view of the entire system to have increased generating capacity at its eastern end con-

[1] A condensing turbine is one which exhausts steam into a specially constructed condenser in which the pressure is maintained at a point considerably below the actual atmospheric pressure. The advantage of this type of installation is the greater efficiency obtainable from such units because of the utilization of the expansion of steam down to a lower exhaust pressure. The lower this exhaust pressure, the greater is the steam utilization efficiency of the installation.

The condensing water necessary for the operation of the turbines in this plant was supplied by a spray pond. This is a device for cooling the condensing water by spraying it in the form of fountains in an open pond adjacent to the power plant. When the problem of increasing the utility's capacity arose, therefore, the question of obtaining condensing-water facilities for an enlarged installation presented itself. Baton Rouge is located on the Mississippi River, which provides an ample source of water for condensing purposes, in spite of the fact that the river level at that point rises and falls some 46 feet from season to season.

siderably in excess of that supplied by the Baton Rouge plant, since such increased capacity would eliminate, to some extent at least, the necessity for transmitting large quantities of power over 185 miles of transmission line.

In the latter part of 1929 the refinery of the Standard Oil Company of Louisiana at Baton Rouge was faced with the necessity of making extensive changes to provide for growth in both steam and electric loads, and to permit the retirement of some of its older boilers. The refinery processes required the use of large quantities of steam at pressures upwards of 135 pounds gauge,[1] which the company's own power plant supplied. The Stone & Webster interests proposed to supply both steam and electricity to the refinery and thereby eliminate the necessity for a large investment in expansion of facilities on the part of the Standard Oil Company. The Standard Oil Company was not interested in such a development unless the utility company would agree to use the refinery's waste products as fuel in the supplying of its requirements. The Baton Rouge Electric Company had been using natural gas supplemented by crude oil for all its fuel requirements. To obtain the desired contract from the Standard Oil Company, however, the electric company would have had to develop some process for the burning of miscellaneous oil refinery sludges and petroleum coke. The sludges had for many years been classed as "noncombustible" materials, in spite of the fact that chemical analyses revealed that they contained considerable B.t.u. content. This was due to the fact that no suitable apparatus had been developed for burning such sludges. Among the difficulties presented was the fact that they contained from 20 to 40 per cent dilute sulphuric acid.

The engineers realized, however, that if a contract could be made with the Standard Oil Company, it would then be feasible to erect a large noncondensing plant at Baton Rouge. Steam turbines driving electric alternators could be so constructed as to take steam from boilers at 650 pounds pressure and exhaust it at a pressure of 141 pounds. Although generally such an installation would have been prohibitively inefficient, in this case the exhaust steam could be utilized in the processing of the oil at the refinery. The over-all efficiency of the plant, considering that it would furnish the necessary steam and generate electricity as a

[1] Gauge pressures are pressures measured above atmospheric pressure.

by-product, would amply justify its installation. Furthermore, such a plant would obviously eliminate the necessity of pumping sufficient quantities of condensing water from the river. The Standard Oil Company's steam demand, furthermore, was utilized at an annual load factor of 83 per cent and its large electrical energy consumption at an annual load factor of 85 per cent, thus making it an extremely desirable customer.

So attractive did the prospects of such an installation appear to be that the Stone & Webster engineers proceeded to design a power plant which could utilize as fuel 50 per cent natural gas and 50 per cent refinery waste. A unique feature of this plant design was that it was equipped to handle solid, gaseous, and liquid fuels simultaneously.

A long-term contract extending until 1940 was made with the Standard Oil Company of Louisiana, by the terms of which the utility was to purchase the refinery's waste products for fuel purposes, and the company was to purchase its steam and electric power requirements from the utility. A gas-price clause, similar to the usual coal-price clause, was, of course, incorporated into this agreement. The cost of both steam and electric services specified in the contract was fixed in such a way as to permit the utility to earn a profit and to amortize its otherwise useless investment in this specially constructed plant during the life of the contract.

After the conclusion of this agreement, Engineers Public Service Company erected the new and highly specialized plant required, and placed it under the supervision of a newly formed subsidiary called the Louisiana Steam Products, Inc. The plant was completed and put into operation in 1930. It was estimated that out of a total investment of approximately $6,500,000 in this plant, only $775,000 would have to be abandoned if the Standard Oil Company failed to renew the contract at its expiration. The balance of the investment could, after some supplementary expenses had been incurred, be utilized for efficient generation of electric power.

Since the station had to be operated in such a way as to supply ample steam requirements to the refinery, the Louisiana Steam Products, Inc., generated large quantities of electric power as a by-product in excess of the Standard Oil Company's needs. This enabled the Baton Rouge Electric Company to shut down completely its own inadequate plant and to purchase power from the Louisiana Steam Products, Inc., at a cost which was not only

lower than its previous cost of production, but which was lower than its increment cost would have been had it attempted to increase its own generating facilities by installing additional generating capacity. Since the requirements of neither the oil company nor the local utility company absorbed the entire by-product electric power generated by the Louisiana Steam Products, Inc., all the excess was sold to the Gulf States Electric Company system through the Baton Rouge Electric Company's interconnection with that system.

In 1932 the name of the company was changed to Louisiana Steam Generating Corporation. At that time it was found necessary to issue bonds to reimburse Engineers Public Service Company for money advanced for the original plant construction. At the request of the company's investment bankers, the name was changed in order to express more clearly the type of business in which the company was engaged.

In the years following the construction of the plant, the demand for the company's steam and electricity was well maintained despite the general business depression. There were several reasons for this. In addition to the contractual obligations of the Standard Oil Company and the Louisiana Steam Generating Corporation, the continuous nature of the oil company's processing tended to maintain the load factor of steam and electricity used. Furthermore, while there was some curtailing of refining operations, the amount of decrease was not so great as that found in other localities because the Baton Rouge refinery was used by the Standard Oil Company as a base load plant.

With the upturn in business, the Louisiana Steam Generating Corporation's industrial load increased substantially. The first factor in this growth was the enlargement of the Standard Oil Company's refineries with an accompanying increase in the demand for steam and electricity. The contract with this company was extended until 1950. A chemical plant of the Solvay Process Company started operations in 1933, obtaining steam and electricity under a five-year contract with the Louisiana Steam Generating Corporation. In 1937 another industrial customer was obtained when the du Pont company erected a plant for the manufacture of ethyl fluid and sodium. Early in 1938 the du Pont company assigned its contract to a new company, Ethyl Gasoline Corporation, in which, it was understood, Standard Oil Company and General Motors Corporation both had an interest. The new

corporation was undertaking the construction of a substantial extension to the original plant, such extension to be completed during 1938, and to require additional steam and electricity.

The contract, expiring in 1950, covering the service to this customer took special advantage of the complementary nature of the demands of the Standard Oil Company and the Ethyl Gasoline Corporation. In its refinery operations the former company used steam in an amount generally not exceeding 20 kilowatt-hours per 1,000 pounds of steam, whereas the Louisiana Steam Generating Corporation produced between 35 and 40 kilowatt-hours per 1,000 pounds of steam, depending upon operating conditions. The plant of the Ethyl Gasoline Corporation needed primarily electric power. Thus it was arranged that under the company's contract the amount of electricity that could be taken was dependent upon the amount of steam taken by the refinery of the Standard Oil Company.

These additions to the demand on the plant of the Louisiana Steam Generating Corporation required substantial expenditures for new boilers and generating equipment. By the early part of 1938, the company had started to add two new boilers of 500,000 pounds per hour each, and two turbogenerator units with a minimum capacity of 15,000 kilowatts each. These new units were of the condensing bleeder type which enabled the electric output of the plant to be controlled, since kilowatt-hours could be generated independently of the steam demand by putting steam through to the condensers in the new units. Formerly there was no such ability to vary the electric output, and the amount of electricity generated depended almost entirely on the amount of steam taken by the industrial customers. The capacity of the new turbogenerators was greater when steam went through to the condensers. The electric generators attached to each unit had a maximum capacity of 25,000 kilovolt-amperes which might be developed under certain operating conditions. The addition of condensers to these units required substantial construction to bring condensing water into the plant. This construction presented engineering difficulties because of the varying levels of the river.

Consider the effects upon public utilities generally of the development of such relationships between public utilities and industrial companies as are illustrated in this case.

D. Construction of Public Utility Plants to Provide Adequate Supply of Steam and Power to Industries

55. Rochester Gas & Electric Corporation

Beginning in the year 1889, district steam service in Rochester, New York, varied but little from this service in Lockport, New York, and in New York City, the only two other cities where district steam systems were in operation at that time. The exhaust steam from slow-speed reciprocating engines connected with direct current generators had usually been wasted before that time. This exhaust steam, supplemented by so-called high-pressure steam direct from the boilers at about 100 pounds gauge, beginning about 1889, was sold at extremely low rates to near-by buildings and factories in Rochester.

Skepticism of this "new-fangled" idea of sending steam through underground pipes soon gave way to appreciation of the real advantages of cleanliness, convenience, economy, and dependability. By the middle 1930's there were over 100 district steam systems in the principal cities of the United States, most of which were supplying steam mainly for heating purposes. A relatively small amount of steam was also being supplied for water heating, laundry, kitchen, and other special uses, the Cambridge Electric Light & Power Company's supply of steam to the buildings of Harvard University being typical of this type of system.

In Rochester, an unusual type of system developed with a large part of its load made up of the demands of the central industrial district of the city, including the large plants of the Eastman Kodak Company, Bausch & Lomb Optical Company, the Curtis Canning Company, the Genesee Brewery, the Aplo Clothing Company, and the plants of several other companies, all grouped in areas within a mile of the company's main steam and electric-generating station. In addition, the company's two gas-manufacturing plants and the city's garbage-reduction plant, also located in this district, required large steam and electric loads.

Since all these companies used steam for heating purposes during the winter season, and some of them required it for process work during winter and summer, the executives of the Rochester Gas & Electric Corporation realized that in order to obtain all the electric business of these plants, it would be advantageous to offer to supply them with steam also. If such joint service was not made available, each of these plants might find it cheaper to supply its own electric power, since a large investment in boiler-room facilities would be necessary whether electricity was generated or purchased. Under such circumstances, the costs directly attributable to generating electricity would be only the additional costs of operating a somewhat larger boiler room, the additional fuel costs, the interest on the additional investment required for such capacity, and the cost of installing and operating an engine room. In most instances, such additional costs would amount to less than the cost of purchasing electric power from the Rochester Gas & Electric Corporation. If, however, both steam and electricity could also be purchased, then the investment in new boiler rooms as well as in engine rooms would be entirely eliminated; in addition customers would not have to cope with the problems of operating their own private plants, and would obtain cleaner, more easily controlled, and more convenient and dependable heating and industrial steam service. For these reasons, certain customers were interested in the possibility of purchasing both power and steam.

In order to make joint steam and electric service available to these and other industrial consumers, the Rochester Gas & Electric Corporation constructed mains from a steam generating plant in Rochester's central manufacturing district. Although at that time franchises were not necessary for engaging in the generation and distribution of steam, city permits were obtained to lay steam mains under the streets which had to be crossed in order to reach consumers. When this joint service first began, the sale of steam itself was unprofitable, but the revenue from the sale of electricity to these plants was sufficient to make the combined sale of steam and electricity advantageous to the Rochester Gas & Electric Corporation.

When the steam mains had been laid from this central plant to the customer's premises, numerous smaller enterprises in the vicinity requested the Rochester Gas & Electric Corporation to

extend its steam service to them. Gradually the company complied with these requests and the sale of steam was increased in this manner. In another district, such as that where the shoe factory of Utz & Dunn was located, the latter company, which was buying electric power from the Rochester Gas & Electric Corporation, contracted with an engineering and construction firm for the erection of a private power plant adjacent to a location selected by the Rochester Gas & Electric Corporation for the erection of a substation. In order to retain this customer's business and to obtain additional load, the Rochester Gas & Electric Corporation purchased this contract. The utility then erected a substation, equipped in such a way that steam as well as electricity could be supplied. As a result, Utz & Dunn purchased steam for heating purposes and continued to buy electric power from the utility.

As the steam business developed, it became apparent that an important electric load could be built up if steam were supplied for heating purposes to such potential customers as large office buildings. This fact had been fully demonstrated by Mr. Cutler, of Cutler Mail Chute fame, who owned several adjacent buildings in Rochester and who had erected a central heating plant to supply steam to his commercial properties. Because of his investment in the steam plant, he decided to install electrical generating equipment to supply his buildings with power and light also. At a later date, Mr. Cutler disposed of his properties to an individual who offered to sell the Cutler power plant to the Rochester Gas & Electric Corporation. The negotiations did not result in a sale at that time; hence, the owner decided to organize a steam heating company. He died before his plans materialized, however, so that the operation of the power plant had to be assumed by the trustees of his estate. Realizing their inability to operate such an enterprise efficiently and satisfactorily, the trustees offered to sell the plant to the Rochester Gas & Electric Corporation. The executives of the utility, believing that the time had come when they would find it profitable to develop further the steam-heating business in certain parts of Rochester, and, furthermore, wishing to eliminate a possible competitor, in 1925 purchased the old Cutler plant.

From 1926 to 1928 many large office buildings, including that of the Rochester Gas & Electric Corporation, were being erected in

the heart of Rochester's business district. The utility realized that in order to supply electric light and power to these new buildings, it would be beneficial to have available both steam and electricity before the installation of individual power plants. Consequently, another steam generating plant was built in the downtown business district, and the necessary franchises, by that time required, were obtained. This new plant supplied steam for heating purposes to the utility's own new office building and to other similar buildings in the neighborhood. It also assumed the entire steam load formerly carried by the abandoned Cutler plant.

When the utility first began to sell steam, the steam was supplied directly from boilers or as exhaust from engines. Later, however, its plants were modernized and bleeder or back-pressure turbines were installed in its steam plants. Such equipment generated high-pressure steam, 200 pounds gauge, which was supplied to a turbine which was either bled or exhausted at the pressure desired in the steam mains. The station which supplied the Bausch & Lomb Optical Company, the Curtis Canning Company, and the Eastman Kodak Company, was so designed that electricity was the chief product and steam a by-product. It was, of course, so constructed that if the electric load on the station declined to such a point that an insufficient quantity of steam was drawn through the turbines to supply the needs of the customers on the lines, additional steam could be sent into the mains through reducing valves directly from the boilers. Most of the steam sold from this station was high-pressure steam delivered to the customers at from 100 to 150 pounds gauge.

In a station which supplied the downtown district, steam was the main product and electricity the by-product. This station was designed in such a way that it was capable of supplying both high and low pressure steam. Two sets of mains radiated from this station; one set conveyed high-pressure prime steam to such customers as required this service,[1] and the other was used for distributing low-pressure steam which was used primarily for heating purposes. The low-pressure section was shut down during the summer, and the electrical load assumed by other stations in the system. Because of the location of this station in the midst of the business district, it had no condensing water available. If, there-

[1] Prime steam is steam which comes directly from the boilers without passing through a turbine.

fore, circumstances ever made it desirable to operate this station on "speed control," that is, in such a way that electricity became the primary product, steam would have to be exhausted to the atmosphere.[1] This station could be so operated in emergencies and, therefore, would serve as a stand-by unit for generating electric power. By 1930, both these stations were showing a profit on their steam business and were electrically interconnected with the rest of the utility's system, to which they supplied electric power.

In 1929, the utility was again confronted with the problem of retaining the electrical business of three of its large industrial customers, each of which was planning to expand its facilities and was contemplating supplying its own steam and electric requirements, either on an individual basis or in cooperation with each other. These customers were all within a comparatively short distance of one another at Lincoln Park, one of Rochester's industrial sections. They needed additional boiler capacity and believed that, because of the greatly improved efficiency of small turbogenerator units in recent years, it would be advantageous to generate their own electricity.

In order to retain this business, the utility constructed a modern, high-pressure, 400 pounds gauge, power plant in the Lincoln Park district. Highly efficient powdered coal boilers and turbines equipped with automatic back-pressure governing devices were installed, so designed that the turbine carried any electric load necessary to maintain the desired exhaust pressure, irrespective of the variations in demands for steam. This station, like the one in the downtown business district, however, could be operated on speed control in case of emergencies. The Lincoln Park station was designed originally to supply the steam needs of three large industrial customers and to prevent these firms from having to make a large investment in boiler-room equipment which, in all probability, would have led them to supply their own electric

[1] When a back-pressure turbine is operated on speed control, the amount of steam which it draws from the boilers is determined by the electrical load which it must carry, independent of the needs for exhaust steam for other purposes. Ordinarily, a turbine operated on speed control exhausts steam to a condenser so that a large portion of the potential energy of the steam can be utilized in expanding down to the condenser pressure. If no condensers are provided, however, steam must be exhausted at atmospheric pressure with the result that the over-all efficiency of the unit is greatly impaired. Consequently, back-pressure turbines would be operated on speed control only in emergencies when additional electrical power was urgently needed by the system.

needs. Unlike the downtown station, the Lincoln Park plant was so situated that condensing water could be obtained. If at any time in the future it became necessary or advisable to operate this station with a view to making electricity the primary product, condensers could be installed and efficient speed control operation effected.

Shortly after the completion of the Lincoln Park plant, the three customers supplied with steam found it necessary, because of the generally poor business conditions, to curtail operations. For this reason, the steam business of the Lincoln Park plant in its first year of operation proved unprofitable, although the over-all operations of the plant, even under the existing adverse business conditions, appeared to be satisfactory.

Since the time when it first began to supply steam, the utility had been able to shut down nearly 300 private steam generating plants, some of which generated electricity as well. In some instances, it purchased private plants and operated them temporarily to supply steam to its customers, tying in the electrical generating equipment with the rest of its system. The utility could operate such plants efficiently and effectively because its electric system provided a constant outlet for the electric power generated, whereas the peak steam and electric requirements of individual consumers seldom occurred simultaneously, with the result that most of the time either the steam or electric equipment was not utilized to the best possible advantage. Furthermore, the peak demand for steam generally occurred on a Monday morning in January, whereas the peak demand for electricity was usually recorded on a dark evening in December, making it possible for the utility to supply a given amount of steam and electricity with a total boiler capacity considerably below that which would have been required had the same demands fallen upon a large number of privately operated stations. In addition, the annual load factor of the utility's electric business was improved by at least 5 per cent because, as a result of its ability to furnish both steam and electricity, large industrial customers with exceptionally high load factors were connected with it.

Do you believe that public utilities ordinarily generate and distribute electricity at a lower cost than that at which industrial companies can supply their own requirements?

Under what circumstances can an industry profitably supply its own needs for (*a*) power, (*b*) steam, or (*c*) both?

Under what circumstances, if at all, should a power company be permitted to offer steam service at a loss?

Should any rate discrimination between steam customers be allowed by a public utility commission?

What effect may the assumption of steam business have upon the character of a public utility's securities?

E. Wholesale Rates to Rural Electric Cooperatives

56. Kentucky-Tennessee Light and Power Company[1]

In the Fourth Special Session of the Kentucky legislature, 1936, a law was passed regulating the organization of rural electric cooperatives and giving them special privileges, such as exemption from taxes, not possessed by other utilities.[2]

The Kentucky statutes provided in part as follows concerning discrimination in public utility rates:[3]

> No utility shall as to rates or service make or grant any unreasonable preference or advantage to any corporation or person or subject any corporation or person to any unreasonable prejudice or disadvantage . . . No utility shall establish or maintain any unreasonable difference as to rates or service either as between localities or as between classes of service for doing a like or contemporaneous service under the same or substantially the same conditions. The commission may determine any question of fact arising under this section.

In March, 1937, the Kentucky Public Service Commission issued an order to the principal power companies in the state to show cause why a special rate should not be made for wholesale power to be furnished to rural non-profit cooperative associations. This order was issued by the commission because it felt that "low cost projects sponsored by the Federal Rural Electrification Administration" had not "progressed rapidly in Kentucky primarily because electric power" had not been available "at rates which farm organizations could afford to pay for such service." The commission wanted a "speedy and orderly extension of electric service to widespread rural areas" and desired "to do everything in its power to encourage rural development."

The commission said that while it was unimportant what agency furnished rural electric service, provided adequate and

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[1] This case is here referred to as the Kentucky-Tennessee Light and Power Company, but it actually included the major power companies operating in Kentucky, and it appeared under the title, *Re Wholesale Rates for Electric Power to Rural Cooperative Associations*, 19 P.U.R. (N.S.) 22 (1937).

[2] *Kentucky Acts*, 1936–1937, Special Session, Chap. 6.

[3] *Kentucky Laws*, 1934, Chap. 145.

dependable service was available at lowest possible cost, it saw in the rural cooperative financed by Federal funds certain advantages not possessed by other utilities serving rural areas. Advantages which the commission believed these cooperatives had over private utilities were "cost of capital and overhead expenses."

The level of rates proposed by the commission was "somewhat above that desired by the Rural Electrification Administration but lower than the standard rates of the various companies for light and power service or for wholesale service to other small utilities." The commission believed the rates proposed to be "substantially higher than the increment costs for even the highest cost producer" of the group of companies cited in its order. The commission sought to make a rate that would "cover the out-of-pocket costs incident to this service and in addition contribute a substantial margin to apply against general overhead costs and fixed charges of the utility, thus eventually making possible reductions in charges for other classes of service."

The commission held a hearing on its proposed rates, at which the companies cited in its order were represented. The companies restricted their "presentations to general statements that the proposed classification and rate" were discriminatory, "demonstrating this contention by comparisons with charges for other classes of service." No evidence was presented to show that the proposed rates would provide less revenue than "actual costs incurred by the companies in furnishing this service." But certain companies promised to submit such evidence at a later hearing. At the second hearing, about two weeks later, only the Kentucky-Tennessee Light and Power Company attempted to submit such factual material. This company "introduced certain statements of operating expenses and 'aggregate costs' per unit of service." The commission investigated the operating problems of this company and found that in certain districts it was hampered by high cost of energy purchased from other utilities, and the commission indicated that that company would not be required to sell to the rural cooperatives at the proposed rates in those districts.

The commission objected to the use of "average rates," pointing out that they gave little basis for actual rates which might properly be made for different classes of consumers, some of which would pay more and others less than the average.

The commission cited the provisions of the Kentucky statute authorizing it to determine the conditions and the facts which might justify different rates to different classes of consumers. It believed rates to rural cooperatives were justified for the following reasons.

First, rural nonprofit electrification cooperative associations constituted "a distinct and reasonable classification of service." The commission emphasized the fact that it had been generally recognized by commissions and courts that not all discrimination was illegal or unjustified.

Second, the commission believed a special classification for rural cooperatives would "attract and promote new business." It believed that these cooperatives would in the main develop rural markets which had been considered "economically unsuitable for development by privately owned utilities"; that these areas could not be served on a sound basis unless every effort were made to "offset their inherent economical disadvantages"; that to this end the Federal government had made available low-cost funds for construction and a large staff to assist with organization and development of the cooperative associations, and that the facilities of the Kentucky commission itself and of the Kentucky Farm Bureau had also been made available to encourage rural electrification. The commission was convinced that the rural market for electricity could not be developed and maintained if it was not assisted during the promotional period "while customers are being connected and a satisfactory load and usage built up."

The commission pointed out that it would not permit utilities to attract business which would impose "an unfair burden" on existing consumers. But the commission believed that its proposed rate schedule for "non-profit rural electrification cooperative associations" would cover all additional costs incurred in furnishing service to these groups "with a substantial margin remaining for general overheads and fixed charges." The commission thought it significant that none of the companies participating in the hearings had shown the foregoing claim to be untrue. The commission was convinced that its proposed rates would benefit rather than injure existing consumers by reducing average unit costs, thus breaking the "so-called vicious circle" between low consumption and high rates, and that, as volume was increased by the attracting of new business, lower rates would be possible for all classes of

service. It was felt that this theory of rate making had been "vigorously supported" by the utilities themselves in the development of their markets, and that both commissions and courts had upheld the principle involved in such rate making.

The third reason why the commission felt its proposed special rates were justified was that such rates were really "competitive rates," from two points of view: the larger cooperatives could build their own power plants; and smaller projects, if not given the special rates, would be abandoned, and the utility would thus not be able to expand its load through serving them. The commission was convinced that neither of these alternatives should be permitted when power could be supplied by existing private power companies at rates which would cover all the "out-of-pocket" costs and also leave "a margin for contribution to general overheads and fixed charges."

"Ability to pay" was given as the fourth reason for the proposed rates. The nonprofit rural cooperatives proposed generally to serve areas where the ability to pay was "extremely low compared with territory already served by utilities." In recognition of this situation the Federal government had made available low-cost funds for financing these cooperatives, and Kentucky had also passed a statute designed to promote rural electrification. The commission, therefore, believed that it was "reasonable and proper" that the utilities serve the nonprofit rural cooperatives at rates which would "produce a lower margin of profit than for certain other classes of service."

Finally the commission justified the special rates on the theory that the development of rural electrification would have "material social advantages" which would "benefit the public generally." Rural electrification would contribute to a higher standard of living, resulting not only in better lighting but in "cultural pursuits of all kinds such as reading, home study, and social intercourse" and would "lighten the burden of farm work generally."

The commission believed that such an increase in the rural standard of living would in turn bring increased demands for "numerous products, particularly equipment and appliances, plumbing facilities and farm machinery." In this manner the improvement in rural life through rural electrification would "benefit urban customers by increasing demands for industrial products in addition to benefits of increased volume and reduced

unit costs for electric service which should make rate reductions possible for all."

While the commission believed that it had ample authority to order a special rate classification for rural cooperatives, nevertheless, "in view of the uncertain nature of the loads" which such rates might develop and "the relationship of such loads, diversity and usage to existing classes of business" the commission authorized and required the adoption of such rates for a temporary period of two years. During this period the commission proposed to observe the "effects on other classes of service"; hence, it retained jurisdiction so as to enable it to make whatever adjustments might prove to be necessary.

The following rate schedule was ordered by the commission to become effective on or before June 1, 1937:

Demand Charge	
First 50 kw. of Maximum Demand per Month.....	$1.25 per kw.
Next 150 kw. of Maximum Demand per Month.....	1.00 per kw.
Over 200 kw. of Maximum Demand per Month.....	.75 per kw.
Energy Charge	
First 50 Hours' Use of Maximum Demand per Month.	1 cent per kw.-hr.
Excess Consumption.....	¾ cent per kw.-hr.

Minimum Charge

The monthly minimum charge shall be $1.25 per kilowatt of maximum 15-minute integrated demand per month for each point of delivery, but not less than $62.50 for each point of delivery, except that the $62.50 minimum will not be effective for the first 12 months after service is commenced.

Initial contracts under this rate order were to be in force for a period of two years from the date service began and were to continue in effect after that period for yearly periods until canceled "by six months written notice being given by one party to the other of its election to terminate this contract." When mutually agreeable, contracts for longer periods than two years could be made, but no contract was to preclude revision thereof by the commission.

The commission included in its order a provision that no substantial investment in transmission lines or substations were contemplated under the rates announced. When connection of potential service loads under this rate made it necessary to "strengthen or increase the capacity of the company's existing facilities, such cost in excess of an amount equivalent to three times the expected annual gross revenue from the requested service will be borne by the cooperative association." But con-

tributions in such instances were to be required by the utility furnishing the service only after approval of the commission.

The cooperatives were also required under this rate order to "bear the cost of all labor, materials, and equipment" that might be necessary in making the connection between its facilities and those of the utility, except that the cooperatives were not to be required to furnish watt-hour meters or demand meters or to install such metering equipment.

Service under the rate order was to be furnished at one location. If the cooperative desired to purchase energy at two or more locations, each location was to be metered and billed separately.

The cooperative would have "complete responsibility for all operation and maintenance beyond the point of delivery" and would "save the company harmless against liability for injury or damages, resulting in any manner from construction, location, operation, or maintenance of the cooperative's lines and facilities."

During the temporary period of two years for which these rates were to be effective, the utilities were required to file with the commission at three-month intervals, beginning July 1, 1937, a statement of the cooperatives furnishing service under the rates prescribed by the commission, including "their respective monthly maximum demand, load factor, kilowatt-hours consumed, and monthly bill."

What economic and business factors should be considered in determining whether there would be any justification for a lower wholesale rate schedule to rural cooperatives than might be available to small utilities serving mainly urban areas?

2. Demand Charges in Wholesale Market

A. Bases for Demand Charges

57. LEEDY MANUFACTURING COMPANY[1]

In April 1929, the Leedy Manufacturing Company and a number of other manufacturers in Indianapolis petitioned the Public Service Commission of Indiana to modify the schedules of the Indianapolis Power & Light Company, applying to large power consumers, so as to provide for the demand charge on a monthly basis instead of a yearly basis.[2] This request was made in order to allow consumers having seasonal loads the privilege of paying for only the amount of power actually used during slack periods in their business or during shut-downs. It was pointed out that inasmuch as most consumers have seasonal peaks, the shift to a monthly basis of measuring demand would not greatly reduce the revenues of the utility and would allow the power consumer to pay for just the amount of power he used each month. The petitioners contended that, since electric utilities are benefited by the diversity in the demands of their customers, they should be allowed a return only on the actual monthly tested demand.

The petitioners also claimed that the demand charges of some of the power consumers were an increasing percentage of the total charges made by the utility. But the Indiana Public Service Commission pointed out that in the instances cited the increase in the amount of the demand charge was the result of one or both of the following causes: first, a change in operating conditions from off-peak to on-peak periods; and, second, installation of additional equipment, or other changed operating conditions, which increased the demand.

Evidence indicated that the business of certain large power consumers was seasonal, and that they desired the demand charge placed on a monthly basis instead of an annual basis so that the high demand of the seasonal peak load would not apply through-

[1] *Leedy Manufacturing Co.* v. *Indianapolis Power & Light Co.*, P.U.R. 1929E, 412.

[2] The large power consumers mentioned in this case obtained power under the company's schedule called "rate D."

out the year. The Indianapolis Power & Light Company introduced evidence, however, which showed that the application of the demand charge on a monthly rather than on a yearly basis to its 234 large power consumers in 1928 would have reduced its revenues by $40,758.54; that application in 1928 of the demand charge on the proposed basis would have reduced the bills of ten of the petitioners by $1,780.24. The utility also estimated that four of the petitioners would have paid the same amount. The Indianapolis Power & Light Company also introduced evidence showing a comparison of rates charged large power users in a number of cities with conditions more or less comparable to those in Indianapolis. The analysis showed that "when the demand charge, energy charges, prompt payment discount, or delayed payment penalties, and off-peak discount," were all considered, the power rates in effect in Indianapolis were favorable to the consumer. It was also shown that where the demand rate was based on an interval of less than a year, the demand charge was relatively higher than that obtained in Indianapolis. Testimony of a member of the engineering staff of the Indiana Public Service Commission, who had completed a survey of electric rates in the principal cities of the United States, showed that the average bill of a large power consumer in Indianapolis was $695.87, as compared with an average bill of $737.47 for all cities of the United States of over 100,000 population.

Evidence of expert witnesses called by the Indianapolis Power & Light Company was to the effect that a change to the monthly basis of applying the demand charge would require the company to make additional capital expenditures and enlarge its plant at a more rapid rate than the continuation of the yearly basis would necessitate. It was pointed out that in accordance with the plan of making the highest demand of consumers during a year the basis of their demand charge, power consumers were careful not to create occasional extraordinary demands for energy; that some consumers had installed devices to prevent the demand from passing a certain point, but that with the proposed monthly basis in effect the necessity for care against an extraordinary increase in load would not exist; that with these abnormal demands occurring thoughout the plants of many power consumers, an unusual increase in plant equipment by the company would be required beyond that which would be necessary under the applica-

tion of the demand on a yearly basis. The evidence also indicated that while the proposed basis would benefit some seasonal consumers, it would result in discrimination against consumers with a steady monthly consumption of current throughout the year.

The Public Service Commission of Indiana decided that the proposed change to a monthly basis would defeat many of the purposes for which a demand charge was established and that the request for the change should not be granted.

Could the application of a demand charge for periods of less than one year be made equitable both to the utility and to power consumers?

What consideration, if any, should be given to business cycles in determining a proper basis for demand charges?

What relationship, if any, is there between the demand charges and the energy charges for power?

B. Uniform Demand Charges

58. Georgia Power Company (A)[1]

In the spring of 1931 the Georgia Public Service Commission ordered the Georgia Power Company to inaugurate uniform rates throughout its entire territory for certain classes of wholesale customers taking the same class of service.[2] Under these rate schedules a lower demand charge was made for wholesale industrial customers than for both municipal and private central-station service.

Representatives of the Georgia Municipal Rate Association contended that the rates for wholesale power purchased by the members of the association were too high and that the *demand charge* for municipal and/or private central-station service, which was 50 per cent higher than for industrial service, should be reduced and made identical with the demand charge imposed upon industrial consumers. This case considers only the complaint concerning the demand charges.

A demand charge of $1 net per month per kilowatt of maximum demand had been made to industrial customers and $1.50 per kilowatt of maximum demand for power sold to municipal and/or private central stations for resale. These charges were increased from $1.50 to $1.66 for the central stations and from $1 to $1.11 for industrial consumers.

The difference between the demand charge made to wholesale industrial consumers and to the central-station customers was partly explained by the fact that, in instances where the utility company sold power at wholesale for redistribution by some other agency, it was deprived of some of the profit which could be obtained from the sale of electricity to the ultimate consumer. Furthermore, when power was sold under municipal and/or private central-station contracts, these customers were given first call on the company's resources; that is, in case of any event which

[1] Prepared from official copy of decision of Georgia Public Service Commission Number 18195, April 15, 1931.

[2] See case entitled Georgia Power Company (C), p. 620.

reduced the company's ability to deliver power, making it necessary to discontinue service to any of its customers, provision was made to meet the demands of the central-station customers without regard to the demands of industrial consumers. Coupled with these facts was the consideration that under the industrial rates a maximum of but 10 per cent of the power purchased could be used for incidental lighting. The preponderance of the power sold to the central-station customers, however, was used for lighting purposes.

Another factor which the power company and the commission had considered when the higher demand charge for the central-station service was made was the diversity of demand of these customers. It was believed that there was little diversity of demand in the case of the central-station customers; that the central stations themselves, however, did reap the rewards of a certain amount of diversity of demand among their own customers.

The commission pointed out that the central stations were receiving a higher class of service than was being rendered to wholesale industrial consumers, and that a higher demand charge for the central-station service was justified. The commission indicated that, if the rates for service to the central stations were lowered, it would be necessary to increase rates on other classes of service in order to allow the company to earn a fair return on its fair valuation.

Was the commission justified in granting the Georgia Power Company permission to impose a higher demand charge on central stations than on wholesale industrial customers?

3. Competition among Utilities for Wholesale Market

A. Competition Between Power Companies for Identical Markets

59. GRAFTON POWER COMPANY[1]

In September, 1929, the Grafton Power Company, a subsidiary of the New England Power Association, petitioned the New Hampshire Public Service Commission for permission to construct transmission lines and to engage in the business of supplying electricity by selling it to other public utilities and municipalities engaged in distributing it to consumers. The Grafton Power Company had previously received the permission of the commission to construct hydroelectric plants in Monroe and Littleton, New Hampshire, and, upon their completion, to operate as an electrical public utility in those towns. It had received authority also to engage in the business of transmitting or conveying electricity generated by water beyond the confines of the state.

The Grafton Power Company proposed to erect a 220,000-volt transmission line from Littleton and Monroe, where the power was generated, to Tewksbury, Massachusetts, a distance of 126 miles. At its destination it was proposed to step down the transmission voltages for distribution to subsidiaries of the New England Power Association and other distributing utilities. The transmission line was to pass through about 30 towns in New Hampshire and Massachusetts. The Grafton Power Company sought the permission of the commission to sell power at wholesale to utilities operating in the towns in New Hampshire along its right of way. This proposed transmission line would of necessity largely parallel existing transmission lines of the so-called "Insull Companies" which were then wholesaling power to certain unassociated or independent utilities in the territory which the Grafton Power Company's lines would traverse. A representative of one of these Insull companies, testifying before the commission, said: "If we are supplying a utility at the present time, and supplying it at

[1] 12 N. H. Public Service Commission 379; P.U.R. 1930B, 346.

reasonable rates, I don't think that the Grafton Power Company or any other company has a right to come in and bid for that business against us."

The commission stated that it had been its policy not to permit competition in the transportation of passengers and in the retail distribution of gas and electricity; that such action had been based on the theory that the paralleling of lines and facilities was an unnecessary and uneconomic duplication of service when the business was conducted under the supervision of a regulatory body. It appeared to the commission, however, that the problem presented to it by the Grafton Power Company involved entirely different factors.

The Grafton Power Company's line would parallel the Insull companies' lines, regardless of whether or not it was tapped at various towns through which it passed for the purpose of supplying them with power. Furthermore, it seemed to the commission that if certain unassociated or independent utilities in such towns desired to purchase power, they should be given an opportunity to obtain it from whatever source they themselves might choose. If the Grafton Power Company were forbidden to tap its high-voltage lines at suitable points for resale to such local utilities, these local utilities might be forced to buy that power from the Insull companies. This would in turn mean that to some extent the Insull companies would act merely as middlemen, as they would in some instances probably purchase power from the Grafton Power Company for resale to the independent utilities.

The commission pointed out that the Insull power lines themselves were established under a state policy of free competition in the wholesale marketing of power; that the Grafton Power Company was the first utility able to compete with the Insull interests in wholesaling power to other utilities and to municipalities. While the commission believed that it had the power to designate territorial rights to utilities wholesaling power, it did not believe that territorial monopolies in the wholesale marketing of utility service would be to the best interests of the public.

The Grafton Power Company indicated that, at the outset at least, it proposed to serve the local utilities concerned in this case through interconnections with other utility systems. The commission indicated that while it did not object to the fact that the Grafton Power Company took advantage of existing interconnec-

tions, that fact could not be construed to mean that the company should not provide other avenues of sale.

In further emphasizing the fact that it was not ready to extend territorial monopoly to wholesaling utilities, the commission said that the privileges of monopoly would be granted only when sound economic reasons indicated that such a procedure would be for the public good. In granting the petition of the Grafton Power Company, the commission specified that, when ordered to do so, the company should provide suitable facilities for supplying energy from its high-voltage lines at such points in its territory as might require it.

What will be the effects of territorial competition in the wholesale marketing of power?

Should utility commissions be given the power to designate territorial rights for the wholesale marketing of power?

SECTION V

RETAIL MARKETING OF PUBLIC UTILITY SERVICE

1. Significance of Off-peak Utilization of Public Utility Plant

A. Off-peak Rates for Telephone Service

60. American Telephone & Telegraph Company

In 1919 the many different toll rate schedules in the United States were generally replaced by a schedule in which two major classes of toll service were provided, namely; station-to-station and person-to-person. On person-to-person calls the telephone company undertook to establish communication with a designated person, and on station-to-station calls to establish communication with anyone answering at a given telephone number or address. Between the hours of 8:30 P.M. and 4:30 A.M. reduced rates were established on station-to-station calls except for very short distances. Between 8:30 P.M. and midnight, the reduced station-to-station rates were about 50 per cent of the day rates, and between midnight and 4:30 A.M. about 25 per cent of the day rates.

The purpose of the reduced rates was to increase the usefulness of the toll service by encouraging a greater use of it among a large portion of subscribers (in general, residence subscribers) who were infrequent toll users; to create additional business during the off-peak hours so as to utilize, so far as practicable, the time of operators required to be on duty; and to make the most efficient possible use of circuits necessarily provided for the heavy busy hours of the day.

A few years' experience with the discounted toll rates established in 1919 indicated that the volume of calls filed in the first half hour of the period during which the maximum discounts were effective, that is, midnight to 12:30 A.M., was becoming so large as to present a serious operating problem. Exhibit 1 shows the hourly rate of filing calls over routes to which reduced rates were applicable; the full line indicates the average condition which obtained a few years after the establishment of the discount period. Furthermore, there was a marked concentration in the

filing of calls during the first half hour of the discount periods, that is, between 8:30 and 9:00 P.M. and between midnight and 12:30 A.M.[1] Over these routes the rate of filing calls between midnight and 12:30 A.M. was about 56 per cent of the rate of filing in the day busy hour, 10:00 to 11:00 A.M. On many very long haul routes, the number of calls in the midnight to 1:00 A.M. period exceeded the number during the morning busy hour.

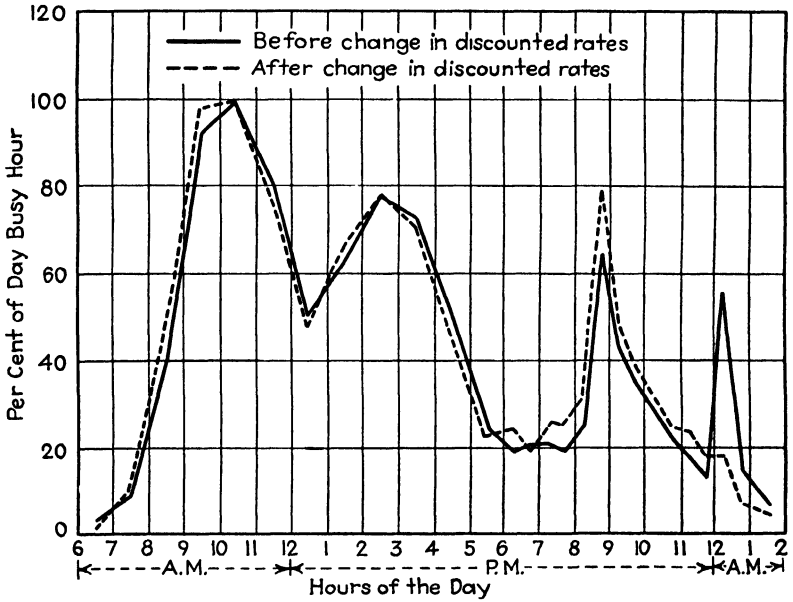


EXHIBIT 1.—American Telephone & Telegraph Company. Hourly Rate of Filing Toll Calls over Routes on Which Discounted Rates Apply.

At many of the larger toll centers the heavy midnight peak presented a difficult problem of obtaining operators for the very short periods and very undesirable hours, and also resulted in greatly increased operating expenses. On certain very long haul routes, additional circuits were required solely on account of the midnight loads. The quality of toll service as respects the customer's wait at the telephone was very unsatisfactory during the night hours. In the large cities the average delay was from

[1] In addition to the data shown on Exhibit 1, it is of interest to note that station-to-station calls constituted most of the traffic during the evening and night hours. For example, of total calls filed between 8:30 P.M. and midnight, 81 per cent were on a station-to-station basis as compared with about 94 per cent between midnight and 4:30 A.M. and about 33 per cent during the day hours.

15 to 25 minutes during the first hour after midnight, as compared with from 6 to 7 minutes for day service at that time.

From this experience it was apparent that a discount period commencing at midnight was undesirable from an operating standpoint and, in general, was an inconvenient period to patrons. Furthermore, advancing a discount as great as 75 per cent to an earlier hour would merely accentuate the difficulties with the service. It was, therefore, decided to apply the 50 per cent discounted rates to the period from 8:30 P.M. to 4:30 A.M., thereby eliminating the 75 per cent discount effective at midnight. Except for the shorter distances, at the same time a new discount of approximately 20 per cent was introduced between 7:00 and 8:30 P.M. The purpose of this earlier discount was to make a discounted service available at a more convenient time and also to assist in relieving the peak load which would exist between 8:30 and 9:00 P.M.; furthermore, this would provide a greater load for the operating forces generally available at 7:00 P.M. who were carry ing relatively light loads until 8:30 P.M.

The changes decided upon were generally adopted on October 1, 1926, and a marked improvement in operating conditions after midnight was realized. The broken line on Exhibit 1 indicates the effect of the changes in reduced rates on the rate of filing total calls, as indicated by an analysis of traffic approximately one year after the introduction of the changes in the discounted rate periods. The hourly rate of filing calls between midnight and 12:30 A.M. was reduced from 56 per cent to about 18 per cent of that during the morning busy hour. The average delay on calls during the first hour after midnight was reduced from the former 15 to 25 minutes to about 7 or 8 minutes. The rate of filing between 8:30 and 9:00 P.M. was somewhat higher after the rate change than before, due to the addition of calls formerly filed after midnight. The calls filed between 7:00 and 8:30 P.M. also increased somewhat owing to the new discount.

Although the reduced rate periods introduced in 1926 brought about a marked improvement in operating conditions and in the quality of service during the evening and night periods, a heavy peak load still remained between 8:30 and 9:00 P.M. The years of experience following 1926 with the 7:00 to 8:30 P.M. discount of about 20 per cent indicated that these reduced rates were not sufficiently attractive to customers to encourage them to shift their calls from the 8:30 P.M. period to the more convenient 7:00 to 8:30 period. Therefore, on June 1, 1935, the 7:00 to 8:30 P.M. reduced

rates were eliminated and the reduced night rates were made effective starting at 7:00 P.M. It was believed that this would tend to reduce the undesirable 8:30 P.M. peak by enlarging the night period; a 7:00 P.M. peak would probably not be so great and would be less objectionable.

The effect of the introduction of a single night discount period on the filing of calls was as had been foreseen. Exhibit 2 shows the hourly rate of filing for all calls for representative periods before and after the June 1, 1935, change. A new peak beginning at 7 P.M. was created, but this peak was very much less than had

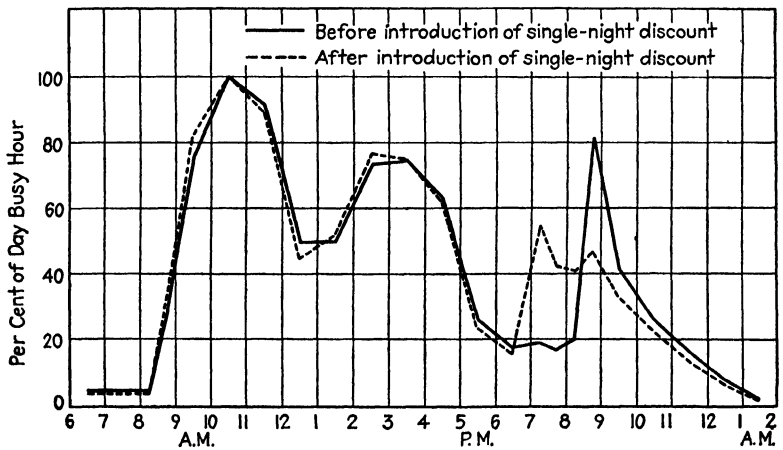


EXHIBIT 2.—American Telephone & Telegraph Company. Hourly Rate of Filing Toll Calls.

been the 8:30 P.M. peak (55 per cent of the day busy hour, as compared with over 80 per cent prior to the rate change). Moreover, the evening business was more evenly distributed over the period from 7:00 to 9:00 P.M., thus making for more efficient use of operators' time and of circuits, with resulting possibilities for improvement in the service.

Discuss this problem as an illustration of the relative importance of the price appeal and the publicity appeal in developing new business, and state briefly what data would be needed as a basis for decision. Is it probable that such data can be obtained except by experiment?

What light, if any, does this case throw upon the problems involved in government regulation of telephone toll rates?

B. Off-peak Rates for Water Heating

61. Jersey Central Power & Light Company

In the spring of 1930 the Jersey Central Power & Light Company secured a contract for furnishing electric power to the Delaware, Lackawanna & Western Railroad Company, which was then being electrified. At that time the utility's northern and southern divisions were not interconnected. The railroad's requirements were to have been supplied by the main generating plant of the northern division, at Whippany, New Jersey.

The load curve of the railroad, shown in Exhibit 1, illustrates the extreme peak demand of the railroad between 5:00 and 7:00 P.M. and the somewhat lesser peak which occurred between 6:00 and 9:00 A.M. The railroad's load curve superimposed on the northern division's previous load curve resulted in a very decided peak demand on the division's facilities around 6:00 P.M. Since it was necessary to provide ample generating capacity to care for this peak demand, a large portion of this investment was idle during the off-peak period. In attempting to improve the northern division's load factor, the Jersey Central Power & Light Company obtained the permission of the New Jersey Public Service Commission to inaugurate a special off-peak rate, applicable to the use of storage water heaters. Such heaters were equipped with thermostats and with time clocks, which operated in such a way that during the periods of peak demand on the system, or whenever the water in the tank attained a temperature of from 185 to 195°F., the heaters were automatically shut off.

In its attempt to develop such off-peak business, the utility company selected heaters which were available in 52- and 100-gallon sizes. Each heater was equipped with a mixing valve which operated so that the water from the tank at a temperature of approximately 190°F. was mixed with cold water and was delivered to the faucet at 135°. A 100-gallon installation was therefore capable of actually delivering at least 125 gallons of hot water.

When the problem of developing this business was first considered, one of the company's regular appliance salesmen was given

a special training course in electric water heating, and, upon the termination of this period of instruction, he was placed in charge of sales of electric water heaters. Under his supervision, regular appliance salesmen solicited orders for this equipment. The sales campaign for water heaters was inaugurated by mailing

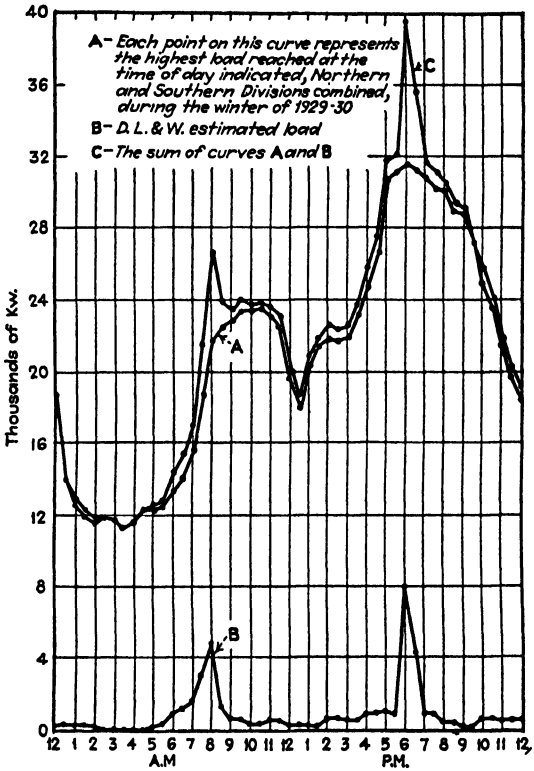


EXHIBIT 1.—Jersey Central Power & Light Company. Load Curves. (*Adapted from graph furnished by the engineering department of the Jersey City Power & Light Company, Asbury Park, N. J.*)

introductory letters to all the company's customers, giving complete information concerning the new service. Electricity was to be supplied to these water heaters at a flat rate of 1½ cents per kilowatt-hour, and a minimum monthly charge was made of $2 per meter per customer, as contrasted with the following rates, applicable throughout the northern division for all other domestic uses:

Kilowatt-hours per Room per Month	Cents per Kilowatt-hour
First 5	11
Next 5	6
All Excess	3

Newspaper advertising and bill inserts describing the new service supplemented letters to consumers and the solicitation of salesmen.

The utility's salesmen advised prospective customers as to the proper size of unit required for their premises. Customers were required to sign a contract for off-peak service for a period of at least 12 months.[1]

When this special off-peak water-heating rate was first offered to the utility's customers in certain districts of its northern division, the off-peak power was made available between the hours of 11:00 P.M. and 4:00 P.M. Later, it seemed desirable, because of the railroad's morning peak, to eliminate the water-heating load between the hours of 7:00 and 9:00 A.M., as well as between 4:00 and 11:00 P.M. Consequently, the time clocks on the heaters were adjusted so that the off-peak periods during which 1½-cent power was available extended from 11:00 P.M. to 7:00 A.M. and from 9:00 A.M. to 4:00 P.M. After some experimentation under this latter system, the off-peak power was again made available from 11:00 P.M. to 4:00 P.M.

Several months after the inauguration of the off-peak water-heating service, the northern and southern divisions of the Jersey Central Power & Light Company were interconnected, and the off-peak rates were made available to all customers on the company's system. Exhibit 1 illustrates how the assumption of the railroad's load by the utility altered the load curve of the entire system and impaired its load factor. Exhibits 2 and 3 indicate the load curves of the automatic electric heaters and illustrate how they improved the load factor of the system.

About a year after the inauguration of the off-peak water-heating rate, approximately 100 automatic electric heaters had been installed throughout the company's system. Largely

[1] The cash selling price of the 52-gallon storage heater was $160 installed. Heaters were also offered on easy terms at a price of $167.50 for the 52-gallon size and $275 for the 100-gallon units.

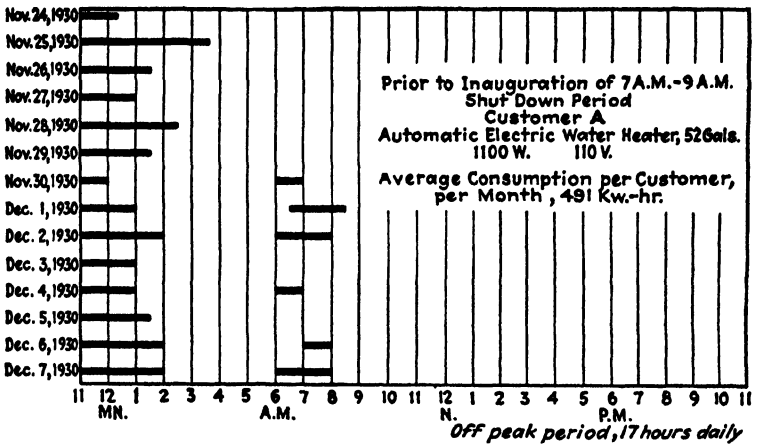


EXHIBIT 2.—Jersey Central Power & Light Company. Selected Customer Consumption.

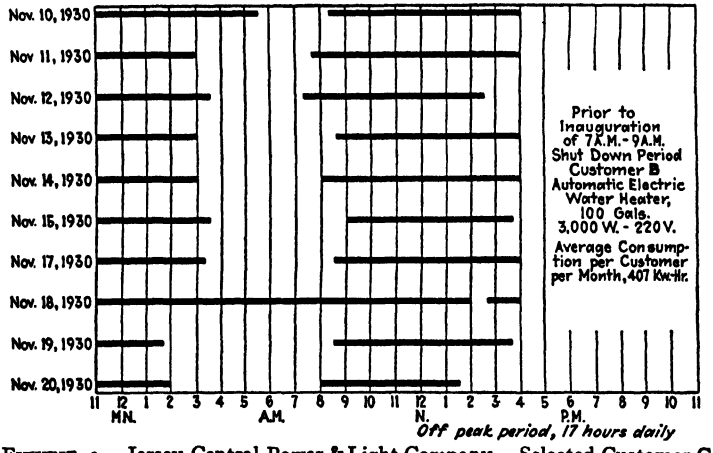


EXHIBIT 3.—Jersey Central Power & Light Company. Selected Customer Consumption. It will be noticed that on November 18, 1930, this water heater consumed power continuously throughout the peak period. This was due to the fact that on the early installations the time switch, which was operated by an electric clock, was wired behind the master switch of the house. On leaving his home temporarily, this customer opened his master switch, thereby stopping the clock, When he returned and closed the master switch the clock started running, but of course did not operate on correct time. The customer used so much water that the thermostatic control did not get a chance to operate. To avoid similar difficulties in the future, the clock was wired in such a way that it was not disconnected when this master switch was open.

because of the fact that gas was available in 95 per cent of the company's territory, only 50 per cent of the electric storage heaters were sold in these sections. The other 50 per cent were sold in that 5 per cent of the territory where there was no gas service. It was also noticed that 90 per cent of the purchasers of automatic electric heaters were also users of electric ranges.

The company did not attempt to merchandise electric storage heaters as aggressively throughout that portion of its territory in which it also supplied gas, but concentrated its efforts where no gas service was available or where gas was supplied by another utility. The company's executives attributed their failure to distribute more electric heaters partly to the fact that automatic gas-storage water heaters of 20-gallon capacity, supplying approximately as much hot water a day as a 52-gallon automatic electric heater, cost but $115 installed. Furthermore, at $1 per thousand cubic feet, the cost of heating water with gas was only 0.0023 cent per gallon; whereas with electricity at 1½ cents per kilowatt-hour, the cost was 0.0025 cent per gallon.[1]

To what extent is there an interdependence of the domestic and industrial markets for electricity?

What light does this case throw on future possible marketing policies of public utility companies which have electric and gas service under a single management?

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[1] In 1937 the available rate for off-peak electric water heating was 1 cent per kilowatt-hour. At that time, also, gas was available throughout the company's territory at 75 cents per thousand cubic feet.

C. Off-peak Rates for Local Transit Service

62. Boston Elevated Railway Company (B)

After reaching a peak in 1924, the number of revenue passengers carried by the Boston Elevated Railway Company declined substantially in the following ten years, the low point being reached in 1933. In common with practically every other transportation system serving a large industrial city in the United States, the company experienced, as a result of the general business depression after 1929, a particularly severe decline in both passengers carried and revenue received. Although considerable improvement was registered after 1933, in 1936 both the number of revenue passengers and the amount of passenger revenue were still at approximately the levels recorded in 1932. This downward trend, extending over more than a decade, caused the executives of the company to make careful studies of the company's rate structure, the studies being undertaken with a view to determining whether or not the number of passengers carried could be increased by fare reductions.

The Boston Elevated Railway Company provided a unified system of local passenger transportation in the Boston metropolitan area. It operated its rapid transit subway and elevated lines in the more congested central sections of the city, and supplemented this service with surface cars, trolley coaches, and buses. In addition to service rendered within the city of Boston, the company furnished transportation to an extensive suburban territory. In 1936 the total population of the metropolitan area served was approximately 1,700,000.

In 1897 the company had agreed, as a condition of its receipt of certain franchise rights, that for a period of 25 years its fare be limited to 5 cents.[1] The operation of the company was ceded to a board of public trustees under the Public Control Act effective July 1, 1918.[2] On August 1, 1918, in an effort to cover the cost of service, the fare was raised to 7 cents, and on December 1, 1918, to

[1] *Mass. Acts*, 1897; Chap. 500.

[2] *Mass. Special Acts*, 1918; Chap. 159. See case entitled Boston Elevated Railway Company (A), p. 296, dealing with financing of rapid transit facilities.

8 cents. A further increase was made on July 10, 1919, when a 10-cent fare was introduced, this rate still being in effect in 1938.

In 1921 the operating executives realized that in many suburban districts there was a wasteful surplus of service. In order to maintain proper standards of service, cars had to be operated with reasonable frequency; hence in the suburban districts they were generally less than half-filled. The 10-cent fare, which was charged at all points on the system, entitled the passenger to ride continuously in one direction to any point served by the company. Transfers were given free of charge whenever requested, authorizing the holder to transfer from surface to rapid transit lines or vice versa at will. In 1921, however, it was decided to attempt to increase the number of passengers carried, and thereby obtain a fuller utilization of the existing facilities in certain suburban areas by offering a 5-cent fare for all local rides. The privilege of transferring to other surface lines or to the rapid transit system was withheld from those paying the 5-cent fare. When such a transfer was desired, by a local rider, an additional 5-cent fare was charged.

The 5-cent fare was intended to increase the number of passengers riding on these local lines without adding materially to the expense of operation. It was not intended to be a substitute for or to compete with the regular 10-cent fare service. The 5-cent fare was generally confined to the outer parts of the company's system and, with the exception of a few instances, did not enable the 5-cent rider to reach the center of the city. The management believed that there were many thousands of people who would avail themselves of a 5-cent ride but who would not pay 10 cents for the same ride. Furthermore, from the public's point of view, the 5-cent ride enhanced the usefulness of the system without imposing any additional burden on the regular 10-cent fare riders. In fact, it was shown that if the 5-cent ride were confined within proper limitations it would increase the company's total revenues without involving a commensurate increase in the cost of operation, thereby making it possible to improve the service to the 10-cent riders. The company's records indicated that the 5-cent ride became popular immediately. In the first full year of the 5-cent local fare, 20 per cent of the total number of passengers carried by the system paid the local rate.

In the fall of 1924 the fare for local rides was increased to 6 cents, and in 1927 it was advanced to 6¼ cents. In conjunction

with these increases in the local fare, transfer privileges were granted at the request of people in various localities, thus enabling the local riders to transfer from certain surface lines to buses or other surface cars. At no time was a transfer to the rapid transit facilities of the company granted a passenger paying only the local rate of fare.

In the summer of 1930 the company's executives considered the advisability of abolishing the local 6¼-cent rate and substituting therefor a straight 5-cent fare for all local rides. It was expected that if such a 20 per cent cut in fare was instituted it would result in increased riding to such an extent that the company's revenues on such local lines would be increased. Furthermore, it was believed that passengers would welcome a straight 5-cent fare and the consequent abolition of the nuisance of purchasing tickets and tokens.

Accordingly, in September, 1930, the local fare was reduced to a straight 5-cent basis and all transfers at this rate were abolished. To have permitted the local transfer privilege to continue would have resulted in making it possible for many passengers to take much longer rides than had been intended when the original special local fare was established. Furthermore, it was suspected that abuses of the transfer privilege had crept in and that the reduction in the local fare presented an excellent opportunity to correct this situation by eliminating its cause.

During the first month after the local fare reduction was put into effect, 5,534,633 passengers were carried at the 5-cent rate of fare compared with 4,694,937 local fare passengers carried during the corresponding month of 1929. This represented an increase of almost 18 per cent in the number of passengers carried. In order to maintain the company's revenues in spite of the decreased fare, it would have been necessary to carry 5,735,835 passengers during that month.

Although the traffic apparently had failed by approximately 200,000 passengers to justify the rate reduction, one of the executives pointed out that a fairer basis of comparison should have been adopted. He believed that the comparison should have been made between the number of passengers that probably would have paid the local fare had the fare not been reduced and the number that actually did do so. This, he believed, could be accomplished by assuming that had the 6¼-cent local fare remained

in effect, the number of local riders would have decreased at least in the same ratio as the number of regular 10-cent riders had decreased from the preceding year. That this assumption was a reasonable one was indicated by the fact that in the month preceding that of the local fare reduction the number of passengers carried at the 10-cent fare had decreased about 7½ per cent, whereas the number carried at 6¼ cents, the local rate then in effect, had decreased almost 10 per cent.

Consequently, it appeared that, because in September, 1930, the month in which the local fare reduction was inaugurated, the number of passengers carried at the regular 10-cent rate decreased 4 per cent from the corresponding month of 1929, this percentage decrease should also have been applied to the expected number of local passengers carried in the same month of 1930. Thus, since 4,694,937 local fare passengers were accommodated during September, 1929, in the corresponding month of 1930 only 4,507,140 could reasonably have been expected, had the fare remained at 6¼ cents. A 20 per cent reduction in fare should, therefore, have resulted in a 20 per cent increase in this passenger traffic to 5,408,568 in order to justify the decrease. Since, as a matter of record, 5,534,633 passengers were actually carried at the local fare in September, 1930, it appeared that the reduced fare actually resulted in an excess income of $6,303.25 over the amount which would have allowed the company just to cover the cost of the reduced fare.

Each of the remaining months of 1930 on the same basis of analysis appeared to indicate that the 5-cent local fare resulted in attracting a constantly increasing number of local passengers. It became apparent that the company's revenue was greatly enhanced over that which would have been derived had the 6¼-cent fare been retained. If the declining trend in riding had not been taken into account, the conclusion might have been drawn that the loss in the company's revenues, caused by the reduction in fare, was not fully absorbed by the increased volume of traffic. This, of course, would have been borne out by the statistics, which indicated that, although the traffic had increased from 15 to 18 per cent, revenues under the 20 per cent fare reduction declined from the previous year. It seemed to the company's executives, however, that the general decline in number of passengers should be considered, and when this was done, it appeared that the

reduction in the rate of fare from 6¼ cents to 5 cents had stimulated riding sufficiently not only to offset the normal decline in this type of riding, but also to enable the company to increase its earnings substantially. The company's executives believed that if the 5-cent local fare was retained beyond the duration of the general business depression, an actual increase in local riding to the extent of producing a greater revenue would be witnessed.

In 1931 the Metropolitan Transit Council was created. This body was composed of the mayors of cities and chairmen of selectmen of towns served by the Boston Elevated Railway. In any year when the company showed a deficit, the council was required to meet for the purpose of considering the question of raising fares as an alternative to continuing the system of assessing deficits against cities and towns served by the company. From 1931 to 1938 the council voted each year against increasing the existing 10-cent fare.[1]

In the years following 1931, the local 5-cent fare increased in popularity until in 1937 approximately 27 per cent of the total revenue passengers were carried at the 5-cent rate. From Exhibit 1 it may be seen that in each year since the inauguration of the local fare, the number of riders taking advantage of it comprised an increasing percentage of the total revenue passengers carried by the company. Obviously, this trend in the number of passengers paying the 5-cent fare resulted in a steady decrease in the average fare received by the company per passenger transported. One explanation of the increasing percentage of 5-cent fares paid was the extension of lines into suburban areas.

In studying methods by which the company's revenues might be increased, one proposal considered was the abolition of local fare privileges during rush hours. Obviously, the cost of rendering service could be substantially reduced if the company's daily load factor could thereby be improved. Since it cost more to provide service during the peak hours than during the remainder of the operating day, consideration was given to charging the full 10-cent fare during such periods.

It was estimated that approximately 38 per cent of all local fares were collected between the hours of 7:00 and 9:00 A.M. and

[1] For details of public operation of the railway, see case entitled Boston Elevated Railway Company (A), p. 296, which considers the financing of rapid transit facilities.

EXHIBIT 1

BOSTON ELEVATED RAILWAY COMPANY
REVENUE PASSENGERS CARRIED, 1917–1937

Year Ended Dec. 31	5-cent Fares		6- and 6¼-cent Tickets and Tokens		7-cent Fares		8-cent Fares		10-cent Fares	
	Number	% of Total	Number	% of Total	Number	% of Total	Number	% of Total	Number	% of Total
1917	380,819,242	99.95	.....	.....	.....	.....	.....	.....	.....	.....
1918	217,203,899	62.30	.....	.....	102,619,954	29.43	28,739,858	8.24	.....	.....
1919	886,034	0.27	.....	.....	.....	.....	173,808,769	53.52	146,162,131	45.01
1920	3,846,989	1.15	.....	.....	.....	.....	.....	.....	326,496,184	97.31
1921	23,915,742	7.09	.....	.....	.....	.....	.....	.....	307,624,243	91.22
1922	71,425,347	20.03	.....	.....	.....	.....	.....	.....	279,851,313	78.48
1923	94,170,518	24.64	.....	.....	.....	.....	.....	.....	283,660,762	74.23
1924	85,218,867	22.26	9,549,775	2.49	.....	.....	.....	.....	283,569,003	74.06
1925	3,853,807	1.06	55,937,785	15.32	.....	.....	.....	.....	299,107,782	81.94
1926	1,936,219	0.52	58,803,057	15.84	.....	.....	.....	.....	304,378,164	82.00
1927	2,355,682	0.64	58,890,542	16.05	.....	.....	.....	.....	299,340,854	81.58
1928	2,743,742	0.76	57,785,211	15.96	.....	.....	.....	.....	295,168,018	81.54
1929	2,612,980	0.74	56,272,366	15.88	.....	.....	.....	.....	288,789,514	81.53
1930	24,123,763	7.04	36,295,851	10.59	.....	.....	.....	.....	275,612,705	80.43
1931	67,262,611	20.71	38,625	0.01	.....	.....	.....	.....	250,941,595	77.26
1932	64,321,902	22.05	7,369	0.00	.....	.....	.....	.....	220,884,856	75.71
1933	60,309,151	22.52	3,204	0.00	.....	.....	.....	.....	201,239,625	75.13
1934	64,943,176	23.44	1,271	0.00	.....	.....	.....	.....	205,903,554	74.32
1935	68,881,593	24.57	355	0.00	.....	.....	.....	.....	205,471,568	73.28
1936	77,140,864	26.05	72	0.00	.....	.....	.....	.....	212,308,509	71.68
1937	80,477,621	27.15	39	0.00	.....	.....	.....	.....	209,458,470	70.67

SOURCE: Annual reports of the public trustees of the Boston Elevated Railway Company.

EXHIBIT 1.—(*Continued*)

Year Ended Dec. 31,	Pupils' Tickets 5 Cents		Special Car and Motor Coach Passengers		Total Revenue Passengers*	Total Passenger Revenue	Average Fare, Cents	Net Result of Operations
	Number	% of Total	Number	% of Total				
1917	.....	....	198,096	0.05	381,017,338	$19,030,941	4.99	.....
1918	.....	....	100,989	0.03	348,664,700	20,352,412	5.84	.....
1919	3,803,815	1.17	97,936	0.03	324,758,685	28,767,544	8.86	2,382,100*d*
1920	5,105,588	1.52	77,800	0.02	335,526,561	33,108,946	9.87	347,167*d*
1921	5,606,105	1.66	105,990	0.03	337,252,080	32,253,630	9.56	1,171,445
1922	5,213,664	1.46	103,618	0.03	356,593,942	31,834,023	8.93	1,412,189
1923	4,214,132	1.10	104,285	0.03	382,149,697	33,297,952	8.71	679,632
1924	4,443,228	1.16	107,975	0.03	382,888,848	33,419,172	8.73	636,696*d*
1925	6,003,917	1.64	132,995	0.04	365,036,286	33,790,442	9.26	502,194
1926	5,971,189	1.61	129,772	0.03	371,218,401	34,393,954	9.27	482,749*d*
1927	6,178,984	1.68	172,846	0.05	366,938,908	34,000,571	9.27	222,815
1928	6,146,748	1.70	161,314	0.04	362,005,033	33,616,877	9.29	40,051
1929	6,371,689	1.80	168,441	0.05	354,214,990	32,885,588	9.28	94,073
1930	6,357,662	1.85	304,924	0.09	342,694,905	31,415,747	9.17	1,134,639*d*
1931	6,330,862	1.95	214,884	0.07	324,788,577	28,811,914	8.87	1,904,945*d*
1932	6,333,016	2.17	206,682	0.07	291,753,825	25,648,339	8.79	2,569,445*d*
1933	6,036,196	2.25	257,253	0.10	267,845,429	23,475,404	8.76	2,247,930*d*
1934	5,756,660	2.08	429,514	0.16	277,034,175	24,187,129	8.73	1,464,490*d*
1935	5,543,664	1.98	505,346	0.18	280,402,526	24,347,368	8.68	2,229,251*d*
1936	6,160,264	2.08	570,957	0.19	296,180,666	25,502,416	8.61	1,897,469*d*
1937	5,935,804	2.00	525,559	0.18	296,397,493	25,339,336	8.55	2,526,024*d*

* During the years 1922, 1923, and 1924, one passenger making a single journey for which he might pay two 5-cent fares was counted as two revenue passengers. The substitution in November, 1924, of 6-cent tickets for 5-cent fares often resulted in the payment of a 10-cent fare by such a passenger with a consequent reduction in the company's figures of total revenue passengers carried, though the gross passenger revenue for the year 1925, which increased $371,269.51, would indicate substantially the same number of passengers carried by the railway in 1925 and 1924.

d—Deficit.

SOURCE: Annual reports of the public trustees of the Boston Elevated Railway Company.

4:00 and 6:00 P.M. On the assumption that 75 per cent of these rush-hour riders were necessity riders who would pay the 10-cent fare if it were imposed, and that 15 per cent of the rush-hour riders would be induced by the higher fare to ride during off-peak hours, and on the further assumption that 10 per cent of these riders would not use the service at all if the rush-hour local fare were increased, the company's accountants estimated that a substantial amount of additional revenue could be derived from the increased fare. This increased revenue would also be accompanied by somewhat decreased costs of operation.

Should the company have adopted a 10-cent fare on its local routes during the rush hours?

From an examination of the material in Exhibit 1, what fare or fares do you believe should be charged by the company?

Do you believe that a reduction in the charge for local rides, as against through or regular rides, represents a policy which could be successfully adopted in other important cities?

D. Effect of Refrigeration Load on Load Factor

63. Brooklyn Union Gas Company (A)[1]

The Brooklyn Union Gas Company, serving a territory including parts of the boroughs of Brooklyn and Queens in New York City, was in April, 1928, supplying gas to approximately 700,000 customers whose demand was 69,647,000 cubic feet during an average 24-hour period. The business of the company had grown steadily since 1913, but an analysis of its growth, shown in Exhibit 1, indicated that the increased business had resulted in an increasingly poor load factor for the system. The company's research engineer undertook a study of the possibilities of improving the load factor through the development of a substantial gas-refrigeration load.

On the average, gas refrigerators consumed about 2½ cubic feet of gas per hour, or 60 cubic feet per day. If, therefore, 10 per cent of the company's customers should install gas refrigerators, a refrigeration load of 4,200,000 cubic feet of gas daily would thereby be created. This would increase the company's output by approximately 6 per cent. The character of this load, however, made it appear even more desirable than the mere fact that it would increase consumption by 6 per cent. The daily increase of 4,200,000 cubic feet would appear in every month of the year and would fluctuate but little with outside temperatures. Refrigerators are almost universally installed indoors, either in a pantry or in a kitchen, where they are frequently placed in close proximity to the gas range. Over 60 per cent of the gas refrigerators sold by the company had been installed in apartment houses which were heated at least from October 15 to May 1. Indoor temperatures, therefore, were found to vary only slightly from summer to winter, and consequently the increased consumption due to the refrigeration load would probably remain steady throughout the year. The addition of a constant load to the normal output would improve

[1] Acknowledgment is made to Mr. E. J. Devlin, research engineer, New Business Department of the Brooklyn Union Gas Co. for data used in the preparation of this case.

the seasonal load factor, since a given increase would constitute a greater percentage of the comparatively low summer load than it would of the considerably higher winter load.

The greatest improvement, however, was to be expected in the daily load factor. The addition of a gas load created by 70,000

EXHIBIT 1

BROOKLYN UNION GAS COMPANY (A)

AVERAGE HOURLY OUTPUT IN M.C.F.—1:00 A.M. TO 6:00 A.M.—MONTH OF APRIL

Time	1913	1916	1918	1920	1922	1924	1926	1928	1930	1932	1934	1936
1:00 A.M.	940	1,036	1,051	1,290	988	1,010	958	784	807	750	783	785
2:00	685	702	741	967	654	707	735	680	670	657	656	679
3:00	606	583	687	898	698	671	738	713	610	564	605	643
4:00	598	668	639	821	607	596	668	681	610	566	609	630
5:00	636	761	759	956	656	730	794	743	696	631	665	707
6:00	824	1,000	1,188	1,384	1,033	1,147	1,209	1,154	1,012	901	916	970
Average	715	792	844	1,053	773	810	850	792	734	678	706	719

Average Hourly Output (Midnight to 6 A.M.) Month of April, 1928..... 792,000 Cubic Feet
Average Hourly Output (Midnight to 6 A.M.) Month of April, 1913..... 715,000 Cubic Feet
Increase..... 77,000 Cubic Feet, or 10.77 Per Cent

Average Hourly Output (Midnight to 6 A.M.) Month of April, 1936..... 719,000 Cubic Feet
Average Hourly Output (Midnight to 6 A.M.) Month of April, 1928..... 792,000 Cubic Feet
Decrease..... 73,000 Cubic Feet, or 9.22 Per Cent

OUTPUT IN M.C.F. FOR MONTH OF APRIL

Year	Output, M.C.F.
1913	1,131,496
1916	1,269,839
1918	1,488,043
1920	1,842,346
1922	1,656,901
1924	1,905,480
1926	2,296,620
1928	2,091,461
1930	2,112,399
1932	1,984,317
1934	1,851,269
1936	1,812,684

April, 1928..... 2,091,461 M.C.F.
April, 1913..... 1,131,496 M.C.F.
Increase..... 959,965 M.C.F., or 84.84 Per Cent

April, 1936..... 1,812,684 M.C.F.
April, 1928..... 2,091,461 M.C.F.
Decrease..... 278,777 M.C.F., or 13.33 Per Cent

refrigerators would amount to approximately 175,000 cubic feet per hour, which would be effective 24 hours a day. Exhibit 2 indicates that such an hourly increase would amount to but 3.3 per cent of the company's output during the peak hour, while from 1:00 to 5:00 A.M., when less than 20 per cent of the distribution facilities were in use, the output would be increased by approximately 25 per cent. The refrigeration load would, therefore, greatly improve the daily

load factor and make possible the sale of 6 per cent more gas through the existing distribution system, with a possible necessary increase in distribution facilities of only 3 per cent, assuming that the existing distribution facilities were already loaded to capacity during the hour of maximum demand. If the company should experience a 6 per cent increase in its daily output because 70,000 customers increased their average daily cooking load by 60 cubic feet, at least 20 cubic feet per customer would probably be

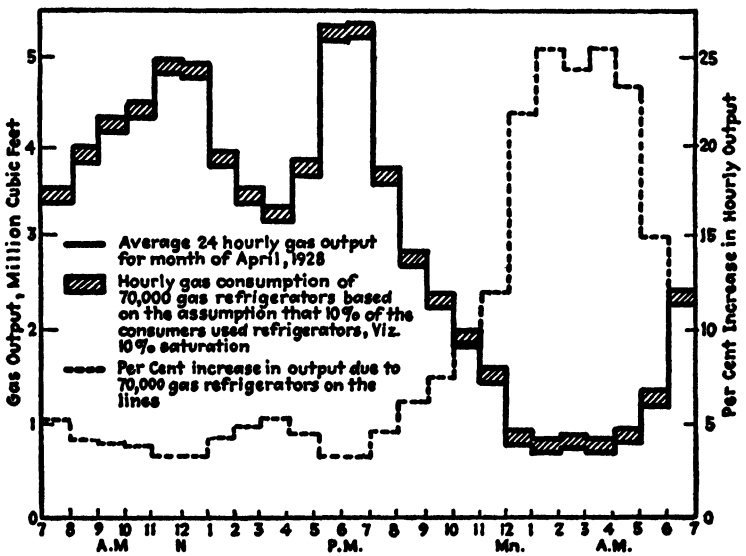


EXHIBIT 2.—Brooklyn Union Gas Company (A). Gas Output.

added during the peak hour. This would result in an additional demand of 26 per cent on the system at a time when its distribution facilities were probably already being taxed to capacity. By comparison, therefore, the refrigeration load appeared to be much more desirable. A refrigerator consumes approximately the same amount of gas in each of the 24 hours, and since there was but one peak hour on the system the refrigeration load was off-peak 96 per cent of the time.

Exhibit 3 represents the actual hourly gas consumption of an individual customer. This customer's load consisted of a gas refrigerator and a gas range. The gas consumption was determined by the use of a recording meter to measure the gas consumed by the refrigerator and by another recording meter to measure the

total gas consumed. The uniform cross-hatched section at the bottom of the curve indicates the consumption of the refrigerator, while the irregular solid line indicates the total gas consumption.

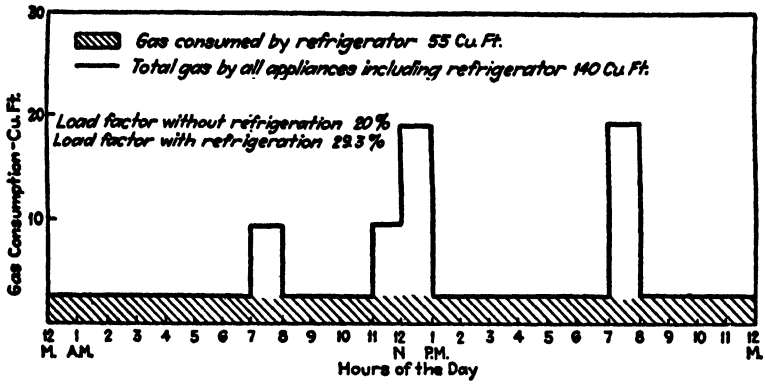


EXHIBIT 3.—Brooklyn Union Gas Company (A). Effect of Refrigerator on Load Factor.

EXHIBIT 4

BROOKLYN UNION GAS COMPANY (A)

COMPARISON OF THE MONTHLY GAS ACCOUNT OF A CONSUMER BEFORE AND AFTER THE INSTALLATION OF A GAS REFRIGERATOR

Before Installation of Gas Refrigerator			After Installation of Gas Refrigerator		
Month	Cu. Ft.	Bill	Month	Cu. Ft.	Bill
August	1,000	$1.38	August	3,200	$3 42
September	1,800	2.14	September	4,000	3.98
October	2,400	2.71	October	3,000	3 28
November	2,200	2.52	November	3,000	3.28
December	1,800	2.14	December	4,000	3.98
January	1,200	1.57	January	3,400	3.56
February	1,600	1.95	February	3,200	3 42
March	1,400	1.76	March	3,600	3.70
April	2,200	2.52	April	3,800	3 84
May	2,000	2.33	May	3,800	3.84
June	2,600	2.90	June	4,000	3.98
July	1,600	1.95	July	3,800	3.84

This study, conducted with a view to determining the extent to which the addition of a refrigerator would improve the load factor of a typical customer, indicated that the total gas consumed in 24 hours was 140 cubic feet. Of this amount the refrigerator used

55 cubic feet. The maximum total hourly load was 20 cubic feet, whereas without the refrigerator it would have been 17.7 cubic feet and the load factor 20 per cent. The addition of the refrigerator increased the load factor to 29.2 per cent. A comparison of the monthly account of this consumer before and after the installation of the refrigerator is presented in Exhibit 4. Before the installa-

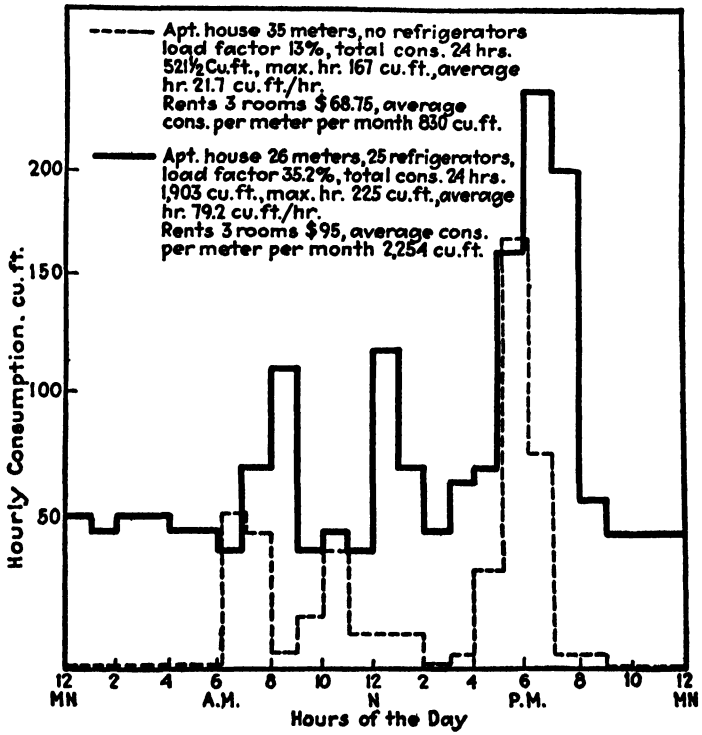


EXHIBIT 5.—Brooklyn Union Gas Company (A). Chart Showing Comparison of Hourly Gas Consumption on Friday in Apartment Houses with and without Refrigeration.

tion of the refrigerator this customer's average monthly consumption was approximately 1,800 cubic feet and his average bill $2.15, whereas after the refrigerator was installed the average monthly consumption increased to almost 3,600 cubic feet and the average bill to $3.68. Most apartment-house dwellers could utilize gas in but two appliances—the range and the refrigerator. The addition of the latter load would increase their consumption as indicated in the example cited.

Exhibits 5 and 6 present graphic comparisons of 24-hour load curves for representative apartment houses with and without gas refrigeration. It should be noticed that on Friday the load factor of the apartment house without refrigeration was 13 per cent

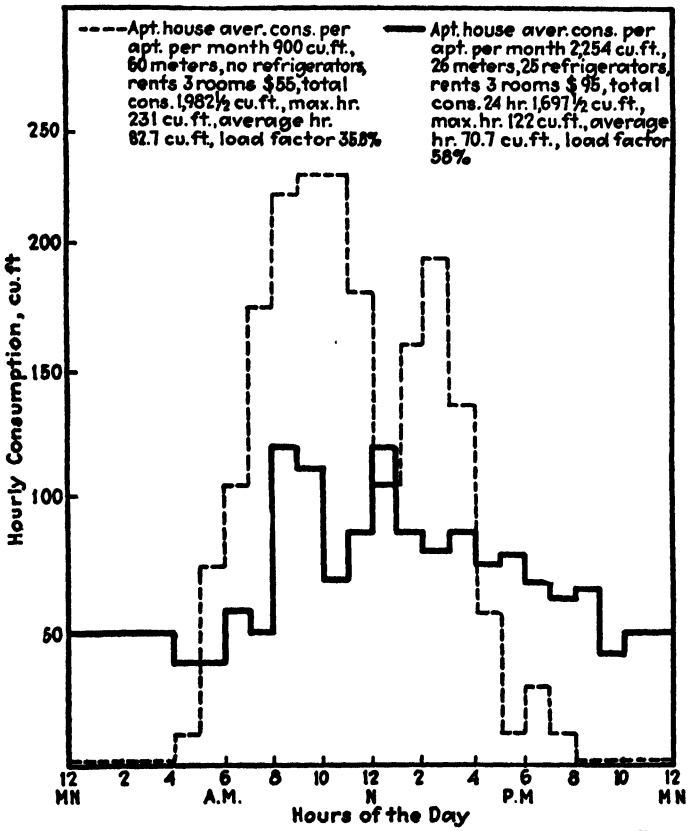


EXHIBIT 6.—Brooklyn Union Gas Company (A). Chart Showing Comparison of Hourly Gas Consumption on Sunday in Apartment Houses with and without Refrigeration.

against 35.2 per cent for the apartment house with refrigeration. On Sunday the load factors of both houses improved, the one without refrigeration rising to 35.8 per cent and the one with refrigeration rising to 58 per cent.

The research engineer who conducted this study concluded that because of the very desirable characteristics of the gas-refrigeration load, and because of the large potential market for mechanical

refrigeration in the metropolitan area which his company served, the development of gas refrigeration would eventually result in greater sales per meter and in a material improvement in the load factor of the system. Some indication of the success of the company in building off-peak load is reflected in the data in Exhibit 1 for the period 1928–1936.

Does this case indicate that a large expenditure of funds would be justified in attempting to build up a gas-refrigeration load?

What consideration should be given to rates in the development of this market?

2. Importance of Value of Service and Elasticity of Demand in Development of Retail Market

A. Message Rates for Telephone Service

64. ATLANTIC TELEPHONE COMPANY

Southport, an industrial city having a population of about 60,000, had a rather large proportion of families of a relatively low economic status. There were about 14,000 families in the area, more than 40 per cent of which subscribed for telephone service. This percentage was considered by the company as somewhat low for the exchange, and furthermore the rate of growth in number of subscribers for several years had been below what the management had considered as reasonable. The rate treatment employed in Southport was flat rates, service being offered to both business and residence subscribers on an individual line and two-party line basis.

The telephone company started work upon plans for the replacement of the Southport central office equipment, which was of the manual type, and was located in rented quarters where additional space necessary for growth could not be obtained. In moving to a new central office location the company had decided to install up-to-date dial central office equipment, and it was highly important in engineering plans for this equipment that it be designed to furnish those classes of service which would best meet subscribers' requirements. Accordingly, the company undertook a review of its rate treatment for Southport. From general experience in many exchanges with different types of rates it was apparent that the subscribers' needs in Southport would probably best be met by one of three possible plans:

Plan 1. The flat rates then in effect.

Plan 2. Full message rates for business and residence.

Plan 3. Mixed flat and message rate service; that is, a plan offering both business and residence subscribers the option of flat rate or message rate service.

In connection with earlier consideration of the problem the desirability of introducing four-party residence flat rate service in

addition to the existing individual line and two-party flat rate service was reviewed. Consideration of the effects of such a change, however, indicated that the quality of service furnished in Southport would be materially lowered through increased party line interference and an increase of busy conditions on subscribers' lines. The lowering of quality of service would affect not only subscribers having the new four-party service but would affect all subscribers in the exchange to varying degrees. These considerations led the management to the conclusion that the introduction of four-party service would be inadvisable.

In order to evaluate the more important factors affecting the relative desirability of the three plans mentioned above, a study was undertaken to compare the results which might reasonably be expected from the application of each of the plans under dial operation. The working out of these three plans involved estimates of the number and distribution of subscribers by class of service, also estimates of traffic and of all the items of investment and expense which would vary among the plans.

The plans were worked out on the basis of new dial-equipment installations so that costs of transition from one type of operation to another were not included. Also, it was assumed that the existing rates in Southport[1] produced satisfactory financial results, and the rate levels in the other two plans were adjusted so as to give approximately the same net financial results. In this manner the factor of differences in rate of return on investment was eliminated, and the comparison of the relative desirability of the plans could be confined to considerations of attractiveness of the schedules to subscribers as a whole, distribution of charges among different groups of subscribers, and effect on development, quality of the service, and amount of use.

Exhibit 1 shows a comparison of the rate schedules assumed for the three plans, together with the estimated results of operation.

Experience had shown that the introduction of full measurement of local telephone service was followed by two important results: (*a*) a redistribution of charges, and (*b*) a curtailment of use. Practically all the considerations which entered into a decision as to the advisability of measurement were closely related to these two results. Data on a number of exchanges had shown that

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[1] The rates of Plan 1.

under flat rates the distribution of charges was made in accordance with fairly broad groupings of subscribers, such as between business and residence and between individual, party-line, and private

EXHIBIT 1

ATLANTIC TELEPHONE COMPANY

ILLUSTRATIVE RESULTS UNDER CERTAIN TYPES OF RATE SCHEDULES IN SOUTHPORT

Dial Operation

Classifications of Service	Plan 1 Flat Rates	
	Rates	Percentage of Subscribers
Rates and Distributions:		
Business Main		
Individual Line, Flat	$ 6.25	76.8
Individual Line, Measured	.....	.....
Two-Party Line, Flat	5.25	23.2
Average or Total	6.02	100.0
Residence Main		
Individual Line, Flat	3.50	27.6
Two-party, Flat	2.75	72.4
Two-party, Measured	.....	.....
Average or Total	2.96	100.0
Private Branch Exchange		
Average Revenue per System*	45.59	.....
Total Stations†	10,321	
Total Lines†	6,230	
Annual Gross Revenue‡	$402,400	
Annual Gross Revenue per Station‡	39.99	
Average Number of Calls per Station per day	6.23	
Average Charge per Message:		
Business Main	2.15¢	
Residence Main	2.57¢	
Private Branch Exchange	2.33¢	
Investment‡	$1,784,000	
Investment per Station‡	172.85	
Annual Expense‡	272,000	
Annual Expense per Station‡	26.42	
Balance‡	129,700	
Rate of Return on Investment‡	7.27%	

branch exchange service; that the introduction of measurement made practicable a much finer grouping of subscribers, so that the charges were more closely correlated with use; that this redistribu-

tion of charges resulted in relatively higher charges to subscribers having high usages, thus making practicable a reduction in the charges to subscribers having lower usages and particularly a

EXHIBIT 1.—(*Continued*)

Classifications of Service	Plan 2 Message Rates		
	Rates	Percentage of Subscribers	Percentage Difference from Plan 1
Rates and Distributions:			
Business Main			
Individual Line, Flat	.....	.....	.....
Individual Line, Measured	100–$3.50–3¢	100.0	.....
Two-party Line, Flat	.....	.....	.....
Average, or Total	5.99	100 0	0.5*d*
Residence Main			
Individual Line, Measured	85–$3.00–3¢	25.1	.....
Two-Party, Flat	.....	.....	.....
Two-Party, Measured	60–$2.25–3½¢	74.9	.. ..
Average or Total	2.83	100.0	4 4*d*
Private Branch Exchange			
Average Revenue per System*	$62.56	.....	37.2
Total Stations†	11,068		7.2
Total Lines†	6,767		7.0
Annual Gross Revenue‡	$430,400		7.0
Annual Gross Revenue per Station‡	38.89		0 3*d*
Average Number of Calls per Station per day	3.62		41.9*d*
Average Charge per Message:			
Business Main	3.52¢		63.7
Residence Main	4.51¢		75.5
Private Branch Exchange	4.56¢		95.7
Investment‡	$1,897,000		6.3
Investment per Station‡	171.39		0.8*d*
Annual Expense‡	$293,500		7.6
Annual Expense per Station‡	26.52		0.4
Balance‡	$136,900		5.6
Rate of Return on Investment‡	7.22%		.....

reduction in minimum rates; that the reduction in minimum rates might be made even without reductions in costs or in the total revenue requirements, owing to the higher charges paid by the large users.

Exhibit 2 shows a comparison of the charges which experience indicated would be paid by residence subscribers under the flat

EXHIBIT 1.—(*Continued*)

Classifications of Service	Plan 3 Mixed Flat and Message Rates		
	Rates	Percentage of Subscribers	Percentage Difference from Plan 1
Rates and Distributions:			
Business Main			
Individual Line, Flat	$6.75	73 1	....
Individual Line, Measured	70–$3 50–5¢	26.9	...
Two-party Line, Flat	... .	.....	..
Average or Total	6 06	100 0	0 7
Residence Main			
Individual Line, Flat	$3 50	25.1	.....
Two-party, Flat	2 75	54.9	. ...
Two-Party, Measured	50–$2 25–4¢	20.0	.
Average or Total	2 89	100 0	2.4*d*
Private Branch Exchange			
Average Revenue per System*	$47.67	.....	4 6
Total Stations†	11,068		7.2
Total Lines†	6,979		12.0
Annual Gross Revenue‡	$428,900		6 6
Annual Gross Revenue per Station‡	38.75		0 6*d*
Average Number of Calls per Station per day	5.55		10.9*d*
Average Charge per Message:			
Business Main	2.52¢		17 2
Residence Main	2.82¢		9 7
Private Branch Exchange	2.44¢		4.7
Investment‡	$1,891,000		6.0
Investment per Station‡	170.85		1.2*d*
Annual Expense‡	$291,200		6.8
Annual Expense per Station‡	26.31		0.4*d*
Balance‡	$137,700		6.2
Rate of Return on Investment‡	7.28%		.....

* Switchboard rates are the same under all three plans. Under flat rates of Plans 1 and 3 each trunk is 150 per cent of the 1 FB rate. Under message rates of Plan 2 the first trunk with 200 messages is $8; additional trunks, $2; messages over 200 per system, 3 cents each. Station rates are 25 cents higher under flat rates than under message rates.

† Does not include public, hotel, rural, service, and company official lines or stations.

‡ Excludes certain items common to all plans. Plans 2 and 3 include 5 per cent more business main stations and 10 per cent more residence main stations than Plan 1.

d Decrease.

rates of Plan 1 and message rates of Plan 2. The subscribers are arrayed by the amount paid in a typical month, and it will be seen that about 15 per cent of the subscribers under the message rate

schedule would pay more than the maximum flat rate, whereas about 61 per cent would pay less than the minimum flat rate. Experience with full measured service in other exchanges had shown that the apportionment of charges in accordance with the use of telephone service was followed by a curtailment of use by

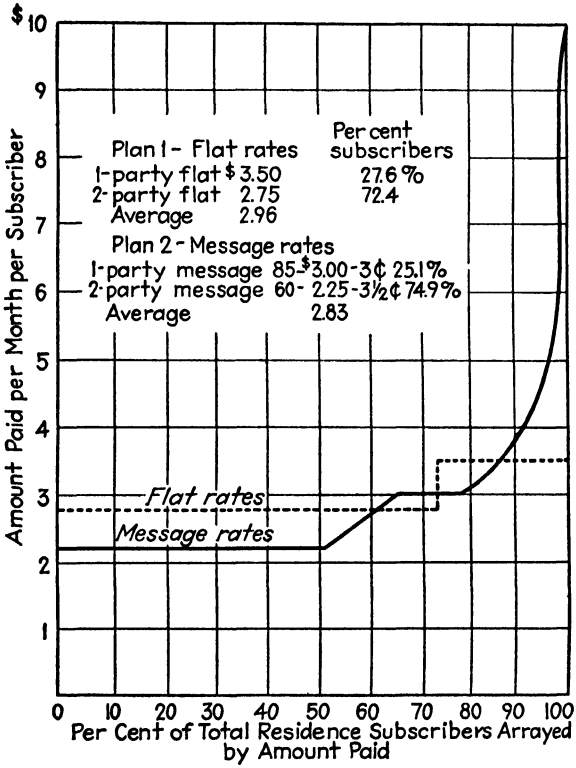


EXHIBIT 2.—Atlantic Telephone Company. Comparison of Charges Paid per Month per Residence Subscriber.

subscribers in order to keep down their charges. In Southport it appeared that the reductions in traffic would be approximately as follows:

	Percentage
Business Main Stations	35
Residence Main Stations	45
Private Branch Exchanges	30

Reductions in message use, of course, tended to reduce the cost of giving service. Studies of the cost effects of measured service in

small exchanges, however, had shown that this reduction in cost was generally offset by the added cost of measurement. In other words, in applying Plan 2 it appeared that the costs of measurement would more than offset the saving due to reduced traffic. The charges, therefore, per unit of service, that is, per message, would necessarily be materially higher under measured rates than under flat rates. The reduction of 50 cents per month in the minimum residence rate, which appeared from this study to be feasible in the change from a flat rate to a full measured rate schedule, was estimated to result, in conjunction with reasonable sales effort, in a 10 per cent increase in the number of residence subscribers. The reduction in the business minimum rate was estimated to result in a 5 per cent increase in business subscribers.

The advantages and disadvantages of the full measured rate plan as compared with the flat rate plan, which were taken into consideration, were as follows:

FULL MEASURED RATE PLAN

Advantages	Disadvantages
1. Distribution of charges more closely in accordance with use and value.	1. Reduction in use and therefore in value of service.
2. Reduction in minimum rates with resulting increased development.	2. Increase in total costs and increase in the average charge per unit of service.
3. Less party line interference and "busies" due to lower calling rates.	3. Preference of public for freedom of usage.
	4. Increase in number of subscriber complaints due to billing of charges for additional local messages.

The considerations affecting the desirability of full measured service applied to some extent with regard to the mixed rate plan. Plan 3, which offered both business and residence subscribers the option of flat or message rate service, permitted unlimited use by those subscribers who were willing and able to pay the flat rates, while providing service at a somewhat lower basic rate for smaller users. The estimated increase in number of subscribers under this plan was the same as under the full message rate plan. It was estimated from experience with mixed rates in other exchanges that the distribution of subscribers among classes of service in Plan 3 would be about as indicated in Exhibit 1. This distribution shows that when the option of flat rate or message rate service is available a large proportion of the subscribers usually take the flat rates, even though there is a considerable differential in the

charges. This experience indicates the general preference of subscribers for flat rates.

The chart in Exhibit 3, similar in form to that in Exhibit 2, shows a comparison of the charges which experience indicated would be paid by residence subscribers under the mixed rate plan compared with the flat rate plan. The subscribers are arrayed by the amount paid in a typical month, and it will be seen that about one-half of 1 per cent of the residence subscribers would pay more under the mixed rate plan than the maximum flat rate, whereas about 17 per cent would pay less than the minimum flat rate.

The advantages and disadvantages of the mixed flat and measured rate plan as compared with the flat rate plan appeared to be as follows:

MIXED FLAT AND MESSAGE RATE PLAN

Advantages	Disadvantages
1. Reduction in minimum rates with resulting increase in number of subscribers.	1. Some reduction in use, and, therefore, in value of service of subscribers who elect the measured rate. This reduction in value, however, appears to be more than offset by the lower charges to subscribers, since otherwise, the subscribers would not elect the measured rate.
2. Furnishes small users service at a reduced cost, while permitting large users to retain flat rate service with unrestricted use.	2. Increase in the average charge per unit of service to subscribers who elect the measured service.
	3. Slight increase in number of subscriber complaints, due to billing of charges for additional local messages.

It will be noted that the disadvantages of the mixed rate plan, as listed above, are somewhat similar to those of the full message rate plan. However, in the case of the mixed rate plan the disadvantages apply to only a portion of the total subscribers, the bulk of subscribers retaining flat rate service with unrestricted use.

Both the full message rate plan and the mixed rate plan offered the same possibility of a substantial increase in the number of subscribers in Southport. The full message rate plan, it was recognized, offered material disadvantages, whereas the disadvantages of the mixed rate plan were viewed as constituting no serious drawback. In fact, the advantage of a lower minimum rate and the resulting increase in the number of subscribers seemed controlling, and consequently the company decided to introduce an

underlying two-party residence message rate with a monthly guarantee 50 cents below the existing two-party flat rate, and to substitute for the existing two-party business flat rate, an individual line message rate with a monthly guarantee $1.75 below the existing two-party business rate.

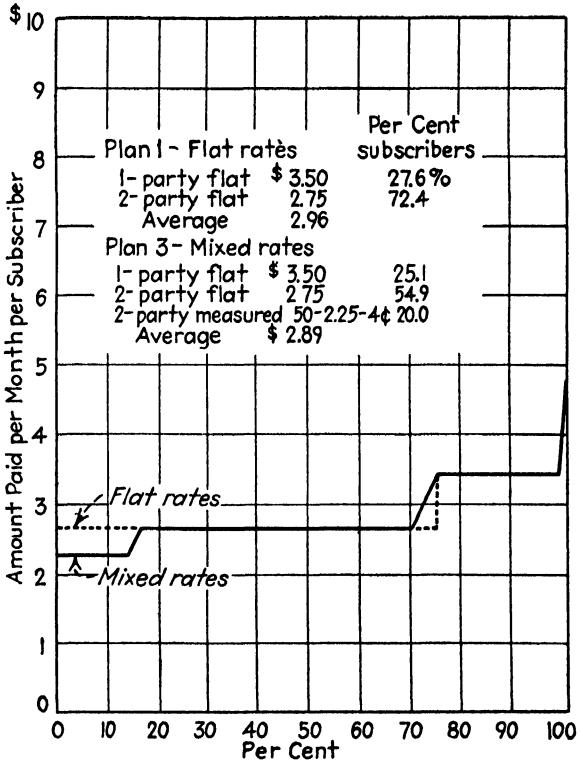


EXHIBIT 3.—Atlantic Telephone Company. Comparison of Charges Paid per Month per Residence Subscriber.

If the telephone development in Southport had been satisfactory, and if the rate of growth had been high, might a different conclusion have been reached?

Compare the relative merits of the full message rate plan with the mixed rate plan.

Compare the advantages in connection with rate making that a telephone company with many exchanges has over a company with a small number of exchanges.

B. Sale of Additional Telephone Lines For Abnormally Busy Conditions

65. FULTON CITY TELEPHONE COMPANY

The Fulton City Telephone Company operated exchanges in a number of cities and towns of a Middle Western state. Flat rates were employed exclusively for both business and residence service in both large and small exchanges, and calling rates were high, especially in the cities. Approximately 12 per cent of all local calls handled by the company were uncompleted because the called line was "busy," and this situation accordingly received the active consideration of the management in setting up service objectives.

Telephone service from the subscriber's point of view is not satisfactory when the calling subscriber is given a report that the called line is busy. It is important, therefore, that (called) subscribers' lines be available to receive calls made to them. This characteristic, namely, that both the amount and quality of service received by one subscriber are dependent upon his ability to have access to the telephones of others when he desires it, is somewhat peculiar to the telephone business and raises many problems not common to other businesses.

It would seem to follow from the foregoing that, since the availability of a line to the called subscriber is a material factor in the furnishing of telephone service, it might be desirable from a service standpoint that the company be able to exercise some control in the determination of the proper number of lines connecting each subscriber with the central office. With this question left entirely to the discretion of individual subscribers, whose opinion of the service is apt to be more influenced by their ability to communicate with others than by the ability of others to communicate with them, the company is partially deprived of control over the quality of service which it furnishes to subscribers in general. Moreover, repeated attempts to secure connection when lines are busy result in expense which must be borne by the general body of subscribers.

It was recognized that the high percentage of busy calls resulted in general from the fact that some subscribers had not provided themselves with sufficient central office facilities. In the case of business subscribers, this was primarily due to an inadequate number of private branch exchange trunks or individual lines and, in the case of residence users, to an inadequate number of lines as well as to the fact that certain subscribers were taking a lower grade of service than fitted their requirements. It was apparent, therefore, that greater sales effort should be directed toward selling additional lines where existing facilities were congested, and also toward the upward regrading of certain residence subscribers having two-party and four-party line service which did not meet their requirements. Some effort was expended in this direction but, of those prospects solicited, sales resulted in only 15 per cent of the cases, and experience had shown that there was considerable difficulty in bringing subscribers to the realization that adequate telephone facilities were essential to obtain the full value of telephone service, as well as to avoid the impairment of service to others.

The company therefore took under consideration the possibility of supplementing its sales activities with other measures designed to relieve further the busy line situation in its territory. Possibilities of modifications in the rate structure were considered but a careful review failed to reveal any opportunities for relief through this means.

In approaching the problem from another angle, the management considered whether it would be practicable to adopt a tariff regulation which would give the company the right to require business subscribers whose lines were regularly reported busy more than a certain number of times per day to contract for additional central office lines. Further investigation along this line disclosed the fact that a practice of this sort was included in the regulations of the telephone administrations of certain European countries.

The advantage of such a regulation appeared to lie in the fact that it would provide the company with authority which could be used persuasively in minimizing the number of busy calls to business subscribers, and in thus effecting a substantial improvement in the over-all busy line situation. This improvement would result not only in a better quality of telephone service to all

subscribers but also in plant and traffic economies helping to reduce the cost of giving telephone service.

On the other hand, the practical difficulties associated with the administration of such a practice were recognized by the company. It would be necessary for the regulation to specify a certain number of busy reports per day which might be difficult to justify, particularly since certain lines might be busy only occasionally; furthermore, the fact that a particular subscriber had exceeded this number would not easily lend itself to proof if the subscriber questioned it. Even with the most careful administration, some antagonism would probably be aroused on the part of subscribers affected by its application, and the company would undoubtedly be required to defend its position, resulting in some unfavorable publicity.

In the light of the foregoing, should the company request a tariff regulation giving it the right to require business subscribers, whose lines were usually reported busy more than a certain number of times per day, to contract for additional central office lines?

C. Long Distance Telephony as a Sales Medium

66. key-town plan of telephone selling

This case is confined to a specific type of use of long distance telephone service, and is only one of the ways in which the telephone can be used in buying, selling, and other phases of business activity.

Within recent years there have been great increases in the use of long distance telephone service in sales work. One of the controlling reasons for the use of long distance service is the peculiar quality of the telephone as a communication medium by which the personalities of the speakers may be so projected as to make the telephone call a very personal type of contact, closely akin in character to a personal visit. Of course, the advantages in sales work of face-to-face interviews with customers cannot be gainsaid. But, where customers are located in various cities throughout the territory, the time and expense of personal visits often makes it impractical to see all customers or to see certain of them as frequently as desired. In these situations the use of long distance telephony is particularly helpful, because in addition to saving time and expense, the telephone, as compared with certain other communication media, offers many of the same advantages as a face-to-face contact.

Other basic advantages in the use of long distance service in sales work are the speed, ease, and cheapness with which personal contacts may be made. By the use of the telephone it is often possible to obtain a greater frequency of coverage than if a trip had to be made to each buyer. Moreover, telephoning customers between salesman's visits reduces the risks of losing business to competitors. It will be clear that personal visits to smaller buyers often located in remote places can be made only up to a certain marginal point beyond which the salesman goes into what might be called "the inaccessible market," where traveling delays and traveling expenses become greater than the potential sales would justify. Long distance telephone calls, therefore, are particularly useful in supplementing the efforts of salesmen and making them more effective.

The key-town plan of telephone market coverage is employed by many business firms whose salesmen cover territories comprised of a number of different towns, in order to secure more complete market coverage, increase frequency of coverage, cover inaccessible or out-of-the-way customers, or secure quick coverage of a market in connection with such matters as price changes, moving surplus stocks, handling seasonal peaks, etc. Firms using direct mail are faced with the problem of handling inquiries economically and effectively. Instead of sending salesmen on all leads, which would be expensive, inquiries can be forwarded to salesmen in the field. A telephone call by the salesman from key towns helps in the selection of those prospects who seem to warrant a personal interview.

Essentially, the key-town plan consists of selecting centers or key towns from which salesmen may make telephone calls to customers or prospects in the surrounding territory. A key town selected for this purpose should preferably be the market or trade center for the area to be covered, and should be convenient from the standpoint of transportation, hotel accommodations, and telephone facilities.

For a particular firm, the size of the area and the selection of the key towns depend upon individual requirements, and it is important that the plan be "tailor made" for each case. For example, a firm of wholesale grocers might cover small areas intensively, doing business with most of the retail grocers in each area, while the manufacturer or jobber, engaged in some other line, might find his market in relatively widely scattered cities. The former firm would probably wish to do its calling from a larger number of key towns to its customers concentrated in small areas and the latter from fewer key towns to its more widely separated customers.

The key-town plan of telephone coverage is not intended as a substitute for personal visits by salesmen. Most firms using the plan combine personal and telephone visits. In actual practice, each of the major towns in a salesman's itinerary becomes a key town from which he may make telephone calls to those customers or prospects whom it is not feasible to visit, reserving the majority of his time for the attention which must be given by personal visit to the more important customers or prospects. However, under favorable conditions long distance telephone service can be used

as the primary sales medium, the extent of such use varying with the nature of the product, familiarity of the prospect with the product, extent of market area, and similar factors.

A variation of the key-town plan known as the "Skip-Stop Plan" involves alternating on each trip the towns which the salesman visits and the towns to which he telephones.

The key-town plan presupposes that the regular salesman will make the telephone calls. Other things being equal, this is usually the best method, inasmuch as the salesman has personal knowledge of the buyer and his problems. There are, however, advantages in other arrangements. The sales manager or other sales executive in the home office or district office may make the calls. Some concerns use a combination of these two methods, the salesman making periodic calls when on the road while the sales manager calls to thank new customers for their business or established customers for particularly large orders. Many firms use specialized telephone salesmen, and this practice naturally has the advantages of greater specialization and the development of greater expertness in selling technique.

Various facilities have been provided by the Bell telephone companies which are often useful in connection with the key-town plan. Among these are the key-town book for listing customers and their telephone numbers, as well as the key towns from which they should be called and key-town maps.

When a number of customers are to be telephoned from a key town another convenience provided by the Bell companies is often helpful. It is sequence service, which permits a number of long distance calls to be made with a minimum of delay between calls, and a special form is provided on which necessary information concerning the people who are to be called may be listed. This list may be presented to the telephone company in advance or a series of calls may be given to the operator orally for completion in sequence, and each call is completed immediately after a preceding conversation has been finished.

An additional aid provided by the Bell System and frequently helpful for those using the key-town plan is the Bell System credit identification plan, which permits business men, while on the road, to charge to their home office telephones long distance calls placed from a telephone company business office, thereby eliminating the necessity of carrying funds for the payment of charges on these

calls. At the same time, this provides control information at the company's home office of its salesmen's telephone activities. In a large number of cities, desk space is provided in the telephone company's business office as a convenience in placing long distance calls.

In connection with the key-town plan concerns frequently desire to get in touch with their representatives while they are on the road in order to give them last-minute information or instructions on inquiries and leads, price changes, or competitive situations and to have supervisory control over them. To meet this requirement, an arrangement is available whereby transients may register with the telephone company's chief operator in the town in which they are temporarily located so that incoming long distance calls for them can be completed. The concern may then place a call for the representative, telling the operator that he is a transient in the called place so that the call will be referred to the chief operator who has the necessary information to complete it. The regular person-to-person rates apply for this service.

In connection with the use of the telephone in business, the Bell System has men trained as communication advisers to discuss with customers, without any obligation, appropriate applications of long distance service for meeting the requirements of their business and the various long distance services available. Experience has indicated that no general prescription can be written for making the most effective use of the telephone in sales work or in other phases of business operations. The telephone company has collected considerable information to help business firms in formulating "tailor made" plans for the effective use of long distance service in their business.

What are the possibilities for expanding the use of long distance telephony as a sales medium?

Should any wholesale rates be available for such service?

D. Telephone Service in Newly Developed Suburban Area

67. WARD CITY TELEPHONE COMPANY

The Ward City Telephone Company operated two contiguous exchanges, Ward City and Brookville, the central offices of the two towns being approximately seven miles apart. Ward City, a commercial center of over 80,000 population, had some 15,000 telephones. Brookville, a much smaller town of a generally residential character with about 10,000 population had approximately 1,100 telephones. Both exchanges were served on a manual basis.

The main station rates in the two exchanges were as follows:

WARD CITY TELEPHONE COMPANY

Flat Rates	Ward City		Brookville	
	Business	Residence	Business	Residence
Individual Line	$6.50	$3.50	$4.00	$2.75
2-party Line	5.50	3.00	3.50	.....
4-party Line	.....	2.50	.....	2.00

The toll rate between the two exchanges was 10 cents for an initial period of five minutes and 5 cents for each three minutes overtime period or fraction thereof.

Although the exchange areas were contiguous, it will be seen from the map on page 446 that the base rate areas, that is, the more densely populated sections of the two exchanges, were some miles apart. A ridge of hills separated the intermediate territory into two parts about midway between the towns, and the common exchange boundary had been drawn at this point. On the Ward City side of the boundary, there was a scattering residential development, while the Brookville portion was sparsely settled and largely devoted to agriculture. The farmers then receiving service in this portion were served on a rural line (eight-party) basis from the Brookville central office.

Subsequently, a new improved highway was opened between Ward City and Brookville, and the towns were brought into closer communication, with an increasing community of interest. This was evidenced by the establishment of bus service and a considerable growth in telephone toll traffic between the two towns.

As the improved highway was being built, a Ward City realty company purchased a tract of land lying in the Brookville exchange between the Brookville base rate area and the common exchange boundary. This was developed as a high class residential community with country club facilities and was known as Wildwood. Families locating in this community were mostly those of Ward City business men, although a number of Brookville people also established residence there. A year after the highway was opened some 84 houses had been built, of which 64 had been bought by people from Ward City and 20 by former Brookville residents.

Up to that time telephone service to these Wildwood subscribers had been provided through the Brookville exchange in accordance with the existing method of serving this area. Charges for this service consisted of the base rates of the Brookville exchange[1] plus monthly exchange line mileage charges measured on an airline basis from the nearest point on the boundary of the Brookville base rate area to the center of the Wildwood community. These charges were 60 cents per one-quarter mile for individual line subscribers and 25 cents per one-quarter mile per subscriber for four-party line service, making the aggregate monthly charges, including mileage, $6.35 and $3.50, respectively. In addition, the 10-cent toll charge which applied on calls to Ward City resulted in rather substantial monthly toll charges, especially for those Wildwood subscribers who formerly resided in Ward City and whose business affiliations and, to a large extent, social interests, still remained there.

In the latter part of that year the Ward City Telephone Company, recognizing the changed conditions, undertook a study to determine the most satisfactory method of furnishing service to subscribers located in Wildwood and the immediate vicinity.

Basically, the problem confronting the Ward City Telephone Company appeared to be one of developing a scheme which would recognize the service requirements of both existing and potential

[1] Given in foregoing table.

subscribers, all of whom were located on the Brookville side of the boundary but only a portion of whom had a community of interest with that exchange; and which would not at the same time involve serious over-all disadvantages from the point of view of other subscribers or the company. A preliminary survey indicated that the following alternatives should be studied and compared.

1. Merging of the two exchanges.
2. Changed location of the exchange boundary line.
3. Modifications in rate structure.

The general considerations that appeared to be involved in each of these alternatives are outlined below.

1. *Merging of the Two Exchanges.*—This involved the combination of Ward City and Brookville into one exchange area with one schedule of rates throughout, the existing central offices and base rate areas to be maintained. While this plan had the obvious advantage of eliminating the exchange boundary problem, it also had numerous disadvantages which appeared to be controlling.

In the first place, general increases in the rates of both exchanges would be necessary in order to offset the loss in toll revenue, as well as the additional operating expenses resulting from the increase in traffic that the company estimated would flow between the two towns with the removal of the toll rate. These exchange rate increases would be expected to meet with considerable opposition from the general body of subscribers, and, furthermore, the higher rate levels would tend to retard the growth in telephone development, particularly in Brookville, where the percentage of increase in rates would be very substantial.

The company estimated that the majority of Wildwood subscribers would obtain service at an appreciable saving under this plan, but this advantage appeared to be offset by the fact that the saving would be secured by only a few subscribers at the expense of the general body of subscribers in both exchanges.

2. *Changed Location of Exchange Boundary Line.*—This involved the extending of the Ward City exchange area to include Wildwood and perhaps some of the immediate vicinity.

Under this plan those Wildwood subscribers desiring Ward City service would pay Ward City base rates plus exchange line mileage to the Ward City base area. While this aggregate amount would be higher than the charges applying under existing

conditions for Brookville exchange service, the elimination of the toll charge on calls to Ward City would result in an appreciable saving in the total bills of many of the Wildwood subscribers.

Those Wildwood subscribers who desired to continue to have Brookville service could secure this by paying Brookville base rates plus foreign exchange mileage charges for the distance from Wildwood to the new common exchange boundary and regular exchange line mileage charges from that point to the Brookville base rate area. Under this plan, these subscribers would be charged somewhat more than formerly, the increase being due to the fact that foreign exchange line mileage charges were on a somewhat higher level than regular exchange line mileage charges.

An outstanding disadvantage of the plan was the fact that neighboring Wildwood subscribers taking service from different exchanges would have to pay a 10-cent toll charge to call each other.

Accordingly, the company proceeded to review the possibility of meeting the situation through a third alternative.

3. *Modification in Rate Structure.*—Assuming the desirability of the retention of the existing boundary, the company first considered the possibility of furnishing Ward City service on a foreign exchange basis to those Wildwood subscribers who desired such treatment, and dismissed this possibility for reasons similar to those under the preceding plan.

After considering other possibilities, the company finally decided to adopt an optional rate scheme which would be available to Brookville residence subscribers located in a borderline zone of about a mile in width including Wildwood and territory in its general vicinity.[1] Such subscribers could, if they desired, continue to pay the existing Brookville exchange rates which would, as heretofore, give them local service to the Brookville exchange with the toll charge applying on calls to Ward City and vice versa. On the other hand, these subscribers would have the option of taking a "general zone" service, which would be furnished on an individual line basis, at a rate higher than the existing Ward City individual line residence rate. This service would give the subscriber local service, that is, service without the payment of toll, to all subscribers of both the Brookville and Ward

[1] See map, Exhibit 1.

City exchanges; and in addition all subscribers in both the Brookville and Ward City exchanges would be able to call these general zone subscribers without the payment of toll. While these subscribers would continue to be connected to the Brookville central office, they would be given a different central office designation from other Brookville subscribers, which would indicate to the

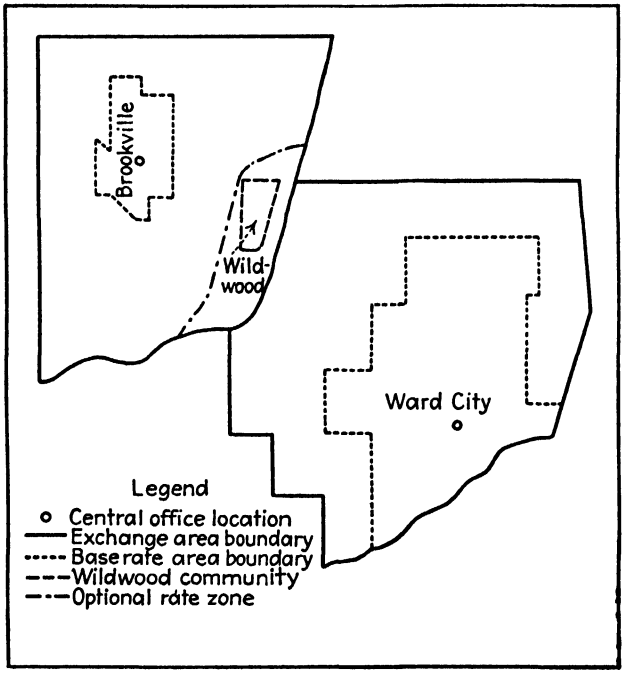


EXHIBIT 1.—Ward City Telephone Company. Ward City and Brookville Exchange Areas.

operator that calls to such stations from Ward City subscribers did not involve a toll charge.

Such a plan would meet the needs of subscribers who, though located in and served from Brookville, were closely associated with the Ward City exchange. By reason of this close association, the calling rate from these subscribers to Ward City subscribers, and vice versa, was naturally high, and the plan would recognize this fact through the elimination of a toll charge on these calls in both directions. Moreover, the disadvantage of a toll charge applying on calls between neighbors would not be involved.

Experience with optional rate schemes of this character indicated that in general only those subscribers would regrade to the general zone rate who would thereby reduce their total charges. A net revenue loss was consequently anticipated, and in order that this should not be too large, and also since most of the subscribers whose needs were being considered were already on individual line service, it was decided to offer the general zone service only on an individual line basis. A monthly rate of $7.00 appeared suitable for this service, at least for the time being. Wildwood subscribers regrading to the optional rate would continue to pay $3.60 mileage, making their total monthly charge $10.60. It was estimated that about 40 Wildwood subscribers would take the general zone service and that the average saving per subscriber in total monthly charges would be $2.50.

The net effect on the Ward City Telephone Company's net revenues of offering this optional service was estimated to be a small annual loss, which might represent a reduction in the net return on investment in these two exchanges of less than ¼ of 1 per cent.

Does the decision in this case appear to you to be sound from the point of view of the telephone company; of the telephone subscribers involved?

E. Use of Promotional Rates to Develop Local Transportation Business

68. The Milwaukee Electric Railway and Light Company (A)[1]

The Milwaukee Electric Railway and Light Company, supplying local street railway, trackless trolley, and motorbus transportation in the metropolitan area of Milwaukee, Wisconsin, also operated interurban railway and bus lines between Milwaukee and nearby communities. Altogether, the company served an area with a population of about 1,226,000 in 1938.

Beginning in 1930, the company secured the consent of the Public Service Commission of Wisconsin[2] to experiment with various types of promotional rates in the hope of securing increased patronage. Among the fare experiments proposed by the company and approved by the commission were: (1) the unlimited weekly pass; (2) the summer recreational pass; and (3) the school children's pass. Under certain conditions the company also provided free rides for children in connection with the use of adult passes. In addition to changes in the fare structure itself, an important revision was made in transfer policy.

Permission to use the unlimited weekly pass to be sold for $1 was obtained from the commission on May 1, 1930. At the same time, an increase was authorized in the single fare from 7 cents, or 8 tickets for 50 cents (the fare prevailing between 1920 and 1930), to a cash fare of 10 cents, or 6 tickets for 50 cents. The single-fare limits were materially extended within the metropolitan area.

After approximately a year of operation under this rate structure, the Public Service Commission of Wisconsin said:

> Sufficient time has elapsed since the inauguration of the weekly pass to demonstrate its value. The commission's estimate that the new rate structure would increase the company's revenues $400,000

[1] This case was prepared from material furnished by officials of the company; and from the mimeographed copy of decision 2-R-26 of the Public Service Commission of Wisconsin. Part of the material has been published in P.U.R. 1931E, 289. See also case entitled The Milwaukee Electric Railway and Light Company (B), p. 670.

[2] Until 1931, this body was known as the Wisconsin Railroad Commission.

annually has fallen far short of fulfillment. Yet while the revenue of street railways in other comparable cities has fallen off during the same period by some 10%, revenue in Milwaukee has not fallen off, whereas riding has increased about 10%, with prospects under recent fare experimentation of a continued increase.

The popularity of the unlimited weekly pass was thought to be especially instrumental in bringing about this increase in riding. According to checks made by the company, it appeared that the holder of a weekly pass, through its use during both peak and off-peak periods, had reduced the price of his rides to an average of about 4½ cents. As indicated in Exhibit 1 the unlimited weekly pass was still in use by the company in 1938.

At the same time that the $1 pass was placed in use in Milwaukee, a $1.75 unlimited weekly pass was introduced in the city of Milwaukee and in all suburban zones. This pass was used largely on the South Milwaukee line, which was the only remaining zone area in which any considerable traveling was done.

In order to stimulate further the purchase of passes, the company allowed two children of half-fare age to be carried free of charge on Sundays if accompanied by an adult with a $1 or $1.75 weekly pass. During the early months of 1938, children's rides of this kind amounted to approximately 17,500 per Sunday.

While the privilege of carrying two children of half-fare age on Sunday on the regular unlimited $1 or $1.75 weekly pass was not directly productive of any additional revenue, in the opinion of the company it was a plan which had considerable merit. The company believed that this plan probably increased the sale of passes and had the more important advantage of stimulating the habit of streetcar riding by children. It appeared that many of the younger children in Milwaukee had seldom, if ever, been on a streetcar. It was the theory of the company that these children would be regular riders in the future and that the free privilege in connection with the regular weekly pass would be instrumental in engendering goodwill for the transportation company while stimulating the sale of this form of pass at the same time.[1]

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[1] For a period of 2 weeks beginning October 4, 1931, the company offered a 50-cent off-peak pass in celebration of its winning the 1931 Coffin Award. During the first week 6,375 passes were sold, and during the second week, 6,625. The largest number of off-peak passes (except the Christmas-shopper pass) that had been formerly sold at 75 cents was 2,577. Apparently the reduction in price greatly stimulated sales. However, the 50-cent off-peak pass was not extended largely

The success of various recreational riding plans introduced by the company appeared to be another proof of the versatility of the pass. Effort was directed especially at the promotion of riding on the interurban or rapid transit system. The pass sold for 50 cents and entitled the holder to ride on the interurban system any number of times during the evening. It was good for one evening only but could be used without limitation as to destination or line. Saturday and Sunday evenings were excluded. A similar pass was issued for children at half price.

An official of the company made the following comment concerning the summer recreational pass:

> Although the rate of fare was ridiculously low, we were able to fill up cars that otherwise would have been nearly empty, and while we had to put on some additional service, this pass apparently netted us $1,000 or more a week additional with practically no added expense; even where more service had to be put on, it was possible to make a neat profit at 50 cents per person when the cars were filled. The general idea here is to work out some scheme that will develop off-peak riding and make use of equipment and facilities that would otherwise be idle.

A special pass known as the "Mid-week Special" was good on Tuesdays through Fridays after 10:00 A.M. The price to adults was 50 cents and to children, 25 cents. The privilege of two children riding free was extended to each holder of an adult pass. This pass was instituted for the purpose of encouraging family travel to two well-known bathing beaches.

In 1935 an "Evening Special Round-Trip Rapid Transit Excursion Fare" was sold which consisted of a minimum round-trip fare of 25 cents for adults and 15 cents for children and a maximum of 75 cents for adults and 40 cents for children. This fare was good on Mondays through Thursdays for round-trip

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because the company felt that economic conditions did not warrant experiments of this kind.

The Charles A. Coffin Award is made annually to "that electric railway company in the United States and Canada which during the year has made a distinguished contribution to the development of electric railway transportation for the convenience of the public and the benefit of the industry." As in previous years, six principal factors were considered in making the award. These were: (1) more riders and more revenue; (2) a friendly public; (3) lower costs and increased reliability of service; (4) increased safety for riders, employees, and the public; (5) cooperation between management and employees; (6) financial accomplishments. For details concerning the 1931 competition and award, see *Electric Railway Journal*. October, 1931, p. 578.

riding on the rapid transit system after 5:45 P.M. After this pass had been in effect a short time, arrangements were made to include unlimited city riding in Milwaukee on the return trip. Still later, the pass was made good all day on Sundays. In 1936, an excursion fare became effective, based on the one-way regular rate good any day of the week after 5:45 P.M. at a cost of $1 for adults and 50 cents for children. As a result of several extensions, this fare was still in effect in 1938.

A weekly pass for school children at a price of 50 cents was announced April 18, 1932. These passes were sold at schools to regularly enrolled pupils. They were good on all streetcars and auxiliary bus lines in the metropolitan single-fare area, with the limitation that each student was permitted to use his pass only between his home and his school from 6:30 A.M. to 5:30 P.M. on school days. The restrictions on the school pass were later changed, so that in 1938 passes were accepted on Saturdays between 11:00 A.M. and 6:00 P.M. and on week days until 6:30 P.M. The Saturday riding privilege was extended for the purpose of enabling school children to attend athletic events, and the evening riding enabled them to attend functions occurring after the regular school hours.

A revision of the company's transfer policy was effected in April, 1931. All limits as to direction, originating line, and the necessity of boarding the cars at transfer points were eliminated. Only one restriction was placed upon the use of the transfer; it was valid for only one hour. When a passenger received a transfer, he could ride a short distance, attend to his errands, and ride back to the point from which he started on the single fare. A person could also ride to a shopping center, later take a car in the same direction, and finally ride back to the point of origin, all on the same transfer, provided the time limit had not expired. Thus, the company deliberately allowed a rider the opportunity of making a round trip for one fare, a practice generally considered the worst kind of abuse of a transfer. A special study indicated that approximately 9 per cent of transfer riders were able to return to their point of departure on a single fare.

This transfer plan was instituted for a trial period of 3 months and was later extended indefinitely on a temporary basis. Because of the extent to which it was abused by persons who gave their transfers to others, the company did not deem it wise to establish

this form of transfer on a permanent basis. In general, however, the results appeared to the company to be satisfactory, and apparently the loss of revenue incurred was balanced by additional business stimulated by this policy.

In effect, this transfer plan was an hourly pass, which might be considered similar to a zone fare within the basic zone. The commission believed it not unlikely that this innovation would stimulate the building of neighborhood business centers, and in addition provide in a small way for a lower fare to the short-distance rider, an accomplishment which, in the opinion of the commission, would be highly desirable. It was obvious that one who rode any great distance would not have much time to shop or transact business and make the return trip within an hour, but the person who rode a short distance would have considerable time for such business, and still could make the return trip at a rate equivalent to a single fare.

While the results of this new transfer scheme were not clearly crystallized, its effects upon riders' habits and upon revenues were being observed with interest. Shortly after it was introduced, industrial conditions again grew worse and the company sustained some additional loss in revenue. While the management of the company did not believe that the new transfer plan had any effect on this loss in revenue, it was very difficult to draw definite conclusions. An official of the company made the following statement concerning the new transfer policy:

> The transfer has certainly simplified our situation and has had an appeal to the riding public. The use of transfers increased after its introduction perhaps by 50%. Of course we know that through its use some persons gave us only 10 cents for some round-trip rides where they would have given us 20 cents before, but we are certain that many round-trip rides are being taken for 10 cents where we would not have received any revenue if the rate had been 20 cents.

As may be seen from Exhibit 1, this transfer policy was still in force in 1938.

Beginning in 1923, the company inaugurated a special service through a separate department of the company known as the Wisconsin Motor Bus Lines. Buses were operated on selected streets and boulevards. This service extended to approximately four miles from the downtown district. As shown in Exhibit 1, there was a straight 10-cent fare for this service without transfers

except from one of these lines to another line offering the same type of service.

One question which the promotional fares raised was whether they constituted illegal discrimination. Obviously, under some

EXHIBIT 1

THE MILWAUKEE ELECTRIC RAILWAY AND LIGHT COMPANY (A)
SCHEDULE OF FARES EFFECTIVE IN METROPOLITAN AREA 1938
Metropolitan Division

Type of Fare	Street Railway and Feeder Bus System		Wisconsin Motor Bus Lines, City Lines	Local Rapid Transit Line	
	Single-fare Area	Suburban Area		Single-fare Area	Zone Area*
Adult Fares:					
Weekly Pass (Unlimited Bearer)	$1 00†	$1.75††‡	.....	None	None
Ticket Fare	6 for 50¢	20 for 50¢§	.....	.....	.....
Token Fare	None	None	.....	.....	.....
Cash Fare	10¢	3¢§	10¢	10¢	5¢
Transfer (Unlimited Hourly)	Free	Free	Free‖	Free	Free
Children's Fares	.....	¶	**	.....	††
Weekly Pass (Limited School)	50¢	None	.....	.....	.....
Ticket Fare	12 for 50¢	20 for 25¢§	.....	None	None
Token Fare	None	None	.....	.....	.....
Cash Fare	5¢	2¢§	10¢	5¢	3¢
Transfer (Unlimited Hourly)	Free	Free	Free§	Free	Free

* Zone area extends from 92d Street to West Junction.
† Adult passes are good for use on Racine City Lines.
‡ Also good for use in single-fare area.
§ One ticket fare or one cash fare is required for each zone traveled in riding into or out of the single-fare area. For riding within the suburban zone area only, the minimum zone fare for adults is 6 cents cash or two zone tickets and for children 4 cents cash or two child's zone tickets.
‖ Transfers are not issued to Metropolitan Division vehicles.
¶ Street railway system fares for children three years of age and under twelve years.
** Children under five years of age are carried free; children five years of age or over are required to pay full fare.
†† Children's fares apply to children three years of age and under twelve; children under three years of age free if accompanied by an adult.
NOTE: Wisconsin Motor Bus Lines: Between December 20, 1931 and February 13, 1932 (8 weeks), an unlimited $1.25 pass was sold on the city lines. Maximum sales per week, 662 in the seventh week of use.
NOTE: Local Rapid Transit Line: Transfers are issued to this line from rail, trackless trolley, and bus intersecting lines on payment of 10 cents cash fares if specially requested at time of paying fare. Transfers are punched so that they are good on the local rapid transit cars.

of the rates which have been discussed, rider A might be transported from point X to point Y at less cost to him than the amount paid by rider B. Obviously the company was making these various rates on the theory that a large portion of its costs was attributable to fixed capital charges and that the off-peak user would cut down the cost per unit of service to all classes of users. On this theory off-peak riders might be properly served at a charge which would return to the company something over the direct cost of serving them. The commission stated that it was the application of this principle which, in the main, supported its

conclusion that there was no illegal discrimination involved in the use of these special fares.

The fares being charged by the company in June, 1938, were as shown in Exhibit 1.

For questions see end of the next case.

69. ST. LOUIS PUBLIC SERVICE COMPANY

The St. Louis Public Service Company was incorporated in 1926 as the result of a reorganization of the United Railways Company of St. Louis, which had been in receivership since 1919. Before 1926 a total of between 70 and 80 street railway companies had served St. Louis and St. Louis County. The United Railways Company had been formed in 1899 through the consolidation of a number of separate companies. In 1906 the company had absorbed the last important independent street railway companies serving St. Louis and vicinity.[1]

From 1906 until 1923 there was no important competition in the furnishing of mass transportation in St. Louis proper, but in 1923 the motorbus began to serve as a means of transportation in St. Louis, The People's Motorbus Company being formed in that year. The capital stock of this company was owned by the St. Louis Motor Coach Corporation, which, in turn, was affiliated with the Chicago Motor Coach Corporation. The St. Louis Bus Company was organized in 1924 by the Reorganization Committee of the United Railways Company of St. Louis. From 1924 to November 30, 1926, buses of the St. Louis Bus Company were operated under contract by the receiver of the United Railways Company as feeders to the existing streetcar lines. Upon the formation of St. Louis Public Service Company in 1926 these buses were leased to the new company.

Control of The People's Motorbus Company was obtained by City Utilities Company, which also owned 38 per cent of the voting stock of the St. Louis Public Service Company. In view of the scattered holdings of the other stockholders, this 38 per cent ownership constituted effective control of the company. Thus, the two main corporations furnishing bus transportation in St. Louis were both affiliated with the street railway system. In the latter part of 1933, St. Louis Public Service Company acquired direct control of The People's Motorbus Company through purchase of stock of

[1] This consolidation did not include street railway properties in East St. Louis, Illinois.

the St. Louis Motor Coach Corporation. In addition to the bus companies mentioned, there were at various times independent bus companies operating in St. Louis County, at least one of which rendered a limited service between the suburbs and the downtown district.

Mass transportation service in St. Louis was also furnished by so-called "service cars." This type of vehicle had been introduced in St. Louis in 1915, and until the passage of a regulatory ordinance by the City of St. Louis in June, 1928,[1] had operated under chaotic conditions. This ordinance did not prescribe public convenience and necessity as a basis for granting or refusing licenses for operation of these cars. As no reports were required of the operators of service cars concerning their business, no facts were available as to the number of these cars actually in operation. Checks made by the St. Louis Public Service Company at selected periods in 1930 indicated that service cars probably carried about 7,000,000 passengers annually. At that time the People's Motorbus Company was carrying about 21,000,000 passengers annually, while the streetcars and buses of the St. Louis Public Service Company were carrying approximately 213,000,000.

In April, 1933, a receiver was appointed for the company by the United States District Court in St. Louis. The receivership was later extended to all the company's subsidiaries except People's Motorbus Company. In June, 1934, the company filed a voluntary petition for reorganization under Section 77B of the Federal Bankruptcy Act.

The St. Louis Public Service Company had applied to the Missouri Public Service Commission in 1929 for authority to advance its fare to 10 cents cash or three tokens for 25 cents. At that time the rate of fare charged by the company had been

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[1] This ordinance defined service cars as "all motor vehicles which are offered for, or engaged in, carrying passengers, with or without baggage, for hire within the city of St. Louis, without regard to the time consumed or the distance traveled, and the passenger having no control over the route of passage and carriage, and the fare or charge for the use of which is made on the basis of carrying passengers from one designated place to another along a definite route. This ordinance shall not apply to vehicles run on rails and tracks or to any motor vehicle used as a sightseeing car, a sightseeing car being defined as a 'motor vehicle having a seating capacity in excess of ten (10) persons' and which is used for the purpose of conveying passengers on a sightseeing tour as the term is generally understood, and where the basis of charge is time or circuit route traveled by such cars in regular trips, or to vehicles commonly known as 'taxicabs' which are equipped with a taximeter or fare indicator, or to vehicles commonly known as 'motorbuses.'"

EXHIBIT 1

ST. LOUIS PUBLIC SERVICE COMPANY

OPERATING STATISTICS OF THE ST. LOUIS PUBLIC SERVICE COMPANY AND THE PEOPLES' MOTORBUS COMPANY OF ST. LOUIS

Year	Passenger Revenue		Revenue Passengers		Passenger Mileage Operated		Miles of Single Track in Operation at End of Year	Miles of Bus Route (Round Trip)
	Streetcar	Bus	Streetcar	Bus	Streetcar	Bus		
1925	$18,776,756	$2,482,459	271,273,073	25,302,774	43,004,533	8,997,003	457.68	215.82
1926	18,777,545	2,542,410	270,652,464	26,075,696	42,775,855	8,921,844	456.80	221.25
1927	18,814,496	2,514,474	260,348,715	26,129,724	42,701,879	8,617,506	456.73	230.12
1928	19,208,914	2,591,299	251,089,494	27,101,679	42,095,979	8,759,995	454.18	261.87
1929	19,026,905	2,748,555	237,688,917	28,821,352	41,503,728	8,879,385	447.11	237.61
1930	17,862,063	2,678,860	206,899,281	27,941,288	39,865,432	8,747,863	427.74	235.99
1931	15,127,139	2,585,721	174,661,641	27,235,116	36,943,353	9,004,499	421.81	226.17
1932	12,009,303	2,477,532	135,106,840	26,411,830	34,057,707	10,108,266	392.13	248.12
1933	10,242,844	2,434,691	118,466,313	25,784,699	30,724,469	10,328,130	384.60	235.46
1934	10,364,699	2,620,919	123,366,458	29,058,759	31,700,110	11,958,878	384.60	230.01
1935	10,035,647	2,942,895	113,209,821	32,264,424	29,701,528	12,617,979	384.60	241.37
1936	10,361,457	3,438,536	116,593,869	37,690,251	29,834,538	14,351,864	379.64	255.68
1937	10,073,958	3,790,983	113,355,479	41,613,288	29,421,057	15,715,487	379.48	268.42

increasing for over 10 years. Before 1918 a flat 5-cent cash fare was charged. This, however, had been raised to 6 cents in 1918. Subsequent increases had been made so that by 1929 a rate of 8 cents was in effect. Evidence submitted to the commission by the company showed that, while there had been some increase in passenger revenue following fare increases in 1927 and 1928, there had been a decrease in revenue passengers during the same period.

Operating statistics showing the trend of riding in St. Louis are presented in Exhibit 1. The decrease in revenue passengers, shown in Exhibit 1, had resulted largely from a constantly diminishing number of riders during the off-peak hours.

Instead of granting the company's request for an advance in fares, the Missouri Public Service Commission suggested the application of the two-part rate principle to street railway fares in St. Louis. At that time, the commission had been making some investigations concerning the effect of fare increases upon street railway traffic, not only in Missouri, but also in important cities throughout the United States. On the basis of these studies, it was believed that there was considerable evidence indicating that the increasing of street railway fares was not the solution of the problem of the declining trend in street railway revenues. In the opinion of the commission, fare increases had not resulted in increased revenue, and such increases were in part responsible for the constantly diminishing number of persons using the streetcars, especially during the off-peak hours. As an alternative the commission believed that special fare concessions to regular users would be an incentive to such patrons to use the service more freely. Furthermore, such concessions would also tend to increase the demand for streetcar service on the part of those who had ceased riding on streetcars and who were patronizing competitive local carriers such as buses, service cars, and taxicabs.

The commission suggested a two-part rate on the theory that it would probably increase the number of streetcar riders during the off-peak hours. In the study which the commission had given to street railway traffic, it had found that about twice as much rolling stock and operating labor were required during the peak hours of the morning and the late afternoon as were required during the off-peak periods of the day. Keeping this situation in mind, and giving consideration to the fact that many people depended upon the street railway company merely for occasional

rides, the commission suggested that a schedule of fares based on the type of service rendered should be given a trial. In the opinion of the commission such fares in use over a trial period would provide more reliable information than was then available concerning the effect on streetcar patrons of changes in fares.

The commission suggested a plan according to which the railway company would issue a ticket entitling the holder to a specified number of rides at any time during the period of one week.

EXHIBIT 2
ST. LOUIS PUBLIC SERVICE COMPANY
RATES ADOPTED, 1929
12 Rides for 90 Cents

Cost of Ticket	Number of Rides Used per Week	Total Cost of Rides	Refund	Average Fare Paid, Cents
$0 90	1	$0.10	$0 80	10.00
0.90	2	0.20	0 70	10 00
0.90	3	0.30	0 60	10.00
0.90	4	0.40	0 50	10.00
0.90	5	0 50	0.40	10 00
0.90	6	0.60	0.30	10 00
0.90	7	0.70	0.20	10 00
0.90	8	0.80	0 10	10.00
0.90	9	0 90	.....	10.00
0.90	10	0 90	.....	9 00
0.90	11	0.90	.....	8.18
0.90	12	0.90	.....	7.50
0.95	13	0 95	.....	7.31
1.00	14	1.00	.. ..	7.14
1.05	15	1.05	.....	7.00

If all the rides were used in less than the one week specified, additional rides for the remainder of the week were to be made available at a price equal to the average fare per ride paid under the provisions of the original ticket. Only one passenger could use the ticket at the same time, but the ticket was transferable so that a passenger riding into the city during the period of the peak load could transfer his ticket to a person riding in another direction.

The St. Louis Public Service Company, in response to this proposal of the commission, suggested that it sell a 14-ride ticket for $1 and that a 5-cent token fare, to be used upon showing the used ticket, be available to all riders who used the 14 rides before the end of the week. The commission then suggested a com-

promise at 16 rides for $1. The City of St. Louis made several suggestions, the final proposal being a 12-ride weekly ticket selling for 90 cents, additional rides to be taken on showing this ticket and making a payment of 5 cents per ride. This basis, as shown in Exhibit 2, was accepted by the commission. Those not desiring to purchase a weekly ticket had to pay a flat cash fare of 10 cents per ride.

The plan offered a method by which peak-load riders paid a higher fare than those who rode during the off-peak periods. The proposed fares, therefore, would not only result in the payment by regular patrons of lower average fares than the casual rider because of a quantity purchase of tickets, but they took into consideration the time element as well, since the tickets were accepted by the company only during the week for which they were issued. The commission assumed that 12 rides per week would represent the rides taken during the peak hours and, therefore, that additional rides should be available at reduced fares on the assumption that such rides would probably be taken during off-peak periods. While, as shown in Exhibit 2, a reduction in the average cost per ride occurred after the ninth ride instead of the twelfth, this resulted from the nature of the refund arrangement, a feature that was introduced to increase popular acceptance of the new schedule.

The new rate schedule was first put into effect for a trial period of 8 weeks, beginning August 26, 1929. The commission later extended the period to 18 weeks, or until December 29, 1929. The results of the 18-week trial showed an increase in the average fare of about 0.005 cent. This was because a greater percentage of 10-cent cash fares was received than had been anticipated. It had been thought that the 10-cent cash fares would probably constitute 25 to 30 per cent of the total, whereas such fares constituted more than 40 per cent of the aggregate.[1] The average fare was increased, in spite of the fact that those living within St. Louis County outside the city were permitted to present the ticket for two fares going into and out of the city, thus using up the 12 rides in three days, and thereafter paying a total of 10 cents each way, presenting the card twice during the ride into and out of

[1] This percentage increased somewhat after the advance in fares to 12 rides for $1 in December, 1929. The statistics of the company showed that during 1931 there was a decline in commutation tickets and an increase in the number of 10-cent cash fares paid. This change undoubtedly reflected both the increase in fare and the unemployment situation.

EXHIBIT 3

ST. LOUIS PUBLIC SERVICE COMPANY

CONDENSED STATEMENT OF RESULTS OF OPERATION BY WEEKS UNDER THE EXPERIMENTAL 12-RIDE TICKET

Week	Date, 1929	Revenue Passengers	Passenger Revenue	Number of Tickets Sold	Comments
1	8–26 to 9–1	4,139,858	$ 349,249.78	149,572	Incomplete Registration
2	9–2 to 9–8	4,144,549	352,475.70	152,909	Incomplete Registration Labor Day—9–2–29
3	9–9 to 9–15	4,460,038	369,762.89	168,338	.....
4	9–16 to 9–22	4,517,685	373,309.39	172,812	.....
5	9–23 to 9–29	4,473,212	368,897.23	173,743	.....
6	9–30 to 10–6	4,541,076	375,143.10	175,118	.....
7	10–7 to 10–13	4,663,858	383,882.19	176,950	Veiled Prophet's Parade, 10–8–29 Railroad World's Series, 10–12–29 Start of Dairy Show, 10–12–29
8	10–14 to 10–20	4,693,737	387,119.31	174,444	Dairy Show, 10–14 to 10–20
9	10–21 to 10–27	4,633,023	380,996.73	175,030	State Teachers' Convention
10	10–28 to 11–3	4,538,864	373,152.10	171,677	....
11	11–4 to 11–10	4,606,055	377,525.90	174,572	.....
12	11–11 to 11–17	4,548,723	374,505.25	167,087	Armistice Day, 11–11–29
13	11–18 to 11–24	4,598,239	376,705.53	172,072	.....
14	11–25 to 12–1	4,248,537	357,809.48	162,752	Bad Weather Thanksgiving Day, 11–28–29
15	12–2 to 12–8	4,743,950	388,585.28	176,638	Shopping Season
16	12–9 to 12–15	4,586,553	376,292.07	170,161	Shopping Season
17	12–16 to 12–22	4,691,706	389,272.41	167,705	Shopping Season Bad Weather
18	12–23 to 12–29	4,359,069	368,814.05	136,311	Christmas Day, 12–25–29
Total.....	8–26 to 12–29	81,188,732	$6,723,498.39	3,017,891	.....

the city and paying 5 cents at each presentation. Under the former fares such trips outside the city had been 16 cents each way. The company's experience under the new fares during the first 18 weeks was as shown in Exhibit 3.

As shown in Exhibit 1, after the year 1925 streetcar traffic decreased in St. Louis. It was the belief of the chief engineer of the commission that the new fares did not cause the decline in streetcar riding in the autumn of 1929. Although an unprecedented decline in the stock market, which affected the whole country, occurred during the 18-week trial period, it was believed that the streetcar traffic did not fall off "as much as other forms of business, both utility and private" and that if business had remained more uniform throughout the trial periods, the advantage of the new rates would have been much more evident.

While previous advances in fares in St. Louis had met with considerable opposition, the new fare schedule suggested by the commission appeared to meet with public approval. The chief engineer of the commission made the following statement concerning the results attained under the new rates:

> It appears from the information at hand that the streetcar company now has a means of stopping the decrease in its gross revenue heretofore experienced without, at the same time, disturbing its public relations. The public can understand the equity of this form of fares. It might also be added that the representatives of the streetcar company have expressed their willingness to continue the use of this form of fare in St. Louis.

After the 18-week period, the company was allowed to try a further increased rate by charging $1 for a 12-ride ticket for "an experimental period and until otherwise lawfully changed."[1]

While the company realized that too much dependence should not be placed upon the results of the experimental period because of the unsettled business conditions, it nevertheless felt the need, during the closing months of 1931 and the early part of 1932, of making a careful appraisal of the entire situation in order to determine whether further experiments with fares might result in improvement in its financial condition.

A number of possible rates were considered by the company. First, it was suggested that the 10-cent basic fare, which applied

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[1] Decision No. 6510, issued December 23, 1929.

in the city or outside the city, but not in both areas, be changed to include the entire territory served, with free transfer privilege. In addition to this basic cash fare policy, the following proposals were given consideration: a 5-cent fare within certain zones but without transfer privilege; a $1 unlimited weekly pass; a provision permitting two or three children under twelve years of age to accompany without charge the holder of a weekly pass; a 25-cent daily pass with the retention of the 25-cent Sunday and holiday pass which was inaugurated by the company in 1928; a 15-cent daily pass good between the hours of 9:00 A.M. and 4:00 P.M.; a 15-cent pass good only after the hour of 7:00 P.M.; a 15-cent two-ride daily ticket, one portion of which would be surrendered for the initial ride, the other portion to serve as a 5-cent permit for any number of intermediate rides, and the final portion to be good for one ride within the time limit of the ticket, that is, 9:00 A.M. to 4:00 P.M. and after 7:00 P.M.

The possible fares given consideration by the company early in 1932 comprised, in addition to the 10-cent straight cash fare, four major proposals: a zone plan, a weekly pass, a daily pass, and a plan of reduced fares for riding in off-peak periods.

The first step taken by the company after analyzing its fare structure was to eliminate the county fare zone in April, 1932, and to extend the city single-fare area to all lines with the exception of two long county lines. Within the period of a year other changes were made, including the complete abandonment of one county line, the shortening of two others, and the substitution of buses for streetcars on one line. After the zone changes, revenue on county lines was maintained, and in some instances it increased slightly.

As a result of the business depression beginning in 1929, unemployment in St. Louis increased substantially. Furthermore, many of those who were still employed worked only a few days each week. This situation caused a drop in the sale of 12-ride tickets from 148,000 per week in 1929 to 75,000 per week in 1932. Many factories were operating on a 2- or 3-day week schedule; hence their employees usually made three round trips to work per week, or a total of six rides. With this limited riding, there was little need for the worker to purchase a 12-ride ticket, since it would be necessary for him to obtain a refund every week at one of the company's offices. With the decreased use of the 12-ride

ticket the company experienced an increase in the ratio of 10-cent cash fares to total fares. Because of this limited riding by many regular passengers who had become part-time workers, it was apparent to the company that the $1 unlimited weekly pass which had been under consideration would not be useful to these riders, who most needed a reduction in fare.

The company decided, in the summer of 1932, to discontinue the 12-ride weekly ticket and substitute a fare of four tokens for 35 cents. This amounted to a 12½ per cent fare reduction to those part-time workers who had been paying the 10-cent cash fare. The average fare for weekly ticket users had been 7.71 cents. Thus, the new token rate resulted in a 13½ per cent fare increase to those previously using the commutation ticket.

Early in 1934 the receiver of the St. Louis Public Service Company made effective a plan of complete coordination of streetcar and motorbus service in St. Louis. Three important lines of the People's Motorbus Company operating from the western limits of the city to the heart of the business district were set apart as "Selective Service Lines." These lines gave quicker service because of "skip stops," and since there was no transfer privilege, delays at transfer points were eliminated. A flat cash fare of 10 cents was charged. These three Selective Service Lines operated in or near streets served by parallel streetcar lines on which transfer privileges were available. Thus, the opportunity was afforded the public to select the form of transportation best suited to individual needs. The remainder of the People's Motorbus lines operated under the same fare schedule as did the street railway system, thus making it possible to ride from one part of the city or county to any other section served by either streetcars or coordinated bus lines, on the payment of one fare.

Efforts were also made by the company to secure greater utilization of streetcar equipment through encouragement of off-peak riding. In the summer of 1933, the city of St. Louis suggested that the company operate between the hours of 10:00 A.M. and 4:00 P.M. on a straight 5-cent fare with free transfers. After a careful study of this suggestion, it was decided that the plan would result in too great a sacrifice in revenues to enable operations to continue. The suggestion was then made that a round-trip ride for 10 cents be offered, with free transfers at the time of payment of the 10 cents and also when the return ride ticket was collected.

After approval by the Missouri Public Service Commission this round-trip ride, known as the Shoppers' Ticket, was put into effect in July, 1935, on lines of the St. Louis Public Service Company, but not on those of the People's Motorbus Company. After the coordination of local transportation service in 1934 the Shoppers' Ticket was extended to the lines of the latter company, with the exception of the three Selective Service Lines.

This rate met with immediate response from the riding public. During the first week the number of off-peak tickets collected each day ranged from 30,000 to 34,000. The percentage of riders carried from 10:00 A.M. to 4:00 P.M. increased from 26 per cent of total riders to 33 per cent. Checks made by the company relative to the source of the increased riding during the off-peak period indicated that approximately 5,000 streetcar riders had changed the time of their rides. The establishment of the new fare had also resulted in a considerable shift in traffic from bus lines and service cars to the street railway system.

While these changes had occurred in the riding habits of the public, the revenue position of the company remained virtually unchanged. The company considered the off-peak fare to be valuable chiefly in building goodwill and in encouraging the riding habit.

During the summer of 1934, the company experienced an especially severe seasonal decline in riding, so that it was necessary to effect either an increase in fare or a reduction in operating expenses. At the same time, the company signed a labor contract which increased wage rates 10 per cent. In view of this situation, the company applied to the commission for an increase in the price of the Shoppers' Ticket from 10 to 15 cents. The method by which the 15 cents was to be collected was to issue the Shoppers' Tickets between 10:00 A.M. and 4:00 P.M. upon payment of a 10-cent cash fare. The ticket was to be kept as an identification slip and when accompanied by an additional 5 cents would entitle the holder to a second trip during the off-peak period. This new rate became effective in August, 1934, and resulted in a substantial shift in riding habits, including a considerable decrease in the number of Shoppers' Tickets sold. After adjustment for other variable factors, however, it was estimated that the revenue position of the company was improved slightly by the establishment of the new rate.

At the end of 1937, there remained in effect on the St. Louis Public Service Company's streetcar lines and coordinated bus lines a cash fare of 10 cents, or four tokens for 35 cents. The Shoppers' Ticket remained unchanged at 15 cents. Free transfers were available except on the Selective Service Lines, which continued to operate at a cash fare of 10 cents.

Do you believe that street railways can obtain a substantial increase in their revenues through a differentiation in fare structures similar in principle to the rate policies employed by light and power companies to improve their load factor?

Is the size of the community served of any significance in considering rate reductions to stimulate riding?

What, in your opinion, do the facts in the foregoing cases indicate with reference to adjustments of rate schedules as a means (1) of improving mass transportation service; (2) of making it profitable to the companies which furnish it?

F. Use of Promotional Rates to Develop Domestic Market for Electricity

70. HARTFORD ELECTRIC LIGHT COMPANY (A)

The Hartford Electric Light Company was incorporated in 1881, to supply electricity under a perpetual franchise to the city of Hartford, Connecticut. In 1938 it was also selling electricity to a number of electric companies operating in towns in the vicinity of Hartford. The population of the area being served at that time was approximately 250,000.

In 1922 the company inaugurated a new domestic rate schedule for the purpose of increasing domestic use of electricity. The company had an average annual domestic consumption of electricity in 1922 that was approximately 20 per cent below the national average. At the same time the average rate per kilowatt-hour was about 18 per cent above the national average. The new domestic rate was an immediate success, as indicated by the fact that in 1923 consumption was over 10 per cent greater than in the preceding year. The average rate meanwhile decreased about 7 per cent.

Following the policy of reducing rates as fast as earnings would permit, the company made eight reductions in domestic schedules between 1922 and 1934. As a result of this promotion of domestic consumption, rates to the residential market were 16 per cent below the national average in 1933, while average annual domestic consumption had risen to 31 per cent above the national average for such consumption.

On August 1, 1934, a new domestic schedule was filed with the state public utility commission, to become effective December 1, 1934. In general, the purpose of this new rate was to simplify the residential rate structure by replacing three optional schedules then in force by one standard form. While not intended primarily as a rate reduction, nevertheless the company's earnings were reduced approximately $30,000 per year, inasmuch as the schedule was so designed as not to increase the bills of any customer. Furthermore, the new schedule removed a provision included in

the previous rates which had established a fixed monthly charge based upon the floor area of a customer's residence. This provision had met with public disfavor and was therefore discontinued in form, although retained in principle, in the new "Domestic Schedule." The latter provided the following rates for customers with a lighting demand of one-third kilowatt or less:

Amount	Rate, Cents per Kilowatt-hour
First 10 kw.-hr. per Month	10
Next 15 kw.-hr. per Month	5
Next 200 kw.-hr. per Month	3
Excess	1½
Night Water Heating	1
Minimum Bill: $1.00 per Month	

For customers with a lighting demand in excess of one-third kilowatt, the blocks above were modified by the addition of one kilowatt-hour to the first and third blocks and 1½ kilowatt-hours to the second block for each one-thirtieth kilowatt of such excess. The demand was determined at the customers' option by measurement, counting, or calculation. If measured, the billing demand was the maximum average load during any 15-minute interval occurring in the elapsed 12 months, but not less than one-half the counted load. If counted, the billing demand was the sum of the ratings of all lights and socket devices. If calculated, the billing demand was computed at the rate of one-thirtieth kilowatt per one hundred square feet of house area.

In November, 1934, the Hartford Electric Light Company announced a "Share the Benefits" plan for the purpose of increasing domestic consumption of electricity. It was stated that the lack of increase in the company's net earnings resulting from increased taxes and other expenses in the year preceding the announcement of the plan had been a barrier to the reduction of domestic rates in accordance with longstanding policy. It had been necessary, therefore, to evolve a new plan of procedure. The new idea was a variation of certain objective rate plans which had been developed by members of the Commonwealth & Southern system, but which nevertheless exhibited certain distinguishing features. The Share the Benefits plan was to become effective December 1, 1934. It reversed the customary procedure of rate reductions in that existing rates were retained, but a material amount of increased usage was made available for one year without

charge, and subsequently at prices lower than those in effect at the time of the inauguration of the plan. Along with the introduction of the new domestic rate the company proceeded on a plan of active merchandising of load-building appliances.[1]

Announcement of the Share the Benefits plan was made in the following terms:

THE SHARE THE BENEFITS PLAN

50 Additional Kw.-hr. per Month Free

For 12 months beginning December 1, 1934, 25 kw.-hr. of increased use will be given free for each 5 kw.-hr. of increased use purchased up to a limit of 50 free kw.-hr. per month, for each customer.

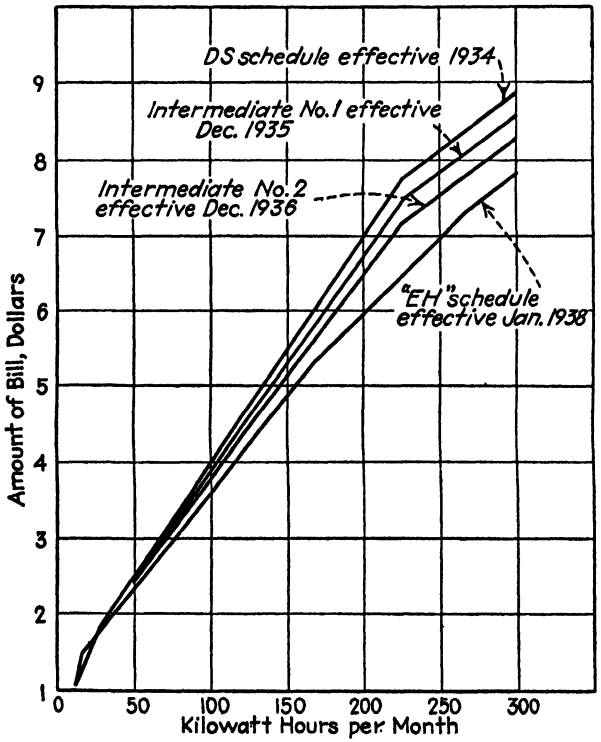


EXHIBIT 1.—Hartford Electric Light Company (A). Domestic Rate Plan. (Figures for 1 9/10 kilowatt-hours lighting demand.)

The use in the corresponding month of the previous year or in October, 1934, will be the basis for computing the free kw.-hr., subject

[1] See case entitled Hartford Electric Light Company (B) p. 485.

to such necessary adjustments as may be required to meet the intent of the offer (that is, an increase after December 1, 1934, in regular usage).

After the expiration of the free period a new and materially lower "Electric Home" rate will immediately become effective for the benefit of those customers who wish to continue the use of materially more current in their homes.

Under the Electric Home rate a customer may obtain substantially more kw.-hr. for the same amount of payment than are now obtainable under the present schedule.

EXHIBIT 2

HARTFORD ELECTRIC LIGHT COMPANY

COMPARISON OF SUCCESSIVE RATES NAMED IN SHARE THE BENEFITS PLAN

	First Block	Second Block
Domestic Service Schedule...	10 kw.-hr. at 10 cents*	15 kw.-hr. at 5 cents*
Intermediate 1.....	10 kw.-hr. at 10 cents*	15 kw.-hr. at 5 cents*
Intermediate 2	10 kw.-hr. at 10 cents*	15 kw.-hr. at 5 cents*
Electric Home Schedule.....	15 kw.-hr. at 10 cents†	150 kw.-hr. at 2½ cents
	Third Block	**Fourth Block**
Domestic Service Schedule...	200 kw.-hr. at 3 cents*	Excess at 1½ cents
Intermediate 1.....	Less 5%	Excess at 1½ cents
Intermediate 2.....	Less 10%	Excess at 1½ cents
Electric Home Schedule.....	100 kw.-hr. at 2 cents	Excess at 1½ cents‡

* These blocks are subject to increase in size for customers with a lighting demand in excess of ½ kilowatt. The first and third blocks are increased at the rate of one kilowatt-hour for each additional ⅒ kilowatt demand; the second block, 1½ kilowatt-hour for each additional ⅒ kilowatt.

† In the Electric Home Schedule, when lighting demand is ½ kilowatt or more, the first block will consist of 4½ kilowatt-hours for each ⅒ kilowatt of demand.

‡ Night water heating with approved equipment at 1 cent.

Also reductions in the general domestic schedule will be made annually until, when the average use in the community reaches the figure of 100 kw.-hr. per month, the Electric Home rate will become available to all, regardless of individual usage.

As a result of a greatly increased domestic usage to be made possible by the Free Electricity Offer a program of rate reduction for all classes of commercial and industrial customers can be put into effect much sooner and in much greater degree than would otherwise be possible.

The progress of the company's campaign for reduced rates and increased domestic consumption of electricity may be seen in Exhibits 1 and 2. The upper line in Exhibit 1 represents the

prices paid by domestic consumers served under the Domestic Service Schedule effective December 1, 1934. The intermediate Rate 1, effective December 1, 1935, provided a 5 per cent reduction in the third block of the Domestic Service Schedule, while Intermediate Rate 2, effective December 1, 1936, provided a 10 per cent reduction in the same block. Under the original provisions of the plan, the "objective" Electric Home Schedule, also shown in

EXHIBIT 3
HARTFORD ELECTRIC LIGHT COMPANY
RESULTS FROM USE OF SHARE THE BENEFITS PLAN

	Domestic Customers			Number of Free Kw.-hr. Taken
	Total Number		Number Receiving Free Service	
	Charges	Bills Rendered		
1934:				
December...	58,886	57,883	16,049	190,288
1935:				
January.....	58,611	57,638	18,687	263,422
February.....	58,574	57,535	19,617	289,494
March	59,100	58,044	20,159	303,722
April.....	59,523	58,483	21,522	323,810
May.....	59,769	58,703	19,758	320,368
June.....	59,575	58,644	19,102	337,373
July.....	58,011	57,010	20,422	396,058
August.....	57,677	56,639	19,220	405,070
September....	60,183	58,930	22,241	449,539
October.	60,973	59,632	24,004	473,611
November....	61,312	59,934	22,333	445,197*

* "Free" kilowatt-hour offer terminated November 30, 1935.

Exhibits 1 and 2, was to become effective whenever average domestic consumption reached 100 kilowatt-hours per month.

Results of the free usage campaign of the "Share the Benefits" plan from December 1, 1934, to November 30, 1935, may be seen in Exhibit 3.

The effects of the gradual reduction in domestic rates, coupled with the company's load-building activities, may be seen by reference to Exhibit 4. By the end of 1937 average annual domestic consumption had reached 1,192 kilowatt-hours. According to the company's estimate this was about 49 per cent above the national average computed as of November 30, 1937. The com-

pany's average rate of 3.5 cents per kilowatt-hour at the end of the year was estimated as 20.5 per cent below the national average as of the same date.

Rather than wait until average annual domestic consumption had reached exactly 1,200 kilowatt-hours as was called for in the original Share the Benefits plan, the company removed the objec-

EXHIBIT 4

HARTFORD ELECTRIC LIGHT COMPANY (A)

AVERAGE ANNUAL CONSUMPTION OF ELECTRIC POWER BY DOMESTIC CUSTOMERS AND AVERAGE PRICE PAID PER KILOWATT-HOUR

Year	Hartford	
	Consumption, Kilowatt-hours	Rate, Cents per Kilowatt-hour
1913	283	8 7
1914	298	8 0
1915	283	7 7
1916	274	7.8
1917	277	8.0
1918	254	8.5
1919	258	8.4
1920	277	8.5
1921	280	9.7
1922	286	8.7
1923	318	8.1
1924	339	7.6
1925	356	7.4
1926	386	7.2
1927	430	6.6
1928	478	6 4
1929	524	6 0
1930	601	5.6
1931	681	5 0
1932	756	4.7
1933	793	4.6
1934	860	4 3
1935	973	4.1*
1936	1,090	3.7
1937	1,192	3.5

* With "free" kilowatt-hour deductions, this figure was 3.9.

tive conditions from the Electric Home Schedule on January 1, 1938. On that date the latter schedule became available to all domestic customers without condition.

It may be seen from Exhibit 2 that for 25 kilowatt-hours or less of consumption per month, the 1934 Domestic Service Schedule

was less expensive than the Electric Home Schedule. To meet the needs of the small group of customers using only a minimum amount of lighting, the first two blocks of the former rate were retained after January 1, 1938, and were known as the Limited Domestic Service Schedule.

See questions at the end of the next case.

71. THE TENNESSEE ELECTRIC POWER COMPANY

In February, 1934, The Tennessee Electric Power Company, a subsidiary of The Commonwealth & Southern Corporation, made available throughout its territory the following schedule of rates for residential electric service:

1. Immediate Rate:
   6.5 cents per kw.-hr. first 25 kw.-hr.
   5 cents per kw.-hr. next 35 kw.-hr.
   3 cents per kw.-hr. next 140 kw.-hr.
   1.5 cents per kw.-hr. excess
2. Promotional Rate:
   $1.00 for first 15 kw.-hr.
   4.5 cents per kw.-hr. next 50 kw.-hr.
   2 cents per kw.-hr. next 135 kw.-hr.
   1.25 cents per kw.-hr. next 500 kw.-hr.
   1 cent per kw.-hr. excess

Delayed Payment Charge, 5 per cent, 10 days.
Minimum Charge, $1.00.

This schedule of rates was a variation of the objective rate plan developed by The Commonwealth & Southern Corporation and introduced in several of the subsidiaries of the latter corporation. A distinctive feature of this plan was that two rates were effective simultaneously, the lower one being available to those customers who increased their consumption. Monthly base bills were established for each customer. These bills were computed by application of the immediate rate to the customer's consumption during each of the 12 months immediately preceding the introduction of the rate. For new customers connected during this period, the base bills were determined on the basis of the first 12 months' use.

Each month, reference was made to the base bill in determining whether a customer should be billed under the immediate rate or the promotional rate. Whenever a bill under the immediate rate was equal to or less than the base bill, the immediate rate would apply. If a bill under the promotional rate exceeded the base

bill, the promotional rate would apply. The base bill would be charged in cases where consumption was such that (1) the immediate rate would result in a bill greater than the base bill, and also when (2) the promotional rate resulted in a charge less than the base bill.

When this schedule of rates was introduced, it was further provided that all base bills would be reduced 5 per cent at the end of 12 months, and that the resultant base bills would be reduced another 5 per cent at the end of 24 months. At the end of 36 months, the immediate rate would be withdrawn and all domestic consumption would be billed at the promotional rate.

The following table illustrates the promotional nature of the new rates:

COMPARISON OF NET BILLS: 1934

Monthly Consumption, Kilowatt-hours	Immediate Rate	Promotional Rate
10	$ 1.00	$1.00
20	1.30	1.23
30	1 87	1 68
40	2.37	2.13
50	2.87	2.58
60	3.37	3.03
70	3.67	3.35
80	3.97	3.55
90	4.27	3.75
100	4.57	3.95
200	7.57	5.95
300	9.07	7.20
400	10.57	8.45
500	12.07	9.70

In order to illustrate the application of the billing procedure, a customer may be selected whose consumption in May, 1933, before the introduction of the new rates, was 70 kilowatt-hours. Thus, the base bill for the following May would be $3.67. The actual charges at various levels of consumption would be as shown on p. 474.

It may be observed that the immediate rate applied up to 70 kilowatt-hours. From 70 to 86 kilowatt-hours the base bill applied, after which the promotional rate was charged. Thus, by increasing his consumption, the customer would in effect receive

16 free kilowatt-hours and also have any additional usage billed at the new low rate.

A question arising out of the rate schedule established in 1934 by The Tennessee Electric Power Company was that of discrimination. Obviously, under such a system two consumers could be charged different amounts for the same quantity of electricity, depending upon their consumption during the base period. Furthermore, in cases where a customer was already using major electric appliances, including a range, water heater,

Kilowatt-hours	Monthly Bill	Kilowatt-hours	Monthly Bill
10	$1 00	83	$3.67
20	1.30	84	3 67
30	1.87	85	3.67
40	2.37	86	3.67
50	2.87	87	3.69
60	3.37	88	3.71
70	3.67	89	3.73
80	3.67	90	3 75
81	3.67	100	3.95
82	3.67		

and electric refrigerator, there was little opportunity for any large increase in consumption. Such a customer would not obtain the same benefits from the new promotional rate as would the small user, but would in effect be penalized for having already purchased electric appliances. In an attempt to reduce any discrimination that might exist against large domestic consumers, a maximum base bill of $8 was established in 1935 for those customers having the three appliances referred to above.[1]

Under the original plan inaugurated by The Tennessee Electric Power Company in February, 1934, the new promotional rate was to apply to all residential electric service at the end of three

[1] The Immediate and Promotional Rates of The Tennessee Electric Power Company were approved by the Railroad and Public Utilities Commission of the State of Tennessee, Docket 1818, January 10, 1934. No mention was made of any possible discrimination in the rate schedule. In commenting upon the establishment of a similar objective rate plan by the Alabama Power Company, another subsidiary of The Commonwealth & Southern Corporation, the Alabama Public Service Commission stated: "It may be charged that under this plan some discrimination will result in favor of the present small user. If there is any basis for such view, our answer is that such condition will be temporary, and when all the facts and circumstances are considered, that the discrimination, if it exists, will not constitute an unjust discrimination." 3 P.U.R. (N.S.) 363 (1934).

years. This period was later shortened, however, the immediate rate being withdrawn in May, 1936.

In order to judge the results obtained under the plan, data are presented in Exhibit 1 comparing operating results for the 12 months preceding the inauguration of the plan with the final 12 months under the plan. It will be observed that certain adjustments have been made for rate reductions. These are the result of the fact that the immediate rate introduced in February, 1934, was lower than the rate previously applied to domestic consumption. Thus the base bill device maintained revenues, not at the level before February, 1934, but at the level determined by applying the immediate rate to consumption during the 12 months before February, 1934. The adjustments in the data are for the purposes of eliminating the effect of this outright rate reduction, in itself not a necessary part of an objective rate plan.

After the completion of the plan inaugurated in 1934, The Tennessee Electric Power Company in May, 1936, established a new promotional rate plan with the following provisions:

RESIDENCE SERVICE (G-2, G-3)[1]

May 1, 1936

Availability: Any residential service installation

Rate: Block meter

1. Immediate rate
   - $1.00 for first 15 kw.-hr.
   - 4.5 cents per kw.-hr. next 50 kw.-hr.
   - 2 cents " " " 135 "
   - 1.25 cents " " " 500 "
   - 1 cent " " excess
2. Promotional rate
   - $1.00 for first 20 kw.-hr.
   - 4 cents per kw.-hr. next 45 kw.-hr.
   - 2 cents " " " 135 "
   - 1.25 cents " " " 300 "
   - 1 cent " " excess

Note: Customers using energy under Rate 2 for a storage water heater with a capacity of 18 gallons or more and 2500 watts or less, will be billed for all consumption in excess of 200 kw.-hr. at 1 cent per kw.-hr.

Note: Application of Rate

For existing customers the Base Bill will be the consumption for the same month of the year preceding May 1, 1936, computed under Rate 1.

For new customers and for those connected during the 12 months preceding May 1, 1936, the Base Bill will be the first 12 months' use computed under Rate 1.

Whenever a bill under Rate 1 is equal to or less than the Base Bill, Rate 1 will apply.

Whenever a bill under Rate 2 exceeds the Base Bill, Rate 2 will apply.

Whenever Rate 1 results in a bill greater than the Base Bill and Rate 2 results in a bill less than the Base Bill, Customer is billed the Base Bill for that month.

[1] *Edison Electric Institute Rate Book*, 1938, p. 293.

EXHIBIT 1

THE TENNESSEE ELECTRIC POWER COMPANY

ANALYSIS OF ANNUAL RESULTS UNDER THE OBJECTIVE RATE PLAN RESIDENTIAL ELECTRIC SERVICE (INCLUDING RURAL)

	12 Months Ending January 31, 1934		12 Months Ending April 30, 1936		Comparison Increase or Decrease	
	Amount	Per Unit, Customer or Kw.-hr.	Amount	Per Unit, Customer or Kw.-hr.	Amount	Per Unit, Customer or Kw.-hr.
Revenue	$3,030,490	$35.16	$3,600,612	$36.12	$ 570,122	$0.96
Adjustment for Rate Reductions*	−610,580	−7.08			610,580	7.08
Revenue after Adjustment	$2,419,910	$28.08	$3,600,612	$36.12	$1,180,702	$8.04
Kilowatt-hour Sales	53,254,000	618	102,200,000	1,025	48,946,000	407
Average Number of Active Meters	86,181		99,697		13,516	
Revenue per Kilowatt-hour	.....	5.74 cents		3.52 cents		−2.22 cents
Adjustment for Reductions	.....	−1.20 cents				1.20 cents
Revenue per Kilowatt-hour (after Adjustment)	.....	4.54 cents		3.52 cents		−1.02 cents

* $415,000 was due to the reduction made at the inauguration of the objective rate plan.

SOURCE: Acknowledgment is made to the Columbia University Press and to the author, Mr. W. F. Kennedy, for permission to use this exhibit. It was published in *The Objective Rate Plan for Reducing the Price of Residential Electricity* (a master's thesis in Columbia University) by William F. Kennedy, 83 pp. For the data in Exhibit 1, see p. 30.

All Base Bills will be reduced 5% at close of first 12 months of application of the new rates, and the resultant Base Bills reduced another 5% at the end of 24 months. Whenever 80% of all residence customers are billed at the new Promotional Rate, said new rate shall apply thereafter to all residence customers, but in no case shall the effective date of the new Promotional Rate to all residence customers be later than May 1, 1939.

No Base Bill will be in excess of $8.00, provided customer has in operation a refrigerator, range and water heater.

Delayed Payment Charge: 5%, 10 days.

Minimum Charge $1.00.

How do you appraise the rate plans in the foregoing cases as methods of promoting increased consumption of electricity?

What are the advantages and disadvantages of such plans as compared with outright rate reductions?

Is such discrimination as occurs among customers in the application of objective rate plans justified?

3. Merchandising of Utility Appliances and Development of Retail Market

A. Full-use Electic Home Plan

72. Central Hudson Gas & Electric Corporation

The Central Hudson Gas & Electric Corporation, serving a section of the Hudson River Valley, supplied gas and electricity to Poughkeepsie, Beacon, Kingston, Newburgh, and Catskill, the chief centers of population in that territory, and supplied electricity only to more than 324 smaller communities, as well as to a large suburban and rural population.

In 1929, the executives of the Central Hudson Gas & Electric Corporation devised a plan which they termed "The Full-use Electric Home Plan" for stimulating the domestic demand for electricity throughout their territory. Fundamentally, this plan was based upon the premise that on the average it required eight to ten years to modernize a home completely through the installation of one major electrical appliance at a time. Their high cost and the lack of an adequate financing plan generally prevented the simultaneous acquisition of all appliances which would eventually be installed. Such delays in placing appliances in operation, on the one hand, prevented customers from deriving the comforts and economies which the use of a complete service could bestow, and, on the other hand, drastically retarded the domestic load building of the utility company.

In order to overcome these difficulties and to encourage customers to have their homes adequately wired and fully equipped, the Central Hudson Gas & Electric Corporation's Full-use Electric Home Plan provided a means of financing the purchase of all appliances necessary to complete a customer's equipment in order to make his residence a full-use home. According to the company's classification, a full-use home was one which had installed the following appliances:

1. Electric refrigerator.
2. Vacuum cleaner.

3. Electric range.
4. Electric water heater.
5. Percolator.
6. Toaster.
7. Hand iron.
8. Washing machine.
9. Ironer or ironer attachment.
10. Waffle iron.

Items 1 to 7 inclusive were considered essential to complete service, and no agreement was made under this plan unless all these appliances were included. Other appliances were included in the plan, so that customers could have the benefit of their use, but they were considered to be optional. Such items as electric pumps, health lamps, kitchen ventilators, etc., could be included whenever circumstances seemed to warrant their installation. Radios were not included.

When appliances were purchased under the full-use plan, the customer was given a wide choice as to the amounts of his monthly payments, provided they were in all cases ample to liquidate his indebtedness within a five-year period. If appliances were purchased singly or were for some other reason not purchased under the full-use plan, the utility company required that the monthly installments amortize the debt thus created within a two-year period.

Customers availing themselves of the full-use plan had included in their fixed monthly payments not only a sum used for amortizing their equipment purchases and the interest charge on their unpaid balance, but also the cost of electric service computed on the special full domestic use rate.

Although the energy charges were combined with the installment and financing charges on a customer's monthly bill, for bookkeeping purposes that portion of the payment sufficient to cover the electric bill was credited to the electric account and the balance to the customer's merchandise account. A record of each customer's consumption was kept and a statement giving the amount of electricity used each month was sent to the customer together with a bill for the amount of his monthly payment according to the agreement.

Because the executives believed that the entire future of the development of the company's territory depended upon the ability to help its cooperative dealers to become better and stronger

merchants, the Central Hudson Gas & Electric Corporation decided that all appliances distributed under its full-use plan would be installed and sold through cooperating dealers.

When the plan was first conceived, it was thought wise to allow a finance company to carry the installment paper created under this arrangement. However, since the company had on hand at that time ample funds which could profitably be employed in connection with such a development, it was later decided that the utility would carry such paper itself. After the company and the customer had signed an agreement, the dealer proceeded to install the appliances. When he furnished proof that the appliances had been installed and were operating satisfactorily, the company paid the dealer the price of the appliances, less 1½ per cent, and charged the customer's account. The 1½ per cent which the utility company deducted from the bills of its cooperating dealers served to reimburse it for the assumption of the credit risks involved, the expense of collection, etc.

Eleven customers who adopted the plan and who had had a full year's experience with it were considered to be representative of the average home, although some of them were already using more than the national average of energy before they adopted it. None of the 11 customers on whose experience the company based its expectations for the full-use plan were located in a district where gas service was available. These 11 customers in the course of a single year increased their consumption of electricity fivefold, whereas the utility's revenue from them increased threefold. The new equipment purchased by these 11 customers to supplement existing uses totaled nearly $8,000 installed, or $725 per customer. Of this amount, more than $1,100, or $100 per customer, went to contractors for additional wiring facilities and installation. These figures indicated the benefits which appliance dealers could derive from the extensive adoption of this plan.

In order not to compete with its own gas business, the Central Hudson Gas & Electric Corporation did not finance the full-use plan for homes located in districts where gas was made available or where the company was contemplating an extension of its gas mains. Furthermore, it did not finance the sale of electric ranges or electric water heaters in such territories, except that, in those instances where one of these appliances was already installed, it would finance the purchase of the other.

By 1938, while the full-use plan was still available, the plan was actually but little used. There were several reasons for the change. In the first place, dealers were better organized and better prepared to do effective merchandising. In the second place, it was easy for any customer with any credit at all to secure a Federal Housing Administration Modernization Loan or a Federal Housing Administration Insured Mortgage. Obviously, in the case of new construction the repayment under the latter could be made over a longer period than under the company's full-use plan. Finally, another factor affecting the full-use plan was the high saturation of the demand for major appliances which the company had been able to effect. Hence the future market to be developed consisted largely of customers whose incomes were not large enough to enable them to buy at one time a number of major appliances, even under an arrangement as favorable as the company's full-use plan. For the use of this low income group, the company decided to install a prepayment meter device which would collect for the appliance in amounts as small as 5 cents a day over a period extending as long as five years.

See questions at end of Niagara Hudson Power Corporation case.

B. Development of the Domestic Market for Appliances

73. Niagara Hudson Power Corporation (B)

In 1938 the Niagara Hudson Power Corporation system was following a plan of developing the domestic market for power which, although conceived earlier, was to some extent stimulated by the loss of industrial load during the depression years of the early thirties. Loss of the industrial load was a common experience of most power utilities during this period. Of three important operating territories centered in Buffalo, Syracuse, and Albany, the plan followed in the latter was selected for consideration.[1]

As a part of the Niagara Hudson Power Corporation system, the New York Power & Light Corporation supplied electricity to 174 communities and gas service to 37 communities in the industrial region of the Mohawk and Upper Hudson River Valleys, including such cities as Albany, Schenectady, Troy, Amsterdam, Cohoes, Glens Falls, Gloversville, Watervliet, Saratoga Springs, and Hudson.

The new plan for exploiting the potentialities of the huge domestic market was early developed in this territory. The plan was based upon the theory that new homes set the standards for modernizing old homes. If the new homes were adequately wired, properly lighted, and equipped with modern appliances, they would set an example for the older homes.

Experts in home construction were consulted in the preparation of a questionnaire which was sent to Albany customers, asking them what they wanted in a new home and what their present homes lacked in modern conveniences.

Answers to the questionnaire revealed that the people wanted an ample, up-to-date home, but that they were not in position to pay much for it. Consequently, the company built two houses: one according to replies to the questionnaire, as far as design and room arrangement were concerned, the other according to the price most often mentioned.

[1] In operation, the plan was similar in all three cities, and the description in this case with minor changes could apply equally well to Buffalo and Syracuse.

One house was in the $30,000 class and included model gas and electric installations. In the smaller home, priced at about $9,000, room space was more functional, more flexible, and more adaptable to multiple uses. It included gas and electric installations that were within reach of the masses.

These two homes were called Five Star Homes because they contained five fundamentals.

Star 1. *Wiring for the Future.*—Wiring outlets, wire sizes, and circuits were planned not only for immediate needs but also for the future.

Star 2. *Lighting for Eye Comfort.*—The lighting in both houses provided enough light for any purpose with absence of glare. All the lighting fixtures were shaded.

Star 3. *Step-saving Kitchen.*—Such a kitchen was worked out on the theory that it was not enough to place modern labor-saving appliances in a kitchen without reference to their efficient utilization, but rather to plan a kitchen so as to minimize effort and to increase the attractiveness of the workshop of the home. Much attention was therefore given to the facilities which might be installed in homes of different price ranges, and to the specific location of all such facilities so as to secure the maximum benefit with the minimum cost and effort in the use of all these modern facilities.

Star 4. *Automatic Supply* of hot water for all household and personal needs.

Star 5. *Insulation and Inside Weather Control.*—Because insulation reduced fuel waste it was emphasized. The term "inside weather control" was used instead of air conditioning because the latter was too often interpreted to mean summer cooling. The company wanted to feature winter heating with its benefits of humidification, circulation, and cleaning of the air.

These Five Star Homes were opened to the public for inspection during certain hours of the day and evening, under the supervision of hostesses capable of explaining about them. Moreover, on occasions, these homes were made available for meetings of various organizations not to exceed 40 in attendance, including both adult and junior groups.

Special effort was made to have architects, builders, and bankers inspect these homes, since it was believed that these groups controlled expenditures for appliances in new homes, and their support was encouraged.

The company established a set of specifications whereby any home might become a Five Star Home, and when so equipped, it was labeled with the five stars and advertised.

Brief experience convinced the company that if it was to sell the *idea of the fuller life*, as provided by a Five Star Home, it should indicate a willingness to certify all homes meeting these standards even though automatic heating and hot water were provided without the use of the utility's service. Company officials were convinced that it would weaken the utility's position in trying to establish the importance of Five Star Homes, if it insisted that its service must be utilized to meet these standards.

In attempting to carry out the program of raising the general standard of gas and electric utilization and in building up a domestic load through a more complete use of available appliances, the utility established close contact with builders and architects. Before the inauguration of its Five Star Home plan the utility had to rely upon salesmen, wiremen, and plumbers to have wiring, lighting, and appliances included. Once the Five Star Home Plan was adopted, however, by the architect and builder, a higher quality of wiring, lighting, and kitchen design was assured, as was the installation of adequate equipment, regardless of make.

The public, having seen the two Five Star Homes built by the utility, were informed as to the desirability of owning a Five Star Home. The builder, therefore, incurred less risk in the building of a Five Star Home. It was the conviction of the officers of the utility company that landlords of older houses would find that, unless they installed the Five Star Home requirements, their properties would be considered antiquated long before their normal time, with the result that their rental values would be considerably impaired. Hence the Five Star Home Plan would greatly stimulate home modernization.

Discuss the relative merits of this plan from the point of view of (*a*) the utility, (*b*) the dealers in gas and electrical appliances, (*c*) the consumers of energy.

Contrast this plan with that of the Central Hudson Gas & Electric Corporation.

C. Load Building by the Use of Trial Appliances

74. Hartford Electric Light Company (B)

Late in 1932 the Hartford Electric Light Company was attempting to decide upon a course of action to counteract the appreciable drop in both gross and net earnings resulting from the generally depressed business conditions. At that time existing plant capacity was substantially in excess of actual requirements. In view of the lessened demand and the existence of this excess capacity, new construction seemed unlikely in the near future. The officers of the company felt, therefore, that primary emphasis should be placed upon building up the load of customers already on the line. Because of the idle plant facilities, the expense involved in providing additional energy would be small. Although it was believed that an acceptable plan for load building might well require some capital expenditure, it was felt that such a

Exhibit 1

Hartford Electric Light Company (B)
Electric Water Heaters on Line at End of Year

Year	Number
1929	123
1930	385
1931	466
1932	636
1933	802
1934	1,045
1935	1,415
1936	1,732
1937	2,141

plan should be designed so as not to add any appreciable amount to current operating expenses.

One possible solution to the company's problem was the extension of appliance rental plans, such as had been widely used in European countries. The company for a number of years had had in force a rental plan in connection with water heaters. The results of this plan are shown in Exhibit 1. This policy had undoubtedly contributed appreciably to the gains in average

annual domestic consumption which the company had experienced.[1] While some of the water heaters on the line had been sold to customers, approximately five-sixths of them were on a rental basis.

Company officials accordingly considered the possibility of extending the appliance rental plan to electric cooking. Vigorous efforts had already been made in Hartford to extend the use of electricity for cooking. Most of the well-known methods had been tried, such as dealer selling, free wiring installation, trade-in allowances, cooking classes, etc. Two electric equipment companies had carried on intensive campaigns to increase the sale of electric ranges. One of the companies had depended mainly on advertising, while the other had used large numbers of salesmen in intensive city-wide drives, but neither campaign had been particularly successful. Despite these promotional activities, the amount of current sold for electric cooking in Hartford had remained relatively small. About 5 per cent of domestic customers were using electric energy for cooking in 1931. This percentage was somewhat below the national average of about 7 per cent.

Early in 1932 the Hartford Electric Light Company itself had embarked upon a plan of promoting dealer selling of electric ranges in accordance with a national program. When the results of this campaign had proved indifferent, it became apparent that the time had come for the adoption of a different policy.

The result of the efforts to find a suitable solution of the company's problem was the "trial range" plan. This plan was regarded by the Hartford Electric Light Company as an intermediate step toward customer ownership of ranges, whereas straight rental plans did not ordinarily place much emphasis upon the conversion of renters to owners.

The experience of the company in selling ranges over a period of years showed the selling expense to be about $150 per range, and it appeared obvious to the officials of the company that no dealer could work against this cost "on the spread" given by the manufacturer; that in effect the company had been asking the dealers and also itself to do three jobs for the 50–60 dollar "spread": (*a*) sell the idea of electric cooking, (*b*) sell the house wiring, and (*c*) sell the range. The officials of the company believed

[1] See case entitled Hartford Electric Light Company (A) Exhibit 1, p. 468.

that with the selling of the idea and the wiring eliminated, the manufacturer's price to the dealer should be sufficient to enable him to sell the range at a fair profit. The company decided to offer a commission to the dealer on the wiring, and to accept the responsibility of selling the idea of electric cooking. Its trial range plan was the means of accomplishing the latter objective.

This plan was first tried out on the employees of the Hartford Electric Light Company, a group which had been used by the company as a laboratory for experiments in the making of promotional electric rates. Their response to the offer was immediate and convinced the management that the trial range plan was desirable.

The range chosen for the purpose of selling the idea of electric cooking was a thoroughly efficient cooking device which lacked certain of the features, such as timers, available on more expensive models. It was made in but one model and was not available for sale. Since it was built to Hartford specifications, it bore no manufacturer's name but was simply labeled "Hartford."

Since the ranges were to be installed on a trial basis and could not be sold, the plan proved more acceptable to dealers than it would have otherwise. Nevertheless when the dealers were first informed of the proposal in January, 1933, they were somewhat fearful that a number of their best immediate prospects would be diverted to the trial plan. However, they were shortly won over to the new arrangement, partly because their range business had never been very lucrative, and partly because they could see a long-run gain if the idea of electric cooking could be disseminated more rapidly in the Hartford territory.

The trial range plan was introduced to the public on February 1, 1933, by an offer of free installation of the first 500 ranges to be used on the trial basis. Those who took advantage of the free offer had an opportunity to try out an electric range at a rental cost of 30 cents per week. The initial response was extremely favorable, and within 10 days applications had been made for the 500 ranges. After the brief period of free installations the customary $15 installation charge was resumed, but when this was found to cut down the number of orders to a very low level, a plan was announced in May, 1933, under which the installation charge was to be rebated at the end of two years to those customers who were still using electric ranges. It also

provided that the fee of 30 cents per week should be waived until June 1, 1934.

Two more revisions of the plan took place in 1934. The first of these, at the beginning of the year, provided that the trial rental fee, until further notice, would be waived for one year from the date of installation, so that customers might be given the benefit of the company's existing idle plant. In September, 1934, the $15 installation charge was offset by an allowance of $15 for old ranges displaced by the trial model.

After its retirement from the appliance merchandising field early in 1933 (except for electric bulbs and water heaters), the Hartford Electric Light Company developed several types of cooperative activity with dealers. One type was the formation of an Electric Cookery Council of 24 members, established in 1933. This organization proved effective in solving problems involving the relationships between dealers and the electric company and was one of the factors leading to a considerable increase in 1933 in the number of active dealers selling electric ranges in Hartford.

Another aspect of dealer cooperation was the treatment of prospects for electric cooking. A dealer who found it impossible to sell a range to a given prospect was induced to push the trial range plan in order to secure the commission allowed by the utility company for each trial range installed through dealer effort.[1] Moreover, the names of trial users secured by the utility were turned over to the dealers, who were encouraged to make sales as soon as possible.

A third important aspect of the cooperation between the utility and the appliance dealers was the arrangement for financing the sales of electric ranges. This plan under terms announced in September, 1934, provided that electric ranges might be sold by authorized dealers for installation on the company's lines on a one-, two-, or four-year payment plan as follows: (*a*) a $5 minimum down payment; (*b*) interest at 4 per cent per year on the amount to be financed; (*c*) 25 per cent of the finance charge to be placed in a pool upon which dealers might draw in proportion to the amount their sales had contributed, to cover the difference between their cost on a reverted range and the price they obtained for it. The charges on installment accounts financed by the utility company were

[1] A commission was also given to an electric contractor who was instrumental in securing a trial range user.

fixed on a monthly basis and were itemized in the customer's regular bill for electricity.

Servicing of the trial ranges by the utility was a feature of the trial plan. During the years 1933 and 1934, the costs of servicing were within the company's estimate of $3 per range annually. Since all the heating units were of the open-coil type, it was possible to work out a plan whereby the service men wound the replacement coils at a very low cost.

EXHIBIT 2

HARTFORD ELECTRIC LIGHT COMPANY (B)

DATA ON ELECTRIC RANGES

Year	Dealer Sales		Trial Ranges Installed	Trial Ranges Returned to Company	Total Number of Electric Ranges on Lines at End of Year
	Total	Through Conversion of Trial Ranges			
1932	175	....	...	.....	3,303
1933	260	88	1,368	145	4,718
1934	599	351	1,280	343	5,896*
1935	1,245	782	2,366	1,342	7,700†
1936	2,142‡	1,163	1,786	2,210	9,264§
1937	2,500‖	904	488	706	10,599¶

* At end of 1934, 1,747 trial ranges were included in this figure.
† At end of 1935, 2,752 trial ranges were included in this figure.
‡ 444 apartment ranges included in this figure. No appreciable number sold in any previous year.
§ At end of 1936, 2,346 trial ranges were included in this figure.
‖ 528 apartment ranges included in this figure.
¶ At end of 1937, 1,185 trial ranges were included in this figure.

The trial range plan fitted in closely with the efforts of the Hartford Electric Light Company to increase domestic consumption of electricity by the introduction of promotional rates.[1] The low "follow-on" rates set up by the company were an added incentive to consumers to install ranges, and such installations were relied upon to aid materially in attaining the goal of 1,200 kilowatt-hours average annual domestic consumption of current by the end of 1937.

By May, 1937, it appeared probable that the company would reach this goal by the end of the year without continuing all the promotional expense involved in the trial range plan. Conse-

[1] See case entitled Hartford Electric Light Company (A), p. 466.

quently, it stopped installing trial ranges at that time. Arrangements were made to sell the trial ranges which were returned.

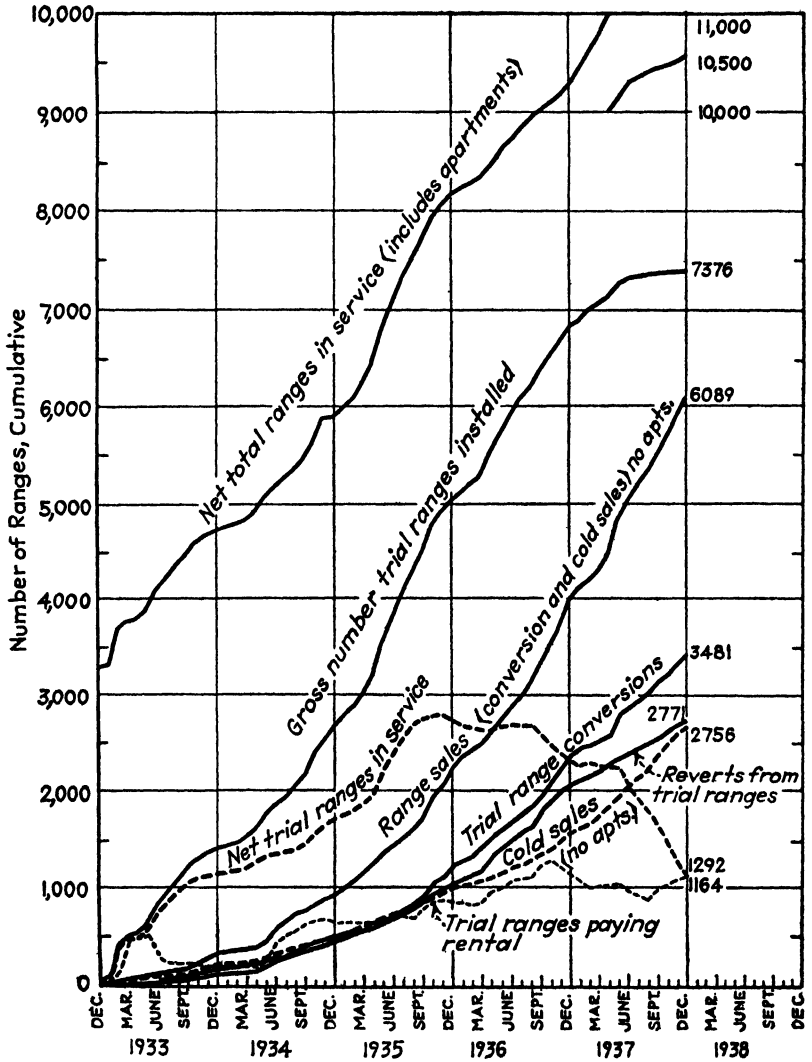


EXHIBIT 3.—Hartford Electric Light Company (B). Range Installations.

After reconditioning, they were disposed of through sale to an affiliated company, to apartment houses, and to local dealers. Local dealers were to sell the ranges to customers whose means

would not permit their buying new and better ranges at regular prices.

By the end of 1937, disposal of the trial range stock was proceeding successfully through these three channels At that time, of the 10,559 ranges in service, only 11 per cent were trial ranges owned by the company, the remaining 89 per cent being customer owned. At the end of 1935, on the other hand, 36 per cent of the ranges in service had been company-owned trial ranges.

Progress of the Hartford Electric Light Company's trial range plan may be seen by reference to Exhibits 2 and 3. Not only may the total number of ranges in service be ascertained, but also indication is given of the extent to which trial ranges resulted in dealer sales, as well as the extent to which the ranges reverted to the utility without being replaced by another electric range. In Exhibit 3 the term "Cold Sales" means the number of ranges sold by dealers when the customer had not had a trial range.

Interpretation of the significance of the total number of ranges on the Hartford lines may be facilitated by reference to the results of a study made of the bills of 257 trial users. For this group tabulation was made of the consumption for June, 1932, and June, 1933, in order to provide a rough approximation of the monthly consumption attributable to the installation of a range. For these customers the average consumption in June, 1932, was 83 kilowatt-hours as compared with 195 kilowatt-hours in June, 1933.

What problems of production and finance do you see in this trial range plan?

Why did the Hartford Electric Light Company call this a trial range plan rather than a rental range plan?

Should the company have initiated the trial range plan before 1933? Should the plan have been continued indefinitely?

D. Dealer Relations in Appliance Merchandising

75. The Hartford Gas Company

In 1937 The Hartford Gas Company, originally incorporated in 1848 as The Hartford City Gas Light Company, had a daily capacity of from 6,000,000 to 7,000,000 cubic feet, and was supplying gas to Hartford, Connecticut, and neighboring communities. The total population of the area served was approximately 240,000. The company maintained a home office in Hartford and two branch offices, one in West Hartford, and one in Manchester, about nine miles distant. In addition to these offices there were collection agencies in outlying districts.

The company played an active part in the merchandising of gas appliances. It maintained a sales organization with men covering the various types of markets for gas and gas appliances. This organization included men selling appliances in the display room of the company's main office as well as outside salesmen. The latter class included range and refrigerator salesmen; a group of men selling water-heating and house-heating equipment; a number of specialists in equipment for new buildings; a specialist in sales to industrial companies; and a specialist in the hotel and restaurant market.

The supervisor of sales promotion had charge of the company's relations with appliance dealers. His function was to keep in contact with the dealers with whom the company cooperated. He also acted as a clearing house for all communications between these dealers and the company. Finally, he was responsible for developing dealer interest in the merchandising of gas appliances.

In its merchandising work the company cooperated with several different groups of dealers, of which one important group was the local master plumbers, some of whom had display offices. In general, the plumbers sold the same kinds of equipment as did the gas company. Sales cooperation between the company and the plumbers was limited mainly to domestic gas ranges, gas refrigerators, and gas water heaters. In most cases the plumbers reported the names of prospects to the company. A member of the company's salesforce then attempted to close the

sale. The company paid various commissions to this class of dealers. On gas water heaters, a commission of 20 per cent was paid on the net cash installed selling price of any such heater sold at retail by either the plumber or a company salesman to any prospect listed by the plumber in accordance with the company's regulations on listing. A commission of 10 per cent was paid to the plumber on the sale of a gas range or refrigerator under similar circumstances. If a plumber brought in a signed order for a range or refrigerator from a customer not previously listed by him, however, a 20 per cent commission was paid. There was no differential in commissions paid to plumbers having display rooms and those not having them.

A second group of dealers with whom the company cooperated was composed of the larger stores, including several department stores and one large furniture store. These dealers maintained their own stove departments and sold through their own salesforces. A third group included specialty shops and appliance dealers who also sold electric appliances such as radios and toasters. Finally, the company cooperated with hotel and restaurant supply houses selling to the institutional market.

For each of these four groups there was a dealer manual explaining the procedure to be followed in regard to prospective customers and the regulations concerning commissions paid by the company. These manuals were set up on the basis of conferences with dealers. For example, in setting up the regulations for plumbers, the company conferred with heads of the local master plumbers' organizations. Provision was made for additional conferences as needed in order to change the manual to meet changing circumstances.

The dealer manuals included rules of procedure in regard to prospects and for the paying of commissions. No prospects were to be considered official until their orders had been signed in triplicate and filed or sent to the company, the sender receiving a copy in return as proof of listing and acceptance. All telephone messages regarding prospects had to be verified within 24 hours. Prospects were not listed from two sources, duplicate prospects being stamped "previously listed" and returned. Registration of prospects was limited to 90 days with one relisting for the same period, after which they became "not listable" for 90 days. But during this nonlisting period only, a signed sales contract

entitled the holder to a commission. A dealer filing a name was protected against competition by a representative of the gas company but not against other dealers; the dealer obtaining the customer's order received the commission paid by the gas company. Moreover, the customer's expressed desire to purchase through a certain dealer was recognized by the company and a commission paid accordingly, regardless of any previous listing. When the customer stated a desire that credit be given to a certain dealer or master plumber, the gas company put such dealer's or plumber's name on the order, and a commission was paid as though it were a listed prospect, not as a signed order brought in by a dealer.

A dealer, master plumber, or salesman listing a prospect for the sale of gas appliances to the owner of a new home under construction or undergoing major alterations was protected for commission on equipment available for sale by him, and handled through the gas company until the property showed signs of occupancy. In the case of new homes or of major alterations, the master plumber having the contract was protected on gas water heater sales made by the gas company salesman until the property was occupied.

Rules regarding commissions provided that a commission would be paid only on such gas appliances as were installed on the lines of the gas company. Dealers, to receive commission from the gas company on sales, were to sell appliances furnished by the gas company. Any dealer who shared his commission with a customer or sold at prices lower than those established by the gas company automatically terminated his eligibility to further commissions.

In the repossession of any appliance financed by and purchased from the gas company, and sold by or through a dealer, the dealer was charged with an amount equal to the sales commission paid to him, except when the customer had paid 30 per cent or more of the net cash selling price, in which case no charge was made against the dealer.

Commissions were considered due only when installations were completed and accepted by the gas company's inspection department, and after the customer's first payment had been made.

In addition to the general regulations applying to commissions, for each class of dealer there was a special agreement concerning

specific relations between the company and that group of dealers. For example, Class S dealers were limited to certain department stores and furniture stores that had shown an aggressive interest in the sale of gas appliances and had maintained an appliance department with an outside sales force and delivery and installation facilities, and had carried on a gas appliance advertising program. Sales cooperation between the company and dealers in this class was limited to gas ranges and gas refrigerators sold at retail. The gas company supplied a consignment display of ranges and refrigerators to these dealers, and they maintained a suitable display of gas ranges and refrigerators at all times. Upon presentation of a completed contract covering the sale by the dealer of a gas company range, the gas company paid the dealer 25 per cent of the net cash installed retail selling price. For a completed contract covering the sale by the dealer of a gas company refrigerator, the company paid the dealer 30 per cent of the net cash installed retail selling price. When the dealer listed a prospect for a gas company refrigerator in accordance with the gas company regulations on "Prospect Listing" and the sale was completed by the gas company, a commission of 15 per cent of the net cash installed retail selling price was paid to the dealer.

While the procedure in regard to prospects and the regulations as to the payment of commissions were the main points covered in the dealers' manuals, other phases of the company's dealer relations were also included, such as installation and connection charges and provisions for financing dealer sales. The Hartford Gas Company did not employ an outside finance company, but did its own financing on a plan comparable to that of one of the large commercial credit houses.

In order to promote the sale of gas appliances by both dealers and company salesmen, the gas company engaged in a number of promotional activities, in addition to paying sales commissions as described. For the purpose of obtaining more effective advertising, the company followed the policy of paying for one-half the amount spent by dealers in gas appliance advertising. The dealer might advertise his own line of merchandise, or that sold by The Hartford Gas Company.

The company made use of its employees in finding new prospects. Bonuses were paid to the employees who reported prospective customers. Market survey work was also carried out by

the readers of gas meters. A preliminary survey in 1936 was incomplete in that it covered only 46 per cent of the meters. However, work was continued with the aim of maintaining an up-to-date inventory of appliances in use throughout the company's market.

Trial water heaters were installed for the purpose of acquainting gas consumers with that type of appliance. Such heaters were installed on a 60-day free trial basis. While the company did not actively promote the policy, trial gas ranges could also be obtained on the same basis. This practice, however, was not widespread.

As another means of acquainting consumers with the most efficient use of gas, the company maintained a "Home Service" cooking class which met in the company's auditorium. In order to coordinate the efforts of the dealers with this work, the company on occasions allowed one of the dealers to sponsor a meeting of the class. In such a case, the dealer's gas range would be used in the class demonstration. There were about eight class meetings during a year, and one dealer might possibly sponsor as many as two classes during the year.

In order to obtain the most efficient distribution of gas appliances, the company cooperated with dealers in the instruction of salesmen. On several occasions, special courses were given by the company on methods of selling appliances. The dealers were invited to send their salesmen to these meetings.

During June and July, 1937, the company conducted an "Old Range Round-up." Estimating that there were about 35,000 obsolete ranges in Hartford, the company offered dealers standard allowances on any old range, the amount of the allowance depending upon the price of the new range purchased. The plan was promoted by the use of newspaper and radio advertising, circulars, and dealer displays.

The rate structure of The Hartford Gas Company contained promotional features which encouraged the use of appliances. Three rates were available, depending upon the extent to which consumers used the three major gas appliances, the gas range, the automatic storage-type gas water heater, and the gas refrigerator. Class A rate was available to those using any one appliance; Class B applied to those having any two appliances, while Class C, the Full Domestic Use Schedule, applied to those consumers having all three appliances. As an illustration of the promotional

nature of these rates, a consumer using 5,000 cubic feet of gas per month would pay $5.50 under Class A, $4.75 under Class B, and $4.60 under Class C.

The Hartford Gas Company encountered several difficulties in its appliance merchandising. First of all there was the competition from electric appliances. This competition was felt strongly because of the extensive promotional campaigns carried on by manufacturers of electrical equipment. Furthermore, in some instances local dealers tended to favor electrical appliances over gas because they received a bonus for the sale of electric equipment in addition to regular commissions. The competition between gas and electric appliances was especially intense because the gas company and the light and power company in Hartford were under separate management. Moreover, the durable nature of appliances also accounted for keen competition in their sale. If a customer bought an appliance of either type, it would normally last a number of years. Thus, every effort would be made by both utilities to avoid what would amount to virtually a permanent loss of a customer's load.

From the standpoint of both the dealers and the gas company, it seemed advisable for the latter to be engaged actively in the work of appliance merchandising. The gas company would naturally receive long-time benefits from load-building through the sale of appliances. Therefore, it could afford to engage in promotional activities which the dealers alone would not find profitable. On the other hand, the company could not do all the appliance merchandising satisfactorily alone because it could not obtain adequate coverage of the market. Thus, cooperation between the company and the dealers seemed to the company the most feasible solution to the problem.

On the other hand, in attempting to cooperate with dealers and also to sell appliances itself, the company encountered new problems. For example, a dealer might sell a different line of appliances from that sold by the company. Thus, in defraying the dealer's advertising expense, the company was, in a sense, subsidizing the advertising of a competitive line of merchandise. However, from the standpoint of the gas company as a whole, this expense was believed to be well justified, inasmuch as the value of the dealer's line of appliances was, from the load-building standpoint, as great as the value of the company's own merchandise.

In maintaining its own salesforce, the company was actually competing with those with whom it was cooperating. To minimize this competition it was necessary to develop the prospect-listing procedure described earlier. Even with this system, it was inevitable that in some cases sales would be closed by someone other than the person to whom the prospect had been assigned. To guard against ill feeling in these cases, the company paid double commissions. It will be observed, for example, in the earlier description of commissions paid to Class S dealers that if a company salesman closed a sale to a dealer prospect, the company, nevertheless, would pay one-half the normal commission to the dealer, in addition to paying a commission to its own salesman. The apparent necessity of paying these double commissions led to high selling expenses. It was estimated that the gas company paid annually about $35,000 in commissions to dealers and plumbers. It was believed that a considerable part of this business would have been obtained by the company even if no such commissions had been paid.

Do you believe that a gas company ought to sell appliances?

How do you appraise the policy followed by The Hartford Gas Company in the merchandising of appliances?

Should the arrangement with dealers regarding the sales of gas appliances for an independently owned gas company be different from the arrangement for a gas company that is controlled by a light and power company?

E. Competition of Public Utilities and Dealers in Merchandising Appliances

76. Luckey, Platt & Company *v.* Central Hudson Gas & Electric Corporation[1]

In the latter part of 1931, Luckey, Platt & Company, an electrical dealer in Poughkeepsie, made a complaint to the Public Service Commission of New York concerning the merchandising practices of the Central Hudson Gas & Electric Corporation, also of Poughkeepsie. Luckey, Platt & Company alleged that the competition of the utility with private agencies, such as dealers in electric and gas appliances, plumbers, and wiring companies was unfair.

Upon the basis of this complaint, the commission sent out a questionnaire to various public utilities in the state and later instituted hearings as to the "methods, practices, and regulations of gas corporations and electric corporations, particularly as to selling, dealing, and jobbing in merchandise."

In the meantime, a hearing had been held upon the complaint of Luckey, Platt & Company against the Central Hudson Gas & Electric Corporation, and this case was joined for further hearing with other complaints which the commission had under consideration. Before further hearings were held, Luckey, Platt & Company informed the commission that as a result of conferences with the Central Hudson Gas & Electric Corporation, that utility had decided to abandon "all direct selling of electrical appliances and to cooperate with the dealers"; that Luckey, Platt & Company therefore had no further complaint to make. The commission decided, however, to continue the scheduled hearings upon the general subject matter involved.

Some of the objections of dealers in regard to the merchandising activities of utilities raised the question whether the utilities had a legal right to engage in such activities. The commission pointed out that in section 11 of the "Transportation Corporations Law" electrical corporations were given "the express right to

[1] *Luckey, Platt & Company* v. *Central Hudson Gas & Electric Corporation*, P.U.R. 1922B.

generate and supply electricity for heat or power in cities, towns and villages throughout the states 'and to make, sell, or lease all machines, instruments, apparatus, and other equipments therefor.'" With reference to gas corporations, no express power was conferred by the law, and the commission therefore considered certain court decisions to determine whether gas companies had implied powers to engage in such merchandising. In the case of the *Consolidated Gas Company* v. *Newton* (267 F. 231; P.U.R. 1920F, 483, 515), Judge Learned Hand had held that the expense of selling gas appliances and promoting their use was a proper operating expense. He said that the utility was under a duty to keep up its sales so far as it could, and to push the use of gas in any new ways in which the public would use it.

A similar question was presented in the case of *Kings County Lighting Company* v. *Prendergast* (7 F. (2d) 1920; P.U.R. 1925C, 705, 735).

With reference to these decisions, the commission said:

> While in no way holding that this commission has judicial powers to determine whether any certain corporation is empowered under its charter to deal in appliances, yet for the purpose of this proceeding it must, under the decisions, be held that *gas corporations, electric corporations, or gas and electric corporations are authorized to deal in both gas and electric equipment when such a business is reasonably carried on for the purpose of promoting the use of gas or electricity.*[1]
>
> While this commission has broad powers in the regulation of public utilities, yet these powers may not be exercised to prohibit a practice which is otherwise legal, unless such practice results inevitably in a violation of some provision of the Public Service Law. This brings us to a consideration of the relief requested by parties who may be aggrieved.

The dealers who made complaints to the commission regarding the merchandising activities of the utilities did not demand that the utilities be prohibited from selling appliances. The International Brotherhood of Electrical Workers was opposed to the entrance of public utilities into the wiring business; but it did not oppose the dealing in appliances by public utilities, provided they did not infringe upon private business and provided they worked in conjunction with the dealers and the contractors in their respective territories. This association was unalterably opposed to the

[1] Commission's italics.

charging of any loss on the appliance business to the cost of supplying gas or electricity.

The attitude of the New York State Retail Hardware Association towards merchandising by public utilities was a very liberal one. That association pointed out that it would not raise, at least at that time, any question as to the legal right of utility companies to merchandise. It did insist that, if utilities engaged in merchandising, the merchandising department of each company should be charged with every factor of cost which an independent merchant would have to pay, including rents, use of gas or electricity for lighting and demonstrating purposes, and office operations, including billing and collection of installment accounts, and that there should be an allocation of general salaries to the department, such as would apply if it were operated independently. In other words, the merchandising departments of utility companies should be put on the same basis as any independent merchant engaged in selling similar service or supplies. This association stated that while at that time they had no complaint to make, nevertheless they desired to point out that where new territories were being opened up, it was sometimes the practice of the utility companies to send out canvassers selling all lines of appliances and machinery, and that in such cases there were complaints that the practices were very unfair; that as the territory developed, the tendency was for the utility companies to go out of this line of business and leave it to dealers.

While the questions raised by these hearings related to matters of company policy and management, most of the large companies sent legal representatives and not officers or managers. The former generally knew little about the subject, and had it not been for the operating men representing several of the smaller companies and certain of the larger ones, the commission would have secured little accurate information from the utilities. The commission in criticising the companies for this lack of cooperation pointed out that if the utilities desired to have the facts fully placed before the commission when the opportunity was afforded them, they should have sent men who knew the facts.

Speaking generally, it appeared to be the view of the utilities that in those sections which might be described as rural, as distinguished from those that were closely settled, there were special advantages in having the installation work and the merchandising

done by the public utility companies; that the local utilities had the capital, the personnel, and the experience necessary to enable them to do good work; whereas the local contractor was handicapped in these respects, and his chief interest was "to finish his job and get out"; that the local utility had a vital interest in the efficiency of the service that a customer would be able to secure every hour of the day and night, and that this long-run interest of the utility made it imperative that the customer be given service that was satisfactory in every respect. It was pointed out that in rural communities, and in the small towns and villages, there were often incomplete supplies of appliances and that the public did not have an opportunity to secure accurate information at first hand regarding their cost, efficiency, and usefulness. It was also stated that in these communities purchasers needed credit through partial-payment plans. It was admitted that in cities, particularly the larger ones, ample facilities were often provided by private dealers.

The record showed in some instances that utilities had withdrawn from the merchandising business where private agencies were performing every service that was required; and in other instances arrangements had been made between the utilities and the dealers for full cooperation, resulting in a minimum amount of work to be done by the utilities.

Two suggestions were made with reference to accounting which the commission believed should receive careful consideration: (1) that every utility should be required to show in its accounts and reports to the commission the full and complete cost of merchandising activities, the revenues obtained therefrom, and the profit or loss upon the business; and (2) that utilities should be prohibited from charging any losses from merchandising as a part of the cost of furnishing gas or electricity.

It was claimed before the commission that there was scarcely a public utility company which showed the true cost of merchandising, including the fair rental value of space devoted to showrooms, offices, storerooms, the cost of gas and electricity for lighting and demonstration purposes, the cost of rendering and collecting bills, the cost of keeping accounts, a proportionate part of the salaries paid to officials and employees whose services were devoted in part to merchandising departments, and the return upon the working capital which was necessarily used in the business. It was

also asserted that it was not possible to produce such a statement of revenues and expenses for merchandising.

With regard to the accounting practices, the commission pointed out that while it might be that the accounting system then in force did not produce or call for sufficient details to obtain an accurate financial statement, if it were not possible to secure one or devise a system of accounting which would produce it, a serious question arose whether utilities should be allowed to conduct a business that was not necessary to the supply of gas and electricity and for which the profits or losses therefrom could not be determined. The commission indicated that if the business were conducted by a separate corporation, as in the case of at least one company under its jurisdiction, the profits or losses would be shown; that it might be desirable that all merchandising business should be so conducted if true costs could be determined in no other way.

It did not seem reasonable to the commission, however, at least for the time being, to assume that a true financial statement could not be obtained from utilities carrying on a merchandising business; also, until further efforts had been made in this direction and failure found to be unavoidable, it seemed unnecessary to discuss what course should be followed when, if ever, it developed that only by the institution of a separate corporation would it be possible to secure a full and complete statement of revenues and expenses for utility merchandising.

It was the opinion of the commission, therefore, that "*the establishment of an accounting system for merchandising should be undertaken at once and a fair trial given.*"[1] The commission pointed out that the national associations of the utilities had made progress in this direction and that apparently there was no opposition upon the part of the utilities to the suggestion. The commission had no objection to the organization of a subsidiary or affiliated corporation to conduct merchandising business. Indeed it believed that this method had certain advantages, and that there might be many companies in the state which would desire to adopt it.

Regarding the profit or loss from utility merchandising and its relation to utility rates, Chairman Maltbie, who wrote the opinion of the commission, said:

[1] Commission's italics.

In view of the fact that the accounts do not generally show the complete cost of merchandising operations (there may be exceptions to this statement), it hardly seems necessary to determine at this time whether the profits or losses therefrom should be excluded in determining the rates which should be charged for gas or electric service.

. . . . . .

. . . Until more definite information is available and the facts established, such as would be provided by a proper accounting system, I recommend that no ruling be made as to the disposition of the profit or loss. There is one point, however, which is reasonably clear, namely, that the losses should not be capitalized and conversely that there is no basis for deducting profits from capitalization. *It may be added that merchandising by public utilities is justified only upon the ground that it is a necessary function in order to provide adequate service to the public at reasonable rates.*[1]

In its decision the commission pointed out that no general order would be issued at that time prohibiting merchandising. On this point, Chairman Maltbie said:

In my opinion, the record herein provides no basis for an order of the commission prohibiting merchandising. It is desirable, however, that utilities should engage in merchandising only where it is necessary in order to provide for the introduction of appliances upon reasonable terms and to supplement what private agencies are doing.[1]

In the decision of the commission it was pointed out that an accounting system and a form of report should be provided which would show the full and complete cost of merchandising operations of public service corporations, and that when these had been prepared a hearing should be held to give the utilities an opportunity to submit their criticisms and suggestions; that until the facts had been developed as to the true profits or losses from merchandising, no general ruling should be made as to the disposition of such profits or losses; that a public service corporation had no right to discontinue service because merchandising bills had not been paid; and that separate bills should be rendered for appliances or any service other than gas or electricity.

In May, 1932, the Public Service Commission of New York directed that hearings be held to determine whether the uniform systems of accounts for gas and electric corporations should be

[1] Commission's italics.

amended. On the basis of the evidence presented in these hearings, certain additional account classifications relative to appliance merchandising were required by the commission, effective July 1, 1933. In general, gas and electric corporations were required to keep their merchandising activities separate from their other operations. The new system which was set up provided that no consumer should suffer any loss which could be reflected in rates or service as a result of a loss incurred by a utility through merchandising operations.[1]

Is it wise for utilities to carry on merchandising activities from their own point of view; from the point of view of the customers?

How do you account for the opposition which has arisen throughout the country in recent years toward the merchandising activities of utilities?

Do the foregoing cases indicate the need for any reform in the merchandising methods of utilities?

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[1] *Re Uniform System of Accounts for Electric and Gas Corporation*, P.U.R. 1933B, 448.

4. Basis for Extension of Electrical Service to Rural Customers

A. Policy of State of Washington

77. Washington Department of Public Service[1]

In 1928, electric line extensions to rural consumers throughout the state of Washington were regulated by standard rules established by the Department of Public Works of Washington.[2]

Before 1923, utilities operating in the State of Washington had various rules and policies of their own in regard to the construction of electric line extensions to serve customers applying for service. The most important of these policies were as follows:

1. Construction by the customer of the extension necessary to furnish him with service, thus eliminating the necessity of added investment on the part of the utility.
2. Contribution by the customer of a definite amount of money to offset the amount of additional investment required of the utility.
3. Compensation of the utility for increased fixed charges incurred by charging higher rates to customers on extension lines.
4. Rendition of service to rural extension customers at regular rates applicable in the territory, and payment of the deficit caused by the greater expense of rendering service during the development period in a lump sum in advance by the customer. This sum was designated as "Prepaid Revenue."

Because of the wide variation in these policies, it became necessary in the interests of uniformity and the elimination of discrimination among customers to establish rules setting up a standard practice relative to rural line extensions. The first method described above had been found to be unsatisfactory

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[1] Acknowledgment is made to Mr. F. Harper Craddock and Mr. C. Maynard Turner, who in 1930 were chief engineer and assistant chief engineer, respectively, of the State of Washington Department of Public Works; and to Mr. C. P. Dexter, in 1938 chief engineer of the Department, for data furnished in the preparation of this case. Some of the material included was published by Mr. Turner in the *Electrical World*, March 8, 1930.

[2] In 1935 this name was changed to Department of Public Service of Washington.

because of the lack of adequate maintenance on the part of the individuals who constructed the lines. There were objections to the second plan on the grounds that the consumer paid for the line and presented it as a gift to the utility; also that the plan was a source of discrimination. The third method was deemed unsatisfactory in that the making of rates in accordance with the cost of the extension caused undue confusion for both the utilities and the regulatory body because each rural extension line was subject to a different rate schedule.

After extended study of the situation by the utilities and the state regulatory body, a plan was adopted in 1923 based upon the fourth method described. Except for a minor change made in 1929, this plan, as set up in 1923, was still in effect in 1938. In the opinion of the regulatory body, the method chosen provided for the construction of extensions for the benefit of the majority of new customers and enabled the utility to provide service under established urban rates without changing the ratio of the utility's investment to its revenue. The plan also prevented any undue burden from falling upon the existing customers of the utility.

The policy with reference to rural extensions was adopted on the assumption that the utility was making a fair return on the capital already invested in distribution facilities. The amount of investment per dollar of revenue was obtained by dividing the total investment in distribution system equipment by the total revenue received by the sale of current therefrom. This figure, called the "investment ratio," was applied to the revenue expected from the proposed extension during the first year to obtain the company's required minimum initial investment in a particular line. The difference between what was designed by the commission as the company's minimum initial investment and the actual estimated cost of construction of a given extension equaled the "excess cost."

The utility's operating expenses, taxes, depreciation, interest, etc., were determined as a percentage of the fixed capital involved, and the sum of these percentages was termed the "deficit factor." This factor was applied to the excess cost of the line to determine the amount of additional revenue necessary during the first year to cover all costs not covered by the effective tariff of the utility. The rules contained the following provisions concerning the computation of the annual deficit:

During the first year after the construction and operation of an extension, the deficit incurred in that year, by reason of the excess cost of such extension, will be an amount which is the sum of the following percentages applied to such excess cost.

Return	A%
Taxes	B%
Depreciation	C%
Operation	D%
Risk and Contingencies	E%

A% to be taken as 8%.

B% to be the percentage of actual taxes paid on operating real and personal property to the rate base for the last preceding fiscal year.

C% to be the average rate of depreciation of the distribution system.

D% to be the ratio of the total of the utility's distribution and utilization expenses to the investment in the distribution system as a whole.

E% to be 1% to cover risks and contingencies.

It was assumed that extensions would grow to be self-supporting within a certain period of time. The average annual deficit would be the amount that would have to be collected each year from each extension to cover all expenses incurred during the development period above expenses covered in the utility's rates. The utility was required to indicate this average development period in its extension schedule. Under the assumed conditions of gradual growth, the average annual deficit would equal one-half the amount applicable to the first year.

To insure the collection of the necessary revenue and to simplify the extension rules, the customer was required to pay the total deficit for the development period before service was received. From this total advance revenue payment, which might be divided equally among the prospective customers, or in any other manner satisfactory to them, was deducted an amount equal to interest at 5 per cent on the amount that would be unpaid from year to year during the development period. In other words, the customer was entitled to interest upon the annual payments that were made in advance. In the opinion of the state regulatory body, the payment made was not a contribution to the cost of the line but was advance revenue to cover the deficit which would be incurred during the unprofitable period of growth.

In all applications for electric service involving a cost in excess of its required initial investment, the utility was required to make

up a standard form containing an estimate showing details of construction, a detail of the cost, and a list of prospective customers together with estimated revenue and the computation of the customer's payment. The standard rules required that this record should be preserved for five years. The following example indicates the details of a proposed extension of service.

Development period 6 years
Investment ratio 2 to 1

			Percentage
Deficit Factor	20%	Return	8
		Taxes	2
		Depreciation	4
		Operation	5
		Risk and contingencies	1
			20

Five prospective customers with an expected first year's revenue of $108 requested service requiring an extension estimated to cost $1,396.39. The customer's advance revenue payment was then computed as follows:

1.	Estimated First Year's Revenue	$ 108.00
2.	Estimated Cost of Extension	1,396.39
3.	Minimum Initial Investment Required by Utility (2 Times Item 1)	216.00
4.	Excess Cost (Item 2 Less Item 3)	1,180.39
5.	Annual Deficit First Year (20 Per Cent of Excess Cost)	236.08
6.	Average Annual Deficit (One-half of First Year)	118.04
7.	Development Period	6 years
8.	Present Payment at 5 Per Cent to Pay $1 per Year for Development Period of 6 Years (Compound Discount Table)	$ 5.076
9.	Present Payment to Pay Average Annual Deficit of $118.04 per Year for Development Period	599.17
10.	Present Payment per Customer for Five Customers If Equally Divided	119.83

It will be observed that the ratio of estimated cost to estimated first year's revenue in this case was approximately 13 to 1. Ordinarily the state regulatory body would not require a utility to construct an extension when this ratio was greater than 6 to 1, but would permit the utility to make the construction if it so desired provided it received the proper prepaid revenue payment.

The standard rules provided that after the extension had been completed and the actual cost had been ascertained, the customer's payment should be recomputed. If the original payment was greater than the amount computed on the basis of actual cost, the utility was to refund the difference. If the reverse was found to be true, then the utility should not require any additional payment from the customer.

In 1929 an amendment was made to the standard rules adopted in 1923. Effective July 1, 1929, additional customers coming on a rural line within five years after its construction were required to pay their pro rata share of the extensions, which share was refunded to existing customers. Before this date the limit had been three years.

In the opinion of the Washington state regulatory body the standard policy followed in the construction of rural line extensions, while applicable to the entire state, provided sufficient flexibility to meet various local conditions. Under the rules, extensions had increased steadily and comparatively few complaints had been received. In June, 1937, out of 82,379 farms in the state of Washington which had occupied dwellings, 45,685 or 55.5 per cent were receiving central station electric service.[1]

Is the merchandising policy embodied in the standard extension policy in this case one which should be adopted by electrical utilities generally in making rural line extensions?

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[1] Committee on the Relation of Electricity to Agriculture, *News Letter*, November, 1937, p. 2.

SECTION VI
VALUATION, RATE MAKING, AND FAIR RETURN
1. Bases of Valuation for Rate Making
A. Original and Reproduction Cost
78. St. Louis & O'Fallon Railway Company[1]

In May, 1929, the U. S. Supreme Court handed down a decision in the case of the St. Louis & O'Fallon Railway Company which reversed a decision made by the Interstate Commerce Commission in 1927 concerning the value of that railroad.[2] The commission's decision which had been upheld by a lower court was reversed by the Supreme Court on the ground that the commission had not given sufficient recognition to present value or current cost of reproduction in determining the value of the road.[3]

The decision of the commission had directed the St. Louis & O'Fallon Railway Company, in accordance with the so-called recapture provisions of the Transportation Act of 1920, to place in a reserve fund one-half of its determined excess income for the years 1920 (ten months), 1921, 1922, and 1923 and to pay to the commission the remaining one-half of that excess.[4]

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[1] *St. Louis & O'Fallon Railway Co.* v. *United States of America et al.*, 279 U.S. 461; 49 Sup. Ct. 384 (1929); P.U.R. 1929C, 161.

[2] 124 I.C.C. 3, February, 1927.

[3] Lower court decision, 22 F. (2d) 980.

[4] That is, half of the sum by which the net railway operating income for each of those years exceeded 6 per cent of the ascertained value of property devoted to public service should be placed in a reserve fund. The Transportation Act of 1920 provided among other things, as follows: "For the purposes of this section, such aggregate value of the property of the carriers shall be determined by the commission from time to time and as often as may be necessary. The commission may utilize the results of its investigation under section 19a of this act, in so far as deemed by it available, and shall give due consideration to all the elements of value recognized by the law of the land for rate-making purposes, and shall give to the property investment account of the carriers only that consideration which, under such law, it is entitled to in establishing values for rate-making purposes. Whenever pursuant to section 19a of this act the value of the railway property of any carrier held for and used in the service of transportation has been finally ascertained, the value so ascertained shall be deemed by the commission to be the value thereof for the purpose of determining such aggregate value. If, under the provisions of this section, any carrier receives for any year a net railway operating income in excess of 6% of the value of the railway property held for and used by it in the service of transportation, one-half of such excess shall be placed in a reserve fund established and

The St. Louis & O'Fallon Railway Company, a coal-carrying road of about nine miles in length, located between the town of O'Fallon and East St. Louis, connected with the Terminal Railroad of St. Louis. Counsel for the road contended that the commission's order left to the company a return of only 4.35 per cent upon a value ascertained in accordance with the rule laid down by the Supreme Court in the Southwestern Bell Telephone case in 1923 and in the Indianapolis Water Company case in 1927; that, in short, the commission refused to find actual value and instead found the "prudent investment." The commission itself claimed that it had recognized, as pointed out by the Supreme Court in the

EXHIBIT 1

ST. LOUIS & O'FALLON RAILWAY COMPANY

VALUATION ESTIMATES

Date	Company's Estimate, Cost of Reproduction New	Commission's Estimates	
		Cost of Reproduction New	Cost of Reproduction New Less Depreciation
June 30, 1919	$ 927,884	$927,884	$678,506
December 31, 1920	2,112,709	936,732	658,531
December 31, 1921	1,562,248	950,553	692,923
December 31, 1922	1,471,027	951,974	674,769
December 31, 1923	1,639,049	940,708	645,466

Minnesota Rate Cases (230 U.S. 352), that value "is not a matter of formulas" but that there must be a reasonable judgment having its "basis in a proper consideration of all relevant facts." The commission maintained that it had "considered and weighed carefully, in the light of its own knowledge and experience, each fact, circumstance, and condition called to its attention on behalf of the carrier" as well as the other evidence otherwise introduced, and that "from this accumulation of information" it had formed its judgment as to the "fair basic single-sum values, not by the use of any formula, but after consideration of all relevant facts."[1]

maintained by such carrier, and the remaining one-half thereof shall, within the first four months following the close of the period for which such computation is made, be recoverable by and paid to the commission for the purpose of establishing and maintaining a general railroad contingent fund as hereinafter described."

[1] 124 I.C.C. 3, 37 (1927).

The estimates made by the commission and by the company for the period involved in the case are shown in Exhibit 1.

The Supreme Court maintained that the elements of value recognized by the law of the land for rate-making purposes had been pointed out by it many times in its decisions beginning with *Smyth* v. *Ames*, and it quoted the following from that decision which was handed down in 1898:[1]

> We hold, however, that the basis of all calculations as to the reasonableness of rates to be charged by a corporation maintaining a highway under legislative sanction must be the fair value of the property being used by it for the convenience of the public. And in order to ascertain that value, the original cost of construction, the amount expended in permanent improvements, the amount and market value of its bonds and stock, the present as compared with the original cost of construction, the probable earning capacity of the property under particular rates prescribed by statute, and the sum required to meet operating expenses, are all matters for consideration, and are to be given such weight as may be just and right in each case. We do not say that there may not be other matters to be regarded in estimating the value of the property. What the company is entitled to ask is a fair return upon the value of that which it employs for the public convenience. On the other hand, what the public is entitled to demand is that no more be exacted from it for the use of a public highway than the services rendered by it are reasonably worth.

The court also quoted from its decision in the case of the *Southwestern Bell Telephone Co.* v. *Public Service Commission*, to the effect that it was impossible to ascertain what would amount to a fair return upon properties devoted to public service without giving consideration to the cost of labor, supplies, etc., at the time the investigation was made; that an honest and intelligent forecast of probable future values made upon a view of all the relevant circumstances was essential; that if the highly important element of present costs was wholly disregarded such a forecast would become impossible, and that estimates for tomorrow could not ignore prices of today.[2]

The court maintained that it had consistently adhered to the doctrine in these cases in its later decisions.

In its decision, the court maintained that the commission disregarded the approved rule laid down in the court's previous deci-

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[1] 169 U.S. 466; 18 Sup. Ct. 418, 434.
[2] 43 Sup. Ct. 544 (1923); P.U.R. 1923C, 193, 199.

sions, and had thereby failed to discharge the definite duty imposed upon it by Congress; that unfortunately, proper heed was denied the timely admonition of the minority opinion of the commission that "the function of the commission was not to act as an arbiter in economics, but as an agency of Congress, to apply the law of the land to facts developed of record in matters committed by Congress to its jurisdiction."

In commenting upon the division of opinion within the commission and the weight to be given to reproduction costs in making valuations, the court said:

> The question on which the commission divided is this: When seeking to ascertain the value of railroad property for recapture purposes, must it give consideration to current, or reproduction, costs? The weight to be accorded thereto is not the matter before us. No doubt there are some, perhaps many, railroads the ultimate value of which should be placed far below the sum necessary for reproduction. But Congress has directed that values shall be fixed upon a consideration of present costs along with all other pertinent facts, and this mandate must be obeyed.

Mr. Justice Butler took no part in the consideration of the case, and three Justices, Brandeis, Stone, and Holmes, dissented from the opinion of the court.

Mr. Justice Brandeis in his dissenting opinion contended that through the Transportation Act of 1920 Congress had delegated to the Interstate Commerce Commission the duty to establish and maintain rates which would yield "a fair return upon the aggregate value of the railway property"; that Congress directed that in ascertaining value the commission should "give due consideration to all the elements of value recognized by the law of the land for rate-making purposes"; and should "give to the property investment account . . . only that consideration which, under such law, it is entitled to in establishing values for rate-making purposes."

Mr. Justice Brandeis contended that Sec. 15a made no specific reference either to the original cost of the property, or to prudent investment, or to current reproduction costs, or to the then existing price level; that the valuation provisions of Sec. 19a to which Sec. 15a referred, directed the commission to report, among other things, "in detail as to each piece of property . . . the original cost to date, the cost of reproduction new, the cost of reproduction less depreciation"; and also "other values, and elements of value";

that after the enactment of Sec. 15a and before the decision of the commission was made on the value of the St. Louis & O'Fallon Railway Company, it was held by the Supreme Court in *Southwestern Bell Telephone Co.* v. *Public Service Commission* (262 U.S. 276) that the rate base on which a public utility was constitutionally entitled to earn a fair return was the then actual value of the property used and useful in the business, not the original cost or the amount prudently invested in the enterprise. In the opinion of Mr. Justice Brandeis, the question upon which the commission divided was whether Congress required it, when acting under Sec. 15a, to give, in all cases and in respect to all property, some, if not controlling, effect to evidence establishing the estimated current cost of reproduction. "Or did Congress intend to leave to the commission the authority to determine, as in passing upon other controverted issues of fact, what weight, if any, it should give to that evidence?" In his opinion, neither Congress nor the Supreme Court required the commission to give to evidence of reconstruction cost a mechanical effect or artificial weight; they left untrammeled its duty to give to all relevant evidence such probative force as, in its judgment, the evidence inherently possessed. It was his belief that the conclusions of the commission were well founded; that the commission was clearly authorized to determine for itself to what extent, if any, weight should be given to the evidence; and that its findings should not be disturbed by the court, unless it appeared that there was an abuse of discretion.

Mr. Justice Brandeis pointed out that many branches, and indeed whole lines of railroad, had been scrapped after 1920; that abandonment of 2,439 miles of railroad was authorized under Par. 18 of Sec. 1 of the Interstate Commerce Act between 1920 and 1925; and in the three following years 2,010 miles more; that these properties had, in the main, become valueless for transportation, either because traffic ceased to be available or because competitive means of transportation precluded the establishment of remunerative rail rates; that, obviously, no one would contend that their actual value just before abandonment was what it originally cost to construct them, or what it would then have cost to reconstruct them. He pointed out that the property investment account of the railroads in 1920 was about 19 billion dollars; that the reproduction cost of the railroads in 1920, applying index figures to estimated actual cost, was over 40 billions; that it was inconceiv-

able that Congress, after rejecting property investment account as excessive, intended by Sec. 15a to make mandatory on the commission the consideration of elements which would give a valuation double that which had been rejected; that the insertion in Sec. 15a of the provision that the commission "shall give to the property investment account of the carriers only that consideration which under the law it is entitled to in establishing values for rate making purposes" and the rejection of other proposed measures of value showed that Congress intended not to impose restrictions upon the discretion of the commission.

In the opinion of Mr. Justice Brandeis, in making provisions for a fair return, the main purpose was not to increase the earnings of capital already invested in railroads, but to attract the new capital needed for improvement or extension of facilities; that the adoption by Congress of the increase in the return, as the means of compensating for the decreased purchasing power of the dollar, precluded the assumption that it intended that the valuation would reflect that lessened purchasing power; that by explicitly choosing the former, Congress implicitly rejected the latter, for to have allowed an increase in both would have gone beyond adjusting earnings to increased costs and have made this increase a mere pretext for allowing unwarranted profits to the railroads; that the proceedings which led to the passage of the act made it clear that Congress intended no such result.

Mr. Justice Brandeis believed weight should be given to the commission's conviction that the earnings of the railroads were limited both by the commercial prohibition of rates higher than the traffic would bear and the legal prohibition of rates higher than were just and reasonable; that it knew that a rate base fluctuating with changes in the level of general prices would imperil industry and commerce. It knew that the adoption of a fluctuating rate base would not, as was claimed, do justice to those pre-war investors in railroad securities who were suffering from the lessened value of the dollar, since the great majority of the railroad securities were represented by long-term bonds or the guaranteed stocks of leased lines which bore a fixed return; and that only the stockholders could gain through the greater earnings required to satisfy the higher rate base; that it recognized that an adequate national system of railways, so long as it was privately owned, could not be provided and maintained without a continuous inflow of capital;

and that "obviously, also, such an inflow of capital could only be assured by treatment of capital already invested which would invite and encourage further investment."

A previous decision of the court, *Dayton-Goose Creek Ry. Co.* v. *United States* (263 U.S. 456), was quoted to show that by investment in a business dedicated to the public service the owner must recognize that, as compared with investment in private business, he could not expect either high or speculative dividends but that his obligation limited him to "only fair or reasonable profit."

Concerning the economic significance of a fluctuating rate base and the extent to which railroad rates are subject to commercial considerations, Mr. Justice Brandeis said:

> As a fluctuating rate base would thus directly imperil industry and commerce and investments made at relatively high price levels during and since the world war; would tend to increase the cost of new money required to supply adequate service to the public; and would discourage such investment, the commission concluded that Congress could not have intended to require it to measure the value or rate base by reproduction cost, since this would produce a result contrary to its declared purpose. And as confirming its construction of section 15a the commission showed that, with the stable rate base which it had accepted as the basis for administering the act, the aim of Congress to establish an adequate national system had been attained. It pointed out that during the period 1920–1926, inclusive, the investment in railroad property increased by four billions of dollars. A substantial part of this money was derived from income, but much of it was obtained by the sale of new securities. The market for railroad securities since the passage of the Transportation Act, 1920, has steadily improved and the general trend of interest rates has been downward. The credit of the railroads in general is now excellent.
>
> Railroad property is valuable as such only if, and so far as, used. If rates are too high, the traffic will not move. Hence, the value or rate base is necessarily dependent, in the first place, upon the commercial ability of the property to command the rates which will yield a return in excess of operating expenses and taxes; and such value cannot be higher than the sum on which, with the available traffic, the fair return fixed under section 15a can be earned. Persistent depression of rates or lessening in volume of traffic, from whatever cause arising, ordinarily tends to lower actual values of railroad properties. It follows, that since the commission is required by the rule of *Smyth* v. *Ames*, reaffirmed in the *Southwestern Bell* case, to determine the rate base under section 15a by actual value as distinguished from prudent investment, it must in making the finding consider the effect upon value of both the commercial and the legal limitations upon rates and, among other things, the effect of competition upon the volume of traffic.

In the opinion of Mr. Justice Brandeis, Congress imposed still another limitation which was far-reaching in its operation, by declaring in Sec. 15a that the commission, "in the exercise of its power to prescribe just and reasonable rates," should so adjust them upon the value that a fair return might be earned "under honest, efficient, and economical management;"[1] that the commission when requested to consider evidence of reproduction cost must, therefore, examine the value of every part of the plant, and that of the whole plant, as compared with the value of a modern, efficient plant; that upon such consideration the commission might conclude that the railroad was so largely obsolete in construction and equipment as to render evidence of the reproduction cost of the identical plant of no probative force whatsoever; that the duty so to deal with the evidence seemed to flow necessarily from the rejection by the court in a number of its decisions of prudent investment as the measure of value, and the adoption, instead, of the actual value of the property at the time of the rate hearing as the governing rule of substantive law; that freight terminals, originally well conceived and wisely located in the heart of a city, might have become valueless for rate-making purposes under Sec. 15a, because through growth of the city the expense of operating therein had become so high, or the inescapable cost of eliminating grade crossings so large, that efficient management required immediate abandonment of the terminals; that even if the cost of continuing operation there was not so high as to require abandonment, the property might have for rate-making purposes a value far below its

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[1] On that point, Mr. Justice Brandeis said:

"Efficiency and economy imply employment of the right instrument and material as well as their use in the right manner. To use a machine, after a much better and more economical one has become available, is as inefficient as to use two men to operate an efficient machine, when the work could be performed equally well by one, at half the labor cost. Such an instrument of transportation, although originally well conceived and remunerative, should, like machines used in manufacturing, be scrapped when it becomes wasteful.

"Independently of any statute, it is now recognized that, when in confiscation cases it is sought to prove actual value by evidence of reproduction cost, the evidence must be directed to the present cost of installing such a plant as would be required to supply the same service. For valuation of public utilities by reproduction cost implies that 'the rates permitted should be high enough to allow a reasonable per cent of return on the money that would now be required to construct a plant capable of rendering the desired service'; and does not mean 'that the plant should be valued at what would now be needed to duplicate the plant precisely. . . . While a part often has some service value, although not efficient according to the existing standard, its use may involve such heavy, unnecessary operating expense as to render it valueless for rate-making purposes under section 15a.'"

market value; that a station warehouse for less-than-carload freight might have become valueless for rate-making purposes, because, through motor competition, the railroad had lost substantially all its less-than-carload business at that point; that large reductions in the value of passenger stations and equipment might have resulted from decline in the passenger traffic.

Concerning the importance of such functional depreciation, Mr. Justice Brandeis said:

If weight is to be given to reproduction cost in making the valuation of any railroad for rate-making purposes under section 19a and section 15a, there must be a determination of the functional depreciation of the individual plant as compared with a modern, efficient plant adequate to perform the same service. To make such a determination for any railroad involves a detailed inquiry into the character and condition of all those parts of the plant which may have reduced functional value because of the post-war changes affecting transportation above referred to, and also into the character and the volume of the carrier's business. For the efficient plant means that plant which is economical and efficient for the particular carrier in view of the peculiar requirements and possibilities of its own business. To make such a determination justly, the commission must have the data on which a competent and vigilant management would insist when required to pass upon the advisability of making capital expenditures. And the commission would be obliged to give them the same careful consideration. The determination of the extent of functional depreciation is thus a very serious task, a task far more serious than that of determining merely physical depreciation.

To make such a determination of functional depreciation annually for each of the railroads of the United States would be a stupendous task, involving, perhaps, prohibitive expense. To make the necessary decisions promptly would seem impossible, among other reasons, because railroad valuation is but a small part of the many duties of the commission. On the other hand, to adjust rates so as to render a fair return, and to provide through the recapture provision funds in aid of the weaker railroad, are tasks which Congress deemed urgent; and which must be promptly performed if its purpose is to be achieved. Obviously Congress intended that in making the necessary valuations under section 15a a method should be pursued by which the task which it imposed upon the commission could be performed.

. . . . . .

This court has no concern with the correctness of the commission's reasoning on the evidence in making its findings of fact, since it applied the rules of substantive law prescribed by Congress and reached its findings of actual value by the exercise of its judgment upon all the

evidence, including enhanced construction costs. . . . We must bear in mind that here we are not dealing with a question of confiscation; that we are dealing, as was pointed out in *Smyth* v. *Ames*, with a legislative question which can "be more easily determined by a commission composed of persons whose special skill, observation and experience qualifies them to so handle great problems of transportation as to do justice both to the public and to those whose money has been used to construct and maintain highways for the convenience and benefit of the people."

Mr. Justice Holmes and Mr. Justice Stone joined in this opinion.

See case entitled Interstate Commerce Commission (A).

79. RICHMOND, FREDERICKSBURG, AND POTOMAC RAILROAD COMPANY[1]

On April 7, 1931, the Interstate Commerce Commission handed down its decision on the value of the Richmond, Fredericksburg, and Potomac Railroad Company in a proceeding pursuant to Sec. 15a of the Interstate Commerce Act for the investigation and determination of the amounts, if any, of excess income subject to the provisions of this section received prior to January 1, 1924, by that railroad. The periods under investigation thus included the last 10 months of the calendar year 1920, and the calendar years 1921, 1922, and 1923. For this purpose it was necessary to ascertain the amount of net railway operating income and the value of the property held for and used in the service of transportation as of each of the periods mentioned.

In this case, the Interstate Commerce Commission interpreted the decision made by the U. S. Supreme Court in 1929 in the St. Louis & O'Fallon Railway Company case.[2] In that case the court reversed the decision which the Interstate Commerce Commission had made concerning the value of that railroad, because the commission had failed to give adequate consideration to the reproduction value of the railroad's property. The court did not indicate, however, just what weight should be given to reproduction value in the valuation of railroad property. In the case of the Richmond, Fredericksburg, and Potomac Railroad Company, the commission interpreted the position which the Supreme Court had taken in the O'Fallon decision with reference to the weight which

[1] Interstate Commerce Commission, Finance Docket 3898, *Excess Income of Richmond, Fredericksburg and Potomac Railroad Company*, 170 I.C.C. 451–555 (1931).

[2] *St. Louis & O'Fallon Railway Co. et al.* v. *United States*, 279 U.S. 461 (1929). See case entitled St. Louis & O'Fallon Railway Co., p. 511.

should be given to reproduction cost, and determined the valuation and the excess income which the Richmond, Fredericksburg, and Potomac Railroad Company should pay to the government under the provisions of the Transportation Act of 1920.[1]

While admitting that original cost must be considered in some cases, the railroad contended that such cost was wholly irrelevant in a case like this one where there had been a substantial change in the price level since the time of construction. The commission's interpretation of the railroad's position was that in practical effect this amounted to saying that original cost was entitled to no weight whatever, since under the railroad's hypothesis, cost of reproduction was the really determinative factor, governing wherever a material discrepancy existed between the two figures.

The majority opinion of the commission pointed out that in *Smyth* v. *Ames* the court was confronted with the reverse of the situation which obtained during the recapture periods 1920 to 1923, under consideration in this case. The question in *Smyth* v. *Ames* related to the rates of railroads in the state of Nebraska which had been largely constructed while prices were on the high plane attendant upon Civil War inflation. At the time of that inquiry in 1898, the prices had undergone a severe decline and the roads could have been reproduced for substantially less than their original cost. Counsel for the state appearing in the public interest contended that the rates should be based upon the current cost of reproduction as the equivalent of the value of the property, while the railroads insisted upon a sufficient return to secure the payment of interest on bonds and dividends on stocks, the securities supposedly representing the original higher cost of the property. The court found that the rates in question were too low to yield a fair return upon any proper rate base, but indicated its views upon the question of valuation.[2]

Concerning the decision in *Smyth* v. *Ames*, the commission pointed out that the court evidently regarded it as inequitable to deprive the roads of any recognition of the amount of their investment, while at the same time it was not disposed to deprive the public of all the benefit of the decline in prices; that whatever the reason, the refusal of the court to accept either cost of repro-

[1] See case entitled Interstate Commerce Commission (B), p. 548.

[2] See quotation from this decision in case entitled St. Louis & O'Fallon Railway Co., p. 513.

duction or original cost as the sole determinant of value, even though there had been a material change in the price level after the roads were built, stood out prominently.

For some time after its decision in *Smyth* v. *Ames*, cases coming before the Supreme Court dealt with incidental questions of valuation, but a distinct issue between original cost and cost of reproduction as determining elements of value came to the fore with the great rise in prices incident to the World War. The commission cited *Galveston Electric Co.* v. *Galveston* (258 U.S. 388; 42 Sup. Ct. 351) where the court took under consideration, among other matters, the value of the property of the street railway company of Galveston. In that case the master in his report submitted in 1919 had concluded that the future price level of commodities and labor would be 33⅓ per cent over the 1913 level and applied that percentage in his determination of value. The company's witness had prophesied that the level would be 60 to 70 per cent above the 1913 prices. The lower court accepted the master's conclusion in this respect, and no error was found therein by the Supreme Court.

The commission's own position with reference to original cost and reproduction as elements in valuation was stated as follows in the Richmond, Fredericksburg, and Potomac Railroad Company case:

> We conclude that both cost of reproduction and original cost must receive consideration in the determination of final value for rate-making purposes. In no case to which our attention has been directed has the Supreme Court of the United States ruled as to the specific weights to be given to these elements. On the contrary, its decisions clearly indicate that they may well vary according to the conditions affecting different railroads. To base values in all cases upon an equal consideration of cost of reproduction and original cost or on any other fixed proportion would be an artificial rule such as was condemned in the *Minnesota Rate Cases*, page 434. "The basis of calculation is the 'fair value of the property' used for the convenience of the public. . . . The ascertainment of that value is not controlled by artificial rules. It is not a matter of formulas, but there must be a reasonable judgment, having its basis in a proper consideration of all relevant facts." The valuation of property must always be largely a matter of judgment and not of formula or precise mathematical computation.
>
> In our findings of the value of the property used by the respondent in the service of transportation during the recapture years we are according such weight to the present cost and original cost of construction as in our judgment is justified by the record. The values found reflect in substantial degree both elements of cost.

The cost of reproduction new of the property, except land, in use by the respondent on December 31, 1920, based on period prices reflecting costs of railroad construction in prior and subsequent years we find to be $35,177,439.

Commissioner Eastman, dissenting in part, stated among other things that he was unable to agree with the conclusions of the majority with respect to what was termed the "value" of the railroad's property "for rate-making purposes." He pointed out that the *St. Louis & O'Fallon Railway Company* was a similar case and that in that case the commission reached certain conclusions with respect to such "values" which in the opinion of the Supreme Court indicated that the commission had "failed to discharge the definite duty imposed by Congress" in Sec. 15a of the Interstate Commerce Act. That section of the law required that in determining values for purposes of recapture, the commission should "give due consideration to all the elements of value recognized by the law of the land for rate-making purposes." "Specifically," said Commissioner Eastman, "our failure, the court held, was that we had not given consideration to the element of value which it termed 'present or reproduction costs.'" The court said that "the elements of value recognized by the law of the land for rate-making purposes," had been pointed out many times, and it quoted with approval the familiar pronouncement in *Smyth* v. *Ames*. Commissioner Eastman contended that this passage had been quoted with approval so often and so recently that it was clear that the court regarded it as a sound and adequate statement of the law. His interpretation of the law affecting valuation, his criticism of the majority report of the commission, and his own suggestions with reference to valuation for rate making may be seen from the following excerpts from his dissenting opinion:

. . . The cases contain no exact or even approximate definition and no description of its general nature or of its particular attributes and characteristics. The result is that there is no definite goal toward which judgment may be directed in weighing the "elements of value recognized by the law of the land for rate-making purposes," in the process of deciding what is "just and right" in each case. This is, I believe, the outstanding difficulty in valuation proceedings as matters now stand.

The majority report herein illustrates the situation. Certain "values" are arrived at, but we are not told *how* they were arrived at or what weights, if any, were given to each of the "elements of value." A description of the process would no doubt be possible, but I question

whether it could be phrased in terms of rational thought. Certainly no attempt is made in that direction. I take it, as an inference from the result, that more weight was given to the reproduction cost of structural property than to its original cost, that land was included at a figure based on the value of adjoining land without giving any weight to original cost, that an allowance for accrued depreciation was deducted, that an allowance for working capital was included, and that some weight may have been given to the fact that the company is a going concern in successful operation. But if this inference be correct, we are not informed as to the why and wherefore of these exercises of judgment. It would not, in short, be impossible or illogical or even inappropriate to substitute "values" very different from those which are actually arrived at, without changing in the least the discussion leading up to the conclusions.

It is, in part at least, this uncertainty as to the nature and definition of the "value" to be ascertained that has made a sorry spectacle of many of the valuation proceedings which have attended public utility regulation in this country in recent years. Often they have been characterized by a riot of prolonged, demoralizing, and more or less disgraceful controversies over violently conflicting claims with "high value" experts on the one side and "low value" experts on the other. Enormous amounts of time and money have been expended with very little satisfaction to any one concerned.

But as the law now stands, unless I have wholly misconstrued the decisions, neither this commission nor any other public regulating authority is yet foreclosed from determining, in the light of such wisdom and experience as it has, what the nature and function of "value for rate-making purposes" or "base value" or "rate base," as it has been variously termed by the court itself, should reasonably be, and by what principles judgment should be governed in deciding the weight, if any, which it is just and right to give each of the "elements of value" which must be considered in arriving at that final figure.

. . . . . .

The central thought underlying the decisions of the Supreme Court of the United States, therefore, if I understand them correctly, is that the Constitution protects the right of a utility to obtain, if possible, an income "adequate under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its duties." This is the ultimate end to be protected. It is the product of two factors, "fair value," or "rate base," and "fair return," but it is plain that there may be considerable variation in these factors without changing the final result, just as six times two and four times three both produce 12. How, then, shall we arrive at these factors which are to produce the end desired?

The answer to that question must reasonably be influenced by practical as well as theoretical considerations. Any one who has had

experience in so-called valuations for rate-making purposes knows how complex, costly, and difficult they are when repeated estimates of current cost of reproduction, current values of land, and current accrued depreciation are necessary. These are amounts which never come to rest but continually fluctuate, often within wide limits.

For a time, costs of reproduction steadily increased. At present they are, and for some time have been, going down. The decrease is due, not only to the changing value of money, but also to improved methods of construction involving the use of mechanical devices. The latter factor just now is probably more important than the other.

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It must be evident that if the public regulation of utilities is to require frequent and repeated ascertainments of a "value" which is to be determined by an exercise of judgment after the consideration of various fluctuating "elements of value" which in themselves necessitate elaborate research and the weighing of much conflicting evidence, then that regulation will be so costly and cumbersome a process and will be so entangled and impeded by the grievous burden of investigation which it must carry that it is likely to fall far short of its purpose.

. . . . . .

In the past, those who advocated original cost or prudent investment as the controlling factor in determining the rate base were regarded in conservative circles as enemies of "property rights" and advocates of "confiscation." The time is rapidly approaching, and to some extent has already arrived, when they will instead be regarded as forces working for the protection of legitimate investment. For the most part the positions taken on this "valuation" question have been wholly opportunistic, regardless of principle, and already the opportunists have begun to shift. Without doubt we shall in the future find many supporters of prudent investment in the ranks of erstwhile devotees of reproduction cost.

And if they do not shift in this way, they will seize the other alternative and urge that the "fair return" must be made high enough to protect outstanding securities and credit, regardless of how low the rate base may sink. All this sustains the thesis that the rate base should be stable and bear as close a relation as is practicable to the basis upon which outstanding securities, so far as they are sound and untainted by bad management, were issued. Then no wide oscillations in "fair return" will be necessary, but it can readily be made to fluctuate to the relatively slight extent that changing credit conditions, affecting chiefly the common stock, may require. . . .

. . . . . .

In theory, therefore, and as a matter of constitutional right, the "value for rate-making purposes" which I would use in applying the *Smyth* v. *Ames* rule in connection with "fair return," would be deter-

mined by adding to the best possible estimate of the reasonable original cost of existing property a fair allowance for working capital and deducting an allowance for depreciation based on the best available evidence as to exhaustion of service capacity. Such a rate base, once determined, could be readily kept up to date, largely by adequate and accurate accounting records and with a minimum of research and investigation. In the case of a company which had been well managed and soundly capitalized in the past, it would have an intimate relation with and afford appropriate protection to outstanding securities. And under such circumstances the "fair return" could be readily adjusted to afford an income amply able to support the credit which utilities under good management must clearly be permitted to enjoy.

Commissioner Mahaffie, dissenting in part, stated that too little weight had been given to the prices currently prevailing as to the value for 1920; that prices of railway construction in 1920 were 220 per cent of the 1914 prices; that in 1922 they had receded to 160 per cent; that estimates on the basis of yearly prices presented by the commission's Bureau of Valuation showed cost of reproduction new on December 31, 1920, as $42,655,395, and on December 31, 1922, as $32,590,533. Yet the majority accepted the figures showing almost no difference in the cost of reproduction new of the property of the carrier as between 1920 and 1922. Commissioner Mahaffie pointed out that the values found had been determined largely from consideration of reproduction cost estimates prepared by the commission's Bureau of Valuation by the use of what were termed "period prices;" that the record also contained estimates based upon spot prices or prices current in the particular period under review; that in the use of period prices to the exclusion of spot prices the commission had placed reliance upon certain decisions of the Supreme Court in utility cases where the inquiry was directed to the determination of service charges or rates to be projected into an indefinite future. This, in Commissioner Mahaffie's opinion, was not analogous to the inquiry which the commission was required to make under the recapture clauses of Sec. 15a of the act where they must deal separately with each of a series of elapsed years. He referred to *McCardle* v. *Indianapolis Co.* (272 U.S. 400, 1926), for example, where the court held that, in determining a "present value," consideration must be given to prices and wages prevailing *at the time* of the investigation.

Concerning the use of so-called "spot prices," Commissioner Mahaffie said:

With spot prices before us we have evidence necessary to determine value upon any theory. In my judgment the majority errs in failing to give consideration to them. . . . Just as the carrier, as to 1920, is entitled to demand that effective consideration be given to the high levels then prevailing, so the public, in 1930, should have the benefit of the decreases that have occurred. Under the principles adopted by the majority a decline in prices can be reflected only very gradually in value.

Commissioner Lewis in a concurring opinion made the following statements concerning the practical problems confronting the Interstate Commerce Commission in making valuations for rate-making:

Some of us who constitute the majority are, in *St. Louis & O'Fallon Ry. Co.*, 124 I.C.C. 3, and also in recommendations made to our principal, the Congress, on record as favoring certain changes in the law. But the changes have not been made and the Supreme Court in its decision in the O'Fallon case declared that we had "failed to discharge the definite duty imposed by Congress" in not applying the "law of the land concerning valuations for rate-making purposes" and said "this mandate must be obeyed." It remanded us to certain decisions of the courts, principal among them being *Smyth* v. *Ames*, 169 U.S. 466. By the final interpreter of the law we are told that in administration of the recapture law we are "not to act as an arbiter in economics" but "as an agency of Congress to apply the law of the land to facts developed of record in matters committed by Congress to our jurisdiction." The Supreme Court said what we are required to find is *value*. We who were of the majority in the O'Fallon decision and also of the majority in disposing of this case may not have changed our minds but we feel constrained to accept and follow the decisions of the Supreme Court. We have, through the many conferences held in the consideration of this case, been diligent and scrupulous, both in searching the facts presented by the record and in endeavoring to comply with the court's interpretation of the law. If the results or ultimate effect, of so doing are unfavorable to any interest involved the responsibility is not ours.

Appraise the arguments of the majority and the minority opinions in the St. Louis & O'Fallon Railway Company case and in this case and determine your theory as to value for rate making.

What would have been the result if railroad rates had been advanced in order to produce a fair rate of return on the increased "present [May, 1929] value" which could legally have been taken as the rate base under the decision of the U. S. Supreme Court in the St. Louis & O'Fallon Railway case?

B. Earning Power as a Factor

80. United Fuel Gas Company and Warfield Natural Gas Company[1]

The weight to be given to the probable future earning power of the natural-gas leaseholds of the United Fuel Gas Company and of the Warfield Natural Gas Company has been involved in a number of cases. One of these was before the West Virginia Commission in 1918, and during a period of 10 years the question was involved in a number of rate cases in both West Virginia and Kentucky before the commissions and also before the courts.[2]

Concerning the case decided by the U. S. Supreme Court on January 2, 1929, attention is here confined merely to the phase of the decision which involved the probable future earning power of natural-gas leaseholds as an element in determining fair value. The record in this case indicated that the United Fuel Gas Company and the Warfield Natural Gas Company, through ownership in fee simple and leases or contracts on a rental or royalty basis, controlled 814,910 acres of land. A part of this area, the so-termed "proven" territory, was being used in production, the remainder being held in reserve as either "probable" or "unfavorable" sources of future production. Their principal items of property consisted of the interest in this acreage, working capital, buildings, machinery, mains, pipes, compressors, and other equipment used in the production and distribution of gas.

The valuation of the entire business in the two states made by the companies as of December 31, 1923, was as follows:

Value Claimed by Companies, 1923

Physical Property	$22,274,274
Gas Lands, Leaseholds, and Rights	36,449,176
General Overhead Charges	6,357,046
Working Capital	990,000
Going-concern Value	8,423,105
	$74,493,601

[1] *United Fuel Gas Co.* v. *Railroad Commission of Kentucky*, 278 U.S. 300; 49 Sup. Ct. 150 (1929); P.U.R. 1929A, 433.

[2] See P.U.R. 1918C, 193; P.U.R. 1920C, 583; P.U.R. 1924A, 357; P.U.R. 1925B 705; 14 F. (2d) 209 (1926); P.U.R. 1927A, 707.

The value found by the District Court for the Eastern District of Kentucky upon the same date was as follows:

VALUE FOUND BY DISTRICT COURT FOR EASTERN DISTRICT OF KENTUCKY, 1923

Physical Property	$22,274,274
Gas Lands, Leases, and Rights (Book Value)	6,732,920
Overheads	4,009,370
Working Capital	999,000
Going-concern Value	3,000,000
	$37,015,564

As will be observed, the variation in these estimates of value was due chiefly to the difference in value ascribed by each to the gas rights and leaseholds.

The companies reached their claimed value by an estimate by experts of the profits to be derived from the sale, in an unregulated market, of the quantity of gas estimated to underlie the proven and probable areas. The court for the Eastern District of Kentucky found that the value of the company's gas field did not exceed its "book cost," which it took to be $6,732,920. This figure, however, included oil-production acreage amounting to $389,591, leaving $6,343,329 as the book value of the entire gas field.

Of the total of 814,910 acres embraced in the gas field, controlled by the companies or their subsidiaries, 41,969 acres were owned in fee. The remainder was controlled by lease or contract. This acreage, although concededly well selected for purposes of economical development and avoidance of loss of gas by drainage, was not in a solid block but in widely scattered acres. Much of it lay adjacent to or was interspersed with gas fields controlled by others.

Leases for fixed periods, and so long after as gas was found in paying quantities, had been obtained by the companies upon payment of small bonuses. The leases varied in their terms, but a typical lease gave the lessee the right to drill for gas for 10 years, with the privilege of renewal at a small fixed annual delay rental, varying from 25 cents to $2 per acre, materially increased in the form of either a fixed rental or a royalty if and when production was established. These leases were customarily renewed from 18 months to a year before expiration, and for renewal an additional bonus was paid.

The actual cost of the companies' gas field on this basis was not shown but, according to the records, appeared to have been sub-

stantially less than the book value assigned to it. The companies stated that these leases, not only singly but in blocks, were sold in the open market, but the Supreme Court pointed out that their market price appeared not to have been established.[1]

The companies did not accept either cost or market value as the basis of value of their gas rights. Instead, they urged that their assembled holdings of gas rights were unique in that they could not be reproduced and that their value depended largely upon their peculiar nature and situation. They rested their claim to a largely enhanced value over book value upon alternative theories supported by two classes of expert testimony.

These experts, on the basis of geological and mining engineering data, especially existing rock pressure of the gas in various pools and the rate of decrease of this pressure with the amount of gas produced, arrived at an estimate of the total volume of gas underlying the proven and probable territory. The results reached by this method were checked by comparison with the actual experience in gas production from selected pools and wells.

As a final outcome of these calculations, it was estimated that there were underlying the 136,384 acres of proven territory and available for use 249,100,000,000 cubic feet of gas, and in the 126,208 acres of probable territory, 414,600,000,000 cubic feet. With respect to the probable territory, there were no production or pressure records to aid the experts in the preparation of their estimates. In calculating the volume of gas in this area they took into consideration the nearest pools in the same geological structure. This method was characterized by the witness using it as "difficult and uncertain" and as "much less trustworthy" than that applied to the proven territory.

These calculations were supplemented by testimony that in Pittsburgh there was an unregulated market for natural gas used for industrial purposes at 35 cents per thousand cubic feet, which would, on an estimated changing schedule of annual production, absorb in 18 years the total estimated reserve of gas in the gas fields of all these companies. At this price, natural gas, it was said, could compete successfully in Pittsburgh for industrial purposes with gas produced from soft coal at the prevailing price of $2.75 a ton at the mine.

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[1] 278 U.S. 300, 314.

After calculating the cost of getting this gas to the market, situated 130 miles from the nearest point on the companies' mains, providing for all construction costs, including the cost of plant and transmission lines, one expert witness estimated that the gas when marketed would pay a fair return upon investment, repay taxes and investment, and leave a balance when discounted, so as to give a present value of $32,458,129.

A second expert witness, taking 30 cents as the market price of gas in Pittsburgh and deducting transportation costs, concluded that the gas in the ground was worth 5 cents per thousand cubic feet and arrived at a higher value, namely, $33,155,421. To this latter estimate he added the present estimated cost of acquiring the 552,319 acres of improbable or unfavorable territory at $5.96 per acre, or $3,293,754, making a total estimated present value of companies' gas fields of $36,449,176. In this connection there was evidence, which appeared to be unchallenged, that the average cost of acquiring unoperated acreage during 1921 to 1923 was 83 cents per acre and that in 1923 the companies acquired 15,184 acres at a cost of 66 cents per acre.

The companies' second class of expert testimony was that of men experienced and interested in the production and marketing of natural gas, who purported to assign to the companies' gas fields what was described in the argument as the "present exchange value or the price which the property would bring if disposed of by a willing seller to a willing buyer." Three such witnesses testified to a present value of the companies' gas fields in amounts varying from $30,000,000 to $35,000,000 and a fourth fixed the value at $45,000,000.

The U. S. Supreme Court pointed out in its decision that these estimates were not based on prevailing prices for gas leases or on actual sales but, as in the case of the geological and engineering experts, upon an estimated or assumed exhaustible supply of gas available to the companies until exhausted, and upon a predicted price for natural gas in unregulated markets through a future period of about 18 years; that common characteristics of both methods of valuation, therefore, were the estimate on uncertain bases of the volume of gas available and of the price at which it might be sold through a long future period.

Concerning the companies' calculations, the U. S. Supreme Court said:

A point considered below and argued here is that gas in the earth is not capable of ownership, but we assume that appellants' leases and contracts give them complete legal power of control over the gas available beneath the surface of the area embraced in the gas field, so far as it may be brought under physical control. We assume also that the gas is now present in substantially the volume indicated and we lay to one side the speculative character of the assumption that the gas in that volume, despite its fugitive character and its possible drainage into other fields not under appellants' control, will remain available for appropriation through the 18 or more years required to exhaust the field.

Waiving these not inconsiderable difficulties in the way of establishing value, we pass to another and more serious difficulty. In both methods of valuation, the value of property used in a business whose rates are regulated is made to depend on an assumed earning capacity and the data relied on to establish assumed earning capacity are themselves essentially speculative—so much so as to form no trustworthy basis for the computation of value.

It is true that a part of appellants' business is not regulated at present, but it does not appear that the ultimate distribution of their product to consumers in other states will be immune from regulation either because of the interstate commerce clause, or for other reasons, and there can be no reasonable assumption that it will be.[1] The unique character of appellants' control over a natural product, limited in amount, asserted here as a basis of value, the obvious necessity of securing franchises or special privileges to enable them to distribute their product to consumers under the conditions assumed, and other circumstances which subject them to regulation in Kentucky and West Virginia, make inadmissible the assumption that the price to consumers would remain unregulated elsewhere.

And in other respects the assumed earning capacity is so wanting in probative force as to require its rejection in the circumstances here disclosed. It rests on a prediction, feebly made, that the estimated amount of gas will be available as required through a period of 18 years; that the natural gas so transported and used as a fuel will command a price of from 30 cents to 35 cents per M.C.F. through that period in a market yet to be established despite the changes wrought by invention and improved business and manufacturing methods; and a further prediction not only of what plant and equipment must be constructed and maintained to effect delivery of the gas for this period to consumers in the city of Pittsburgh but also of the cost through a like period, of the construction, maintenance and operation of that plant and equipment. Such predictions can only be made on the basis of data which are not and cannot be known, and most of which are in the highest degree speculative. Such a process of estimating value is without any known sanction.

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[1] See case entitled Arkansas Valley Natural Gas Company, p. 739.

On the record as made, appellants have failed to present any convincing evidence of value of their gas field which would enable us to assign to it any greater value than that which they appear to have assigned to it on their books. This book value, therefore, may be accepted, not as evidence of the real value of the gas field, but as an assumed value named by the appellants, which, on the evidence presented cannot reasonably be fixed at any higher figure.

To what extent, if at all, should the earning power of a public utility be taken into consideration in determining fair value for rate making?

To what extent should property or plant purchased prior to actual needs enter into determination of fair value for rate making?

C. Significance of Size of Geographical Area on Which Valuation Is Determined

81. Wabash Valley Electric Company[1]

Under the public utility law of Indiana, known as the Shively-Spencer Public Utility Act, patrons of a public utility were given the right to petition the Indiana Public Service Commission either for a reduction of rates or for adequate service. Under this law, 17 individuals in Martinsville petitioned the commission in 1927 for a reduction of the rates of the Wabash Valley Electric Company. Martinsville had at this time approximately 5,000 inhabitants, and electricity was used for the most part by domestic customers. There were few industries which consumed large quantities of power. For a number of years the city was supplied with electricity by a local plant which was later purchased by the Wabash Valley Electric Company.

The 11 counties furnished with electricity by the Wabash Valley Electric Company comprised the greater portion of the Indiana coal fields, and at the time the company began its operations in these counties the coal mines which were then being operated extensively required great quantities of current. Subsequently, however, many coal mines ceased operations, and the use of electricity in this industry materially decreased. At the time the company began operating in these counties, practically all the municipalities were being supplied by local plants, since there were no interconnecting transmission lines. These local plants were owned either by the municipalities themselves or by private corporations. This practice was gradually abandoned, and most of these municipalities were supplied by the Wabash Valley Electric Company. In fact, within these counties, electricity was furnished to approximately 50 municipalities as well as to numerous industrial plants and individuals not within the corporate limits of any municipality.

[1] *Jap Jones et al.* v. *Wabash Valley Electric Co.*, Indiana Public Service Commission (January, 1929) P.U.R. 1929B, 561; and *Wabash Valley Electric Co.* v. *Singleton*, U. S. District Court, Southern District of Indiana, Indianapolis Division, 1 Fed. Supp. 106 (1932) P.U.R. 1932B, 225; 287 U.S. 488; 53 S. Ct. 234 (1933); P.U.R. 1933A, 433.

In order that current might be furnished at a minimum cost, a large generating plant, known as the "Dresser plant," was constructed by the Indiana Electric Corporation. This plant, with a generating capacity of more than 300,000,000 kilowatt-hours per year, was situated on the Wabash River, near the city of Terre Haute, Indiana. The financing of the Dresser plant required the grouping of electric properties throughout the state of Indiana, in order that there might be a sufficiently large market for power to justify its construction. Consequently, local electric utilities throughout Indiana were acquired by affiliated corporations which were to be connected with the Dresser plant. Among the affiliated corporations were the Wabash Valley Electric Company, Attica Electric Company, Colfax Electric Company, Indiana Electric Corporation, Northern Indiana Power Company, Moran Electric Light & Power Company, and the Mulberry Light & Power Company. The current consumed by these affiliated companies, and others not affiliated, aggregated approximately the entire capacity of the Dresser plant. The Central Indiana Power Company owned more than 99 per cent of the stocks, bonds, and other securities of these seven companies. Although these affiliated companies operated separately, they had common officers and management.

Through this arrangement light and power were furnished the city of Martinsville by the Wabash Valley Electric Company, the greater portion of which was obtained from the Dresser plant.

The Attica Electric Company, incorporated in 1924, was a consolidation of the Attica Electric & Power Company, the Newtown Electric Company, and the Hillsboro Electric Company. It supplied electricity to about 20 communities in Indiana, with a total population of about 10,000.

The Northern Indiana Power Company, incorporated in 1922, was a consolidation of seven or eight public utility companies. At the time this case came before the Indiana Public Service Commission this company was furnishing electric energy to 102 cities and towns in northern Indiana, and to an interurban railway system of about 63 miles between Frankfort and Marion, Indiana. The estimated population served was 114,560 and the electric customers numbered 33,937.[1]

It was the contention of the Wabash Valley Electric Company that in making a valuation for rate making it would not be equita-

[1] Poor's *Public Utility Volume*, 1930, p. 1020.

ble to confine it merely to the physical property used and useful in serving Martinsville, but that *all* the company's property should be valued in order to determine whether rates should be changed in that town. In other words, the company believed that the fair value of all properties in the Wabash Valley Electric system should be determined and an allocation made to Martinsville of its share of that total value.

The company was operating under an indeterminate permit issued by the state of Indiana, as provided by the Shively-Spencer Public Utility Act. The Indiana Public Service Commission received all its authority from this same law. In commenting on the law, the commission placed much emphasis upon the fact that special provision had been made for participation of the municipality in utility regulation.

The law required, among other things, that the commission should investigate rates, practices, and alleged discrimination upon petition or complaint of any mercantile, agricultural, manufacturing society, or by any body politic or municipal organization or by 10 patrons, firms, corporations, or associations. The law forbade the commission to issue without a public hearing a permit authorizing the operation of "any public utility *in any municipality* where there was in operation a public utility engaged in similar service under a license, franchise, or permit."

The commission believed that the contention of the Wabash Valley Electric Company that there should be a valuation of all the property in its entire system in order to determine equitable rates in any one community was so impracticable as to be prohibitive; that one class of patrons in a local community could have, and often would have, a just complaint which they would better endure than to undertake to secure relief under the theory proposed by the company; that if all the property of the company "used and useful," directly or indirectly, were to be included to determine fair rates for one city in the group, it would not require a severe stretch of the imagination to include also the electric properties from which the company purchased current.

The commission pointed out that excessive costs could not be avoided if the properties serving all the communities served by the Wabash Valley Electric Company must be considered as a whole and allocated to determine a fair rate for service rendered by the distribution system and by local management in a single com-

munity. It did not appear reasonable to the commission that a complaint against rates by Martinsville should set in motion machinery which would directly affect every consumer in the 50 or 60 other communities which the company served. The commission doubted that there could be a reasonable classification of the cities or towns as regards the rates paid for service; that on the theory advocated by the company, every city and village being a component part of the whole structure, would be entitled to the same treatment; that notwithstanding the fact that it might cost much more to serve some towns than others, all in fairness should join in carrying the burdens imposed by system ownership; that on such a theory the hamlet would take the same rate as the city and, irrespective of cost to serve, would share equally in the blessings or burdens, as the case might be. As a practical question, the commission could not understand how, under the theory proposed by the company, there could be a separate determination of a rate in any city without a complete adjustment for all the communities in the system.

It was the opinion of the commission that the legislature in passing the Shively-Spencer Act did not intend to build up statewide utilities so large as to make it impossible to have any check on them, but that it had intended to formulate "a law which would be fair to citizens, municipalities and utilities alike."

Concerning the method by which equitable rates for Martinsville could be determined, the commission made the following statements:

> Should the entire Wabash Valley Electric Company be appraised, the income calculated and fair return on all the property (both general and local) calculated, for the purpose of allocating to Martinsville its proportion of the physical property, its share in the income and its obligation in rendering its share of fair return? Or, should the total energy generated, purchased and sold be allocated upon the basis of the amount of energy delivered to Martinsville, said delivery of energy to include operating expense, taxes, fair return, etc., upon the generating system and property used and useful in delivery? The former method would bring the consumers at Martinsville face to face with an insurmountable proposition in a rate case. The patrons in any community are authorized by the Indiana law to petition for regulation of rates and service. The patrons of any single community in the Wabash Valley system would be prohibited (by the great expense) from undertaking a valuation of all the property of the system. If this valuation were undertaken by this commission, the expense would

be an excessive burden upon any single community and would, if allocated among all the communities served, be an expense to the other communities against which (in equity) they would have a right to rebel. In this connection could this commission, without notice to all patrons of the utility, under the Constitution of both state and nation, "take property without due process of law" by increasing rates or apportioning costs in a hearing to which they were not parties?

The quantity of energy delivered to the gateways of the several communities is ascertainable. The cost of same, including taxes, return, etc., is ascertainable. The cost to serve each community is, therefore, ascertainable. The commission believes that an impracticable method should not be employed when a convenient and fair method is available. Therefore, the commission finds that the cost of current delivered at the gateways should be the method used in calculating the cost of service to Martinsville in the instant case and the terms of the order in this cause will be based upon such finding.

. . . . . .

With respect to the income account, there is a sharp difference of opinion between petitioner and the respondents as to the power cost properly assessable against the consumers at Martinsville. The respondents assert a power cost of $59,037.10, and the petitioners that that power cost should be entered in the income account at $30,469.50. This difference is a result of different methods of arriving at the unit power cost.

Under the respondents' methods, the sum of approximately $59,000 is arrived at by multiplying the number of kilowatt hours used in Martinsville for the twelve months' period under consideration by a unit cost of $.027 plus per kilowatt hour. The total power cost, according to the petitioners, is arrived at by multiplying that same number of kilowatt hours by a unit cost of $.0139 plus. The difference between these calculations of power costs is so great that, obviously, the method of arriving at these unit costs is most important.

During the year ending July 31, 1927, the Wabash Valley Electric Company purchased and generated a total of 57,549,193 kilowatt-hours. In that same period it sold a total of 51,457,770 kilowatt-hours. The difference between those two figures was accounted for by a line and transmission loss. In other words, during the year there was actually sold by the Wabash Valley Electric Company a little over 51,000,000 kilowatt-hours at a cost, including power cost, operating expenses and taxes, of $719,175.91, or at a unit cost of $.0139 plus per kilowatt-hour sold.

All of this electrical energy was sold out of the interconnected transmission system or pool of power known as the Wabash Valley Electric Company. Of the total kilowatt-hours sold, 21,335,114 kilowatt-hours, or more than two-fifths of the total output, was sold to the Attica Electric Company and the Northern Indiana Power Company, and 31,122,656 kilowatt-hours were sold to the so-called "gateways" of the Wabash

Valley Electric Company, including Martinsville. The Wabash Valley, therefore, sold two-fifths of its total kilowatt-hours in that year to allied companies, and three-fifths to the so-called "gateways" of the company, including Martinsville, at an average sale price per kilowatt-hour of $.0139 plus. It would have been expected that, inasmuch as all the electrical energy comes from the same pool of power, the price to Martinsville for that power would be the same as the price to the Attica Electric Company, that is $.0139 plus per kilowatt-hour. This is the method which the petitioners used in arriving at that power cost.

[The] treasurer of the respondent company shows that . . . the Wabash Valley Electric Company sold electrical energy to the two allied Insull Companies at a cost of $.0125 per kilowatt-hour, and sold electrical energy out of the same pool of power to Martinsville for $.027 plus per kilowatt-hour.

Under the respondent's method of calculation, electrical energy from a common pool was sold to allied utilities at less than the actual cost to the Wabash Valley Electric Company (selling company) and was sold to Martinsville and other towns in the system at substantially double the cost.

In calculating the sale price of electrical energy the Wabash Valley Electric Company charged against the so-called "gateways," including Martinsville, all of the depreciation and return that the Wabash Valley Electric Company was entitled to earn. Respondent did not charge any of that depreciation and return against the two allied utilities, and also did not charge anything to meet operating cost and power cost. This was aside from the depreciation and return. In other words, under the respondent's method of allocating its cost, the various towns in the system, including Martinsville, which purchased only three-fifths of the total output of the Wabash Valley Electric Company, paid not only for the depreciation and return charged on the three-fifths of the property devoted to its use, but did pay the depreciation and return charged on the entire five-fifths of the property, thus allowing the two allied utilities to escape without paying any depreciation or return whatsoever. Not only were the towns of the system, such as Martinsville, penalized by paying the depreciation and return on the entire property, but were also penalized by paying some of the actual out-of-pocket power cost under the respondent's method of calculation.

. . . . . .

The commission believes, therefore, that the unit cost of power properly assessable against the city of Martinsville should be $.0139 plus, to which should be added fair return on the property used and useful to generate such current and deliver it to Martinsville.

. . . The fair value of the property used and useful for serving the petitioners herein is $87,000, including going concern value and working capital, as of November 30, 1927.

. . . . . .

The distribution system at Martinsville should be considered separately from the power system and the general system of distribution of respondent in this cause, both as a matter of convenience and accuracy of calculation, and to preserve to the patrons of the several communities the rights intended to be preserved for them by the Shively-Spencer Public Utility Act, amendments thereto and modifications thereof.

. . . . . .

The fair rate of charge, by the general system of respondent to the city of Martinsville, for electrical energy furnished at the "gateway" of said city for service therein, is $.0172 per kilowatt-hour which charge includes production cost, depreciation, and return.

. . . . . .

The price per kilowatt-hour charged to Martinsville for energy furnished at the "gateway" should not be more than Martinsville's fair and equal proportion per kilowatt-hour for all energy sold by the company's general system to all customers, including allied public utilities to which energy is sold.

. . . . . .

Energy sold by respondent to other public utilities should be sold to them at no less price than is charged for energy furnished by said respondent to Martinsville at the "gateway."

. . . . . .

The commission finds that the schedule of rates and charges which it prescribed will be adequate to meet the requirements of the company for rendering service to Martinsville and to yield a 7% return on the fair value of the company's property.

The company appealed from this decision to the U. S. District Court. That court upheld the commission's contention that the Indiana law required that valuation of utility property for rate making purposes should be made on a municipal rather than on a system-wide basis.[1] The U. S. District Court pointed out that while the Indiana Supreme Court had not passed upon the law, the Wisconsin Supreme Court had passed upon a similar law in Wisconsin and had held that rates in that state should be determined on a municipal basis.[2] While the court found that the commission's valuation of the property used and useful in rendering service to Martinsville had been somewhat too low, the rates

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[1] See note 1, p. 534.

[2] See case entitled *Eau Claire* v. *Railroad Commission*, p. 605. Several years before this Federal court decision, the Wisconsin legislature had amended the law giving the commission the power to make rates on a regional basis.

allowed by the commission were found to be more than ample to yield the company a fair return, even upon the somewhat higher valuation approved by the court.

The company appealed the case to the United States Supreme Court. That court held that the Indiana law did not violate any constitutional right.[1] After winning the victory in the Supreme Court the state passed a law in 1933 which empowered the commission in its discretion to approve the system-wide method of valuation.[2]

Should valuation be determined on a municipal, regional, or state-wide basis? Should such bases be fixed by statute?

What economic considerations, if any, justify discrimination in rates to wholesale power consumers?

Is the rate discrimination indicated in this case justified?

See the case entitled Georgia Power Company (A).

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[1] 287 U.S. 488; 53 S. Ct. 234 (1933); P.U.R. 1933A, 433.

[2] 10 Burns Ann. Ind. Stat., 1933, 12678; Indiana, *Acts of 1933*, p. 930.

2. Abandonment of Rule of Rate Making in Transportation Act of 1920

82. Interstate Commerce Commission (A)[1]

Section 15a of the Transportation Act of 1920 necessitated an evaluation and classification of all railroad property for rate making purposes; Sec. 19a was incorporated in the act for the purpose of indicating how such evaluations were to be made.[2] As amended in 1922, Sec. 19a provided for experts to conduct investigations and to make detailed reports on the value of each piece of property, other than land, used by each railroad for transportation purposes. Such reports were to include, among other things, the original cost to date of such property, the cost of reproduction new, the cost of reproduction less depreciation, and an analysis of the methods by which these several costs were obtained, together with reasons for differences in results, if any. Such reports were to state separately the original cost of all real property owned or used for common-carrier purposes, as well as the current value of such property. The original cost and current value of property not used for common-carrier purposes were also to be reported, together with the corporate histories and records of security financing of all common carriers and their predecessors. A complete review of each carrier's earnings and expenditures was to be incorporated in these reports. The law provided further that not only was the total value of each common carrier's property to be so ascertained, but an evaluation of its property in each state or territory was to be separately reported.

After the original evaluations of the carriers' properties had been ascertained, the commission was directed "in like manner" to keep itself informed of all extensions and improvements, or other changes, in the condition and value of all railroad property. As a result of such changes the commission was to revise and cor-

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[1] *U. S. Code*, Title 49, Sec. 19a; June 7, 1922; Chap. 210, Sec. 1, 2, 42 Stat. 624.

[2] The details of Sec. 15a are discussed in the case entitled Interstate Commerce Commission (C), see p. 627.

rect its valuations "from time to time." All such valuations were to be tentative for a period of 30 days after notice of such valuations had been given. If no protests were filed within this specified period, these valuations became final. If, however, protests were filed, the commission was required to consider all the material on which such protests were based. If no changes were made, the original valuation became final. All final valuations were to be considered *prima facie* evidence of the value of all railroad property in all future proceedings under this act.

The provisions of Sec. 19a were in effect a restatement of the major provisions of the Valuation Act of 1913.[1] They served to crystallize in the form of a law the opinions of Congress regarding the considerations for determining value for rate making purposes which had been voiced by the courts from the time of the famous *Smyth* v. *Ames* decision in 1898.[2] The law failed to specify just what weight was to be accorded the different factors which it prescribed for the consideration of the Interstate Commerce Commission. In this respect the rulings of the courts had also been deficient. The Interstate Commerce Commission's rulings under Sec. 19a were subjected to much litigation because valuations made under the 1920 law were used as a basis in recapturing excess earnings and in initiating new rate schedules.[3]

In response to an inquiry sent to the Interstate Commerce Commission by the Senate Committee on Interstate and Foreign Commerce, the Interstate Commerce Commission, in a letter in 1930, suggested that Congress make a declaration of policy concerning the methods to be used in evaluating railroad property and specify how the rate bases, which were to be used for rate making and recapture purposes, should be ascertained by the commission.[4] The commission recommended that such legislation be drawn up along the lines pursued by it in the valuation of the St. Louis & O'Fallon Railway Company. It outlined the procedure as follows:

Up-to-date valuations at any time would be determined by taking the cost of reproduction new at the 1914 unit prices of the property

[1] 37 Stat. 701.
[2] *Smyth* v. *Ames*, 169 U.S. 466 (1898).
[3] This aspect of the law was discussed in St. Louis & O'Fallon Railway Company and Richmond, Fredericksburg, and Potomac Railroad Company, pp. 511 and 520.
[4] Letter (January 20, 1930) of the Interstate Commerce Commission (mimeographed) to the Senate Committee on Interstate and Foreign Commerce (26 pages).

existing on the original valuation date, plus the then value of the lands, adding or subtracting the subsequent net increase or decrease in the property investment account as shown by the accounts when correctly kept, adding further a proper allowance for working capital, and deducting the balance standing in the depreciation reserve.[1]

The commission pointed out that this proposed procedure modified its method in the treatment of the St. Louis & O'Fallon Railway Company case in that it eliminated all increment in land values subsequent to the original valuation date and any allowance for other elements of value. On the other hand, the commission believed that the proposed plan would be more favorable to the carriers in that it would limit the deduction for depreciation to the amount which had been provided for by actual charges to operating expense. It believed that in many instances these modifications would offset each other.

On January 6, 1930, Senator Howell introduced in the Senate a bill amending certain provisions of the Transportation Act. This bill provided, among other things, for the evaluation of railroad properties along the lines advocated by the commission.[2] It provided that for those properties which had not been evaluated under Sec. 19a prior to January 1, 1922, the actual cost less the depreciation reserve, as recorded, be taken as the rate base.

In the case of carriers inventoried before January 1, 1922, the cost of reproduction new as of the original valuation date plus the value of the land owned by the carrier, as determined at such date, plus or minus all additions or retirements at recorded cost since that date, less depreciation, was to be taken as the rate base.[3] In both cases, a reasonable amount was to be granted for working capital.

In a letter in May, 1930, to the Committee on Interstate and Foreign Commerce, the commission approved of the legislation incorporating the foregoing features of the proposed amendment.[4] Commissioner Woodlock, however, dissented from the opinion of

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[1] *Ibid.*, p. 21.

[2] This bill was known as S.4005.

[3] The cost of reproduction in such cases was computed at 1914 unit prices.

[4] Letter (May 17, 1930) of the Interstate Commerce Commission (mimeographed) to the Senate Committee on Interstate and Foreign Commerce. The majority view of the commission is given in pp. 1–32. Commissioner Woodlock's opinion is given in an appended statement, pp. 1–4. In an Appendix A (pp. 1–6) the commission's proposals were presented so as to show by underlining the new provisions not in the existing law, and also to show the provisions of the existing law which it proposed should be eliminated.

the majority. He held that the bill attempted to overrule by legislative action the Constitution of the United States as interpreted by the Supreme Court. Because the rate of return was not adjusted to compensate for the reduction in the rate base, which deprived the carriers of the enhancement in values of a large part of their properties, he believed that the bill would deprive the carriers of property without due process of law. Commissioner Woodlock expressed another serious objection, as follows:

> The bill would penalize carriers whose valuation dates are subsequent to 1914 and do so in proportion to the length of time elapsed between 1914 and the valuation date. A carrier, for example, whose valuation date is 1914 would get the advantage of the enhanced prices reflected in its additions to property subsequent to that date, whereas a carrier whose valuation date is 1919 would lose the advantage of such enhanced prices between 1914 and 1919. A contrary discrimination would occur in the case of land values. A carrier whose valuation date was 1914 would receive 1914 values for its lands, whereas a carrier valued in 1919 would have its lands valued upon a much higher basis. . . . There is no assurance that these discriminations will counterbalance each other.

In another letter to the Senate Committee on Interstate and Foreign Commerce, in January, 1931, the Interstate Commerce Commission again expressed the view that the amendment would, if enacted, meet the practical necessities of Sec. 15a, whereas the procedure prescribed in Sec. 19a was so involved that the process of valuation would always be far in arrears of current conditions.[1] However, the proposed legislation would not overcome the objection that it would keep net railway operating incomes at approximately a constant level without regard to the general industrial conditions which are so quickly and sharply reflected in railroad traffic. The commission pointed out that if it were required so to adjust rates as to yield a "fair return" on some predetermined rate base, it would be obliged to increase rates in periods of depression in order to make up for the decreased volume of traffic, and to order rate decreases in times of prosperity in order to keep the carrier's income down to a fair return in times of heavy traffic. It held that such a procedure would retard recovery from depres-

[1] Letter (January 21, 1931) of the Interstate Commerce Commission (mimeographed) to the Senate Committee on Interstate and Foreign Commerce (25 pages). Separate expressions were appended by Commissioner Lewis, who concurred in the letter (pp. 1–10), and by Commissioner Porter, who concurred in part (pp. 1–2).

sions and would result in irreparable damage to the railroads, and, ultimately, to the public. Consequently, the commission suggested that the law should provide some sort of barometer of earnings by which the commission might be guided, but that the commission should have more leeway in following this guide, and in giving weight to general economic considerations, than was contemplated by Sec. 15a.

The criticism that the proposed legislation would substitute a rate base for "fair value" the commission believed to be founded upon a basic misconception. It agreed that the determination of "value" in the sense in which that word is used by economists is a judicial process. The fixing of rates, however, it deemed a legislative function, and hence held that Congress should indicate as explicitly as possible the rule which the commission should follow in exercising its power. Value for rate-making purposes and the economist's conception of value were, in the opinion of the commission, entirely different. The economist's concept must of necessity be based largely upon earning power, or value in exchange. Such a concept could not possibly be applied to the determination of a rate base. The fair value referred to in *Smyth* v. *Ames* was the value for rate-making purposes, but the court failed to define clearly how it should be determined. It merely listed certain elements for consideration. The one important end in valuation cases, however, is that the product of fair value and fair return be such as to insure the financial soundness of the utility and enable it, under efficient and economical management, to maintain and support the credit necessary for the proper discharge of the public duties of the utility. If such an end were achieved, there could not be confiscation, and hence, if this could be accomplished by specifying a definite procedure for determining value for rate-making purposes, such procedure could not be deemed unconstitutional.

In urging the adoption of the plan proposed in the bill, as modified by the amendment suggested, the commission stated that, in its opinion, if the recapture provisions were eliminated the constitutionality of the proposed legislation would probably not be contested in the courts.[1]

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[1] The commission's proposals for the repeal of the recapture or excess-earnings clause are presented in the case entitled Interstate Commerce Commission (C), p. 627.

Sections 15 and 19a of the Transportation Act were amended in 1933.[1] Changes of interest in this connection in Sec. 15a were as follows:

In the exercise of its power to prescribe just and reasonable rates the Commission shall give due consideration, among other factors, to the effect of rates on the movement of traffic; to the need, in the public interest, of adequate and efficient railway transportation service at the lowest cost consistent with the furnishing of such service; and to the need of revenues sufficient to enable the carriers, under honest, economical, and efficient management, to provide such service.

The parts of Sec. 19 which are of interest here were:

That the Commission shall, as hereinafter provided, investigate, ascertain, and report the value of all the property owned or used by every common carrier subject to the provisions of this Act. . . . The Commission shall, subject to the exception hereinbefore provided for in the case of electric railways make an inventory which shall list the property of every common carrier subject to the provisions of this Act in detail, and show the value thereof as hereinafter provided, and shall classify the physical property, as nearly as practicable, in conformity with the classification of expenditures for road and equipment, as prescribed by the Interstate Commerce Commission.

. . . . . .

Upon completion of the original valuations herein provided for, the Commission shall thereafter keep itself informed of all new construction, extensions, improvements, retirements, or other changes in the condition, quantity, use, and classification of the property of all common carriers as to which original valuations have been made, and of the cost of all additions and betterments thereto and of all changes in the investment therein, and may keep itself informed of current changes in costs and values of railroad properties, in order that it may have available at all times the information deemed by it to be necessary to enable it to revise and correct its previous inventories, classifications, and values of the properties; *and when deemed necessary, may revise, correct, and supplement any of its inventories and valuations. . . .*[2]

The Valuation Act of 1913, as amended in 1920, had imposed upon the commission the obligation to keep its valuations up to date.

What economic and business considerations are involved in the substitution of the Interstate Commerce Commission's proposals for the Supreme Court rule of value for rate making?

[1] 148 Stat. 211.
[2] Italics supplied.

3. Depreciation of Value for Rate Making

A. Determination of Policies Concerning Accounting for Depreciation

83. Interstate Commerce Commission (B)

On September 9, 1931, the Interstate Commerce Commission made public an order requiring all steam railroads and telephone companies to institute a complete system of depreciation accounting. The direct effect of this order on the railroads was to require them after January 1, 1933, to include in their monthly and annual operating expenses an estimate of the current depreciation of their property units, at the same time crediting such amounts to a reserve.[1] For a long time previous to this order the railroads had been charging the amount of loss involved in the retirement of any unit of property *at the time* of its retirement. The telephone companies, on the other hand, had instituted depreciation accounting many years previous, and were, therefore, little affected by the commission's order.

In explaining the meaning of the proposed statute, the commission said:

> Most property units used by a railroad or telephone company are retired from time to time for various reasons. Units so retired may be replaced in kind or by an improved substitute or not at all. It is conceded that the loss involved in such retirements is an expense of operation. Broadly speaking, there are three methods of accounting for such loss. It may be charged in bulk at the time of the retirement of the unit; or it may be anticipated and spread, as nearly as may be, over the service life of the unit by periodical charges usually annual or monthly; or it may be spread by periodical charges over a period subsequent to the retirement. We shall term these methods respectively retirement accounting, depreciation accounting, and future accounting.[2]

Under this definition the railroads had been using retirement accounting. When the commission proposed to require them to

[1] Depreciation Charges of Telephone Companies; Depreciation Charges of Steam Railroad Companies, 177 I.C.C. 351 (1931).

[2] *Ibid.*, pp. 358, 359. For the commission's order on depreciation in 1926, see 118 I.C.C. 295.

substitute depreciation accounting, they contended that the Transportation Act of 1920 did not authorize the Interstate Commerce Commission to require the railroads to alter their accounting policies, but that it merely authorized the commission, in the event the carriers elected to exercise their option of employing depreciation accounting, to prescribe the classes of property and the percentage rates chargeable to each class for depreciation. They contended, further, that before the passage of the Transportation Act, the commission had no power to force the carriers to adopt depreciation accounting, and intimated that if Sec. 20 of that act conferred this power on the commission, then it was unconstitutional, since it gave the commission managerial powers over their properties.

In answer to the railroads' contention, the commission recalled that the original act to regulate commerce, enacted in 1887, gave it the power to require from the carriers annual reports containing certain specified financial and other information, and also provided that:

> [The] Commission may, within its discretion, for the purposes of this Act, prescribe (if, in the opinion of the commission, it is practicable to prescribe such uniformity and methods of keeping accounts) a period of time within which all common carriers, subject to the provisions of this Act shall have, as near as may be, a uniform system of accounts, and the manner in which such accounts shall be kept.[1]

Under the provisions of this law, the commission required all the carriers to submit annual, standardized reports. In addition, the commission was empowered to demand specific information whenever it was so desired. The law, however, failed to provide for any authority to enforce these orders except through the means of equity proceedings in the courts. As a result, vital information was frequently withheld. The Lake Shore Railroad, for example, which had for many years charged improvements to operating expenses, positively declined to state what portion of those improvements were permanent additions to the property, properly chargeable to capital account, and what portion were in the nature of renewals and repairs. The case was finally taken to the Supreme Court of the U. S., which ruled that the commission had no authority, under the law of 1887, to compel the furnishing of

[1] *Ibid.*, p. 359.

such information as it sought to obtain from the Lake Shore road.[1]

In 1906 the law was strengthened by a provision which made it unlawful for the carriers to "keep any other accounts, records or memoranda than those prescribed or approved by the commission."[2] In pursuance of the provisions of this law, the commission promulgated an order, effective on July 1, 1907, which required that depreciation accounting be adopted for equipment. Finally, in 1920, Congress adopted an amendment to the Transportation Act, inserting the following provision in Sec. 20 (5):

> The commission shall, as soon as practicable, prescribe for carriers subject to this Act, the classes of property for which depreciation charges may properly be included under operating expenses, and the percentages of depreciation which shall be charged with respect to each of such classes of property, classifying the carriers as it may deem proper for this purpose. The commission may, when it deems necessary, modify the classes and percentages so prescribed. The carriers, subject to this Act, shall not charge to operating expenses any depreciation charges on classes of property other than those prescribed by the commission or charge with respect to any class of property a percentage of depreciation other than that prescribed therefor by the commission. No such carrier shall, in any case, include in any form under its operating or other expenses any depreciation or other charge or expenditure included elsewhere as a depreciation charge or otherwise under its operating or other expenses.[3]

On this legal background the commission based its right in 1926 and in 1931 to require the carriers to alter their depreciation policies in compliance with its orders.

The railroads maintained, aside from the legality of the proceeding, that it had never been their practice and that it was not practicable to accrue depreciation upon improvements of ways and structures. They admitted that depreciation was accrued on equipment, but held that the practice had not been and should not be extended beyond what was already being done. They claimed that it was impossible to fix an amount for depreciation on ties, rails, etc., and that any attempt to do so would be entirely arbitrary, as the amount of the depreciation of an individual tie or rail varied with the structure and with its use. They argued

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[1] 197 U.S. 536 (1905).
[2] *U.S. Code*, Title 49, Sec. 1 (1–9), June 29, 1906; Chap. 3591, Sec. 1, 34 Stat. 584.
[3] *Ibid.*, Sec. 20 (5), February 28, 1920; Chap. 91, Sec. 435, 41 Stat. 493.

further that the constant input of new rails, new ties, or new structures kept the ways and structures in an undepreciated condition, and that since maintenance and replacements were included as a part of the operating expenses, their present method of accounting was entirely satisfactory and could not possibly be misleading to an investor in their securities.

The commission, however, was not swayed by these arguments. In promulgating its order, it stated that the determination of an adequate and reasonable depreciation allowance could not be left to the discretion of the carriers if the public interest were to be properly protected. It held that under such circumstances there would be no uniformity or consistency in the results. The danger would always exist that discretion would be swayed by the financial situation of each particular carrier.

In its analysis of the railroads' contention that the depreciation on ties, rails, etc., could not possibly be accurately determined, the commission said in part:

> Under depreciation accounting, the loss caused by the retirement of a property unit is charged to operating expense in periodical instalments over its service life or, to state it more accurately, over the average service life of units of the same class. Under retirement accounting, this loss is charged in bulk in the year when the retirement occurs. The total charge in either event should be the same. Of course, depreciation accounting involves certain estimates which may prove to be wrong one way or the other, but for the purposes of this particular discussion, such possible errors may be disregarded.
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> The opponents of depreciation accounting often contend that the retirement of units of a large composite property tend to equalize, that is, to become the same in amount from year to year. Proof of this is lacking, and there is much evidence the other way. The fact is . . . that one of the admitted reasons why the railroads object to depreciation accounting is to avoid an equalization of retirement expenses. They wish opportunity when business is poor to postpone or defer retirements until it is good. Quite apart from fluctuations so caused, it hardly needs proof that there will be greater need for retirements in some years than in others. Under retirement accounting, therefore, charges to operating expense on account of retirements tend to oscillate within comparatively wide limits. The smaller the company also the wider these limits are likely to be. On the other hand, the charges under depreciation accounting are relatively stable. It follows that year by year the difference between the charges under the two methods will vary considerably.
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> Disregarding such fluctuations and considering average results, it appears that ordinarily the annual charges will be larger under depreci-

ation accounting. The chief reason is that normally railroads and utilities in this country are in a state of growth. Under retirement accounting, the current charges to operating expense are on account of units installed in the past, perhaps many years ago, when the company was smaller. Under depreciation accounting, the current charges are on account of the existing and expanding property. And the difference in charges caused by this fact may be accentuated when the charges are based on original cost, if the general level of prices has risen.

. . . . . .

If it were safe to assume that business will continue to expand and never contract, and that need for retirements will not develop apace, retirement accounting might have no very adverse average results, although it is always subject to the threat that the burden upon some particular year may be very heavy and disproportionate, but these are unwarranted and dangerous assumptions. Doubtless, the country will continue to grow in population and wealth, but it does not follow that the business of any particular industry will continue to expand. This is forcefully illustrated by the present situation of the electric railways and by the passenger business of the steam railroads. Competitive means of transportation are developing also which may have similar effects upon the freight traffic of the steam lines, nor can it be known that mechanical inventions and like developments in the art will not create a need for retirements at an accelerated rate. Obviously, a company which is charging off loss on account of depreciation as it accrues can face the future with more equanimity than a company which postpones such charges until the loss is fully realized.[1]

The railroads saw in the commission's order a scheme for deducting between $4,000,000,000 and $6,000,000,000 from their property investment accounts and valuations to represent past depreciation. They had expected to provide for a large part of such depreciation under the existing accounting rules by charges to operating expenses in the future. They claimed that the commission's order would deprive them of an opportunity to reimburse themselves for what the commission itself conceded to be an operating expense, since the depreciation which had taken place, but under the retirement system of accounting had not been acknowledged on their books, would be deducted from their valuations and thus only the depreciated value of such items would be chargeable to operating expense upon their retirement, rather than their entire original cost. They also anticipated an increase in their operating expenses for a while to represent advance

[1] Commission's orders, *supra*, p. 395.

estimates of property to be retired in the future, with no assurance that the commission would find the amount important enough to justify higher freight rates and with no certainty that the estimates would be adequate for the purpose.

Furthermore, the carriers urged that, if depreciation accounting were to be forced upon them, the depreciation base should not be the original cost of the units, but rather the cost of replacing them in kind. They cited numerous Supreme Court decisions which required recognition of reproduction cost in ascertaining a rate base, and argued that if depreciation accounting were to be forced upon them, the depreciation base should be founded upon the reproduction rather than upon the historical cost of their properties.

The commission, however, would not agree with this view. It stated that such a system would involve so much instability in the carriers' accounts that it would not be acceptable to the railroads or to anyone else. It pointed out that in a period of falling prices the basic valuations might have to be written down to such an extent under this so-called "present-value" system as to prevent the declaration of dividends, even though operating revenues might have been sufficient to justify their payment. The commission maintained that the proper principle to be followed was illustrated by the fact that the cost of coal for the operation of a railroad is the cost of the coal actually consumed rather than the cost of the coal purchased to replace it.

The commission stated that the decision of the U. S. Supreme Court in the *United Railways* v. *West* was not clear in regard to the question whether or not replacement value or original value should be used in charging off depreciation.[1] In that case the Supreme Court had quoted with approval the following statement of the Supreme Court of Michigan:

> If the rate base is present fair value, then the depreciation base as to depreciable property is the same thing.

The commission, however, pointed out that the court had added:

> This naturally calls for expenditures equal to the cost of the worn-out equipment at the time of replacement; and this, for all practical purposes, means present value. It is the settled rule of this Court

[1] 280 U.S. 234 (1930).

that the rate base is present value and it would be wholly illogical to adopt a different rule for depreciation.

The commission interpreted the statement that "cost of the worn-out equipment at the time of replacement . . . for all practical purposes means present value" to be applicable to the cost of replacing the old equipment with the same kind of new equipment. It claimed that the court had never yet held that the present value to be used as the rate base was wholly determined by replacement cost.

The telephone companies joined the railroads in their contention that the value of the depreciation reserve at any time should not be deducted from their plant and investment accounts in order to arrive at the valuation base for rate-making purposes. They contended that the valuation base should be arrived at by deducting only the observed depreciation and not the total depreciation reserve from the undepreciated valuation base.

The commission, however, took issue with this contention. It accepted the definition that depreciation is the

> . . . loss in service value not restored by current maintenance and incurred in connection with the consumption or prospective retirement of property in the course of service from causes against which the carrier is not protected by insurance which are known to be in current operation and whose effect can be forecast with a reasonable approach to accuracy.

The commission pointed out that this definition included not only wear and tear, but also such factors as obsolescence and inadequacy. In the case of telephone companies, especially, inadequacy was probably the greatest of all causes of depreciation, in the commission's opinion, and yet this factor played little or no part in observed depreciation. In this connection, the commission said in part:

> It is important to appreciate the distinction between service efficiency and service capacity. Every piece of property used by a railroad or telephone company has a certain capacity for service. It may be unlimited, as in the case of land, or it may be limited to a period of time, as in the case of ties or rails or telephone apparatus. Loss in service capacity causes depreciation in value, but may not, and usually does not, in itself cause loss in service efficiency.
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> A classic and simple illustration is that of the lead pencil which continues to write efficiently, although much of it may have been used up. A telephone switchboard which is retired because of inadequacy

or a railroad locomotive which is retired because of obsolescence may easily be kept in condition so that it will perform with 100% efficiency, on the day before retirement, the work which it was designed to perform. . . . Inspection is helpful, but it will fall far short of giving the best information on this point.

. . . . . .

The railroads attempt to distinguish between what they term "theoretical" depreciation based on a study of service lives and "actual" depreciation based on observation of the property. They have so often found it necessary to retire property because it was inadequate or obsolete that they ought by this time to know that depreciation from such causes is not a theory, but a condition by which they are constantly confronted. They say that the "determination of depreciation in valuation must be ascertained as a fact by observation, or in other words, by looking at the property and not at the books of accounts." This idea seems to be that facts may be gleaned by merely looking at things, but not by study and analysis of recorded statistics. One might as well say that insurance actuaries should determine life tables by going out and looking at people rather than by the study of vital statistics.

The commission also quoted from a Federal court decision an opinion which substantiated its contention. That court said:

When it built up its reserve, it claimed the reserve as its actual depreciation. It cannot now take an inconsistent position about depreciation without fully establishing it, and it has weakened its proof of present value accordingly. The plaintiff was right about depreciation when it created its reserve, and it is wrong in its position now, in its claims for a lesser sum as actual depreciation in this effort to establish fair value.[1]

The U. S. Supreme Court in the case of *McArdle* v. *Indianapolis Company*,[2] however, said in part:

The deduction was not based on an inspection of the property. It was the result of a "straight-line" calculation based on age and the estimated or assumed useful life of perishable elements. . . . The testimonies of competent valuation engineers who examined the property and made estimates in respect to its condition are to be preferred to mere conclusions based on averages and assumed probabilities.

The commission, however, pointed out that the engineers whose estimates were not disapproved took into consideration the

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[1] *New York Telephone Co.* v. *Prendergast*, 36 F. (2d) 54 (1929).
[2] 272 U.S. 400, 416 (1926).

age of the property and its probable future life. It also quoted another U. S. Supreme Court decision, which said:

> The experience of the Illinois company together with the careful analysis of the results shown under comparable conditions by other companies which are part of the Bell system, and thus enjoy the advantage of the continuous and expert supervision of a central technical organization, should afford a sound basis for judgment as to the amount which, in fairness both to public and private interest, should be allowed as an annual charge for depreciation.[1]

The Interstate Commerce Commission summed up its conclusions on this controversy as follows:

> We have no difficulty in reaching the conclusion that the real measure of depreciation is the extent to which service capacity has been exhausted; that wear and tear, obsolescence, inadequacy, etc., are all factors in depreciation, information as to which constitutes evidence to be given appropriate weight in determining the extent to which service capacity has been exhausted; that although inspection may be helpful, the best estimate of the extent of service capacity as of a particular date can be made only by a careful analysis of past experience and the application of informed judgment as to future trends; that with the possible exception of the effect of insufficient maintenance such an analysis will provide a more reliable estimate of the loss in service capacity than observation alone; and finally that the principles are identical which govern the estimating of loss in service capacity for both accounting and valuation purposes.
>
> In order that there may be no misapprehension, it may be well to repeat here what we have already indicated with some particularity; namely, that it does not follow that the same base should be used in estimating depreciation in terms of money for both purposes or that the amount of the depreciation reserve will correctly reflect at any given date in terms of money or of percentage of property the accrued depreciation found in valuation to exist in the property. We have found that the proper base to use for accounting purposes is original cost to the accounting company for the reasons already stated. In valuation, the base may be reproduction cost or present value. And aside from this difference in base, the depreciation reserve may have been built up in the past at rates of depreciation which further experience has shown to be erroneous. Our conclusion is only that the same elements which produce depreciation for accounting purposes likewise produce depreciation for valuation, and they cannot properly be observed and taken into account in the one case and at the same time be overvalued and neglected in the other.[2]

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[1] *Smith* v. *Illinois Bell Telephone Co.*, 282 U.S. 133, 158 (1930).
[2] Commission's orders, *supra*, p. 408.

As indicated in the commission's annual reports for the period from 1932 to 1937, there were two important reasons why its order (to have become effective January 1, 1933), with respect to depreciation accounting had not been made mandatory for steam carriers, subject to the commission's jurisdiction. One reason was the general economic conditions and the financial condition of the carriers, and the other was the lack of adequate funds on the part of the commission.[1]

Do you agree with the theory of the commission in this case?

Why should the telephone companies have voluntarily adopted depreciation accounting and the railroads have declined to do so?

To what extent should depreciation policies be determined by (*a*) management, and (*b*) regulatory authority?

See cases entitled Deepwater Power Station Project, Knox Terminal Company, and Public Service Coordinated Transport (A). See also case entitled St. Louis & O'Fallon Railway Company on obsolescence of railway property.

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[1] See annual reports of the commission, 1932, p. 42; 1933, p. 36; 1935, p. 42; 1937, p. 31.

B. Straight-line Depreciation in the State of New York

84. New York Edison Company v. Maltbie

The Public Service Commission of New York put into effect in that state in 1933 a new uniform system of accounts, a part of which required public utilities to adopt straight-line or age-life depreciation accounting.[1] The instructions in the revised classification of accounts prescribed by the commission for electric utilities required that each company should file with the commission a verified statement showing the composite annual percentage rates of depreciation applicable to the book cost of each class of depreciable property. These rates, to be based upon estimated service values and service life, were to be applied in such a way that equal monthly charges would be set up during the service life of each piece of property in accordance with the straight-line method. The established rates were to be revised at any time when experience should indicate the necessity of a change. Each company was obliged under the new system to keep such records of its property and retirements as would enable the determination of the probable service life of various types of property.

This order was vigorously protested by the utilities. Those within metropolitan New York played an active role in opposing the order in hearings before the commission. They contended that any such order with respect to accounting for depreciation should not be made effective without a full hearing and a determination based upon the results of such a hearing.[2] Reference was

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[1] 3 P.U.R. (N.S.) 320 (1933).

[2] With regard to the commission's study of the proposed system of accounts and the hearings held by the commission, the following statement was made in its decision: "The staff of the Commission was directed to prepare systems of accounts for bus, water, electric, and gas corporations over a year and a half ago. Eighteen hearings have been held, and 1,747 pages of testimony taken extending from May 3, 1933, to August 14, 1933. After the close of the hearings, briefs were submitted by many companies. The drafts were then reviewed and thoroughly reconsidered. Many changes were made in view of the criticisms and suggestions brought out at the hearings. All of this is in addition to the discussion of depreciation which has gone on for years; and now it is suggested that we shall 'defer consideration' for another year, as if depreciation accounting were something new, unheard of, and untried." 3 P.U.R. (N.S.) 320, 326.

made to the extensive investigations which the Interstate Commerce Commission and the Public Service Commission of Wisconsin had conducted before they put new accounting systems into effect. These utilities also protested that the requirement of depreciation accounting was beyond the statutory powers of the commission. The setting up of reserves was held to be properly within the domain of management, and the imposition of specific reserves by the commission was deemed an invasion of the functions of management.

A number of specific criticisms applied to the undesirability of the use of straight-line depreciation accounting for the electric utility industry. It was stated that both law and sound public policy were opposed to the use of this system. The long and successful experience of the companies was cited as indication that the system of retirement reserve accounting had made possible the continuous improvement of service and the protection of the public interest. On the other hand, the system of straight-line depreciation accounting would tend to set up huge reserves with the results that the customers would be charged for something they did not receive, and the cost of service would be increased.

EXHIBIT 1

NEW YORK EDISON COMPANY *v.* MALTBIE

COMPARATIVE COSTS OF DEPRECIATION UNDER RETIREMENT AND STRAIGHT-LINE ACCOUNTING

New York Edison Group, New York City

Member of Group	Booked Fixed Capital at December 31, 1932, per Annual Report	Annual Depreciation Computed at 3.3 % of Total Fixed Capital	Retirement Expense for Year Ended December 31, 1932	Increase Depreciation over Retirement Expense
New York Edison Company....	$329,316,565	$10,867,447	$ 2,896,498	$ 7,970,949
United Electric Light and Power Co.	124,099,061	4,095,269	2,666,329	1,428,940
Brooklyn Edison Company, Inc	225,280,858	7,434,268	4,733,142	2,701,126
N. Y. & Queens Electric Light and Power Co	64,258,537	2,120,532	1,426,615	693,917
Bronx Gas and Electric Company .	10,977,993	362,274	336,322	25,952
Westchester Lighting Company. ...	87,225,500	2,878,442	1,288,072	1,590,370
Yonkers Electric Light and Power Company.....	14,089,252	464,945	281,636	183,309
Total.....	$855,247,766	$28,223,177	$13,628,614	$14,594,563

The data in Exhibit 1 were presented by the New York Edison group as an indication of what the change from retirement reserve accounting to the straight-line method would mean to them.[1]

[1] 3 P.U.R. (N.S.) 320, 332.

Further detailed arguments of these utilities considered the theoretical disadvantages of the straight-line method of accounting for depreciation. Objections were raised to the view that depreciation or loss in value caused by a wide variety of influences occurred progressively with the passage of time. It was pointed out, furthermore, that the straight-line system depended upon the determination of a number of factors, none of which could be estimated in advance with much accuracy. For example, neither the service life nor the salvage value of a piece of property could be successfully forecast. It was argued, moreover, that the straight-line method of depreciation was not applicable to utility property which had been adequately kept up and maintained. After a property had become seasoned, it was expected that replacement would tend to become stabilized. Under such conditions, the purpose of the retirement reserve was primarily to enable losses to be distributed evenly over a period of years and to avoid the danger that a heavy retirement in any one year would have serious effects.

In response to the arguments advanced by the utilities, the chief accountant and the director of research and valuation of the commission urged that the determination of the amount to be charged on account of retirement of fixed capital was an accounting matter which a regulatory body might control without interfering with the discretion of management. It was held that depreciation reserve accounting had been used successfully by telephone companies, by some electric utilities, and most commonly by industrial and commercial concerns, and had thus demonstrated its practicability. It was conceded that, in certain cases, the new system of depreciation accounting might require a revision in rates for service. It was held, however, that the effect of any enlargement of operating expenses would tend to be offset by the accompanying decrease in the rate base. The argument advanced by the companies that the life of a piece of property could not be accurately forecast was met by means of an analogy to life insurance. While the life of neither a single individual nor a single piece of property could be successfully forecast, it was contended that for a large group of individuals or items of plant, it was possible to estimate the average life with considerable accuracy.

The commission pointed out in support of its order that the method was not new or untried in that state; that, as a matter of

fact, straight-line depreciation accounting had been in effect in New York between the years 1909 and 1924 for gas and electric companies. The commission contended that the reasons for the change were never officially stated, as there was no memorandum or opinion of the commission or of any of the four members voting for the change to retirement accounting at the request of the utilities; that the change was made after only one hearing, the record of which covered 92 pages, "at which no witness was sworn or any exhibits produced." The commission pointed out that depreciation accounting was the only system which had ever been prescribed in New York for telephone companies and that such a system had been in force for that utility for 25 years; that it had been applicable to the equipment of common carriers for about the same period and had "more recently" been prescribed for all common carrier property; that many private corporations had voluntarily adopted it; and that it was recognized by the Federal government in determining corporation taxes. In view of these facts the commission held that its order was introducing nothing novel or untried.

The commission did not accept the view that while the straight-line method was proper for determining accrued depreciation in rate cases, it should not be used for determining expenses. The commission maintained that it was unfair to use the retirement method to determine expenses because it did not allow the utilities to maintain the integrity of their assets by building up a reserve to meet accrued depreciation fixed on an age-life basis. The fear of the utilities as to the effect on their financial status and credit, of adopting depreciation accounting, seemed to the commission to presuppose that the accrued depreciation existing in the property would show that the loss in worth or value was appreciably in excess of the reserve which had been credited. The commission held that the public and security holders were entitled to know the true condition of the property and that, if dividends had been declared or surpluses had been accumulated without adequate provision for depreciation, it was time such facts were determined and adequate provision made to remedy the situation. The corporation law of the state was cited to the effect that adequate provision should be made for depreciation before any dividends should be declared.

While the commission was divided 3 to 2 in this decision, the commissioners dissenting were not opposed in principle to the straight-line method of depreciation. They dissented because they believed the adoption of the new system of accounting, including the straight-line method of depreciation accounting, would mean an unwarranted expense to the utilities at a time when economic conditions were affecting them unfavorably and both local and Federal governments had greatly increased utility taxes, and also the National Industrial Recovery Act had greatly increased costs to the utilities.

With specific reference to accounting for depreciation, one of the dissenting commissioners said:

> While in many respects, the proposed method may not be perfect, I believe it can be considered an advance over the present system.[1]

The other dissenting commissioner said:

> I do not condone the practice of many operating companies in charging insufficient annual depreciation, and I favor a remedy as soon as it can be administered without doing more harm than good. . . . I do not favor continuance of the present practice of retirement reserve because while in theory it may be defended, in practice it has resulted in many companies having insufficient reserves. I believe that the charging of a sufficient sum annually to cover depreciation, obsolescence, and inadequacy is sounder policy, but I do not favor increasing operating expenses at this time by increasing annual depreciation charges.[2]

The utilities appealed from the commission's order, and the issue was later passed upon both by the New York State Supreme Court and the New York Court of Appeals. The former court held, in June, 1935, that the legislature had not granted the commission power to "fix the method of setting up depreciation reserves" and that the order in that regard was *ultra vires*.[3] The Court of Appeals upheld the ruling of the lower court with respect to straight-line depreciation in May, 1936.[4]

[1] 3 P.U.R. (N.S.) 320, 331.

[2] *Ibid.*, p. 335.

[3] *New York State Electric and Gas Corporation et al.* v. *Public Service Commission of New York et al.*, 244 App. Div. 685; 281 N. Y. Supp. 223; 9 P.U.R. (N.S.) 155 (1935).

[4] *New York Edison Company et al.* v. *Milo R. Maltbie et al.*, 271 N. Y. 103, N.E. (2nd) 277; 15 P.U.R. (N.S.) 143 (1936). No consideration has been given to other important issues in these New York court cases aside from the question of depreciation. One such point of much significance was given some consideration by the United States Supreme Court in *American Telephone & Telegraph Company* v. *United States*. See p. 694.

In February, 1937, a bill was introduced in the Senate of the State of New York which would have authorized the commission to exercise its discretionary power "to prescribe uniform methods of measuring and accounting for depreciation to be observed by public utility companies and municipalities, under its jurisdiction." This bill also provided that the commission should have power "to ascertain, fix, and determine from time to time proper and adequate rates of depreciation for the several classes of property of any public utility company or municipality"; and finally, the proposed law provided that the commission be authorized "to determine whether the amount in the depreciation reserve or other reserve provided to amortize the loss on property retired from service of any public utility company or municipality" was adequate for said purpose, and in case the amount was found to be inadequate "to fix and determine the proper amount for said reserve and the method and manner by which the amount in said reserve" should be made adequate. The bill failed to pass.[1]

Do you favor such a law as was proposed in the New York legislature in 1937 with regard to commission regulation of accounting for depreciation?

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[1] Acknowledgment is made to Mr. T. H. Carroll, instructor in accounting, Harvard Graduate School of Business Administration, for use of a copy of this bill and a typewritten transcript of the hearing on it. The bill (Senate Prt. No. 683, Intro. No. 639) was introduced by Senator Thomas F. Burchill.

C. Relationship between Depreciation as an Operating Expense and Depreciation as an Element in Property Valuation

85. Illinois Bell Telephone Company (B)

Certain problems connected with the accounting practices, including accounting for depreciation, of the Illinois Bell Telephone Company were discussed at length in the Supreme Court decision in the *Lindheimer* v. *Illinois Bell Telephone Company* case on April 30, 1934.[1] The opinion was written by Mr. Chief Justice Hughes and was accompanied by the concurring opinion of Mr. Justice Butler in which certain supplementary data were presented.

This decision brought to a close one of the most important rate cases in the history of the telephone industry. The controversy began in 1923 when the Illinois Bell Telephone Company protested the action of the Illinois Commerce Commission in reducing the rates for certain classes of coin-box service in Chicago. An injunction was granted the telephone company by the United States District Court, and affirmed by the Supreme Court in 1925, but the company was required to hold in reserve the disputed revenues.[2] The district court in 1929 entered a final decree making the injunction permanent,[3] but the decree was reversed by the Supreme Court in 1930 and the case was remanded for further proceedings.[4] New evidence was taken in the district court and its decree of 1929 was once more declared permanent. The company was thus released from the obligation of making refunds.[5] The appeal by state and city authorities to the Supreme Court brought a reversal of the position taken by the district court.[6]

The decision of the Supreme Court was based upon an aspect of the case which had been accorded comparatively little attention

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[1] 292 U.S. 151; 54 S. Ct. 658. This case was originally *Smith* v. *Illinois Bell Telephone Company;* subsequent changes in the name of this case resulted from shifts in the personnel of the Illinois Commerce Commission. The case is also found in 3 P.U.R. (N.S.) 337.

[2] 269 U.S. 531 (1925).

[3] 38F (2d) 77 (1929).

[4] 282 U.S. 133 (1930).

[5] 3F. Supp. 595 (1933).

[6] See case entitled Illinois Bell Telephone Company (A), p. 207.

by the Illinois Commerce Commission and by the district court. Both these bodies had devoted much time to a consideration of the fair value of the property of the Illinois Bell Telephone Company, to the separation of the interstate and intrastate phases of the business, and to the intercorporate relationship between the Illinois company and the parent organization, the American Telephone & Telegraph Company. That portion of the briefs and decisions which pertained to the subject of depreciation was largely concerned with the relation between depreciation as an operating expense and as an element in determining present value.

Upon this point the issue between the utility and the Illinois Commerce Commission was clearly drawn. The brief in behalf of the Illinois Bell Telephone Company referred to the findings as to the condition of its property which had been made by the engineers of the Illinois Commerce Commission. One of the commission's engineers had made a special inspection of the Chicago property in the winter of 1921 and 1922 and in the summer of 1923. His inspection of representative portions of the plant revealed no inadequacies and led him to conclude that the property was in at least 90 per cent condition.

The brief for the company referred to a number of Federal court decisions supporting the contention that existing depreciation should be determined by inspection and indicating that the balance in the depreciation reserve should not be deducted for valuation purposes. These decisions were held to invalidate the action of the Illinois Commerce Commission in deducting the balance in the company's depreciation reserve from the undepreciated value of plant. It was stated that the detailed inspection upon which the 90 per cent figure was based took account of any existing inadequacies or obsolescence. Future inadequacies, or obsolescence, or destruction by casualty were stated to have no bearing upon the present value of the property. It was pointed out, moreover, that all the company's property should be included in its valuation, irrespective of the sources of the funds used in its construction.

The attorney general of the state of Illinois and the corporation counsel of Chicago contended that the company, by the use of straight-line charges to operating expenses, in order to record costs arising from the wearing out of plant, had relinquished the right to secure a return on that amount of property cost repre-

sented by the depreciation reserve. Since the size of this reserve was dependent upon the periodic charges for depreciation, the reserve was held to represent the amount of property for the consumption of which the telephone company had already been reimbursed. It was urged that a determination of the percentage condition of a property at any given date cuts off consideration of the balance of the period during which forces will operate to produce the property consumption anticipated by the depreciation charges. Therefore, it was the contention of the attorneys representing the state and the city that depreciation for the purpose of valuation should be identical with depreciation as an element of operating expenses.

The Supreme Court decision reflected a marked change in the weights assigned to the various parts of the controversy between the Illinois Bell Telephone Company and the commission. While such matters as the fair value of the telephone property, the nature of the intercorporate relations, and the separation of the interstate from the intrastate business were considered, it was clearly not the intention of the Supreme Court to attempt to make definite findings with regard to them.

In the belief that operating expenses may be as important as property valuation in deciding whether or not a given order is confiscatory, the Supreme Court focused its attention upon the charges made by the Illinois Bell Telephone Company to its operating expenses. It was pointed out that a variation of $1,500,000 in operating expenses would be equal to a variation of $25,000,000 in a valuation figure, assuming a 6 per cent return. Inasmuch as the Court believed that the excess charges to operating expenses were larger than the disputed revenues, these charges assumed a determinative importance in the final decision and made unnecessary a judicial finding with regard to value of property or rate of return.

Depreciation charges were the element of operating expenses to which the Supreme Court gave most attention. Mr. Chief Justice Hughes referred to the provision of the 1923 order of the commission which named a combined allowance for maintenance and replacement that would be accepted in future rate cases.[1] The

[1] The provision was: "That a fair allowance to take care of maintenance and retirement charges for said property in use as of December 31, 1922, is $7,869,400, and that this sum, plus 8¾ per cent of all additions and betterments, will be sufficient

company continued to use rates considerably in excess of those allowed by the commission for the purpose of rate making. The district court, as well as the commission, gave attention to appropriate depreciation charges for use by the telephone company. The court employed the straight-line method, and as indicated in the table below, allowed annual charges not greatly below those actually used by the telephone company.

Year	Court's Allowances	Book Charges by Company
1923	$4,000,000	$4,222,000
1924	4,250,000	4,470,000
1925	4,750,000	5,048,000
1926	5,400,000	5,767,000
1927	6,000,000	6,335,000
1928	6,650,000	7,009,000
1929	7,000,000	7,436,000
1930	7,200,000	7,865,000
1931	7,400,000	8,133,000

The depreciation reserve built up over a period of years by annual charges to operating expenses had increased to a point where it was far in excess of the amount of existing depreciation claimed by the telephone company. The existing physical and functional depreciation was set by the company at not over 9 per cent in the years 1923 to 1928, and 8 per cent thereafter. The disparity between the existing depreciation and that indicated in the depreciation reserve was shown to be as follows:

Year	Existing Depreciation	Depreciation Reserve
1923	$11,992,000	$26,797,000
1924	12,865,000	29,316,000
1925	13,775,000	32,155,000
1926	14,621,000	35,572,000
1927	15,360,000	39,352,000
1928	16,241,000	42,769,000
1929	15,300,000	44,515,000
1930	15,863,000	45,829,000
1931	15,828,000	48,362,000

and adequate to permit the Illinois Bell Telephone Company to properly maintain its Chicago property." See Illinois Commerce Commission, *Opinions and Orders*, III (July 1, 1923, to June 30, 1924), p. 98.

The differences were stated by the company to be the natural result of the methods employed in securing the two series of figures. It was pointed out that the forces producing depreciation are highly irregular in operation and hence unlikely to accord with estimates based on service life.[1] Moreover, in a company which has a fairly large percentage of new property, there are important classes of equipment on which reserves are accruing, but which are only slightly represented in retirement losses.

While the Supreme Court gave weight to these considerations, it held them inadequate to explain the great disparity between the depreciation reserve and the actual depreciation, especially since the data covered a fairly long period. In view of the fact that the percentage condition of the telephone property was kept fairly constant over the years 1923 to 1931, attention was directed to the sums expended on current maintenance, covering such costs as repairs and substitution of new parts for old parts in units of property not retired. It was pointed out that there are difficulties in drawing the line between maintenance and depreciation, and that outlays for new parts may tend to keep down accrued depreciation.[2]

The tabulation on p. 569 reveals that current maintenance plus depreciation ranged between 30 and 40 per cent of total operating expenses for the years 1923 to 1931.

The conclusions drawn by the Supreme Court were based in large part upon comparisons among the various data which were presented. The court said:

In the light of the evidence as to the expenditures for current maintenance and the proved condition of the property—in the face of the disparity between the actual extent of depreciation, as ascertained according to the comprehensive standards used by the Company's

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[1] A piece of property may show relatively little actual depreciation as the result of wear and tear, and yet, because of obsolescence, may be on the point of going out of service. Thus, a central telephone exchange may reveal an existing depreciation of only 10 per cent at a time when its service life is nearly ended, because it has outgrown its quarters and will need to be replaced by another exchange at a new location.

[2] It may be noted that Appendix D to the decisions of the Interstate Commerce Commission in connection with Dockets 14700 and 15100, relating to depreciation charges of telephone companies and of railroad companies respectively, listed the units of property which would be accounted for through the fixed capital and depreciation reserve accounts, rather than through operating expenses. See 177 I.C.C., pp. 484–492 (1931).

witnesses, and the amount of the depreciation reserve—it cannot be said that the Company has established that the reserve merely represents the consumption of capital in the service rendered. Rather it appears that the depreciation reserve to a large extent represents provision for capital additions, over and above the amount required to cover capital consumption. This excess in the balance of the reserve account has been built up by excessive annual allowances for depreciation charged to operating expenses.

Year	Current Maintenance	Depreciation	Current Maintenance Plus Depreciation	Total Operating Expenses	Current Maintenance Plus Depreciation as a Percentage of Total Operating Expenses
1923	$ 5,643,623	$4,222,000	$ 9,865,623	$31,550,286	31.2
1924	6,043,737	4,470,000	10,513,737	33,275,574	31.5
1925	6,563,193	5,048,000	11,611,193	35,649,160	32.5
1926	7,714,364	5,767,000	13,481,364	38,893,042	34.6
1927	8,849,550	6,335,000	15,184,550	42,142,649	36.0
1928	9,941,143	7,009,000	16,950,143	45,704,899	37.1
1929	10,671,576	7,436,000	18,107,576	48,489,647	37.3
1930	11,372,858	7,865,000	19,237,858	49,319,993	39.0
1931	10,842,053	8,133,000	18,975,053	47,904,196	39 5

The court upheld the original order of the Illinois Commerce Commission, ordered the dissolving of the interlocutory injunction and provided for the refunding of the amounts improperly collected from subscribers during the period the injunction was in force.

The opinion of Mr. Justice Butler concurred with the majority opinion of the Supreme Court but went somewhat further in the position taken regarding charges for depreciation. On the basis of tables comparing the book costs, depreciation reserves, maintenance charges, and revenues, Mr. Justice Butler concluded:

From the foregoing it justly may be inferred that charges made according to the principle followed by the company create reserves much in excess of what is needed for maintenance. The balances carried by the company include large amounts that never can be used for the purposes for which the reserve was created. In the long run the amounts thus unnecessarily taken from revenue will reach about one-half the total cost of all depreciable parts of the plant. The only legitimate purpose of the reserve is to equalize expenditures for mainte-

nance so as to take from the revenue earned in each year its fair share of the burden. To the extent that the annual charges include amounts that will not be required for that purpose, the account misrepresents the cost of the service.

The company's properties constitute a complex and highly developed instrumentality containing many classes of items that require renewal from time to time. But taken as a whole, the plant must be deemed to be permanent. It never was intended to be new in all its parts. It would be impossible to make it so. Expenditures in an attempt to accomplish that would be wasteful. Amounts sufficient to create a reserve balance that is the same percentage of total cost of depreciable items as their age is of their total service life cannot be accepted as legitimate additions to operating expenses. In the absence of proof definitely establishing what annual deductions from revenues were necessary for adequate maintenance of the property, the company is not entitled to have the rate order set aside as confiscatory.

What relationship do you see between (1) the decline in numbers of subscribers suffered by telephone companies from 1930 to 1933, and (2) the operation of the forces causing depreciation and obsolescence?

To what extent, if any, would you rely upon an estimate of depreciation obtained through inspection?

Do you agree with the Supreme Court in this case?

4. Bases for Rate Making

A. Cost and Value of Service

86. Brooklyn Borough Gas Company[1]

In August, 1927, the New York Public Service Commission approved a schedule of gas rates for the Brooklyn Borough Gas Company which superseded the graduated or "block" rate approved by the commission in 1922. The first "block" of the old rate was 100,000 cubic feet and, since substantially all residential consumption was within this first block, the rate was virtually a flat rate of $1.30 per thousand cubic feet of gas to domestic consumers.

The rates effective for residential use from August 1, 1927, to January 1, 1929, were $1 per meter per month for the first 200 cubic feet, or less, of gas, and 11 cents per 100 cubic feet for all over 200 cubic feet per meter per month. In December, 1928, the company filed a new schedule which, with the approval of the commission, went into effect January 1, 1929. The only change in this new schedule was that the rate for all gas over 200 cubic feet was 10.5 cents per 100 cubic feet. A number of consumers made formal protest against the new rate schedule. In their protest they maintained that the charge of $1 for the first 200 cubic feet per meter per month was designed merely to increase the earnings of the company without rendering additional service.

The Brooklyn Borough Gas Company claimed that many of its accounts were noncompensatory under the old $1.30 rate, that the new rate structure was a distinct improvement, and that under it there were fewer accounts which were not paying the cost of the service.

The issue in this case narrowed down to the cost covered by the initial charge of $1. It was attacked on two grounds. First, it was claimed that the form of rate was illegal. In 1923 the public service law of New York State had been amended as follows:

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[1] *Customers* v. *Brooklyn Borough Gas Co.*, P.U.R. 1929D, 433.

Section 65, subdivision 6.—Service Charges Prohibited. Every gas corporation shall charge for gas supplied a fair and reasonable price. No such corporation shall make or impose an additional charge or fee for service, or for the installation of apparatus or the use of apparatus installed.

The second objection to the new rate was that the initial charge of $1 per meter per month for the first 200 cubic feet or less was "excessive and therefore unjust and unreasonable."

Counsel for consumers conceded that the costs incurred in serving "convenience users" were real; that many consumers in this group ate for the most part in restaurants, sent out their

EXHIBIT 1

BROOKLYN BOROUGH GAS COMPANY

COMPANY'S COMPUTATION OF OPERATING EXPENSES AND RETURN ON ADJUDICATED PRESENT VALUE OF PROPERTY APPLICABLE TO INITIAL CHARGE PER CUSTOMER, 1926

Distribution Expenses	$102,871.36
Commercial Expenses	155,928.16
New-business Expenses	15,052.89
General and Miscellaneous Expenses	98,799.88
Total Operating Expenses (Exclusive of Uncollectible Bills and Taxes) Applicable to Initial Charge	$372,652.29
Uncollectible Bills	4,240.77
Taxes	81,938.06
Total Operating Expenses (Including Uncollectible Bills and Taxes) Applicable to Initial Charge per Customer	$458,831.12
8 Per Cent Return on Present Value of Property as of December 31, 1926, Based on the Adjudicated Present Value as of August 31, 1925, Plus Net Additions to December 31, 1926. Amount Applicable to Initial Charge	492,909.39
Total Amount Applicable to Initial Charge per Customer Warranted on Above Basis	$951,740.51
Number of Active Customers December 31, 1926	45,634
Average Initial Charge per Customer per Year on Above Basis	$ 20.856
Average Initial Charge per Customer per Month on Above Basis	1.738
First 200 Cu. Ft. of Gas per Meter per Month at 8.67 Cents per 100 Cu. Ft.	0.173
Monthly Initial Charge per Customer Warranted on Above Basis	$ 1.911

laundry, and obtained hot water as a part of the rent. On the other hand, the objection was made that the company had submitted little definite data on the number of such "convenience users," and belief was expressed that this group did "not constitute an important problem in this case." It was claimed that the

company "had failed to support its cost allocations by direct testimony, but had relied on arbitrary conclusions and judgment figures." The computations of the gas company are shown in Exhibit 1.

The commission pointed out that the line of demarcation between costs that might be allocated to consumers on a per-meter basis and those that should be allocated on the basis of the cubic feet of gas consumed must be drawn somewhat arbitrarily, since there were no gaps between the so-called *consumer of convenience* accounts and accounts that covered costs due to the customer's use of gas. There was no disposition shown by the counsel for the consumers to consider anything but certain costs which were unquestionably caused by the fact that a person was a customer. The commission believed the testimony showed that there were "other portions of the company's expenses which all customers should be required to help defray."

Concerning the justification of the $1 charge for the first 200 cubic feet of gas, the commission said:

We come then to the question as to whether the initial charge of $1 per month for the first 200 cubic feet of gas, or less, is justified. The statute (section 65) authorizes a sliding scale of rates, as well as classifications of service, based upon the quantity used, and other considerations. No exact scientific rate structure has yet been devised for gas companies. The best that can be done is to approximate the ideal by the initiation of that form of rate which will yield to the company that reasonable average return upon the value of its property to which it is entitled and at the same time distribute the cost of its service fairly and reasonably among its consumers. The flat rate has failed to do this and has been quite generally discarded in favor of the block rate. Under the flat rate, if the consumption was too small, the rate was too low, and if the consumption was large, the rate was too high. There are costs necessarily attached to the business which are imposed upon a gas company by customers irrespective of the amount of gas taken by them, and if a customer is noncompensatory, that is, does not take a sufficient quantity of gas to reimburse the company for the actual cost of serving him, then such deficiency must necessarily be passed on to other consumers whose rates are thus correspondingly increased, so that it would seem that the form of rate should be a matter of much more concern to consumers than to the company, which is entitled to a fair return, regardless of the form of rate. The question is one of mathematics. This proceeding applies to domestic rates, and if a group of consumers fail to return to the company its actual out-of-pocket expense in serving them, they are carried by their neighbors.

Concerning the illegality of the initial charge on the theory that it was a service charge, the commission made the following statement:

This subdivision may be considered in three parts. The words "Service Charges Prohibited" do not make a complete sentence, and may properly be taken as a heading, or title, of the act, which makes the balance of this subdivision agree in form with the preceding subdivision of section 65. The heading, or title, of the statute is, strictly speaking, not a part of the act. However, when the legislative intent is not clearly expressed, it may be resorted to as an aid in the interpretation of the act. In this case, however, there is no difficulty of construction. The act is in two sentences: "Every gas corporation shall charge for gas supplied a fair and reasonable price."

That sentence is a restatement of the law, as contained in subdivision 1, and would be the law if this sentence had been omitted. It is significant, however, that the legislature used the words "gas supplied" in subdivision 6, while subdivision 1 refers to charges "for gas" and subdivision 5 authorizes classifications based upon "the quantity used." The word "supply" means to provide or make available for use. It is not synonymous with "use" or "consume." Gas is supplied when the distribution system of the gas company is connected with the consumer's premises, a meter installed, and gas made available for his use.

The minority opinion of the commission was to the effect that every computation attempting to justify the initial charge included predominately not the cost of the gas but "the cost of rendering the service to the individual customers, considered as customers without regard to the quantity of gas used"; that counsel for consumers had shown that the company had failed to present any convincing data on the allocation of costs as a basis for the initial charge, that although it might be desirable to have a rate policy provide for an initial charge, the wisdom of the public service law was something with which the commission was not concerned.

The majority opinion of the commission held that the flat rate was "unjust, unreasonable, and unduly discriminatory," and that the form of the rate which imposed an initial charge applicable to all consumers was "not prohibited by section 65 of the Public Service Commission law."

Is a law prohibiting a service charge in a gas-rate schedule in the interest of consumers? Should any consumer be served at less than cost? How would such cost be determined?

87. PUBLIC SERVICE COMPANY OF COLORADO (B)[1]

In 1929 the Public Service Company of Colorado, supplying service in Denver and many other Colorado communities, made a general revision of its power rates for energy served to mines and others dealing with the products of the mines. One of the provisions of the new tariff read as follows:

Special Conditions. When 50% or more of the total energy is used for mine unwatering, and/or smelter operations, and customer provides suitable submetering, approved by and free of cost to the company, the energy charge of the rate schedule shall be subject to a discount determined as follows: Ten per cent of the percentage obtained by dividing the kilowatt-hours measured by the submetering by the total kilowatt-hours used.

The Climax Molybdenum Company, engaged in the mining of molybdenum, at or near the summit of Fremont Pass, protested against the foregoing provision in the new tariff.

The evidence showed that one smelting and three mining companies would be able to take advantage of the "special conditions" in the power schedule.

The Leadville Deep Mines Company had at one time been abandoned, and it was necessary for the company to spend $460,000 over a period of two years in pumping water out of the mine before it could resume mining operations proper. In 1929 this company was pumping 1,500 gal. of water per minute. Of the total electrical energy which it used, 83 per cent was required for pumping alone. An interruption of two hours in the pumping would flood the pumps and cause great damage. Irrespective of the prices for metal products, this company was compelled to continue the unwatering process or run the risk of enormous expenditures before mining operations could be continued after a shut-down. The Evans-Wallower Lead Company had shut down, but was contemplating resuming operations.

The Penrose Mines, Inc., was a large mine which had been abandoned because operations had become unprofitable. It was contemplating an expensive unwatering program in order to resume mining operations.

There were but two smelters in Colorado at the time this case was brought before the Colorado Public Utilities Commission: one at Leadville, the center of the district in which all the

[1] *Re Public Service Co. of Colorado*, P.U.R. 1929D, 342.

companies in this case were operating; the other in Durango, situated in the extreme southwestern corner of the state. In the case of ores shipped to the smelter in Durango, it was necessary to send them over a long circuitous route, leading through northern New Mexico, and when refined or smelted to return them over the same route. Many other smelters formerly operating in Colorado had ceased operations and had been dismantled.

The commission summarized the objections made by the Climax Molybdenum Company, which protested the new power rates, as follows:

> The so-called "special conditions" contained in the schedule seem to us to present two questions of major importance: (1) may a public utility grant special favors, or rates, or rebates, or discounts, or other gratuities, to such of its patrons as it may choose to favor; and (2) the service of the utility being the same in each instance, may it discriminate as between two mining companies on the sole ground of a physical operating condition found in one mine and not in the other?

Concerning these objections the commission said:

> After reading his brief we understand his contention to be that rates may not be made less to one class than to another unless there exist differences in conditions affecting the expense or difficulty of performing the service which fairly justify difference in rates. Two statutory provisions found in the Public Utilities Act read as follows:
>
> "Except as in this section otherwise provided, no public utility shall charge, demand, collect, or receive a greater or less or different compensation for any product or commodity furnished or to be furnished, or for any service rendered or to be rendered, than the rates, tolls, rentals, and charges applicable to such product or commodity or service as specified in its schedules on file and in effect at the time, nor shall any such public utility refund or remit, directly or indirectly, in any manner or by any device, any portion of the rates, tolls, rentals, and charges so specified, nor extend to any corporation or person any form of contract or agreement or rule or regulation or any facility or privilege except such as are regularly and uniformly extended to all corporations and persons; provided, that the Commission may by rule or order establish such exceptions from the operation of this prohibition as it may consider just and reasonable as to each public utility.
>
> "No public utility shall, as to rates, charges, service, facilities, or in any other respect, make or grant any preference or advantage to any corporation or person, or subject any corporation or person to any prejudice or disadvantage. No public utility shall establish or maintain any unreasonable difference as to rates, charges, service, facilities, . . . either between localities or as between any classes of

service. The Commission shall have the power to determine any question of fact arising under this section. Sections 2928 and 2929. C.L. of Colorado, 1921."

In its decision the Colorado Public Utilities Commission pointed out that, if the smelter at Leadville could not be operated profitably, it would go out of business as many other smelters had been obliged to do, leaving the greater portion of the mining territory in Colorado unserved except by the smelter at Durango and another situated near Salt Lake City; that it was "quite a question" how many of the ores could profitably be shipped to those smelters; that if mines having to pump water (called "wet mines") could not purchase their energy at sufficiently low rates, those operating at that time would be compelled to cease and those contemplating resumption of operations would abandon their plans.

The Public Service Company of Colorado stated that its past history with that class of business had shown that the classification of consumers provided for in the new power-rate schedule was necessary in order to insure that these customers could keep on operating.

Concerning the value-of-service principle of rate making, the Colorado Public Utilities Commission said:

> We are at once reminded of the analogy of railroad rates. It is fundamental that one of the important considerations entering into the making of railroad rates is the value of the service to the shipper, which is largely influenced by the value of the articles shipped.

The commission also said that while the contingency sought to be avoided by the Public Service Company of Colorado in its new schedule of power rates was not the generation of energy by the smelting and mining companies involved, the *principle* was the same whether the customer ceased operations or discontinued purchasing from the utility and generated his own power.

Counsel for the Public Service Company of Colorado stated that even without allowing a special discount to smelters and so-called "wet mines," the company would not be earning what it was entitled to earn under the law and that therefore the company felt it had "a right to make a voluntary concession to certain of its customers." The commission stated that it could not agree with

this contention and that unless there could be found a basis for a proper classification of consumers, the giving of a lower rate to one consumer than to another in the same class was an "unlawful preference and discrimination, irrespective of the question of the return that would be realized if no concessions were made."

The majority opinion of the commission held that the classification involved in the new rate schedule of the Public Service Company under its special conditions did "not constitute an unreasonable and unlawful preference."

One commissioner dissented from the majority opinion and made the following statements:

> The protest of the Climax Company alleges that the so-called "special conditions" contained in the proposed schedule would, if they become effective, constitute an unfair, unreasonable, unlawful, and discriminatory difference in rates prejudicial to it and sets forth several reasons why this discrimination would exist.
>
> The burden rests upon the Public Service Company to justify the "special conditions" in said proposed schedule. It elected, however, to take a noncommittal and neutral stand in the controversy, leaving it to the protestants as well as the mining industries who benefit by the proposed change, to contest the matter.
>
> After the reasonableness of rates as a whole has been determined, it becomes necessary to find out what portion of the return is to be obtained from the various classes of consumers, if there is to be no unlawful discrimination; and this can be learned only after a careful analysis of the costs of each class of service. . . .
>
> The record is silent as to whether the proposed schedule would be a burden upon the so-called dry mining industries as against the wet mining industries. The economics of the situation are such that if a private utility sells its service to one class of consumers for less than actual cost of production and delivery, it must make good the loss by overcharging other classes of consumers or go into bankruptcy. Furthermore, any electric schedule which recognizes only the quantity of current consumed and neglects the factors of active connected load and hours, and daily use of the connected load, must necessarily fail equitably to distribute the costs. Only after the various classes of consumers have been graduated in accordance with the cost can there be an avoidance of arbitrary discrimination. After careful consideration of the evidence, I am of the opinion that the Public Service Company upon the record made, has failed to justify the provision in its schedule entitled "Special Conditions."

Is the application of the value-of-service theory of rate making in the interest of consumers? Is the decision in this case sound?

88. NORTHWESTERN BELL TELEPHONE COMPANY[1]

In July, 1929, the Northwestern Bell Telephone Company petitioned the Nebraska State Railway Commission for permission: (*a*) to discontinue the offering of local zone telephone service in its Omaha Exchange; (*b*) to cancel toll rates for messages between zones; (*c*) to make certain modifications and reductions in its schedule of rates for city-wide service; and (*d*) to enlarge the base-rate area at certain points.

Originally, the company operated separate telephone exchanges in Omaha and South Omaha, with different schedules of rates for exchange service, and a toll rate for communication between the exchanges. In 1908 the subscribers in these exchanges were offered the alternative of continuing to take local service at local-exchange rates, with a toll charge for calling the other exchange, or taking, at a higher monthly rate, "general-zone" service, which permitted them to call any telephone in Omaha or South Omaha without payment of toll.

In 1915 Omaha and South Omaha were united politically. No change, however, was made in the telephone rate structure at that time, the company contending that social and commercial, rather than political, boundaries should determine its rate areas. The entire city, including Bellevue and Ralston, was known as the "general zone." South Omaha, Bellevue, and Ralston were known as the "south zone," while Omaha proper was called the "north zone."

The rates which had been in force were as follows:

Type of Service	City-Wide Service for Subscribers in North Zone	Local Service for Subscribers in North Zone	City-Wide Service for Subscribers in South Zone	Local Service for Subscribers in South Zone
Business Individual Line.....	$10.00	$9.00	$10.00	$6.00
Business Two-Party Line.....	8.00	7.00	8.00	5.00
Residence Individual Line....	4.25	3.75	3.75	3.00
Residence Two-Party Line....	3.50	3.00	3.00	2.50

Examination of the foregoing rates indicates that, in general, the smaller the area which could be called, the lower the rate.

[1] *Re Northwestern Bell Telephone Co.*, P.U.R. 1929E, 583.

This is seen in a comparison of the local rates for the south zone with those of the north zone, which included the city of Omaha.

Dissatisfaction with these rates developed as the communities became more closely united socially and commercially. Constant irritation, confusion, and misunderstanding resulted from what the subscribers had come to feel was an artificial barrier between the communities.

The most serious of these difficulties seemed to be that there was no way by which a subscriber could obtain city-wide *incoming* service. A subscriber might pay the general-zone rate and be entitled to call any telephone in the city-wide area but he could not be called without a toll charge by a local-service subscriber in the other zone. Business and professional men with customers in both zones raised serious objections to this arrangement. This was especially true of those located near the boundary line between the zones. Obviously, all persons living on the boundary line who took local service were obliged to pay a toll to call a subscriber on the other side of the street.

Some of the leading civic organizations, both in Omaha and in South Omaha, contended that the zone method of telephone rate making constituted an artificial barrier to social and commercial intercourse, and an obstacle to the development of a unified community.

From the Northwestern Bell Telephone Company's viewpoint, the plan was undesirable because it was difficult to administer. The commercial manager of the company testified that it was difficult to explain the rate schedules to subscribers and that the company had been confronted with constantly recurring irritation which required more and more frequent explanation, not only to individuals but to various civic, commercial, and community organizations. He stated that the company desired to eliminate the source of dissatisfaction although, according to estimates, a loss in revenue would be involved.

The company proposed to abandon the zone system and to offer only city-wide service to subscribers in its Omaha exchange. It proposed to cancel its schedule for local-zone service, including toll charges, and to modify its schedules for general-zone service in such a manner that most of the zone subscribers could secure city-wide service at no higher rates than they had been paying for restricted use. The company proposed to accomplish this in part

by the reduction of certain general-zone rates and in part by offering message-rate service. The proposed schedules for main-line stations were as follows:

Type of Service	Net Monthly Rate
Business Individual Line, Flat.....	$10.00
Business Individual Line, Message.....	5.50 for 75 Messages. Additional Messages at 4 Cents.
Residence Individual Line, Flat.....	3.75
Residence Two-party Line, Flat.....	3.00
Residence Two-party Line, Message.....	2.25 for 40 Messages. Additional Messages at 5 Cents.

It was the opinion of the commercial manager of the Northwestern Bell Telephone Company, based on experience with message-rate service in other cities, and on the calling rate for various classes of subscribers in Omaha, that most of the subscribers who were taking the cheaper grades of local-zone service would change to the message rate, thus obtaining city-wide service at the same, or lower, rates than they had been paying for zone service. Some subscribers would pay more under the proposed rates because of the application of the message rate above the minimum number of calls allowed under the fixed charge. It was pointed out, however, that these large users should pay more for telephone service and that the combination of flat and message rates in the proposed schedule would offer classes of service suited to the varying needs of subscribers.[1] Under the proposed rates, residence subscribers in Omaha proper who had been taking city-wide service would receive the same outgoing service without any change in rates, and, in addition, these subscribers would have unrestricted *incoming* service which they had not had before. North local-zone subscribers, numbering over 34,000, would receive city-wide service at the same rates they were then paying for local service. Almost 1,300 south local-zone residence subscribers, however, faced the alternative of paying a higher rate for city-wide service or changing to another class of service.

Of the business subscribers, about 1,100 who had been taking individual-line general-zone service would be charged the same rates as before, and would have the advantage of unrestricted *incoming* service. Private branch exchange subscribers, involving 1,173 trunks with 7,263 telephones, would be charged the same

[1] The company estimated that approximately 28 per cent of its business and 10 per cent of its residence subscribers would take the message-rate service.

Decrease in Revenue Due to Elimination of Interzone Tolls		$30,526.75
Decrease Due to Enlargement of Base-Rate Area and Consequent Decrease in Extra-Mileage Charges		6,158.00
Decrease Due to Elimination of Foreign Central-Office Service	$13,279.80	
Less Estimated Increase Due to Substitution of Additional Local Central-Office Service	4,560.00	
Net Decrease Due to Elimination of Foreign Central-Office Service		8,719.80
Total Decrease in Revenue		$45,404.55
Less Estimated Increase Due to Readjustment of Business and Residence-Service Rates		8,895.00
Net Decrease in Revenue		$36,509.55

rates for outward service and would have unrestricted *inward* service. They also would have the option of message-rate service at a lower rate. On the other hand, there were 3,626 business individual-line subscribers in the local zone and 1,176 two-party line business subscribers, both local and general, who faced the alternative of taking message-rate service or paying a higher rate for city-wide flat-rate service. It was the opinion of the commission that many of the two-party line business subscribers, especially those business men whose chief need was for *incoming* service, would find it to their advantage to take the message rates under the new schedule, and even those who would be subjected to increases would realize certain savings because of the elimination of toll charges between the zones.

The Northwestern Bell Telephone Company also proposed, together with the elimination of zone boundaries, to enlarge its base-rate area on the south and west so as to include certain residential territory adjacent to the corporate limits which was, from a commercial and social standpoint, a part of the city.

The company estimated that the new rates would produce about $36,000 per year less revenue than had been obtained under the old schedules. This estimate was based on the data shown above.

There were no protests against the elimination of the zone system of rate making and the substitution of rates based on city-wide service, and the commission approved the change.

See questions on page 592.

89. HOME TELEPHONE COMPANY

The Home Telephone Company in a Middle Western state furnished telephone service throughout Adams County, a territory mostly rural in character. The principal town in this area was

the county seat, approximately in the center of the county. Nine small villages were scattered throughout the county, from 7 to 22 miles distant from the county seat, and in each of these the telephone company operated a central office.

The telephone business had been developed in Adams County in 1900 and, in establishing its business, the telephone company had planned to provide local telephone service in each community and to apply toll charges for messages between communites within the county. In canvassing for business, however, it was found difficult to interest the people in telephone service on this basis, as most prospects doubted whether the value of this rather limited service warranted payment of the charges proposed by the telephone company as necessary to cover expenses of operation. A number of the prospects agreed to subscribe for service, provided a wider "free" calling area were instituted.

The telephone company concluded that a larger free calling area was necessary in order to popularize and develop the business. Accordingly, the company changed its original plan and offered instead what may be termed "county service." Under the county-service plan subscribers in any community within the county were permitted to talk without additional charge to any subscriber at the county seat. Likewise, subscribers at the county seat could talk without additional charge to any subscriber in any other community within the county. In addition, the telephone company made the further concession of permitting subscribers in contiguous areas within the county the privilege of communicating with one another without additional charge.

County service proved popular, and, together with improvements in the telephone art, stimulated growth in the number of subscribers. With this growth the intercommunity messages increased materially, and the telephone company found it necessary, from time to time, to add intercommunity circuits as facilities became congested. The increased investment and operating expense involved in handling the rapidly growing intercommunity traffic was not compensated for by an increase in revenue, since toll charges did not apply to messages to and from the county seat, or to and from the contiguous exchanges. During the development stage of the business, these additional expenditures did not seriously affect earnings, since labor and material costs were relatively low and station development was growing quite rapidly

and increasing revenue. With the general rise in costs during the war, however, the telephone company was obliged to increase wage levels substantially to keep its operating force intact. Rate levels remained unchanged so that net revenue diminished rapidly, and the telephone company deferred additions, replacements, and maintenance as much as practicable. The plant gradually deteriorated during this period, and the existing intercommunity facilities became so congested that on certain routes there would be delays on calls of one to two hours.

Subscribers complained to the commission regarding the poor quality of the service, and the commission ordered the telephone company to improve it. The telephone company's stand was that, with the existing levels of rates and method of operating, no net return was being earned on its investment and that an increase in revenues was imperative. With an increase in revenues the telephone company would be able to finance such additional facilities as would be required to restore the pre-war quality of service. The commission accordingly ordered a general investigation of the company's affairs and appointed a date for a hearing.

At the time the telephone company undertook to increase its revenue and to improve the quality of service, there were about 4,000 subscribers, about one half of whom were at the county seat.

In preparing its case for presentation to the commission, the telephone company reviewed the situation from the standpoint of the following possible plans:

I. The continuance of county service.

II. The discontinuance of county service and the substitution of a system of rates for local service within each community with toll rates applicable for messages between all communities in the county.

I. *Continuance of County Service.*—In studying whether it appeared desirable to continue county service, the company brought out the following points:

1. In general, the market for telephone service had been developed to the point where many subscribers had little need for communication with subscribers in communities other than their own. The company presented data derived from a special one month's analysis of free intercommunity traffic, showing a distribution of subscribers by the amount of this traffic originated. The results of that analysis are presented in Exhibit 1.

EXHIBIT 1

HOME TELEPHONE COMPANY
DISTRIBUTION OF SUBSCRIBERS BY AMOUNT OF FREE INTERCOMMUNITY MESSAGE USE WITHIN ADAMS COUNTY
Traffic for a Period of One Month

Number of Messages	Cumulative Percentage Distribution	
	Subscribers	Messages
0	37.0	0
1– 10	67.2	13.9
11– 20	84.5	37.0
21– 30	91.5	51.8
31– 40	94.7	61.4
41– 50	96.3	67.3
51– 75	98.0	76.3
76–100	98.7	81.3
Over 100	100 0	100.0

2. As shown in Exhibit 1, 37 per cent of the subscribers made no use of intercommunity service; 67 per cent used less than 10 calls during the month; some 5 per cent of the subscribers originated approximately 40 per cent of the intercommunity calls.

3. The small percentage of subscribers making substantial use of the intercommunity service were benefiting at the expense of the majority, since all subscribers to the same grade of service paid the same charges regardless of whether or not they used the intercommunity free service.

4. To provide a high quality of intercommunity service would necessitate an appreciable additional investment in high-priced interoffice wire plant and a consequent increase in operating expenses.

5. The costs of continuing the county service would be substantial because of the need for increased investment in inter-community plant and central-office equipment and increased traffic costs on account of growth in traffic.

6. Irrespective of the necessary service improvements, a substantial increase in exchange rates would be required in view of present increased costs of operation. To cover the additional expenses due to the service improvements, a still higher schedule of charges would be required.

7. The tradespeople in the outlying exchanges were opposed to the continuance of free service to the county seat, since it was felt that this took considerable of their local business away from them.

8. The level of exchange rates which would be required to provide for operating expenses and a fair return would be such that there was a possibility of both loss in stations and restriction of growth, which would tend to decrease the value of the service. Exhibit 2 shows investment, revenues, expenses, and return on investment both under existing conditions and the requirements if county service were to be continued, but on the basis of no loss in stations.

EXHIBIT 2

HOME TELEPHONE COMPANY

INVESTMENT, ANNUAL REVENUES AND EXPENSES, AND RETURN ON INVESTMENT

	Existing Rates	Proposal I (Continuance of County Service)	Proposal II (Discontinuance of County Service)
Investment	$495,300	$528,000	$503,000
Annual Revenues			
Exchange	102,000	162,000	135,300
Toll	12,000	12,000	27,700
Total	$114,000	$174,000	$163,000
Annual Expenses	$123,400	$136,500	$128,100
Net Revenues	$ *9,400**	$ 37,500	$ 34,900
Percentage Return	*1.9**	7.1	6.9

* Italics indicate deficit.

II. *Discontinuance of County Service and the Substitution of a System of Exchange Rates for Local Service within Each Community with Toll Rates Applicable for Messages between All Communities in the County.*—In weighing the desirability of this proposal as compared with Proposal I, the following considerations were developed:

1. The application of toll rates to intercommunity service, as shown in Exhibit 3, would tend to make each subscriber weigh the value of a call against the price of the call.

2. Through the application of toll rates, charges for intercommunity service would be equitably distributed in accordance with

EXHIBIT 3
HOME TELEPHONE COMPANY
TOLL RATES UNDER PROPOSAL II
(Discontinuance of County Service)

For Distances More Than	But Not More Than	Initial Station-to-Station Day Rate
0 Mile	6 Miles	$0.05
6 Miles	12 Miles	0.10
12 Miles	18 Miles	0 15
18 Miles	24 Miles	0.20

amount of use, and the few large users of intercommunity service no longer would benefit at the expense of the general body of subscribers.

3. With the application of toll charges on intercommunity traffic a faster service would be furnished than would appear reasonable if county service were to be continued. To furnish the same speed of service with county service would require additional facilities and expense over that of Proposal I.

EXHIBIT 4
HOME TELEPHONE COMPANY
MONTHLY EXCHANGE RATES

Exchanges	Present	Proposal I (Continuance of County Service)	Proposal II (Discontinuance of County Service)
County Seat:			
1FB	$3.75	$6 50	$5.50
2FB	3 00	5.50	4.75
Rural-B	2.50	4 25	3 50
1FR	2.75	3.75	3.25
2FR	2.25	3.25	2.75
4FR	1.75	2.75	2.25
Rural-R	1.75	2.75	2.25
Other Exchanges:			
1FB	3.00	5.00	4.00
4FB	2.00	4.00	3.25
Rural-B	2.00	3.50	3.00
1FR	2.00	3.25	2.75
4FR	1.50	2.50	2.00
Rural-R	1.50	2.50	2.00

4. A lower level of exchange rates, ranging from 50 cents to $1 less per month for main-station service, would be practicable with this plan in comparison with the continuance of county service, as shown in Exhibit 4.

In presenting its case to the commission, the company stressed the advantages of Proposal II over Proposal I. The commission agreed that Proposal II was the more equitable arrangement and approved the schedules suggested by the company with the understanding that the company take immediate steps to improve the quality of the service.

90. COMMENTARY ON TELEPHONE RATES

The following is a statement of the elements of telephone rate making from the point of view of the telephone companies:

Experience indicates that a telephone rate schedule best fulfills its purposes if, with proper regard for the effect on the over-all results, it

1. Produces adequate and stable revenues with
2. Maximum satisfaction to the public through
   a. Encouragement of maximum practicable use with
   b. A fair distribution of charges and
   c. Satisfactory quality of service.
3. Makes for ease and simplicity of administration, through the application of charges on a basis easily understood and accepted as reasonable by the public.
4. Permits economic operation.

Each of these purposes of telephone rates is discussed briefly and illustrated below.

1. *Adequate and Stable Revenue.*—The total gross revenue should be sufficient to meet the requirements of furnishing adequate, dependable, and satisfactory service at a reasonable cost. The investment and expense are, of course, determined by the amounts and types of service sold, which in turn are affected by the level of rates and the differences in price for the various classes of service offered. Flat rates, or message rates with liberal message allowances and appropriate guarantees, offer somewhat less opportunity for fluctuations of revenue with business conditions and other economic factors, and therefore tend in the direction of greater stability of revenue; on the other hand, they result in higher minimum rates than might otherwise be required.

2. *Maximum Satisfaction to the Public.*—Since adequate revenues may be obtained by various rate combinations, the aim of the company is to choose that schedule which, on the basis of business judgment and experience, appears to be most advantageous to the public through:

a. Encouragement of Maximum Practicable Use.—The telephone system should be accessible to the largest number of people, consistent with rendering satisfactory telephone service at reasonable cost, under conditions which will be most convenient and will encourage freedom of use as to number and duration of calls and extent of area covered. The effects of a given rate treatment on these various aspects of use may, however, be in opposite directions. For instance, flat rates encourage maximum use as to number and duration of calls. On the other hand, message rates make practicable lower minimum rates, thus encouraging use by a larger number of people and may, in some cases, make practicable wider local service areas, thus encouraging use over a more extended area.

The rate system should also provide for the specialized needs of those having unusual requirements such as for foreign exchange service (that is, when a subscriber receives exchange service from an exchange other than that in which he is located) or tie-lines (that is, lines directly connecting two private branch exchange switchboards) and should provide suitable charges for by-product services, such as directory advertising, leased line telegraph and telephone typewriter.

b. Fair Distribution of Charges.—With proper regard for both costs and values of service, charges should be equitably distributed so as to encourage use and hence develop the greatest value of telephone service as a whole. To illustrate, business rates may be higher than residence rates for a like amount of service because of the greater value of business service and the increase in that value which results from the added residence development made practicable by the lower residence rates. A further refinement in the distribution of charges may be obtained by measurement in accordance with use where the level of flat rates required would tend to restrict the number of users, but otherwise, the encouragement of use by flat rates appears more desirable than the refinement in the distribution of charges arising from the measurement of service. A fair distribution of charges also

requires that subscribers having more than average needs for service, such as private branch exchange subscribers, or occasioning unusual costs, such as those outside base rate areas, should pay charges sufficient to avoid placing an undue burden on the main body of subscribers. Subscribers occasioning unusual costs because they require a special form of service, such as special assemblies of equipment, private line service, or other services or instrumentalities which add little or nothing to the value of telephone service to the community as a whole, should pay in full the costs of furnishing such service. On the other hand, extra costs occasioned by subscribers because of their location in outlying sections may properly be absorbed, to some extent, by the general body of subscribers, as it is to their advantage to have such sections adequately provided with telephone service.

c. Satisfactory Quality of Service.—A rate schedule should not offer classes of service such as ten-party urban service, which experience has indicated to be unsatisfactory from the standpoint of the subscribers to that class of service or of the rest of the subscribers. Further, it should, so far as practicable, lend itself to improvement in quality of service through maintaining such a relationship of rates that the natural tendency with increased use will be to encourage subscribers to regrade upward (for instance, from four-party to two-party service or from two-party to individual line service), or to take additional service or facilities when needed, such as additional lines or private branch exchange trunks.

3. *Ease and Simplicity of Administration.*—Rates which make for ease and simplicity of administration are desirable from the standpoint of good relations with the public and economic operation. For example, flat rates with fairly wide local service areas have the advantage of simplicity and definiteness of charges, since they avoid the additional local message charges necessary with message rates as well as toll charges for short haul traffic. However, the application of flat rates with wide local service areas is limited by consideration of quality of service and the effects on rate levels, which may tend to restrict development.

4. *Economic Operation.*—With proper regard for all the factors discussed above, rates should be designed with cost effects and methods of operation in mind so as to effect the greatest practicable economies of operation. For example, wide base rate

areas have some advantages from the standpoint of quality of service and of satisfaction to subscribers in outlying areas. Too large an area would, however, involve increased investment and expense, making necessary higher basic rates for all subscribers for the benefit of the few in the outlying areas. Another example is the classification of service between exchange and toll, which results in economic operation by preventing wasteful use of expensive long haul circuits by those for whom the service has not a value commensurate with the costs involved. Further, the differential between station-to-station and person-to-person toll service encourages the use of station-to-station service when it meets the subscribers' needs and thus decreases costs of operation. Economic operation also requires adequate charges for special services and facilities.

It will be observed that the foregoing principal purposes of telephone rates are, at the same time, interdependent and, to a considerable extent, opposed to one another. For example, flat rates produce adequate revenue with a maximum of stability. Although the total costs are greater because of the greater volume of traffic, flat rates permit economic operation from the standpoint that considerably more service than under message rates can be furnished at only slightly increased costs to the company. They are easy to administer with little or no irritation to the public and encourage the maximum use of messages. On the other hand, flat rates may not encourage maximum use as measured by the number of subscribers if the minimum flat rate is materially higher than would be feasible under message rates, and flat rates do not distribute charges so nearly in accordance with variations in message use as among subscribers.

Similarly, opposing considerations may enter into a decision as to the desirability of a decrease in minimum rate. A low minimum rate is desirable from the standpoint of encouraging development, but, in order to lower the rate without unfavorable revenue reactions, it might be necessary to offer a relatively undesirable class of service (such as multi-party flat rate) which might react unfavorably on the service standards of the exchange as a whole, or to introduce a measured rate which would tend to limit message usage and present some operating problems.

Another example might be the differentials between individual and party-line service. These differentials should not be so

great as to produce an undue concentration of development on party-line service with unsatisfactory reactions on quality of service and revenues, or so small as to produce so little party-line development that economic operation through reasonable party line fills[1] cannot be obtained. They should also be sufficient to produce a distribution of charges in accordance with the values of service to different groups of subscribers and to make practicable minimum rates which will encourage development.

To what extent is telephone rate making a dynamic problem and how does this fact affect the application of the foregoing principles?

Does it appear practicable to arrive at precise formulae for determining telephone rates?

In what ways do the factors affecting telephone rate making differ from those of other utilities?

To what extent should value of service determine telephone rates?

What fundamental principles, if any, can be applied in determining when a telephone exchange area should be enlarged or divided?

Under what conditions in the future might it be desirable to divide the Omaha area into various zones for rate making?

91. THE PEOPLES GAS LIGHT AND COKE COMPANY (B)

With the introduction of natural gas in Chicago, by means of a 1,000-mile pipe line from Texas, The Peoples Gas Light and Coke Company began the development of its house heating market. Because of a substantial reduction in the price of gas for house heating, it seemed probable that this market would prove to be extremely important. But the success of the company in developing such a market would create another important marketing problem, since the demand for gas for house heating was highly seasonal. The company, therefore, felt the need of developing possible uses for gas during the summer season.

The company believed there was a growing feeling that there was little more justification for passing the hot days of summer

[1] Party-line fill for a given class is the actual average number of subscribers per line on that class. For example, the party-line fill on a two-party class might be 1.65 instead of the theoretical maximum of 2.00.

in an uncooled house than there would be for enduring the rigors of winter in the same house unheated. Officials of the company were convinced that there was beginning to be a customer demand for air conditioning, particularly during the summer months, in office buildings, institutions, and homes. It was clear, too, that the electric and the ice companies, as well as the gas companies, foresaw in this new market opportunities for expansion of their business or improvement of their load factors. While reasonably satisfactory air conditioning could be obtained through any one of these three agencies, it seemed logical to assume that, although all three might invade the field, final success should and would come to the agency which could render the best service after all factors had been taken into consideration.

In view of this situation, it was apparent to the executives of the company that a study must be made in order to determine the factors which would limit or favor the gas, electric, or ice-making industries in developing the air conditioning field. Preliminary to such a study, consideration was given to the fact that discomfort in hot weather is caused, first, by the high temperature which lessens heat radiation from the surface of the skin, and secondly, by excessive moisture in the air which tends to decrease the rate of evaporation from the skin, thereby robbing the body of the cooling effect that is obtained when moisture is evaporated. Attempts to condition air to provide comfort in summer had been directed at reductions in temperature and relative humidity of the interior atmosphere, since whenever moisture-laden air is cooled, the moisture content in any given volume of that air is reduced, and if the air is reheated to the original temperature, in the absence of water vapor, the relative humidity after this cooling process will be lower.

With this principle in mind, the first attempts to condition air by refrigeration units, electrically driven, were designed to produce inside temperatures of approximately 70°F. at times when the temperature outside the building was 90°F. to 100°F. When the air is cooled through such a wide range, it is obvious that relative humidity is lowered to the desired point, but the executives of the company believed that there was considerable doubt as to the advisability of such drastic temperature reductions. In their opinion, in order to obtain any given percentage of relative humidity by cooling air, which originally had a higher relative humidity, the air had to be cooled to a predetermined tempera-

ture in order to condense a sufficient amount of the excess moisture. If the predetermined temperature was so low that it would endanger health or preclude the possibility of comfort, it would become necessary to reheat the air. In the opinion of the executives of the company, this limitation was worthy of emphasis as it might present a serious handicap to the economic operation of a refrigerating cycle as a means of air conditioning.

Approaching the subject from the standpoint of using gas in air conditioning, the executives of the company believed that it would be possible to reduce the moisture content of air by passing it over a hygroscopic substance, such as silica gel. Such a substance might be freed of its moisture by heating so that it could be used time after time as an absorptive. By such a method it would be possible to reduce the relative humidity of air without changing its temperature.

Since comfortable conditions may be maintained by reducing humidity, and since some cooling may usually be accomplished by bringing air in contact with a spray of water, it was thought possible to design a conditioning unit on the principle just described which would be independent of mechanical refrigeration. Or, if desired, this process of moisture absorption might be carried on in conjunction with a cooling effect produced by mechanical refrigeration.

Inasmuch as a reduction of temperature resulted in a lowering of relative humidity, it was obvious that a cooling and drying effect could be obtained by passing the air to be conditioned over surfaces which had been cooled by the melting of natural or artificial ice. With suitable equipment for controlling temperatures and means of reheating air, it would, undoubtedly, be possible to accomplish the desired results.

The executives of the company realized that the art of air conditioning was developing rapidly, and consequently factors which at that time constituted a handicap for one of the three methods of obtaining air conditioning might prove to be one of the advantages of that method at a later time; also, that the data then available from experimental installations were comparatively meager and conclusions based upon them might later be found unjustifiable.

The company's executives believed that the development of the house heating load made it imperative that summer business

be secured which would improve its annual load factor. In the absence of adequate data they roughly estimated that the gas required for air conditioning during the summer might amount to from 15 to 30 per cent of the gas needed for space heating during the winter. It was not clear that a plan for air conditioning could be worked out which would produce any net revenue for several years, but the executives of the company believed that in the long run there would be a substantial demand for gas for air conditioning not only in commercial and industrial establishments but eventually in homes as well. Because of their faith in ultimate development of this summer load, the executives of the company felt justified in making rather heavy expenditures to cover a period of experimentation and research before the company could hope to secure any net return from this new business. The company's share of the cost of the new pipe line was a substantial amount, and it was imperative that every important summer market for gas be secured.

Beginning in 1931, the company had made several experimental installations to determine the practicability of air conditioning units utilizing gas in their operation and to find out to what extent existing economic conditions warranted public acceptance of gas appliances for air conditioning. Experience of the company proved that the practice of controlling moisture content of air by hygroscopic substances and relying upon the city water for temperature reduction was unsatisfactory in Chicago because of the relatively high temperature attained by the water supply in late summer. To meet the needs of some customers, such as restaurants and drug stores, where lower temperatures were desired than could be secured by use of city water in the late summer, satisfactory installations were made involving combinations of electrically or gas engine driven compressors for cooling, in conjunction with hygroscopic chemical units for moisture removal. Because of the somewhat large investments required for the dual units, and the complexity of control devices, considerable work had to be done before installations of this kind could be sold in large numbers.

While these developments were in progress, the gas company was to some degree paralleling the efforts of the electric industry by installing compression-type air conditioning units in which a gas engine replaced the electric motor as a driving force.

A rate classification which the executives of the company felt provided extremely attractive prices for summer time power users was adopted in March, 1937, and it was expected that the progress would be materially expedited by such a rate. Rates for gas to be used as fuel for internal combustion motors only, for different seasons, were as follows:

November to March, Inclusive.....	12 cents per therm
April and October.....	4.25 cents per therm
May to September, Inclusive.....	first 1,500 therms, 3.0 cents per therm over 1,500 therms, 2.25 cents per therm

Minimum Charge: $10 per month during period the company supplies service.

Assuming that air conditioning by means of gas will be able to compete with other modes of air conditioning for a fair share of the potential market, what are the rate and management problems which the company faces in the development of this market?

Are the rates which should be charged for air conditioning during the summer related in any vital manner to the rates which should be made for house heating?

What, if any, regulatory problems will the company find it necessary to consider in the development of this new business?

5. Optional Rate Schedules

A. Disapproval of Optional Rate Schedules for Gas

92. Long Island Lighting Company[1]

In February, 1928, the Long Island Lighting Company established the following rates for gas:

Rate I

Cubic Feet per Month	Rate per M.C.F.
First 3,000	$1.75
Next 3,000	1.50
All over 6,000	1.30

Minimum Charge: $1.00 per Month.
Terminable by Customer on Three Days' Notice.

In November, 1928, an additional rate schedule became effective. These rates were as follows:

Rate II

Cubic Feet per Month	Rate per M.C.F.
First 200	$1.00
Next 4,800	1.50
All over 5,000	.90

Minimum Charge: $1.00 per Month.
Terminable after One Year on Three Days' Notice.

The second schedule did not supersede or annul the first rate, but was announced as an "optional rate schedule." Any customer could have the choice of taking gas under either the old or the new schedule, but he could not change from the new to the old within a year. A comparison of monthly charges under the two rates, at various levels of consumption, is presented in the table on p. 598. In general, the first rate would be cheaper for small users, and the second, for larger users. Concerning these rates, the New York Public Service Commission said:

> When the consumption for each of the 12 months is known, the cheaper rate may easily be determined, but who knows what his consumption will be for 1 year; and as one must decide in advance, it may easily happen that the customer will make a wrong guess.

[1] *Re Long Island Lighting Company*, P.U.R. 1931D, 353.

All customers are not so perplexed. It is obvious that if a customer is certain that he will not use over 2,800 cu. ft. in each month, he will find the first rate cheaper; and if he is certain he will use over 5,000 cu. ft., he should select the second. Between 2,800 and 5,000 cu. ft. per month, the difference in the rates is only 5 cents per month on the whole bill. But consumption is not uniform and the customer who uses less than 3,000 cu. ft. in some months and much more in others, or above 5,000 cu. ft. in some months and much less in others will find it difficult to decide which rate is preferable. Further, everyone knows that it is impossible to predict, even with consumption records of several years at hand, what the amount of use will be for the next year.

Consumption, Cu. Ft.	Rate I	Rate II	Increase	Decrease
0	$ 1.00	$ 1.00	.....	.....
200	1.00	1.00	.....	.....
600	1.05	1.60	$0.55	.....
1,000	1.75	2.20	0.45	.....
1,600	2.80	3.10	0.30	.....
2,000	3.50	3.70	0 20	.....
2,400	4.20	4.30	0.10	.....
2,600	4.55	4.60	0.05	.....
2,800	4.90	4.90	.....	.....
3,000	5.25	5.20	.....	$0.05
3,500	6.00	5.95	.....	0 05
4,000	6.75	6.70	.....	0.05
5,000	8.25	8.20	.....	0 05
6,000	9.75	9.10	.....	0 65
10,000	14.95	12.70	.....	2 25
15,000	21.45	17.20	.....	4.25
20,000	27 95	21.70	.....	6.25

Then there is the further difficulty that the use of gas may change in a year. Additional gas appliances may be installed, which make the rate selected unsuitable, or *vice versa;* but the customer may not shift from the optional rate within a year, even if he finds it more expensive.

The reason offered for the one-year rule will readily appear. If there were no such limitation, the customer would shift from one rate to another as conditions demanded from season to season; but this is the very thing the company wishes to prevent. If he were given that privilege, optional rates would lose one characteristic which makes them popular with company officials; indeed, there would be little reason for their existence. If consumers availed themselves fully of the privilege, there would be but one rate consisting of the lower rate blocks of each of the two optional rates.

Concerning the problems involved in the application of optional rate schedules, the commission said:

The . . . comments are based upon the assumption that every customer, present and prospective, understands the full meaning of optional rates and knows to what extent they are available. But if an optional rate is made effective without coming to the attention of the customer, and if he is then charged a rate admittedly and clearly higher than he should be, who is responsible and should the company repay the overcharge? The instant case raises these questions.

When the optional rate (the second given above) was made effective, it was filed and posted as required by law and orders of this commission. Notice of the rate appeared in a local paper as an advertisement and as a news item. . . . Both rates were and still are printed on the backs of gas bills sent to customers. . . .

The complainant in this case has been a customer of the Long Island Lighting Company since 1922. Up to 1931, gas was furnished and billed to him at the company's general rate. About that time, complainant discovered that for two years prior thereto, the company had had in effect not only the general rate under which he had been billed (No. 1 above), but also the optional rate given above. Complainant discovered also that if he had been billed during this period at the optional rate instead of the general rate, there would have been a considerable saving to him. Thereupon, he requested the company to refigure his bills for the period referred to, and refund the difference to him. This the company declined to do on the ground that it would result in discrimination in his favor as against all others similarly situated. The company, however, informed him that if he desired to make application for service under the optional rate, he might do so. This was done, and since that time the company has been billing him at the optional rate.

. . . . . .

The crux of the petitioner's complaint appears to be that the company should have given him and others the benefit of the new rate when it first became effective, as it would be required to do if it had established a new general rate to take the place of the old rate. To do this, the company would have had to have gone through many accounts and to have ascertained what customers would be benefited by the new rate. It is claimed that this would have placed the burden upon the company of determining which of the two schedules would be better for a consumer; that there probably would be many border cases where it would be difficult to determine the question; that if the company had made a mistake, the consumer who, without having applied for the new schedule, had been placed thereon by the company without his knowledge or consent and as a result had been compelled to pay more than under the old schedule, undoubtedly would complain and would be justified in so doing.

This reply goes too far, for the company would have met its obligation if it had called the attention of each consumer to the claimed saving a change in rate would produce. But the claim emphasizes

the weakness of optional rates. It is said to be a burden for the company to decide which rate is more economical, but that it is proper to require the consumer to do so. It is asserted that there are borderline cases which would be difficult to determine. Difficult for whom? If they are puzzling for the company with its knowledge of the gas business, how much more puzzling for the general customer. It is said that the company would be expected to rectify any mistake it made. But the whole plan makes the customer bear the loss of any error he might make.

As between the customer and the company, much may be said in favor of placing the burden upon the latter. Public utilities are under the legal obligation to charge every consumer in a class the same rates. It is the general rule that when the service is identical, the rates must be identical; there may be no differences in rates unless there are differences in the service rendered; and the differences in rates must be reasonable and not unduly discriminating or unduly preferential. As a matter of fact, it is admitted that under optional rates, as in the instant case, customers using exactly the same amount of gas or electricity and in the same months are charged different rates. The only defense is that an option has been given the customer; that if he does not select the most advantageous rate, it is his fault; and that he must keep informed of his options at all times and act wisely.

. . . . . .

The new rate not only lowers the charge to large users, but *increases* the charge to small consumers, and as already stated, there is a zone in the two rates where the single rate just suggested would give the company less revenue than the other rates, even if all consumers had the lowest rate for their consumption which either rate would give. This is due to the requirement above referred to; *viz.*, that a consumer must stay on the optional rate for at least a whole year, and to the fact that in order to get the lower rate on the optional schedule for the months in which he uses larger quantities, he must pay a higher rate than on the old schedule for the months in which he uses small quantities. . . .

. . . . . .

The instance selected is not a sporadic one; it is representative of many actual cases. Indeed, if there were no such cases, the reason for the existence of optional rates would be nonexistent. But it does not answer the fundamental question: Why should two consumers who receive the identical service in a given month be charged different rates because in some other months one uses more than the other? There is no off-peak requirement—monthly or yearly—involved. Why should each not be charged the same amount *in each month* and the rates varied in each according to character of use, quantity, or some other difference that may be reasonable?

Any schedule of rates which makes a current monthly charge dependent upon what happens in some future month is objectionable for other reasons, as bills must then be refigured as changes often occur which are unforeseen and are difficult to adjust, and as it is preferable to have each bill final and complete for the period covered if possible.

Further, the agreement to pay for gas at one of two optional rates of the kind here being considered is of no value to a company in its plant operation. It does not enable it to save capital or economize in operating costs. But it does prevent consumers from obtaining the lowest possible rates under a combined schedule.

The complainant asks for a refund of overcharges. The commission has no power to order reparation as have many other commissions. The complainant also asks relief against a practice which he believes unjust and unfair. It may be doubtful whether upon the record in this case, the commission has power to cancel the rates complained of and order a single rate in their place. Before deciding this question, I recommend that this opinion be approved, that the company be required to submit within 30 days a new schedule in accordance with the findings herein set forth.

See questions at the end of the next case.

B. Approval of Optional Rate Schedules for Electricity

93. Spear & Company[1]

For many years before 1928 the Duquesne Light Company had maintained its so-called F rate for wholesale light and power in the city of Pittsburgh. This rate had been applied to service for Spear & Company at its five retail stores in the city. In January, 1928, the utility filed a new tariff to become effective in February. This schedule continued rate F and a similar optional wholesale rate, called the FW rate. In addition, a new schedule was added, designated as Rate W General Service. All three of these schedules included demand charges and consumption charges. It appeared that Spear & Company had first learned of the new rate late in 1929 and at that time applied for service under it at some of its stores.

The three rates in question were made applicable to the same consumers, provided certain requirements were met. The technical nature of the schedules was such that in certain instances one schedule might be most economical for a given consumer, while under other conditions the use of another rate might be advantageous to the same consumer. For example, tests showed that in three of Spear & Company's five stores, rate F would be most economical. In the fourth establishment, after some change in equipment, service was obtained under the new rate W. After approximately one year's use, however, it was found that changed conditions had made the use of rate F preferable, and the company voluntarily went back to the old rate.

In the fifth store, rate W was found to be most economical and was retained. In a complaint to the Public Service Commission of Pennsylvania, Spear & Company maintained that in the period before it learned of rate W and ascertained that it

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[1] *Spear & Company* v. *Public Service Commission of Pennsylvania (Duquesne Light Co., Intervener)*, P.U.R. 1931D, 387; 161 Atl. 441 (1932); P.U.R. 1932D, 384.

would be less expensive in the store in question, the utility was in error in continuing to charge on the basis of rate F, and that such a charge at that particular location was unjust and discriminatory.

Concerning the complaint of Spear & Company, the commission said:

> Complainant contends that for any particular service there can be only one rate properly applicable and that optional rates are improper and discriminatory, except where special arrangements are made in regard to service under conditions of quite unusual nature. . . . The practice of filing rates in the alternative under what is known as optional provisions of the tariff is widespread and well established, not only in the electric industry, but also in other lines of public service. Rate structures are devised to meet conditions applying to the greatest number of people, but it is scarcely possible, particularly in electric power schedules, to devise a method of calculating rates which does not give some consumers unusual benefits or inflict some hardships upon others. It has, therefore, become common for companies to have two or more schedules of rates for a given service; the one or the other to be adopted for a given period as a method of calculating the charge for the service rendered on what may be the most reasonable basis under the circumstances. The commission recognizes the right of respondent to put into effect optional or alternative rates that are not discriminatory or otherwise objectionable.
>
> Complainant contends further that if optional rates are proper, it is the duty of the company to calculate which will be the cheapest for each consumer and to bill him upon that basis. In practice, such a procedure would be well-nigh impossible. A utility has the duty to make proper classifications of its service and to prescribe rates accordingly, but having done this and having made all proper information available to its patrons, its obligation has been met . . .
>
> While it is quite possible to make classifications of consumers unnecessarily complicated and to prescribe optional rates greater in number than necessary, the commission is not persuaded that respondent has done so in this instance, or has established a rate which involves a discrimination between classes of its consumers. There is no evidence that respondent gave any of complainant's competitors any notice of the filing of the optional rate other than that which complainant received, or that any improper delay was suffered in obtaining rate "W" for its business establishment here involved. The decision to adopt rate "W" or retain rate "F" was, therefore, properly left to complainant.
>
> Under all the circumstances, the commission is of the opinion and finds that the application of respondent's rate "F" to complainant's downtown store from February 1, 1928, to the date of its request for rate "W" was neither unreasonable nor discriminatory.

Spear & Company appealed from the decision of the commission to the Pennsylvania Superior Court. The court in July, 1932, upheld the commission's decision.[1]

Is there a justification for optional rate schedules? If they are to be used, should the public utility be responsible for applying the proper rate schedule to the different classes of consumers?

Is the application of optional rate schedules in any way related to the extent to which a public utility's facilities may be used?

Do you approve of the Long Island Lighting Company's rules which prescribed how customers might take service under optional rates?

Is there any more reason for optional rates for electricity than for gas?

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[1] 161 Atl. 441 (1932); P.U.R. 1932D, 384.

6. Municipal, Regional, and State-wide Areas in Rate Making

A. Municipal *v.* Regional Area

94. Eau Claire *v.* Railroad Commission[1]

In 1914 the Wisconsin-Minnesota Light & Power Company acquired all the stock of the Chippewa Valley Railway, Light & Power Company. The Wisconsin-Minnesota Light & Power Company owned the lighting plant at Red Wing, Minnesota, and another at La Crosse, Wisconsin, the power for which was generated by a large steam plant. The property of the Chippewa Valley Railway, Light & Power Company included certain water-power sites on the Chippewa River. After the Wisconsin-Minnesota Light & Power Company acquired the stock of the Chippewa Valley Railway, Light & Power Company, it entered into a contract with the Consumers Power Company at St. Paul, Minnesota, by the terms of which it agreed, when it had completed what was known as the Wissota Dam, to furnish, for a period of 30 years, 22,000,000 kilowatt-hours firm or constant power per year, for which it was to be paid 5½ mills per kilowatt-hour at the substation at Stillwater, Minnesota. It further agreed to furnish a like amount of surplus power each year, for which it was to be paid 3 mills per kilowatt-hour. This current was to be delivered over a power line 74 miles in length, known as the St. Paul High Line, reaching from the proposed Wissota Dam to the St. Croix River opposite Stillwater, Minnesota. Having made this contract, it secured from the Wisconsin Railroad Commission permission to build the Wissota Dam. The estimated cost of the dam and the St. Paul High Line was $3,000,000. The project was completed, however, at an expense of approximately $7,000,000.

The contract proved to be unprofitable, since the company could not earn a reasonable return on its investment. The contract then held by the Northern States Power Company was changed in

[1] *City of Eau Claire et al.* v. *Railroad Commission et al.*, P.U.R. 1922D, 666.

May, 1917.[1] Under the contract as amended, the Wisconsin-Minnesota Light & Power Company was obligated to furnish under the contract all power "not needed elsewhere." The Wisconsin-Minnesota Light & Power Company then apparently started on a campaign to procure from various Wisconsin cities a larger market for the power generated by the Wissota Dam. The cities originally furnished power by the Chippewa Valley Railway, Light & Power Company as well as those later served constituted what was called a "Loop System." The list of cities in the loop system was substantially enlarged after the construction of the Wissota Dam.

In October, 1920, the Wisconsin Railroad Commission granted the Wisconsin-Minnesota Light & Power Company an increase in its rates. In fixing the rates the commission treated the loop, that is, all the cities furnished and supplied by the Wisconsin-Minnesota Light & Power Company, as a unit. It divided[2] the cities in the loop into classes, placing Chippewa Falls, Eau Claire, and La Crosse in one class, Menomonie and Red Wing in another class, and all other cities or villages in a third class. No consideration was given to the proximity of any community to the hydro-electric power. The commission pointed out that the plants originally operated by the Chippewa Valley Railway, Light & Power Company were within a short time unable to supply the demand for power coming from the entire loop, owing to the increase in the number of municipalities served as well as to an increasing demand for power in the municipalities originally supplied by these developments; that the requirements of communities in the loop system for firm or constant power absorbed all such power generated by the original development, as well as 71.68 per cent of the firm or constant power generated by the Wissota Dam. Therefore, 71.68 per cent of the cost of the Wissota Dam was apportioned to the loop system.

Eau Claire and certain other municipalities contested the commission's decision. These cities complained of the allocation of 71.68 per cent of the cost of the Wissota Dam to the loop, and strenuously maintained that the commission had no right to regard the loop as an entity in fixing the just and reasonable

[1] The name of the Consumers Power Co. was changed in 1916 to the Northern States Power Co.

[2] 25 *Wisconsin Railroad Commission Reports* 88.

rates for service. The lower court held that the action of the commission in treating the loop as an entity was lawful. It held, however, that an unreasonable proportion of the cost of the Wissota Dam was apportioned to the loop, and for that reason it reversed the order of the commission. From that judgment the Wisconsin-Minnesota Light & Power Company appealed to the Wisconsin Supreme Court. In its review of the decision of the lower court, the Wisconsin Supreme Court said:

> While the lower court reversed the order of the commission principally for the reason that an undue proportion of the investment made in the Wissota Dam was charged to the loop and used as a basis for fixing the reasonable rates to be paid by the users of electric current situated on the loop, we deem it unnecessary to review the finding of the lower court in that respect for the reason that our decision will be placed upon a broader and more fundamental consideration.

This court was deeply impressed with the thought that the commission's method of fixing rates for all communities in the loop had resulted in great injustice to certain cities and communities originally served by the Chippewa Valley Railway, Light & Power Company. The court pointed out that for some time before the Wissota Dam was built certain communities later included in the loop were being adequately and economically served. The court contended that as the result of the basis adopted by the commission, those communities were subjected to increased rates to enable other cities brought into the loop to enjoy a lower rate than that at which they otherwise could have been served.

It was the contention of the court that the Wissota Dam would not have been built originally for the service of the Wisconsin municipalities which were then receiving power from that source; that its construction was prompted by the contract which it secured from the Northern States Power Company. It was the opinion of the court that if that contract had proved to be a profitable one, the utility company would not have sought the market afforded by the various cities and villages which it later added to the original loop system. The market for electricity was thus developed until the original development of the Chippewa Valley Railway, Light & Power Company was insufficient for the demands of the loop system as enlarged and extended. This in turn made necessary a draft upon the power generated by the

Wissota Dam for the service of the entire loop system. The latter development was not economical; its actual cost was in round numbers somewhere nearly double the original estimate. The court maintained that when the loop system was treated as a unit, the cities originally furnished by the prior developments were called upon to bear the burden necessary to yield a reasonable return upon approximately 70 per cent of the cost of constructing the Wissota Dam; that the practical result of the development of the Wissota Dam had been to increase materially the cost of service to the original cities of the loop.

Concerning the commission's order, which resulted in what the court believed was unfair discrimination against the original cities in the loop, the court said:

> While the hardship resulting to these cities is apparent, the question of whether the basis adopted by the commission, resulting in such increased rates, is illegal or unreasonable, is not so easy of solution.
>
> . . . . . .
>
> Manifestly, whether it is a lawful rate depends upon whether it is a rate which the commission is authorized to prescribe pursuant to legislative authorization.
>
> . . . . . .
>
> But in this case there is no contention that the rates fixed yield an unreasonable return to the utility. The complaint is that the return to, or income of, the utility resulting from the rates fixed by the order under review is unlawfully and unreasonably distributed among the municipalities constituting the so-called Loop System. This brings us down to the single question of whether the commission was acting within the legislative command in treating the Loop System as a unit for the purpose of fixing the rates to be charged by the Wisconsin-Minnesota Light & Power Company.
>
> This question does not find its answer in any express provision in the statute. It must be deduced from a consideration of many correlated statutes in conjunction with the history of commercial, economic, and political development. At the time of the enactment of the public utility law . . . practically every municipality in the state had its individual public utility, whether it was for the supply of water, gas, or electricity. Its relation to that utility was a matter of individual dealing between the municipality and the utility. There was no great development of water power by a single utility serving numerous municipalities scattered far and wide. Our present day developments could not have been within the contemplation of the legislature, because they did not exist.

The legislature enacted a law calculated to bring about reasonable rates and adequate service between the public utility on the one hand and the municipality and its inhabitants on the other. Although these large developments of water power, of which probably the respondent is the most notable example, have come since the passage of the utility law, there has been no modification of that law, which we must assume was enacted in the light of conditions then existing, which regarded the municipality as the entity on the one hand and the utility as the entity on the other, for the purpose of establishing just and reasonable rates and service.

In reaching the conclusion that the commission was within the legislative command in treating the entire loop system as a unit, the lower court relied upon statutory provisions. In commenting upon the statutory provisions upon which the lower court had relied with reference to the definition of a public utility as the corporation that owned the plant, the Wisconsin Supreme Court said:

While these statutes do recognize the fact that parts of the same utility may be situated in different municipalities, they evidently refer to plants which, while located without, develop power and furnish service to, a particular municipality. This is evidenced by §1797m–78 which provides "any public utility accepting or operating under any license, permit, or franchise hereafter granted shall, by acceptance of any such indeterminate permit, be deemed to have consented to a future purchase of its property actually used and useful for the convenience of the public by the municipality in which the major part of it is situate for the compensation and under the terms and conditions determined by the commission. . . . "

The court then said:

This plainly contemplated that the major portion of any utility contemplated by the act is located in some one municipality. It certainly was not within the legislative contemplation that the only municipality on the loop served by the Wissota Dam that can become the owner of the utility within its municipal borders is the one in which the dam is located, as that no doubt constitutes the major portion of the utility.

We are not unmindful of the considerations of public policy which support the position of the Railroad Commission; nor of the fact that the utility commissions of other states have adopted the same basis for rate making under similar circumstances.

. . . . . .

Our water powers are no doubt an asset to our state. It is no doubt wise that when a water power site is developed that it be devel-

oped to its full capacity. It is probably true that in the great majority of instances a market for the power cannot be found adjacent to, or within convenient distance of, the water power site, and that in order to find a market for the developed power it will be necessary to conduct the same by transmission lines to distant cities. Whether or not a city adjacent to the power is to be deprived of the advantage of its location and made to bear the burden of a portion of the expense of carrying it to a distant city, is a question of public policy which should properly be decided by the legislature. It should not be established either by the Railroad Commission or by the court. If the legislature shall conclude that the policy adopted by the Railroad Commission is a wise one, it will be for those administering the law to follow it. As to the wisdom of the policy, we intrude no opinion. We simply say that when such policy becomes the policy of the state, it should be by legislative declaration, and that declaration has not as yet been made. Under existing statutes the commission is required to treat the municipality as a unit and to base its rate upon the cost to the utility of serving the individual municipality rather than the average cost of serving many distinct and scattered municipalities. Because the commission, in fixing the rates under review, treated the Loop System, rather than the individual municipality, as the unit, it proceeded upon an erroneous fundamental basis, and its order must be vacated and set aside.[1]

The Interstate Commerce Commission has recognized, as a general principle in railroad rate making, that a city or town should not be robbed of its geographical advantages.

In the development of hydroelectric systems, how large an area might be said to be within the "geographical advantages" of water-power sites?

To what extent are cities far removed from the site of a hydroelectric plant by which they are served entitled to the economies which result from large-scale operation of such a plant?

Compare the decision in this case with the decisions in Alabama Power Company and Georgia Power Company (A) involving uniform state-wide rates for electricity.

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[1] The Wisconsin Legislature in 1929 amended the utility law so as to permit the commission to make rates upon a regional basis. Subsection 2 of Sec. 196.03, *Statutes*, 1929, reads: "For rate-making purposes the commission may consider two or more municipalities as a regional unit where the same public utility serves said municipalities, if in its opinion the public interest so requires."

B. State-wide Uniform Promotional Domestic Rates

95. Alabama Power Company[1]

In the fall of 1928, the Alabama Power Company filed a petition with the Alabama Public Service Commission requesting permission to make effective throughout the territory served by the company a new schedule of rates for the domestic market.

The Alabama Power Company was originally incorporated in 1906 for the purpose of acquiring and developing hydroelectric power sites, conducting the business of generating and distributing electric power, and operating public utility enterprises in the state of Alabama. In the years following its organization, the company acquired a number of utilities rendering service in various parts of Alabama. In 1927 a new corporation was organized, still known as the Alabama Power Company, as a result of a consolidation of Gulf Electric Company, Houston Power Company, and the former Alabama Power Company. The properties of this new company were located entirely within the state of Alabama. At the end of 1937, the company was serving, directly or indirectly, 672 communities in 64 of the 67 counties of the state. The total number of customers being served was over 226,000, of which approximately 134,000 were served directly by the Alabama Power Company.

As a result of the mergers of electric properties effected by the Alabama Power Company, it seemed feasible to the company

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$1 for first 5 kw.-hr. per month
4.5 cents per kw.-hr. for next 45 kw.-hr. per month
3.5 cents per kw.-hr. for next 150 kw.-hr. per month
2.5 cents per kw.-hr. for excess

The above charge for the first 5 kw.-hr. is applicable to residences of three rooms or less, and will be increased as follows:

15 cents per room for each of the next 7 rooms; plus $1. per hp. or connected motor and refrigerator load (minimum 1 hp.); plus $1. per kw. in excess of 7 kw. connected cooking and heating load.

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[1] *Re Alabama Power Company*, P.U.R. 1929A, 458; 3 P.U.R. (N.S.) 355 (1934).

in 1928 to establish a uniform state-wide residential rate schedule for all areas served by the company. The rate submitted to the commission was as shown in the table on the bottom of p. 611.

The company expected that the introduction of this rate would result in a substantial temporary reduction in the revenue received from the domestic market. The company explained that it could afford to make such a reduction only in case it obtained a new form of rate which would enable its customers to use profitably an increased amount of energy. Thus, it was anticipated that such a rate would eventually increase consumption to the point where total revenue would be increased.

The rate proposed by the company was believed to be well suited to the domestic market, especially in view of the rapid changes that had occurred in the use of electricity in the home. For a considerable time after the introduction of electricity into the home, its use was limited almost exclusively to lighting. In the years immediately preceding 1928, however, there had occurred a rapid extension of the use of electric energy for domestic appliances, especially electric ranges, refrigerators, and water heaters. The company believed that the promotional nature of the rate filed with the commission would provide a distinct incentive for increased consumption of electricity, mainly through the use of appliances.

From an analysis of the proposed rate structure as compared with the rates then in effect, it appeared that a large percentage of the company's customers, consisting for the most part of small users, would be subjected to higher charges for electricity. Approximately an equal number would not be materially affected, and the remainder would obtain a decrease in rates.

Hearings were held by the commission late in 1928, at which testimony was submitted by representatives of cities and towns throughout Alabama as to the desirability of the rate schedule. In general, it was believed by these representatives that the proposed rates should not be approved because of the additional burden placed upon the small user, who was usually the one least able to bear increases in the cost of living. Objections were also raised by some consumers having ranges and refrigerators, who were at the time being served under a special lighting and cooking rate. These consumers would receive increases in their bills upon the establishment of the new rate.

In its decision the commission recognized the increasing importance of the domestic market and the desirability of a rate which would lead to the proper development of that market. The belief was expressed, however, that the schedule proposed by the company would place too great a burden upon the small user. In view of these conditions, the commission established the following rate which reduced charges to the small user, preserved what the commission believed to be equity among various classes of domestic consumers, and at the same time offered an incentive for increased use of electric energy by all classes of domestic customers:

Service Classification "A-1"

80 cents for first 5 kw.-hr. per month
5 cents per kw.-hr. for next 45 kw.-hr. per month
3 cents per kw.-hr. for next 150 kw.-hr. per month
1.5 cents per kw.-hr. for excess

The above charge for the first 5 kw.-hr. is applicable to residences of three rooms or less, and will be increased 10 cents per room for each of the next seven rooms. For ranges and heaters in excess of 10 kw. connected load, the above charge for the first 5 kw.-hr. will be increased by $1 per kw. of such excess.

Monthly minimum charge: An amount equal to the total charge for the first 5 kw.-hr.

The above rate was declared by the commission to be applicable to all domestic customers throughout the State of Alabama who were served by the Alabama Power Company, with the exception of certain specific cases mentioned by the commission in its order establishing the rate. It was estimated by the commission that the new rate would result in an immediate reduction of approximately $300,000 per year in the revenue obtained by the company from the domestic market.

It was felt by the regulatory body that all customers should be allowed the option of retaining the rate under which they had previously been served. Because of the belief, however, that the new rate was of potential value to all domestic customers, it was provided that such rate would be the basis of all future billing unless an individual customer elected in writing, within a designated time period, to retain the old rate.

In May, 1933, the Alabama Public Service Commission commenced a general investigation of the rates of the Alabama Power Company. At that time the company had in effect for urban

domestic service five rates, including Service Classification "A-1" as established by the commission in 1928, and several of the earlier rates which had been elected by consumers under the option extended by the commission in its order of 1928.

In the opinion of the commission, the results of its investigation showed a need for revision of the company's residential rates. Attention was called to the changes in business conditions since 1928, and to the demands of the public for lower electric rates. It was recognized that if rates were lowered sufficiently to meet the expectations of the public, the credit of the company would be destroyed. It was believed, however, that some reductions could be made. In this connection, it was stated that the policy inaugurated in 1928 of establishing state-wide uniform rates for each class of customers served by the company had proved to be beneficial to both the company and the public. This success, it was felt, warranted the continuation of this policy in future rate revisions.

As a means of attaining the two objectives of providing a lower residential rate and at the same time maintaining the company's credit, the commission in October, 1933, canceled all existing urban residential service rates in the territory served by the Alabama Power Company and established the following objective rate plan for such service:[1]

1. PRESENT RATE

6.5 cents net (7.15 cents gross) per kw.-hr. for the first 4 kw.-hr. per room per month, plus
5.0 cents net (5.5 cents gross) per kw.-hr. for the next 6 kw.-hr. per room per month, plus
2.5 cents net (2.75 cents gross) per kw.-hr. for the next 300 kw.-hr. per month, plus
1.5 cents net (1.75 cents gross) per kw.-hr. for excess monthly consumption
The room count shall begin at four and end at ten.
Monthly minimum bill for each customer shall be $1.00 net ($1.10 gross) per meter per month.

. . . . . .

2. OBJECTIVE RATE

$1.00 net ($1.10 gross) per meter per month, first 15 kw.-hr. or less, plus
4.5 cents net (4.95 cents gross) for the next 8 kw.-hr. per room, per month, plus
2.0 cents net (2.2 cents gross) for the next 150 kw.-hr. per month, plus
1.25 cents net (1.375 cents gross) for the next 500 kw.-hr. per month, plus
1.0 cent net (1.1 cents gross) for all excess monthly consumption.
The room count shall begin at four and end at ten.
Net monthly bill for each customer shall be $1.00 net ($1.10 gross) per meter per month.

[1] For a description of the operation of an objective rate plan, see case entitled, The Tennessee Electric Power Company, p. 472.

In 1934, certain changes were made in the size of the blocks as designated in the original rate order. In May, 1936, a new objective rate plan was inaugurated, in which the former objective rate was retained as the "present" rate, and a new, and even lower rate was established for those residential customers who increased their consumption. This new objective rate was to become applicable to all urban residential customers (*a*) upon the expiration of any month during which at least 80 per cent of all such customers were billed under the rate, or (*b*) on or after April 30, 1939, whichever occurred first.[1]

Is the policy of offering state-wide uniform domestic rates sound?

Is the number of rooms in a residence a sound basis for determining demand?

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[1] *Edison Electric Institute Rate Book*, 1937, p. 4.

C. State-wide Uniform Commercial Lighting and Retail Power Rates

96. Georgia Power Company (B)[1]

In 1929 the Georgia Public Service Commission directed the Georgia Power Company to show cause why its commercial-lighting and retail-power rates should not be revised so as to bring about uniform rates to all customers taking the same class of service throughout the territory served by the company. At that time the Georgia Power Company was operating under 16 separate schedules of commercial-lighting rates and 10 separate schedules of retail-power rates. The average commercial-lighting rates ranged from 2.58 to 12.63 cents per kilowatt-hour and the average retail-power rates, from 2.45 to 5.59 cents per kilowatt-hour. This wide range in the average rates was due to the fact that many of the utilities which had been merged with the Georgia Power Company had been operating under different rates "the distribution of the revenue having been made on a different basis for each separate company."

After its incorporation in 1928 the Georgia Power Company, a consolidation of a number of public utility enterprises in Georgia, acquired through merger, purchase, and consolidation a large number of electric plants in various locations throughout the state. At the time the commission was considering these commercial-lighting and retail-power rates, the Georgia Power Company was serving more than 200 towns within the state of Georgia, and its generating stations were scattered throughout its franchise area.

The commission had been requested by various customers throughout the territory served to require the application of the new residential rates to all commercial and retail-power service.[2]

[1] Prepared from official copy of decision of Georgia Public Service Commission Number 16981, November 13, 1929.

[2] In December, 1928, the Georgia Public Service Commission revised the rates of the Georgia Power Company applying to residential-lighting and residential-power service. The purpose of that revision was to remove inequalities existing among residential consumers which had been brought about by the merging of various utilities with the Georgia Power Company. The evidence in that case indicated that there had been 22 separate schedules of rates applying to residence service. The order of the commission on December 22, 1928, provided that all rates to residential consumers taking the same class of service should be uniform.

In response to this request, the commission made the following statement:

> Our investigation in the case of the residential rates showed that, on the average, electricity in the residence is used in what is known as the off-peak hours; that is, during the night hours from six o'clock in the evening till midnight or later, after the closing down of industries, and during such hours that the load on the company's facilities is at the minimum. If the company was unable to sell any current after six o'clock in the evening it would not warrant any reduction in its present production facilities and the water used in producing this night current would go over the dam, so to speak. We were, therefore, justified in prescribing a more reasonable measure of rates for residential purposes than we would have otherwise been. To prescribe the residential rates for the commercial service would result in a net reduction of approximately $1,800,000 per annum, which is not warranted either by the present net earnings of the company or for the classes of service with which we are now dealing.

In the opinion of the commission, it was not practicable to prescribe one schedule of rates that would apply to all classes of commercial service. It pointed out that there were four classes of commercial customers: first, commercial-lighting customers; second, retail-power customers without lighting service; third, those with combined lighting and power service; and, fourth, customers using electricity for commercial heating, commercial cooking, and refrigeration.

The commission believed that in dealing with a rate structure as extensive and as complicated as the one involved in this case, it was necessary that each class of service should be considered on a basis of averages; that it would be impracticable, for example, to prescribe rates to apply to each individual customer; that it would not be practicable to adopt either the lowest or the highest of the 16 schedules of the lighting rates or of the 10 retail-power rates then in effect, and apply these lower or higher rates to all territory served by the company.

The commission maintained that, on the average, the load for commercial-lighting customers came on at the peak hours of the day, from 4 to 8 P.M. The commission pointed out that this was "a very expensive service," for the reason that it was "necessary for the power company to maintain facilities that would adequately take care of this peak load." The record showed that there were about 14,000 customers taking commercial-lighting

service, many of whom were small users of current. Approximately 56 per cent of the commercial-lighting consumers used less than 50 kilowatt-hours per month and consumed 9.8 per cent of all the energy sold in this class; 18.5 per cent used more than 50 but less than 100 kilowatt-hours, or 11.3 per cent of the energy sold in this class; and 25.5 per cent used more than 100 kilowatt-hours, or 78.9 per cent of all current sold in this class.

The commission found that since many retail-power consumers were using energy throughout the day, the percentage of the customers in this class who used a substantial quantity of energy far exceeded the percentage of customers in the commercial-lighting group using a large amount of energy.

Approximately 32 per cent of the retail-power customers used less than 50 kilowatt-hours per month, or 1 per cent of all the energy sold to this class; 31.5 per cent used more than 50 and less than 200 kilowatt-hours per month, consuming about 6 per cent of all energy sold to this class; while approximately 36.5 per cent used over 200 kilowatt-hours and consumed 93 per cent of the total amount of energy sold to the group.

In discussing the Georgia Power Company's rates for commercial lighting, the commission pointed out that certain expenses to the company to serve the 56 per cent using less than 50 kilowatt-hours per month were just as great *per customer* as those incurred in serving the 25.5 per cent using more than 100 kilowatt-hours per month. In view of this fact, it was the opinion of the commission that the rates for commercial lighting should include a service charge, following the principle adopted in fixing rates for residential service.

It was the opinion of the commission that the small retail-power user was not entitled to any lower rate for the same amount of energy used than was the small commercial-light consumer; that customers having a combined lighting and power service should be charged on the basis of the kilowatts of demand.

The commission pointed out that, although consumers using electricity only for commercial heating, cooking, and refrigeration usually had a relatively low demand, the use of energy for refrigeration was continuous throughout the 24 hours and that recognition should be given to this fact in the rate structure.

The commission pointed out that it was impracticable to determine the exact effect that any schedule of rates would have

until such rates had been tested in actual use; that many customers who had been taking service under one class might choose to take service under another class under the revised schedules. The commission indicated that it would check the effect of the revised rates for the period of one year and determine at the end of that time whether or not further revision was necessary.

The rates approved by the commission for commercial lighting resulted in both increases and decreases to individual consumers, but they applied uniformly to all customers of the Georgia Power Company taking the same class of commercial-lighting service throughout the territory served by the company. The commission found that the new rates would result in a decrease of about $200,000 per annum in the company's revenue.

In March, 1934, there was made available throughout the territory served by the Georgia Power Company an optional "Inducement Schedule" for commercial electric service.[1] This rate was a variation of an objective rate plan which had already been applied by the company to domestic electric service.[2] Existing commercial rates were retained, and the new Inducement Rate was made available to those customers who increased their consumption.

See questions at the end of the next case.

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[1] *Edison Electric Institute Rate Book*, 1935, p. 48.

[2] For a description of the operation of an objective rate plan, see case entitled The Tennessee Electric Power Company, p. 472.

D. State-wide Uniform Industrial and Wholesale Power Rates

97. Georgia Power Company (C)[1]

On April 15, 1931, the Georgia Public Service Commission ordered the Georgia Power Company, which supplied electric-light and power service directly or indirectly to approximately 362 cities and towns in the state of Georgia, to inaugurate uniform industrial and uniform municipal or central-station power rates for customers taking the same class of service throughout its entire territory. In 1929 a similar uniformity of commercial-lighting and retail-power rates had been ordered by the commission.[2]

In taking over the various properties which comprised the Georgia Power Company, because of changes in the rates at the time of the acquisition of these properties, and in some instances because of the continuation of some of the rates in effect at the time, there had resulted a total lack of uniformity in the company's rates for identical classes of industrial and wholesale power service.

In 1930 the commission ordered the company to show cause why rates should not be revised and made uniform throughout the company's territory. In its reply early in 1931 the company offered no objection to the imposition of uniform industrial and wholesale rates, but insisted that at that time it was not earning a reasonable return on the fair value of its property devoted to the public use, and therefore that its earnings should at least be preserved in whatever rates might be prescribed. Among other allegations made in the reply filed by the company with the commission, it was stated that the engineers and accountants of the Federal Trade Commission, acting under a resolution of the U. S. Senate, reported that the Georgia Power Company was, for the time at which the study was made, earning only 5.2 per cent on the value found by the engineers of the Federal Trade Commission.

[1] Prepared from copy of official decision of Georgia Public Service Commission Number 18195 (April 15, 1931).

[2] See Georgia Power Company (B), p. 616.

Representatives of wholesale industrial consumers argued at the hearing that for competitive reasons wholesale industrial rates should be made uniform throughout the territory served by the company. They stated, however, that they were not in favor of any rate schedule which would decrease the power company's earnings, since they realized that the company's 1930 earnings had been affected by the general business depression, and that as a result it was not currently earning more than a reasonable return on the value of its property devoted to the public use.

Representatives of the city of Albany and of the South Georgia Consumers Association, consisting of a large number of consumers of southern and southwestern Georgia, contended that uniform rates should be prescribed in order that industries in those territories might be placed on an equal competitive basis with industries elsewhere in the state. These representatives also stated that they were not seeking a reduction of the Georgia Power Company's revenue since they were impressed with the importance of its development in making possible a more complete exploitation of the state's resources and further progress industrially.

Certain cotton ginners urged the commission to make uniform rates throughout the state for this class of service and at the same time urged that the lowest possible rates be fixed in order to reduce the current cost of ginning.

At the time this hearing was held, the commission found that the wholesale, industrial, and municipal rates in north Georgia, in the territory formerly served by the Georgia Railway and Power Company, which was absorbed by the Georgia Power Company, were generally lower than the rates in southern and southeastern Georgia. In some instances, however, the industrial rates in the territory formerly served by the South Georgia Power Company before it was absorbed by the Georgia Power Company were lower than the rates in the north Georgia territory. This was also true in the territory formerly served by the Baker County Power Company, which was taken over by the Public Utilities Georgia Corporation. In August, 1929, rates of this company had been voluntarily revised, resulting in very material reductions. The commission realized that ostensibly this voluntary reduction was made for the purpose of attracting new business, and thereby increasing the load and the company's revenue. This result was not accomplished, however, and the company having been placed

in receivership, was later sold by the court to the Georgia Power Company.

The commission stated that there could be no question of the desirability of uniform rates applicable to all customers of the same class throughout the territory served by the Georgia Power Company. It stated that this was particularly true where industrial rates were involved and when it was practicable to bring about such a result. At the time of the hearing, the Georgia Power Company was serving more than two-thirds of the entire state of Georgia with electric power. Many of the companies and industries served by this utility came in direct, and in fact, very keen competition with each other. The commission was informed that the cost of power to these industries was a very large factor in the cost of production of the commodities manufactured, and that, therefore, where it was practicable to have uniform rates, every section of the state served by the Georgia Power Company should be given an equal opportunity of attracting industries to its territory. This opportunity, it was argued, could not exist were it not for uniform rates resulting in uniform power costs.

Before proceeding to issue its order, the commission outlined some of the factors which it believed should be recognized in establishing a rate schedule. Among these it stated that the condition and adequacy of the company's property and service should be considered, but as no complaints were made regarding the type of service rendered by the Georgia Power Company, this factor was forthwith dismissed. Another factor was the amount of revenue necessary to provide for operating expenses, depreciation, taxes, etc., and a reasonable return on the fair value of the property used and useful by the public. In this connection the commission expressed the view that rates should at all times be so adjusted as to bring about a proper distribution of the cost of the service, so as to permit all citizens, wherever the service was available, to use the service freely and at a reasonable cost.

Another factor, in the commission's opinion, was the value of the service to the customers. Therefore, it expressed the view that it would not be practicable to fix a flat rate for electricity to be applied to all customers without regard to the class or use to which the service was put. The commission recognized that such a method of rate making would make it impossible to develop the state of Georgia industrially with electric power. It was pointed

out that an electric power company might have a monopoly in furnishing electric power, but that it certainly did not have a monopoly in furnishing all power. The commission held this to be true because electric power came into close competition with coal, oil, gas, gasoline, etc., in the residential, in the commercial, and particularly in the industrial market; that the rates for the electricity to residential and commercial consumers depended, to some extent, upon the sales of power to industrial consumers. Conversely, if industrial rates were not properly adjusted so as to enable the electric power company to meet the competition of other fuels and forms of power, there would be a consequent loss of industrial revenue to the company, and very material increases would have to be made in the rates for residential and commercial

EXHIBIT 1
GEORGIA POWER COMPANY
RATES

Schedule *C* 1. Industrial service.
Available: To all industrial power customers being served by 2,300 volts (or other primary distribution voltage), 3-phase, from overhead distribution lines only.
Applicability: All territory served by the company. Industrial power service, including incidental lighting.
Rate: Service Charge.—
$5.55 per month per meter, plus an energy charge as follows:
First 100 hours use of the lighting demand..... 6 66 cents per kilowatt-hour
All additional energy used..... 3.33 cents per kilowatt-hour
Determination of Lighting Demand: By inspection, 100 per cent of the connected lighting load in excess of 500 watts but not less than 100 hours' use of same per month.
Minimum Monthly Charge: The service charge plus 55.5 cents (gross) per h.p. connected.
Seasonal Business: Seasonal customers will be given one cut-in and one cut-out each year under this rate, the service charge then becoming $66.60 (gross) per season payable in not more than six equal monthly installments. For such customers the minimum monthly charge will be waived, and in lieu thereof the customer shall guarantee a total annual payment at least equivalent to the service charge plus $6.66 (gross) per h.p. connected. Minimum connection, 20 h.p.
Prompt Payment Discount: All bills paid within 10 days from presentation are subject to a discount of 10 per cent.
Contract Period: One year.

consumers in order to yield anything like a reasonable return on the fair value of the utility's property.

Although the commission originally had ordered the power company to show cause why all wholesale and industrial and central-station or municipal power rates should not be made uniform, its investigation disclosed that it was not practicable to

prescribe one schedule of rates that would properly take care of all classes of industrial customers. The commission decided that it was necessary to prescribe special rates to meet the needs of small industrial or intermediate wholesale industrial customers, and that such seasonal consumers as cotton gins, cottonseed oil mills, fertilizer plants, and similar enterprises, which required power only during a few months of the year, should have special rates to cover their particular needs.

It was practically inevitable, in prescribing uniform rates for like classes of service while attempting to maintain the company's total revenues, that there should be both increases and decreases, but with a great majority of the customers the prescribed rates would result in decreases. Based on 1930 business,

EXHIBIT 2

GEORGIA POWER COMPANY

RATES

Schedule *C* 2. Industrial service.

Available: To all industrial customers having not less than 50-kw. demand when served by transmission (or wholesale distribution line) voltage, 3-phase.

Applicability: All territory served by the company. Industrial power service, including incidental lighting where the lighting demand does not exceed 10 per cent of the total demand.

Rate: Demand Charge.

$1.11 per kilowatt of maximum demand per month, plus an energy charge as follows:

Kilowatt-hours per Month	Cents per Kilowatt-hour
First 20,000	1.44
Next 30,000	1.11
Next 150,000	0.777
All over 200,000	0.666

Determination of Demand: By measurement of highest 30-minute interval monthly, the demand so determined shall be the demand for such month and for each of the next succeeding six months, unless superseded by a higher demand which in turn prevails for the next succeeding six months. In no event, however, shall the maximum demand of any month be less than the guaranteed demand prevailing at the time under the contract, nor less than 50 kw.

Peak demands, due to short circuits or accidents to machinery or momentary starting of motors, shall not be counted. The terms "month" and "monthly" as herein used are intended to designate the period between the regular watt-hour meter readings which shall be made by the company approximately monthly.

Minimum Monthly Charge: The demand charge, but not less than $55.50 (gross).

Seasonal Business: Seasonal customers will be given one cut-in and one cut-out each year under this rate. During the period when customer is disconnected the minimum monthly charge will be waived, and in lieu thereof the customer shall guarantee a total annual payment at least equivalent to $20 (gross) per kilowatt of highest established demand.

Prompt Payment Discount: All bills paid within 10 days from presentation are subject to a discount of 10 per cent.

Contract Period: One year.

the revision was expected to result in a reduction of the company's annual revenues. The chief increases under the uniform schedules occurred in the southern part of the state formerly served by the Baker County Power Company or the Public Utilities Georgia Corporation, where the rates had been voluntarily reduced, by the former owners of the property, below the cost of the service.

The commission defined an industrial customer as being one engaged in the business of manufacturing any commodity or processing any commodity for manufacture, and ordered that for the same class of service taken by such customers uniform rates

EXHIBIT 3
GEORGIA POWER COMPANY
RATES

Schedule *C* 4. Industrial.

Availability: Primary hydroelectric service for industrial use within the territory served by the company, where service can be supplied from an existing transmission or hydroelectric distribution line of not more than 66,000 nor less than 6,600 volts, 3 phases, 60 cycles. Includes incidental lighting up to 10 per cent of total demand. Customer to furnish and install all transformers required to reduce the voltage below the service voltage.

No service will be supplied under this rate for a maximum demand of less than 500 kw.

Rate: Block Hopkinson Demand.

Demand Charge.

Kilovolt-amperes of Maximum Demand per Month	Rate per Kilovolt-ampere per Month
First 200	$3 00
Next 800	1 66
All over 1,000	1 11

Plus an energy charge of: 0.555 cent per kilowatt-hour per month.

Determination of Demand: By measurement of highest 30-minute interval monthly, the demand so determined is the demand for such month and for each of the next succeeding six months unless superseded by a higher demand which in turn prevails for the next succeeding six months. Demand and energy will be metered on secondary side of high tension transformers.

Minimum Monthly Charge: The guaranteed demand.

Prompt Payment Discount: Ten per cent discount if paid on or before the final discount date indicated on bill.

Contract Period: One year.

Seasonal Business: Customers whose business is seasonal may avail themselves of this rate, in which case an addition of 25 per cent is made to the demand charge only. A seasonal customer will be required to take service for at least six consecutive months out of each contract year, and the minimum charge will be the demand charge for that period, including the 25 per cent additional charge.

were to be charged throughout the Georgia Power Company's territory. Exhibits 1, 2, and 3 summarize the uniform rates prescribed by the commission for various classes of customers.

Are the rates in the two Georgia Power Company cases constructed upon sound principles?

Should the commission have required uniform commercial-lighting and retail-power rates throughout the territory served by the Georgia Power Company?

Was the commission justified in attempting to apply uniform rates to large industrial power consumers throughout the territory served by the company?

7. Excess Earnings and Fair Return

A. Repeal of Excess-earnings Clause of Transportation Act

98. Interstate Commerce Commission (c)[1]

The Transportation Act of 1920 contained a section known as 15a, which provided, among other things, that all carriers subject to the act whose earnings in any single year exceeded 6 per cent of the value of their railway properties must pay one-half of such excess to the Interstate Commerce Commission.[2] The other half was to be placed in a special reserve fund maintained by such carriers. The funds paid to the commission under this provision were to be used for the purpose of establishing and maintaining a general railroad contingent fund. This fund, administered by the commission, was to be used for making loans to carriers requiring funds to meet expenditures for capital account, or for refunding maturing obligations originally issued for capital account, or for purchasing transportation equipment and facilities and leasing them to carriers. All loans made from this fund were to be extended upon such terms and conditions as the commission deemed proper, but the rate of interest prescribed was in all cases 6 per cent, and the commission was required to exact such security for its loans as it deemed adequate. Both the interest derived from such loans and the principal, when repaid, were to be placed in the general railroad contingent fund. In case of leases of facilities or equipment, or both, to any railroad, the act prescribed that the rental should be sufficient to yield a return of 6 per cent on the investment represented by such facilities as well as an allowance for depreciation, to be computed as specified in the act. Any funds in the hands of the commission which for any reason whatsoever were not being currently employed as provided were to be

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[1] *U. S. Code*, Title 49, Sec. 15*A*, Feb. 28, 1920; Chap. 91, Sec. 422, 41 Stat. 488.

[2] Only those railway properties which were actually used and useful in the service of transportation were considered in such valuations.

invested in United States government securities or placed in official depositories of the government.

The reserve funds which carriers were required to maintain out of the half of the excess revenue which they were allowed to retain could be used by such carriers only for the purpose of paying dividends or interest on their securities or for rent of leased roads, but only to the extent that their net railway operating revenues for any year fell short of a sum equal to 6 per cent of the value of their properties, computed in accordance with other provisions of the law. When and if such a reserve fund became equivalent to 5 per cent of the total value of a carrier's railway property, that portion of its excess income which the carrier was required to place in this fund could then be used by it for other lawful purposes.

Other provisions of Sec. 15a empowered the commission to prescribe just and reasonable rates and to adjust them in such a manner that carriers as a whole in each rate group or territory could, under proper management, earn a reasonable return on a fair valuation of their properties. The commission was also given the right to adjust any particular rate or to prescribe different rates in different territories. The law specified that the percentage which the commission deemed to be a fair return was to be uniform for all rate groups, and that in its determination due consideration was to be given, among other things, to the transportation needs of the country, as well as to the carriers' requirements for future growth. For the first two years the law of 1920 specified that 5½ per cent be deemed a fair return, but empowered the commission to add an additional 0.5 per cent thereto for betterments and improvements. The law further prescribed in Sec. 19a the manner in which the valuation of a carrier's property for rate-making purposes was to be determined, and in Sec. 15a specified that valuations, when made in accordance with the provisions of Sec. 19a, were to be used by the commission as the rate base.[1]

In January, 1930, a bill was introduced into the U. S. Senate to amend Sec. 15a.[2] In response to an inquiry from the Senate Committee on Interstate and Foreign Commerce concerning the proposed amendment, the Interstate Commerce Commission raised the question whether the entire plan of recapture was

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[1] See case entitled Interstate Commerce Commission (A), p. 542.

[2] This bill, S. 4005, was introduced by Senator Howell.

sound.[1] It pointed out that the process of recapture invariably involved prolonged litigation, forced both the railroads and the commission to incur great expense, and, even when successful, introduced serious difficulties in properly utilizing the recaptured funds.[2] Although the commission did not definitely recommend the repeal of the recapture clause at that time, it called attention to the fact that the wisdom of its retention in any form might be questionable, and that its repeal should be given serious consideration by the Senate.

The proposed amendment retained the provision for the recapture of excess earnings, but proposed certain radical changes in the collection and administration of the recaptured funds. Whereas under Sec. 15a excess earnings in any single year were subjected to recapture, the proposed amendment substituted a two-year period over which excess income had to be earned before becoming subject to recapture. The commission approved this provision of the amendment, and even suggested that a three-year period be considered. It believed that the substitution of two years for one year in a single recapture period would result in a more equitable basis for recapture, since it would eliminate the payment of excess funds in any one year by a carrier whose earnings fluctuated widely because of circumstances entirely beyond its control.

Under the proposed amendment one half of the recapturable funds, that is, income in excess of 6 per cent, was to be held by the carrier in trust for the United States, and the other half in trust for the investors in the carrier's securities. The half held in trust for the United States would, under the proposed amendment, be used by the carrier for betterments of its railroad property and for providing extensions and additions to its lines when and if such improvements were ordered or approved by the Interstate Commerce Commission. All such expenditures would be charged to a special "public investment account" and the public investment so made would be represented by certificates bearing 4 per cent interest, issued to and held by the commission. No additions or improvements made from such public funds would be included in

[1] Letter (May 17, 1930) of the Interstate Commerce Commission (mimeographed) to the Senate Committee on Interstate and Foreign Commerce (32 pages). The arguments contained in this letter were repeated in the commission's annual report to Congress for 1930. See Interstate Commerce Commission (A), p. 542.

[2] This argument was stressed in the commission's annual report to Congress for 1930, p. 88.

determining the carrier's rate base, except in so far as it might be necessary to provide for the 4 per cent interest on the commission's certificates. All interest received by the carrier on investments made from such funds would likewise be held in trust for the government, and similarly expended.

The half of the excess income which the carrier was to hold for the benefit of its security holders was, with but one exception, to be used identically as provided in Sec. 15a. The one important change was that, whereas under the original law when such a fund had become equal to 5 per cent of the carrier's total valuation all additional moneys normally assignable to such fund were to be used for "any lawful purpose," under the proposed amendment any such remainder had to "be used for the purpose of liquidating fixed obligations either in conformity with the terms thereof or by the purchase of the carrier's securities in the open market."

The commission called attention to the fact that under the proposed plan prosperous roads having excess income would retain all of it, although certain restrictions on the use of such income would be imposed. The half held in trust for the United States would be invested in additions to or betterments of the carrier's own property, and would be managed and operated by the carrier. All the income derived from such additions or improvements, subject only to the recapture provision, would accrue to the carrier. The commission summarized this phase of the plan in the following commentary:

> It is, in effect, a plan whereby these prosperous carriers would be given the use of certain government funds for the purpose of extending or improving their property, and upon the payment of 4% interest, with the limitation that the particular extensions or improvements upon which the funds are spent must be approved by the Commission, and upon the condition that the investment in this property shall not enter into the rate base of the carrier except to the extent necessary to cover the payment of the 4% interest.[1]

Before taking up possible objections to the plan as a whole, the commission questioned the wisdom of requiring the payment of 4 per cent on the certificates it was to hold. It argued that the recaptured funds represented moneys obtained from the users of the railroads, and that the 4 per cent interest would come from the

[1] Commission's letter, cited above, pp. 16–17.

same source. If, therefore, the purpose of the plan was to provide railroad improvements at less than the usual cost to the public, the elimination of the 4 per cent interest charge would be consistent with such intent. Briefly, the commission expressed the belief that the 4 per cent charge would be a burden upon the public, rather than upon the carriers.

In the second place, the commission questioned the wisdom of requiring the carriers to use the remainder of the investors' half of the excess income, after having established the prescribed reserve fund, for the purpose of liquidating fixed obligations. It stressed the fact that such liquidation would not reduce the rate base, which was independent of the capitalization, and would therefore be of no direct benefit to the public. In so far as a reduction of debt might improve the carriers' credit, the public would be indirectly benefited, but the commission expressed the opinion that the proper use of such funds should be left to the discretion of the carriers' directors. It pointed out, for example, that the paying of increased dividends from such funds might improve the credit of a carrier to a greater extent than a partial liquidation of its indebtedness.

Aside from these specific criticisms, the commission offered several serious objections to the proposed plan for the treatment of recaptured funds. Chief among these objections was the fact that under the proposed plan there would be no funds provided "for helping the weaker roads more effectively to discharge their public duties." The benefits to be derived from the recaptured funds would be divided between the prosperous carriers and the general public. Prosperous roads would receive funds for extensions and improvements, at a low rate of interest, while no such assistance would be tendered weaker carriers. The gulf between the financially prosperous and the impecunious roads would thus be widened.

Furthermore, the commission called attention to the fact that in upholding the recapture provisions of Sec. 15a, the Supreme Court had said in part:

> . . . the appropriation takes away nothing which equitably belongs either to the shipper or to the carrier. Yet it is made up of payments for service to the public in transportation, and so it is properly to be devoted to creating a fund for helping the weaker roads more effectively to discharge their public duties. Indirectly and ultimately this should

benefit the shippers by bringing weaker roads nearer in point of economy and efficiency to the stronger roads, and thus making it just and possible to reduce the uniform rates.[1]

Although the commission admitted that it could not be inferred from this statement that the Supreme Court would not have upheld the constitutionality of the recapture provision without the feature providing for assistance to weak roads, it nevertheless pointed out that the court had been impressed thereby, and that this feature might have influenced its decision.

Among other objections which the commission discussed were the possible legal difficulties which might arise in cases involving the acquisition of property from funds held in trust for the United States by a carrier having after-acquired property clauses in any of its outstanding mortgages. Accounting and legal complications might arise from subsequent sales of such property or from the substitution of newer property for that being held in trust for the government.

Another objection of the proposed amendment was that while many prosperous roads might not have any occasion for the investment of their recaptured funds in extensions and improvements, weaker roads not subject to recapture might conceivably be in great need of such improvement.

Although not undertaking to pass upon the wisdom of including a provision for recapture in the Transportation Act, the commission took the opportunity to point out that practically all sums collected under the recapture clause were paid under protest, and hence became available for their prescribed uses only after much litigation. Furthermore, in many instances such excess earnings were not available in liquid form at the time the payments were due, with the result that carriers were forced to borrow in order to effect payment of recapturable funds. The commission expressed the fear that, as a result of the excessive litigation which recapture invited, certain principles of valuation might be developed which would ultimately have an unfavorable reaction on many broader phases of public regulation, especially the regulation of rates. The commission expressed the opinion that the regulation of rates was not so likely to involve litigation as was the actual recapture of excess income.

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[1] *Dayton-Goose Creek Ry.* v. *U.S.*, 263 U.S. 456, 484 (1924).

If, in the opinion of Congress, the recapture provision should be retained, the commission suggested that, among others, it embody the following stipulations:

1. Three consecutive years, rather than one, should constitute a single recapture period.
2. The carriers' earnings should in no event be drawn down by recapture to an amount below 6½ per cent upon the rate base, although the retained excess over 6 per cent would be subject, as under the original law, to the provision with respect to the accumulation of a reserve fund for the payment of dividends, interest, or rentals.
3. In the case of loans made to carriers from the general railroad contingent fund, the requirement of adequate security should be eliminated. Interest payments should vary with the amount of the borrowing carrier's net railway operating income, but should never exceed 6 per cent. The commission should still be required to find that there was a reasonable prospect that the borrowing carrier could repay the principal and interest on the loan and it should also have power to determine the terms and security therefor.
4. The commission should be allowed to lease equipment which it had purchased with moneys from the contingent fund at a rental varying with the lessee's net railway operating income.

Commissioner Woodlock, who did not concur with the report of the majority, prepared a separate commentary, in the course of which he said:

> The provision relating to the use of excess earnings is highly objectionable in that it would result in making the United States a part owner in the railroads . . . this by legislative fiat and without expenditure of one penny of public money. We cannot have a hybrid system of part-governmental, part-private railroads for reasons which need no recital here.[1]

The commission supplemented its views as expressed in its communication in May, 1930, and as summarized in its annual report of December, 1930, in a letter to the Chairman of the Senate Committee on Interstate and Foreign Commerce in January, 1931.[2] In this communication the commission declared that it favored the repeal of the recapture clause entirely. It called

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[1] Commissioner Woodlock's statement (mimeographed) is appended (pp. 1–4) to the commission's letter of May 17, 1930.

[2] Letter (January 21, 1931) of the Interstate Commerce Commission (mimeographed) to the Senate Committee on Interstate and Foreign Commerce (25 pages). Separate expressions were appended by Commissioner Lewis who concurred in the letter (pp. 1–10) and by Commissioner Porter who concurred in part (pp. 1–2).

attention to the fact that since the enactment of the Transportation Act of 1920 railroads in the aggregate had not been able to earn the income contemplated by Sec. 15a.

Concerning the practical application of the law to individual roads, the commission made the following statement:

> Furthermore, certain railroads which have an enviable reputation for financial strength owe this strength to the fact that they are undercapitalized in comparison with the values of their properties, and *vice versa* certain railroads which are weak financially owe their weakness to overcapitalization. Because of this situation there are many strong railroads which are in little or no danger of recapture whereas it threatens various railroads which are weak.[1]

These objections, when coupled with the expense and litigation involved in recapturing excess income, and later in administering such recaptured funds, led the commission to the conclusion that the recapture provisions should be repealed. Congress repealed the excess earnings clause in 1933.[2]

Do you believe that the theory of recapture of excess income of the railroads is basically sound?

Would you apply the recapture principle to other utilities?

How is the recapture of so-called "excess earnings" related to the idea that a public utility is entitled to a fair return on the fair value of its property?

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[1] *Ibid.*, p. 3.
[2] 48 Stat. 211.

B. Elements in Determining a Fair Return

99. BALTIMORE TRANSIT COMPANY

The Baltimore Transit Company acquired the property of the United Railways & Electric Company in 1935 after the latter company's reorganization. Passenger traffic had begun to decline sharply in 1931, and had continued to decline until receivership proceedings in 1933. The company's reorganization, completed in 1935, reduced its funded debt almost two-thirds. Some of the company's troubles had been due to excessive municipal taxation and to unregulated taxicab competition, but by 1935 both these difficulties had been mitigated somewhat. At no time, however, after the United States Supreme Court decision in January, 1930, which was intended to set the system's rate of return on its property at 7.44 per cent, had the actual rate of return on an established valuation exceeded the 1928 figure of slightly more than 5 per cent. Operating statistics for this period are given in Exhibits 1 and 2.

EXHIBIT 1

BALTIMORE TRANSIT COMPANY*

OPERATING STATEMENTS FOR THE YEARS ENDED DECEMBER 31

(000 Omitted)

	1929	1930	1931	1933	1935	1936	1937
Total Operating Revenue	$16,718	$16,162	$14,008	$9,943	$11,177	$11,821	$11,947
Operating Income	3,729	3,558	2,244	104D	508	799	781
Balance for Fixed Charges	3,885	3,668	2,343	†	541	819	803
Fixed Charges	2,784	2,696	2,775	†	98	123	82
Income Bonds	559	559	233		141‡	588‡	706‡
Common Dividends							
To Surplus	542	413	665D	†	302	108	15

* United Railway and Electric Company operations until June 30, 1935, Baltimore Transit Company after July 1, 1935. Operations of Baltimore Coach Company included after July 1, 1935.

† Fixed charges were not accrued following receivership January 6, 1933, excep that equipment notes, interest, and receiver's obligations were paid.

‡ New debenture issues after July 1, 1935, interest payable only if earned.

D Deficit.

SOURCE: Standard Statistics Corporation.

The Supreme Court decision, involving the question of a fair return, arose from an order of the Public Service Commission of Maryland made in February, 1928. In 1927 the United Railways & Electric Company of Baltimore applied to the commission for an increase in street railway fares from 8 cents cash, or two tokens for 15 cents, to a 10-cent flat rate.[1] The company asserted that the existing rate of fare was inadequate to yield a fair return on the value of its property devoted to the public service. The company cited U. S. Supreme Court decisions to show that it was entitled to a return of at least 8 per cent upon the fair value of its property. The commission denied the company's application and fixed a rate of fare at 9 cents cash, or 8⅓ cents on a token basis. The commission estimated that the new fares would yield a rate of return of 6.26 per cent.

EXHIBIT 2

BALTIMORE TRANSIT COMPANY
REVENUE PASSENGERS CARRIED*
(000 Omitted)

Year	Number of Passengers
1928	200,466
1929	193,030
1930	170,587
1931	145,107
1932	118,057
1933	103,921
1934	113,157
1935	117,594
1936	124,434
1937	130,062

* Includes Baltimore Coach Company after July 1, 1935.
SOURCE: Standard Statistics Corporation.

The company brought suit in a state circuit court on the grounds that the rate of return fixed by the commission was confiscatory and that the annual allowance for depreciation was calculated upon a wrong basis, namely, upon cost, instead of present value of depreciable property. The circuit court sustained the company upon both grounds, and enjoined the enforcement of the commission's order. The court of appeals upheld the view of the circuit court with respect to depreciation, but held the rate of return not confiscatory.[2]

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[1] P.U.R. 1928C, 604.
[2] 155 Md. 572; P.U.R. 1928D, 141, 193; 142 Atl. 870.

The court of appeals, in considering the claim of the company that it was entitled to earn 8 per cent on the value of its property, called attention to the fact that $68,000,000 of the $75,000,000 which had been accepted as the valuation of the company's properties consisted of bonded indebtedness or other obligations bearing a fixed rate of interest far below that rate, and that the balance of the 8 per cent return remaining after paying that interest would go to the holders of the stock having a par value of $20,461,200 but a real value of $7,000,000, if the easements were valued at $5,000,000, or only $2,000,000, if the easements were excluded. The court said that in light of these facts the rate of return on the value of that stock would necessarily be much greater than the 8 per cent. Commenting further on this matter, the court said:

> But aside from that and assuming that the rate schedule will yield less than 8% on the actual value of all the company's property or even less than 8% on the actual value of the stock, that fact alone cannot characterize it as confiscatory, but other factors must be considered.

Concerning the argument of the company that an 8% return was necessary to enable it to borrow money, the court took the position that the speculative opinions of experts who were themselves interested in increasing the rate of return on similar utilities could not be substituted for the judgment of the commission. The court maintained, further, that the value of public utility securities depended in the main upon the security which they offered as well as upon the rate of return they paid to the investor; that it was quite reasonable to assume that the ratio of the company's funded debt to the value of its property, approximately 90 per cent, was as important a factor affecting its credit as was the fact that it could earn but 6.26 per cent on the value of its property.

The court did not believe that increasing automobile competition justified the company in increasing its rates to a point which would be burdensome to the traveling public. The Supreme Court was cited as authority for the rule that rates of a public utility should not be permitted to exceed the value of the service to the public.[1] The court believed that the rates proposed by the

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[1] "When the question arises whether the legislature has exceeded its constitutional power in prescribing rates to be charged by a corporation controlling a public

company would yield a greater return than it had received and greater than that usually received by others operating in the same field elsewhere under substantially the same conditions.

The court was not impressed with the argument that the company should have an increased return because of the depreciation of the dollar. It felt that higher rates were justified only if the value of the service to the user warranted the higher charges.

In regard to the mode of calculating the depreciation allowance, the court accepted the theory of the company that it should be based upon present value rather than upon original cost. The court did not share the view of the company, however, that it was not receiving a fair return.

Two justices dissented from the decision of the court. They maintained that the limitation of the rate of return to 6.26 per cent was unlawful and that the conclusions reached by the trial court were substantially correct. The dissenting opinion called attention to the fact that the commission itself had pointed out that the maintenance of street railway service in Baltimore was a necessity; and that the street railway was carrying more passengers during rush hours than ever before in its long history. According to the dissenting opinion, whatever the risks of its business, the company faced no greater risk than operation under less than a fair rate of return and the uncertainty that such a ruinous situation would be relieved.

The dissenting opinion cited facts from the majority opinion of the court to the effect that the company had paid an average rate of 7.23 per cent on more than $18,000,000 which it had borrowed between the years 1920 and 1927. It was contended that the onerous cost of these borrowings reflected the extent to which the credit of the company had been impaired by insufficiency of its revenue and the uncertainty of its being allowed an increased rate of return on the value of its property; also that a fair rate of

highway, stockholders are not the only persons whose rights or interests are to be considered. The rights of the public are not to be ignored. It is alleged here that the rates prescribed are unreasonable and unjust to the company and its stockholders. But that involves an inquiry as to what is reasonable and just for the public. If the establishing of new lines of transportation should cause a diminution in the number of those who need to use a turnpike road, and consequently, a diminution in the tolls collected, that is not in itself a sufficient reason why the corporation, operating the road, should be allowed to maintain rates that would be unjust to those who must or do use its property. The public cannot properly be subjected to unreasonable rates in order simply that stockholders may earn dividends." *Covington & Lexington Turnpike Road Co.* v. *Sanford*, 164 U.S. 578, 596 (1896).

return on the value of the property should be more than the cost of money obtained through the sale of bonds and other securities.

The case was appealed to the U. S. Supreme Court, which made the following statement concerning a fair return:[1]

The commission fixed a rate of fare permitting the company to earn a return of 6.26% on this valuation ($75,000,000); and . . . the case resolves itself into the simple question whether that return is so inadequate as to result in a deprivation of property in violation of the due process of law clause of the Fourteenth Amendment. In answering that question, the fundamental principle to be observed is that the property of a public utility, although devoted to the public service and impressed with a public interest, is still private property; and neither the corpus of that property nor the use thereof constitutionally can be taken for a compulsory price which falls below the measure of just compensation. One is confiscation no less than the other.

What is a fair return within this principle cannot be settled by invoking decisions of this Court made years ago based upon conditions radically different from those which prevail today. The problem is one to be tested primarily by present day conditions. Annual returns upon capital and enterprise, like wages of employees, cost of maintenance and related expenses, have materially increased the country over. This is common knowledge. A rate of return upon capital invested in street railway lines and other public utilities which might have been proper a few years ago no longer furnishes a safe criterion either for the present or the future . . . Nor can a rule be laid down which will apply uniformly to all sorts of utilities. What may be a fair return for one may be inadequate for another, depending upon circumstances, locality and risk . . . The general rule recently [1923] has been stated in *Bluefield Co.* v. *Pub. Serv. Comm.*, 262 U.S. 679, 692–695:

"What annual rate will constitute just compensation depends upon many circumstances and must be determined by the exercise of a fair and enlightened judgment, having regard to all relevant facts. A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures. The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper dis-

[1] 50 S. Ct. 123, 125, 126 (1930).

charge of its public duties. A rate of return may be reasonable at one time and become too high or too low by changes affecting opportunities for investment, the money market and business conditions generally. . . .

"Investors take into account the result of past operations, especially in recent years, when determining the terms upon which they will invest in such an undertaking. Low, uncertain or irregular income makes for low prices for the securities of the utility and higher rates of interest to be demanded by investors. The fact that the company may not insist as a matter of constitutional right that past losses be made up by rates to be applied in the present and future tends to weaken credit, and the fact that the utility is protected against being compelled to serve for confiscatory rates tends to support it."

What will constitute a fair return in a given case is not capable of exact mathematical demonstration. It is a matter more or less of approximation about which conclusions may differ. The court in the discharge of its constitutional duty on the issue of confiscation must determine the amount to the best of its ability in the exercise of a fair, enlightened and "independent judgment as to both law and facts." [Cases cited.]

There is much evidence in the record to the effect that in order to induce the investment of capital in the enterprise or to enable the company to compete successfully in the market for money to finance its operations, a net return upon the valuation fixed by the commission should be not far from 8%. Since 1920 the company has borrowed from time to time some $18,000,000 upon which it has been obliged to pay an average rate of interest ranging well over 7% and this has been the experience of street railway lines quite generally. Upon the valuation fixed, with an allowance for depreciation calculated with reference to that valuation, and upon the then prescribed rates, the company for the years 1920 to 1926, both inclusive, obtained a return of little more than 5% per annum. It is manifest that just compensation for a utility, requiring for efficient public service skillful and prudent management as well as use of the plant, and whose rates are subject to public regulation, is more than current interest on mere investment. Sound business management requires that after paying all expenses of operation, setting aside the necessary sums for depreciation, payment of interest and reasonable dividends, there should still remain something to be passed to the surplus account; and a rate of return which does not admit of that being done is not sufficient to assure confidence in the financial soundness of the utility to maintain its credit and enable it to raise money necessary for the proper discharge of its public duties. In this view of the matter, a return of 6.26% is clearly inadequate. In the light of recent decisions of this Court and other Federal decisions, it is not certain that rates securing a return of 7½% or even 8% on the value of the property would not be necessary to avoid confiscation. . . . But this we need not decide, since the company itself sought from the commission a rate which it appears would produce a return of

about 7.44% at the same time insisting that such return fell short of being adequate. Upon the present record, we are of opinion that to enforce rates producing less than this would be confiscatory and in violation of the due process clause of the Fourteenth Amendment.

Another question of much importance involved in determining what constituted a fair return was the proper basis for computing the annual depreciation charge. On this point the majority opinion of the court said:

> The allowance for annual depreciation made by the commission was based upon cost. The court of appeals held that this was erroneous and that it should have been based upon present value. The court's view of the matter was plainly right. One of the items of expense to be ascertained and deducted is the amount necessary to restore property worn out or impaired, so as continuously to maintain it as nearly as practicable at the same level of efficiency for the public service. The amount set aside periodically for this purpose is the so-called depreciation allowance. Manifestly, this allowance cannot be limited by the original cost, because, if values have advanced, the allowance is not sufficient to maintain the level of efficiency. The utility "is entitled to see that from earnings the value of the property invested is kept unimpaired, so that at the end of any given term of years the original investment remains as it was at the beginning." *Knoxville* v. *Knoxville Water Co.* 212 U.S. 1 (1909).
>
> This naturally calls for expenditures equal to the cost of the worn-out equipment at the time of replacement; and this, for all practical purposes, means present value. It is the settled rule of this court that the rate base is present value, and it would be wholly illogical to adopt a different rule for depreciation.

In a long dissenting opinion by Mr. Justice Brandeis, in which Mr. Justice Holmes and Mr. Justice Stone concurred, it was contended that the proper basis for the annual depreciation charge was the original cost, and not the present value of the utility's property.[1]

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[1] Mr. Justice Stone presented a separate dissenting opinion in which he pointed out that even if it were conceded that the function of a depreciation account was to provide for its replacement of plant rather than the restoration of the cost or value of the original plant, it did not follow that the present reproduction value of the property at current high price levels was a measure of the cost of replacement at some future time. On this point Mr. Justice Stone made the following statement: "To say that the present price level is necessarily the true measure of future replacement cost is to substitute for a relevant fact which I should have thought ought to be established as are other facts, a rule of law which seems not to follow from *Smyth* v. *Ames*, and to be founded neither upon experience nor expert opinion and to be unworkable in practice. In the present case, it can be applied only by disregarding evidence which would seem persuasively to establish the very fact to be ascertained."

Concerning the question of a fair return, Mr. Justice Brandeis said:

> A net return of 6.26% upon the present value of the property of a street railway enjoying a monopoly in one of the oldest, largest and richest cities on the Atlantic Seaboard would seem to be compensatory. Moreover, the estimated return is in fact much larger, if the rules which I deem applicable are followed. It is 6.70% if, in valuing the rate base, the prevailing rule which eliminates franchises from a rate base is applied. And it is 7.78% if also, in lieu of the deduction for depreciation ordered by the Court of Appeals, the amount is fixed, either by the method of an annual depreciation charge computed according to the rules commonly applied in business, or by some alternative method, at the sum which the long experience of this railway proves to have been adequate for it.

Immediately after the Supreme Court decision an extensive program of rehabilitation of equipment was begun. The annual report of the company for 1929 explained that "this was made possible by the decision of the Court of Appeals of Maryland, setting up an adequate depreciation charge, and of the Supreme Court of the United States fixing a fair rate of return on the value of the property."

The 10-cent fare which the company was allowed to charge as a result of the Supreme Court decision was put into effect in February, 1930. A substantial improvement in revenues was noted immediately. In June, however, traffic began to fall off, and gross revenue for the year was 3.3 per cent below 1929, despite the increase in fare.

The company in its 1930 report attributed the decline in riding to unemployment as a result of depressed business conditions, and also to competition from taxicabs operating at reduced rates. Taxicabs continued to offer severe competition to the street railway in Baltimore after 1929 despite later regulation of the taxicab industry by the Public Service Commission of Maryland.[1] The commission required cabs to be equipped with meters and to provide insurance against accidents. No taxicab rates were set by the commission until 1935. At that time it simply designated the rate which was being charged by a majority of the cab operators as the rate which all must charge. There was a

[1] In 1930 the state legislature placed taxicabs under control of the commission, effective January 1, 1932.

substantial reduction, however, from 1932 to 1935 in the number of cabs operated in Baltimore. Most of this reduction resulted from a control of the issuance of permits to operate by the commission.[1]

In 1931, gross revenues for United Railways dropped 13.3 per cent, and the first deficit for the company in almost 20 years resulted. The decline in 1932 was even greater, and on January 3, 1933, United Railways & Electric Company went into receivership.

For many years the company had been burdened with a park tax imposed by the city of Baltimore, which amounted to an annual levy of 9 per cent of gross receipts of the company. The company claimed that a greater proportion of its income was being spent for taxes than that of any other street railway in the United States. The state legislation in 1929 authorized the city to reduce or eliminate the tax, but relief was not granted to the company until August, 1932. A new ordinance provided for a progressive reduction of the tax to a minimum of 3 per cent by 1938; in addition, the company was to pay the city 20 per cent of its net income from street railway operation beginning in 1938. The company might defer until 1938 all the tax in excess of a rate of 2 per cent. The ordinance was subject to a condition, however, that annual fixed charges should not exceed $2,117,000 by a certain date, which was later extended to September 1, 1935. As charges were then about $2,700,000, not including interest on income bonds, this condition was found virtually impossible of fulfillment except by reorganization.

Balance sheets of the company in Exhibit 3 show the debt burden which existed before receivership. The final reorganization plan resulting in the establishment of the Baltimore Transit Company brought about a substantial writedown in the book value of the assets. All creditors were forced to take a less favorable position in the new company. Not only were fixed

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[1] An all-time peak in the number of taxicab permits outstanding in Baltimore was 1,546, reached June 9, 1932. At the end of 1932 there were 1,436 permits outstanding; this number decreased to 1,078 at the end of 1933 and to 972 at the end of 1934. The commission later set the limit at 1,000 permits, at which level it remained for 1937 and 1938. The United Railway and Electric Company protested to the commission in 1932 and 1933 against the soliciting of riders along carlines by cabs which were loading up passengers at a rate of 10 cents each. In December, 1933, the commission suspended 142 permits for this reason.

EXHIBIT 3
BALTIMORE TRANSIT COMPANY*
BALANCE SHEETS, AS OF DECEMBER 31
(000 Omitted)

	1930	1936
Road and Equipment	$92,315	$65,390
Uncompleted Additions	271	19
Investment in Subsidiaries and Affiliates	770	154
Other Investments, Net	.....	100
Sinking Funds	489	
Treasury Bonds	549	
Current Assets:		
Cash	887	2,613
Receivables, Net	178	85
Materials and Supplies, Net	876	534
Bond Discount	1,437	
Prepayments	14	40
Unadjusted Debts	50	6
Total Assets	$97,836	$68,941
Common Stock	$20,461	$ 3,997
First 5% Preferred	.....	23,343
Income Bonds	14,000	22,159
Funded Debt	53,403	1,532
Notes Payable, Banks	1,230†	
Current and Accrued Liabilities	1,846	717
Tax and Ticket Liabilities	494	158
Depreciation of Investment in Affiliates	493	
Retirement Reserve	901	12,363
Obsolete Property Reserve	.....	1,961
Miscellaneous Reserves	229	1,417
Miscellaneous Credits	1,338	2
Capital Surplus	.....	1,176
Profit and Loss Surplus	3,441	116
Total Liabilities	$97,836	$68,941

* Includes operations of Baltimore Coach Company in 1935 and after. Prior to 1935 name of Baltimore Transit Company had been United Railways and Electric Company.

† For 1930, represents "capital expenditures as yet unfunded." Notes payable, 1931: $1,310,000; 1932, $962,000; 1933, $977,000; 1934, $977,000.

NOTE: Accumulated interest undeclared and unpaid on Series A (income) debentures at December 31, 1936, amounted to $117,697.

SOURCE: Moody's *Public Utilities*.

charges reduced, but almost all interest requirements were made payable only if earned, so that there was no danger of default occurring in the immediate future. The valuation of the company for rate making purposes previously established by the Maryland commission at $75,000,000 and also the annual allowance of $1,600,000 for retirements and replacements remained unchanged by the reorganization.

Aside from the question of a proper rate base, what other factors should be considered in determining a fair return to a street railway company?

Did the capital structure of this utility have any bearing on the problems confronting the company?

Was the street railway company seeking a proper solution of its difficulties in this case?

To what extent, if at all, should the financial condition of a public utility be taken into consideration in determining the rate of return?

8. Relation of Rates to Value of Service and to Efficiency in Management

100. Portland Traction Company[1]

In 1931 the question of whether a 10-cent street railway fare should be continued in Portland, Oregon, was brought before the public utilities commissioner of the state. At that time the street railway and bus system of the city was being operated by the Pacific Northwest Public Service Company, later known as the Portland Electric Power Company. In 1932 the operation of the transit properties in Portland was taken over by a subsidiary, the Portland Traction Company.

At the time of the investigation made by the Public Utilities Commissioner of Oregon in 1931, the local transportation system in Portland had undergone a steady decline in earnings beginning in 1917. Several attempts had been made to improve the situation; in each case the remedy had been an increase in fare. Starting from 5 cents in 1917, the fare had been raised to 6, 8, and ultimately to 10 cents in 1930. Despite these increases, and despite a steady growth in population, as indicated by the school and population census, operating income had virtually disappeared by 1930 and the number of revenue passengers carried had declined seriously.

Concerning the results of these changes in fare, the commissioner said:

> The history of this case discloses an almost steady decline in the company's financial condition commencing with the year 1917 to the present period and a continual cry on the part of the company for relief, answered by the commission with increased charges against the public. The treatment of the situation throughout the years discloses that the commission apparently accepted the theory of increased fares as the only panacea; but such increases have not raised the rate of return to any appreciable extent.

. . . . . .

[1] *Re Portland Electric Power Company*, P.U.R. 1931E, 270; 1932E, 212.

The traction company is not entitled as a matter of right, regardless of the interests of the public, to realize a definite rate upon its capital stock. The analysis of the facts discloses that an attempt to do so, with its present equipment, will produce financial disaster.

. . . . . .

In the analysis of [the] . . . chief engineer for the commission, in a voluminous and carefully prepared study of the affairs of the utility, as introduced, and of the evidence as a whole, it is clear that the utility is now and has been for years entirely unmindful of its definite duties and obligations to the public.

Its attitude is and always has been that the sole purpose of its existence was to provide earnings for the stockholders regardless of the public welfare.

With regard to the consideration of the value of the street railway's property for rate making purposes, the commissioner said:

The case before us is peculiar in that the return itself is not in question.

It is doubtful if a reasonable return under present operating conditions can be made on even the scrap value of the property.

Therefore, the determining of a valuation for rate making purpose[s] is not pertinent.

In fact this case is unique in that the element of valuation is not involved.

With this company about to pass the point where income and operating expenses cross, no rate base can be fixed and no reasonable return earned on the capital invested.

. . . . . .

It is apparent from the foregoing that the traction company is confronted with a most difficult situation, the solution of which it has been unable to ascertain to the satisfaction of its own stockholders and to the public.

In the opinion of the commissioner, the management of the company had not been alert and progressive. With reference to this phase of the case and the solution of the company's problems, the commissioner said:

The company attributes this decline to the automobile. Instead of meeting this constantly developing new competitor with improved equipment and service, the company chose the contrary course. It failed to purchase new equipment, keeping the old in operation through maintenance collected from the car rider.

It failed to expend, as provided by law, the depreciation revenues collected from the car riders in modernizing its system, and the company now has or should have $812,000 available in this fund. Instead of improving its system to meet the automobile and transportation competition generally, the company resorted to fare increases to recoup losses due to its antiquated transportation system. These fare increases afforded only temporary and partial relief at the expense of the car rider and resulted in tremendous loss of patronage and a constantly aging equipment.

The situation reflected from the record shows unwise management, unsound judgment, and utter lack of foresight, with a resultant deplorable condition in mass transportation in the city of Portland.

. . . . . .

It is apparent from the record that since 1918 the public has been thoroughly dissatisfied and discontented with the services rendered. The study of the kind and character of equipment now used by the utility explains the situation. It is not a modern transportation system. It is inadequate, insufficient, and intolerably unsatisfactory.

The number of passenger cars and the respective years placed in service as shown by the study of the commission's engineer is illuminating and is as follows:

Number of Cars	Date in Service
4	1890
6	1894
4	1901
86	1903
16	1904
24	1905
9	1906
25	1907
65	1908
20	1909
82	1910
130	1911
25	1918
496 in service	
1	1904
4	1907
5 not in service	

In the year 1912 the commission fixed the life of these cars at 20 years. In 1928 the life was extended to 26 years.

. . . . . .

The record discloses that the utility's efforts to obtain increased fares have been consistently accompanied with drives for increased wages of employees. Whether such concert of action has been through antagonism or sympathy, it is unfortunate from a public view; it only serves to irritate. It injects a collateral question into a vexatious problem.

Every utility, performing a public service, should expect to compensate its employees fairly and reasonably, for satisfied labor will give efficient and courteous service to the public thereby creating a favorable public sentiment necessary to the success of such public service.

Conversely, dissatisfied and discontented employees will reflect their attitude in the service given.

The street car men's Union Division No. 757 has appeared by counsel and filed its brief in this case. The members are now facing a 10% cut in wages. Such reduction will only lead to discontent, which the utility can ill afford. A careful investigation discloses that the service of the employees has been universally courteous and efficient under extremely adverse conditions.

A remedy of this deplorable situation does not lie in a reduction of the compensation of the employees of the traction company for efficient employees are one of the essential elements of any successful business, and the compensation now paid is already too low.

The people and the employees of the company have already paid the price, the one in the way of a low salary scale and the other in the way of increased fares on account of the lack of sound business principle and foresight on [the part of] the management of the traction company.

Neither the public nor the employees should be compelled to suffer financially on account of the mismanagement of the utility and if there is any price to be paid it should be paid by the company itself.

To meet the foregoing situation the commission in the years past has authorized and the utility has collected from the rider a depreciation reserve in the sum of $812,000. This was permitted for the express purpose of replacing old equipment. It has not been done. It has been collected and retained. The utility either has or should have it now.

A new and modern transportation system is the solution of the present problem. It is suggested that the commission order an immediate expenditure of approximately $2,000,000 for this purpose. The franchise now held by the utility expires in December, 1932.

In view of the utility's financial condition and the early expiration of the franchise the utility's officers contend that it would be impossible to finance such development if ordered.

As indicated, a new and modern transportation system is the solution and the commission is of the opinion that a new franchise entered at an early date is essential to new financing of such new system.

The commission believes that if the city of Portland and the company will cooperate in the negotiation and execution of a franchise that they can work out the problem with which they are now confronted, and place transportation in the city on a just and equitable basis for the public and traction company.

In determining and fixing the rates of fare, the commission not only reiterates that such rates do not solve the problem involved but is [sic] the limit to which the commission can go. The responsibility for the next step is upon the public utility and the city of Portland.

The people of Portland are entitled to a modern mass transportation system. The interest of both city and utility demands a new franchise in lieu of the existing one.

The commission strongly recommends to the city council of Portland that immediate negotiations be entered into between the city and the utility for a franchise providing for modern mass transportation. Delay in effecting a new franchise will be unfortunate to both the public and the utility.

After a careful consideration of all the evidence in this case, the commission is of the opinion and finds:

1. That the Pacific Northwest Public Service Company is not rendering safe, adequate, or efficient service; that on the contrary the service now rendered is grossly inadequate and inefficient.

2. That the service now being rendered by said utility is reasonably worth no more than as follows:

Single cash fare	7 cents
Unlimited tickets in strips of ten	60
Weekly pass with five tickets attached	35
After tickets are used the pass entitles the holder for that week to each ride at	5
Limited school-children's tickets each	4

and that the rates of fares above mentioned will be reasonable compensation to the company for the service now being rendered by it and will be just, reasonable, and sufficient rates for it to charge and collect for such service.

3. That the schedules of rates now on file by said utility are unjust, unreasonable, and excessive.

4. That no valuation is fixed for the reasons stated in the opinion.

. . . . . .

The commission especially retains jurisdiction of this case and reserves to itself the right upon complaint, upon application, or upon its own motion, further to investigate the rates authorized by this order or the services rendered in connection with the same, make further findings, and issue such further orders as may be justified by the facts determined at subsequent hearing or hearings as to the rates to be charged and collected for street railway services furnished by the Pacific Northwest Public Service Company.

The company filed a complaint with the United States District Court, stating that the rates fixed by the commissioner were confiscatory and constituted a taking of property in violation of the Fourteenth Amendment. A Special Master was appointed by the court to investigate the situation and present his findings. In his report, the Special Master found the fair value of the

railway system for rate making purposes to be $10,000,000. He also found that the fare being charged by the company did not result in a reasonable return on this value. Moreover, it was found that under the schedule of fares proposed by the commissioner, the company would receive no return at all on its property, but on the contrary would incur an annual loss of not less than $500,000.

The court accepted the findings of the Special Master and held the commissioner's order to be confiscatory. It was stated that there was evidence tending to show that the earnings of the company would be increased by the installation of additional modern equipment. The court pointed out, however, that it could not make changes, in that its powers were limited to a determination of the effect of the commissioner's order upon the company.

In answer to the contention that the proposed fare schedule was experimental and should not be prohibited until it had a fair trial, the court stated that the case in question was definitely not a borderline one, and that an experimental period of 6 months would result in a loss to the company of at least $250,000. In view of this certain loss the court did not believe it was warranted in authorizing such an experiment.

After a period of over three years, during which the company operated under temporary permits, a new franchise was granted to the Portland Traction Company in January, 1936, by the voters of the city. The company was given the right (which under Oregon law could not be exclusive) to operate street railway, trolley bus, and gas bus service for a period of 20 years. The franchise stated that approval of the city council must be obtained for any single addition to the rate base amounting to over $10,000. The company was also required to pay to the city 5 per cent of gross revenues, less amounts paid to any governmental agency as taxes, excluding gasoline and income taxes.

By the terms of the new franchise, emphasis was placed upon the renovation of the Portland transportation system. Provision was made for two types of modernization. One related to the immediate purchase of new equipment and the second contemplated the ultimate renovation of the entire system. Under the former plan, which was to be completed within one year, the company agreed to purchase new trolley coaches and motorbuses and

to operate them on certain designated routes. Details relative to type of service, routes, headways, and other operating provisions were included in the franchise. Trolley coaches were to be used on 7 lines and motorbuses on 11 lines, thus making possible the abandonment of 76 miles of streetcar track. Street railway service was to be continued on 15 lines.

The long-range plan contained in the franchise specified complete modernization of the Portland transit system over a period of 10 years through the purchase of such additional facilities as might be agreed upon by the city and the company. As this program necessarily depended upon the availability of funds, it provided that the company should set aside each year for 10 years 75 per cent of its net profits for the purchase of equipment.

The franchise also provided that fares were to be flexible within a minimum limit of 5 cents and a maximum of 10 cents. Unless purchasing power should decline materially, the maximum rate of fare was not to be increased during the 20-year life of the franchise, the company agreeing not to apply to the Oregon Public Utility Commissioner for such an increase. Should all costs of operation exceed gross revenues, the company was given the right to surrender its franchise on 6 months' notice and to cease operations. In 1936 there was in effect a 10-cent cash fare, a weekly pass for $1.25, and 3 tickets for 25 cents.

The initial improvement program was completed in June, 1937, at a cost of $3,900,000, as compared with the original estimate of $3,000,000, the increase being caused by additions to the original plan and a general rise in construction costs. Twenty trolley coaches and 33 motorbuses not contemplated in the original plan were placed in service at the request of the city council. Purchases of new equipment by the company were financed through conditional sales contracts, which provided for installment payments over a period of 5 years.

After the installation of the new equipment it was possible to compare directly the operating results of three of the seven new trolley coach lines with the results of the former equipment. It was found that in January, 1937, revenue per vehicle-mile had increased an average of 5 cents over comparable periods in the past, while operating costs had declined about 3 cents. Schedule speed had risen as much as 40 per cent, and fewer vehicles were required in order to maintain service standards.

What is the significance of economic and legal factors in determining rates?

What should be the role of management and of regulation in the solution of such problems as are presented in this case?

101. CLINTON ELECTRIC LIGHT & POWER COMPANY[1]

In March, 1931, residents of Madison, Connecticut, petitioned the Connecticut Public Utilities Commission to reduce rates for electricity in that community. The lighting rate charged by the Clinton Electric Light & Power Company in Madison was 20 cents per kilowatt-hour per month for the first 50 kilowatt-hours, with a discount of 25 per cent for prompt payment. The petitioners compared this rate with the one offered by the same company in Guilford, Connecticut, consisting of a flat rate of $1.05 plus an energy charge of 5 cents for the first 20 kilowatt-hours and 4 cents for the next 30 kilowatt-hours.

Even when a customer in Madison took advantage of the "special energy meter rate" for appliances, his bill was approximately 100 per cent higher than for the same service in Guilford. This special rate, offered by the Clinton Electric Light & Power Company, necessitated the installation of a separate meter, for which there was no extra charge when not in use. The rate consisted of a charge of 7 cents per kilowatt-hour for the first 50 kilowatt-hours, 6 cents for the next 50, and 5 cents for the next 100.

While the Clinton Electric Light & Power Company was incorporated in 1901, to generate, sell, and distribute electricity in Clinton and Madison, service by that company was confined to the town of Clinton until December, 1920. Madison was served before that time first by the Shore Line Electric Railway Company and later by the Eastern Connecticut Power Company, with the permission of the Clinton Electric Light & Power Company. The officers and directors of the Clinton Electric Light & Power Company had taken over its management in 1916 and thereafter proceeded to expand the limited service of the company in Clinton. The investment of the company in plant and equipment, which amounted to only $14,898 at the end of 1915, increased under the new management to about $96,453 at the end of 1920, of which

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[1] Prepared from official copies of decisions of Connecticut Public Utilities Commission, Nos. 5601 and 5612, August 3, 1931, and July 20, 1932. This case has been published in P.U.R. 1931E, 196.

approximately $45,000 was due to the acquisition of the Madison distribution plant of the Eastern Connecticut Power Company in December, 1920, with the approval of the Connecticut Public Utilities Commission.

While the towns of Clinton and Madison were fairly compact territories, the character of the service rendered was essentially for household and commercial purposes, since there were comparatively few industries in the territory. The company did not generate its own electricity, although a number of years previous to 1931 it had purchased certain dam sites and riparian rights for that purpose and had included them in its fixed capital at an apparent cost of approximately $9,000. It purchased current from the Connecticut Light & Power Company under the terms of a written contract. For the most part the current was generated by the latter company at its Montville station near New London, 39 miles from the point of delivery to the Clinton Electric Light & Power Company, and transmitted over a single circuit at 33,000 volts, transformed to 22,000 volts at Flanders, about midway between Montville and Webster Point, and delivered from there to the Clinton Electric Light & Power Company at the same voltage. The cost of the current to the company was determined by the number of kilowatt-hours sold, the unit charge for which decreased with an increase in consumption, and by a demand charge, the minimum of which was 75 per cent of the maximum demand made upon the Connecticut Light & Power Company during approximately the entire year preceding the charge, and also by a surcharge of $2,000 in any one year when service on the transmission line was reasonably free from interruptions. The average price paid for current under the contract amounted to 2.3 cents per kilowatt-hour in 1927, to 2.1 cents in 1928, to 1.9 cents in 1929 and to 1.68 cents in 1930. The reasonableness of the contract between the two companies was not questioned.

A large number of residents of both towns appeared at the hearings. They testified that the rates of the Clinton Electric Light & Power Company were so unreasonable as to curtail the use of current, and that service, particularly during the summer, was unsatisfactory because of frequent interruptions. These were caused primarily by electrical storms affecting the transmission line between Montville and Webster Point and only secondarily by conditions affecting the distribution system of the company.

In order to decrease or eliminate these interruptions, it would be necessary either to construct another circuit between Montville and Webster Point, at an estimated cost of approximately $65,000, or, preferably, to construct a connection from the substation of the Connecticut Electric Light & Power Company in Branford, to Webster Point, at a cost of approximately $100,000. It appeared that both the generating and distributing companies had been diligent in their efforts to eliminate such interruptions as were applicable to the existing plant and equipment.

The company served approximately 1,932 customers, of whom 117 were commercial and the rest household customers. Of the total number, 771 lived in Clinton and 1,124 in Madison. Approximately 240 of the household customers used the special energy rate in addition to the regular lighting rate, but since the special rate was not available for combined lighting and household purposes, the customers were billed at the regular rates on one meter for lighting and at the special rate on another meter for other household purposes. The company's expert practically conceded that this had discouraged the general use of current for purposes other than lighting. Approximately three-fourths of the entire energy sold was used for household lighting and the low average consumption resulted in the payment by such consumers of the maximum rate of 15 cents per kilowatt-hour.

The company conceded at the hearing held in May, 1931, that the earnings of the company warranted a reduction in the existing rates, and it therefore proposed as a temporary expedient a reduction in rates pending revision of the entire rate schedule from the existing straight energy rate to a three-part promotional rate. The company estimated that the temporary reduction would decrease operating revenues 10 per cent and net income 30 per cent. Since the proposed reduction was based upon a claimed fair value of $300,000 for the company's property, used and useful in its public service, and an 8 per cent return thereon, the proposed reduction and revision were not conceded by the commission to be sufficient.

The investment of the company and actual cost in plant and equipment as shown in its annual reports filed with the commission was $164,551 as of December 31, 1930. This amount included $18,612 representing the cost of land which the petitioners claimed was not used or useful in the company's public service. A portion

of this land was occupied by a storehouse used by the company, and another portion was appropriated as a building site for a new office building for the joint use of the company and The Guilford-Chester Water Company, both under the same management and serving, in part, the same territory. The office building was nearly completed at the conclusion of the hearings. The rest of said land consisted of dam sites and water rights not being used or useful in the distribution of electricity, the actual cost of which was apparently about $9,000. In the opinion of the commission this latter property should not have been considered in determining a rate base. Deducting this $9,000 from the company's book value of $164,551 left a balance as historical cost or book value of $155,551 as of December 31, 1930.

The company claimed that the actual cost of plant and equipment should be increased $57,000, representing the estimated approximate cost of constructing the office building. While it did not appear how the expenditure of $57,000 was to be divided between the companies, the commission believed that the investment of approximately $28,500, half of said cost, was a reasonable expenditure for such purpose by the Clinton Electric Light & Power Company in the proper and efficient management of its public service. This resulted in a book value as of the time of the hearings of $184,051. No evidence was introduced by the company showing extensions or other expenditures which would increase the book value of the company's property after January 1, 1931.

The company submitted a valuation made by an expert electrical engineer as of August 1, 1927, upon the basis of the cost to reproduce new the property of the company then in existence and used and useful in its public service, at the prices for labor and material then current, less accrued depreciation. The expert estimated the value as of that date to be $178,909. The field appraisal of the expert excluded dam sites and riparian rights as not used or useful in the company's public service. To the estimate of $178,909 the company's treasurer added the cost of additions to the plant and equipment from August 1, 1927, to December 31, 1931, and added what was designated as a "percentage factor," 25 per cent of the cost of these expenditures, increasing the valuation as claimed by the company to $300,000. The value of $300,000 upon which the company claimed it was entitled to earn

8 per cent was an estimate of the cost to reproduce the property as of August 1, 1927, with claimed additions to 1931, and as such was, in the opinion of the commission, entitled to less weight as evidence of value than an appraisal which might have been made at or near the time of the hearings at existing price levels.

Although from the evidence, from actual observation, and from familiarity of the commission's engineers with this property, it appeared to be in substantially 90 per cent condition, as claimed by the company, a depreciation reserve was carried at the end of 1930 of substantially one-third of the actual cost of the plant and equipment. No allowance was made for accrued depreciation on additions to the property after August 1, 1927, and, in the opinion of the commission, the company failed to give an adequate explanation of the basis of the intangible items added to the field appraisal. The 25 per cent added to the actual cost of the property after August 1, 1927, was, according to the commission, purely fictitious and unwarranted, and the estimated cost of the new building, in view of its treatment in determination of actual cost, was allowed only to the extent of one-half in determining a rate base. The commission estimated the value of the company's property at $236,393, and made the following statement:

> We have, therefore, three amounts as indices of fair value: first, actual cost or book value of $184,051; second, the company's claimed value based upon the 1927 appraisal and subsequent additions, $300,000; third, the company's claimed value with certain apparently necessary modifications made by the commission—$236,393. It is apparent the commission is without reliable information upon which to determine with any degree of accuracy the present fair value of the company's property used and useful in its public service. However, upon consideration of the several indices of fair value as set forth above, the commission is of the opinion and finds that, so far as the evidence in the present case discloses, the present fair value for rate making purposes in this case of the company's property used and useful in its public service is approximately $235,000. In view of the incomplete evidence presented, the fair value found is not to be regarded as final in any possible future rate case affecting the company.

From the annual reports of the company to the commission, the latter obtained certain information deemed important in determining the rate of return which should be allowed to the company.

It appeared that although the depreciation reserve was not set up until 1921, it amounted at the end of 1930 to $57,458. As the property was in substantially 90 per cent condition, the commission pointed out that the depreciation reserve was greatly excessive.

It also appeared that the existing capitalization of the company, consisting of $100,000 in common stock, was made up of $77,500, presumably paid in by stockholders, and $22,500 made up of stock dividends. The rate of dividend after 1922 had never been less than 10 per cent and had been as great as 25 per cent in 1929 and 30 per cent in 1930 on the outstanding common stock. Extensions to the company's service, which in recent years had been large, had, in the opinion of the commission, apparently been financed from the excessive profit and loss surplus and depreciation reserve and not from new capital raised from the sale of stock or otherwise. It further appeared that property retired as no longer used or useful in the public service had not been deducted from the fixed-capital investment, and since the company was in a high state of maintenance, it appeared that replacements of property had generally been improperly charged to operating expenses rather than deducted from the fixed-capital investment and charged against retirement reserve.

Concerning the case of the Clinton Electric Light & Power Company, the commission said:

> Upon consideration of the financial history of this company and the foregoing principles, the commission believes that the fair return to this company should not exceed 5% on the aforesaid value of $235,000, and that in fixing an allowance for depreciation, the same should be reduced to an amount less than might otherwise be proper in view of the present excessive reserve maintained by the company. In allowing a 5% return it is not to be understood that the commission regards such a return in rate cases generally as adequate, and it is only the peculiar circumstances applicable to this case and outlined above that warrant, in the commission's opinion, the allowance of a rate of return as low as 5%.
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> . . . . . .
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> It should be borne in mind that the rates . . . prescribed do not take into consideration any increased consumption of current which generally follows a reduction in rates for electric service, and which would offset to some extent the reduction of operating revenues to be effected by this order, particularly when the new rates are essentially promotional or inducement rates instead of the present straight energy rate. While the company in its brief preferred the present straight

energy rate with a discount for prompt payment, the commission believes that a promotional rate is more equitable to the greater number of consumers who find in electricity an outlet for reducing the labors of the household and an economy in the operation of stores and industries. The rates . . . prescribed, however, include a straight energy rate as an option which is retained for the benefit of small consumers. The present practice of the company in installing two meters for separate uses in common households will also be unnecessary under these promotional rates.[1]

The company appealed from the commission's decision to the Superior Court for New Haven county. In April, 1932, that court held that the rates prescribed by the commission were unreasonable, confiscatory, and illegal, and ordered that the matter be remanded to the commission for reconsideration.

The court held among other things that (1) the rates prescribed by the commission would not produce a return of 5 per cent upon the company's investment used and necessary as found by the commission; (2) that the commission erred in not allowing depreciation on additions from August 1, 1927, to December 31, 1930;[2] (3) that the 5 per cent return as allowed by the commission was not a reasonable return on the value found by the commission.

At the rehearing before the commission in May, 1932, the company submitted an appraisal of its property on the basis of cost to reproduce new as of August 1, 1931. Prices of labor and material used were those current about August 1, 1931, except that in the case of copper wire, a large item in the appraisal, the price per pound used was an averaged one of 18.3 cents determined from

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[1] The commission prescribed three domestic rates. Rate 1 consisted of a charge of $1.00 per month for 7 kilowatt-hours or less, 13 cents per kilowatt-hour for the next 13 kilowatt-hours, 9 cents per kilowatt-hour for the next 30 kilowatt-hours and 6 cents per kilowatt-hour for all over 50 kilowatt-hours. The minimum bill was $12 per year for a seasonal customer and $1 per month for an annual customer. Rate 2 consisted of a charge of $1.00 per month plus 4 cents per 100 square feet of house area, with an energy rate of 5 cents per kilowatt-hour for the first 100 kilowatt-hours, 4 cents per kilowatt-hour for the next 200 kilowatt-hours and 3 cents per kilowatt-hour for all over 300 kilowatt-hours. Minimum bill the flat rate. Rate 3 consisted of a flat charge of $5 the first month plus 4 cents per 100 square feet of house area, $2 the second month plus 4 cents per 100 square feet of house area, and $1 thereafter monthly plus 4 cents per 100 square feet of house area, with an energy rate of 5 cents per kilowatt-hour for the first 100 kilowatt-hours, 4 cents per kilowatt-hour for the next 200 kilowatt-hours, and 3 cents per kilowatt-hour for all over 300 kilowatt-hours. Minimum contract one month.

[2] The court did not find that the 2½ per cent rate of depreciation as allowed by the commission was too low, in view of the company's large accumulated depreciation reserve and the high state of maintenance of its property. See decision of Connecticut Public Utilities Commission, No. 5612, July 20, 1932.

records of the cost of copper wire during a period of 30 years preceding August 1, 1931. This was done upon the claim that the price of copper wire current about August 1, 1931, namely, about 12 cents per pound, was a distress price due to economic conditions generally and particularly to the oversupply of copper existing then and at the time of the hearing, and that such price did not therefore represent a fair price to the company. No similar adjustment was made as to other materials in the appraisal, or as to labor prices. The company did not submit any evidence of the cost to reproduce the property new as of approximately the time of the hearing. The undepreciated value as submitted by the company was $354,519.

In criticism of the company's method of making its appraisal, the commission said:

> The company cannot escape in these times consideration of current prices of labor and material as it attempts to do by averaging the price over a 30-year period for the chief material used (*McCardle* v. *Indianapolis Water Company*, 272 U.S. 400, 410) particularly when utility companies in the past have been zealous to claim a preponderant weight for such fair value in time of advancing price levels.

The commission, after taking into consideration aspects of the court's decision which need not be given attention in this case, decided that the value of the company's property for rate making purposes was $275,000. With reference to the rate of return, the commission said:

> In the previous order of the commission in this case it allowed only a 5% return on the determined fair value of the company's property. This low rate of return was fixed by the commission on account of the actual investment and past financial history of the company. The court ruled that the past financial history of the company had no relevancy in determining the future return on the company's invested capital (howsoever acquired and paid for) and the Superior Court's ruling unappealed from must serve as a legal guide to the commission in determining the issues in this case.
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> For a number of years prior to 1931 courts and commissions generally adhered closely to an 8% return. While we may not take into consideration the past financial history of the company in this particular case, we can not ignore the self-evident present depression throughout this country, decreasing price levels and materially affecting the purchasing power of the dollar. Indeed, even in times of advancing price levels the possibility of disturbed business conditions affecting the

rate of return has been present in the [United States Supreme] court's mind, as appears from the following quotation:

"A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding rights and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures. The rate of return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties. *A rate of return may be reasonable at one time and become too high or too low by changes affecting opportunities for investment, the money market and business conditions generally.*[1]

"*Bluefield* v. *Public Service Commission* 262 U.S. (1923) 679, cited and repeated in *United Railways* v. *West* 280 U.S. 234, 250."

Every dollar paid to the company for service and every dollar paid out by the company in dividends as a return on the invested capital at this time has a much greater purchasing power than the dollar during and prior to 1929. If prior to 1930 an 8 to 10% return on a non-speculative investment was considered reasonable, we believe that a 7% return on the fair value of the company's property at this time under present economic conditions and under all the circumstances of this case is a reasonable—in fact a liberal—return to this company.[2]

Do you agree with the reasoning of the commission in this case?

How do you appraise the management of the utility in this case?

102. OKLAHOMA NATURAL GAS COMPANY[3]

Early in 1918 several customers of the Oklahoma Gas & Electric Company complained to the Oklahoma Corporation Commission of the failure of the Oklahoma Gas & Electric Com-

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[1] Commission's italics.

[2] The commission prescribed two domestic rates. Rate 1 was a straight meter rate of 13 cents per kilowatt-hour with a minimum charge of $1.00 per month. Rate 2 consisted of a flat charge of $1.00 per month plus 4 cents per 100 square feet of house area, and an energy charge of 5 cents per kilowatt-hour for the first 100 kilowatt-hours, 4 cents per kilowatt-hour for the next 200 kilowatt-hours, and 3 cents per kilowatt-hour for all over 300 kilowatt-hours. Minimum charge the monthly flat charge.

[3] *Ruth* v. *Oklahoma Gas & Electric Company*, P.U.R. 1918C, 410; *Oklahoma Natural Gas Company* v. *State*, 78 Okla. 5; 188 Pac. 338; P.U.R. 1920D 282; *Oklahoma Natural Gas Company* v. *State of Oklahoma*, 258 U.S. 234; 42 Sup. Ct. 287; P.U.R. 1922C, 522.

pany and the Oklahoma Natural Gas Company to provide an adequate supply of natural gas for domestic purposes in Oklahoma City at certain times during December, 1917, and January, 1918.

The Oklahoma Gas & Electric Company, a public service corporation holding a franchise in Oklahoma City for the sale of natural gas, furnished service at the time of the complaints to approximately 14,500 domestic customers through a distributing system reaching all sections of the city. The Oklahoma Natural Gas Company transported natural gas through pipe lines from producing fields to the city limits of Oklahoma City, where the gas was delivered to the Oklahoma Gas & Electric Company for distribution. As compensation for gas delivered, the Oklahoma Natural Gas Company received two-thirds of the revenue of the Oklahoma Gas & Electric Company from gas furnished the public.[1]

According to the complaints filed with the commission, the companies concerned were in contempt of an order issued by the commission which required gas companies to construct, equip, and maintain pipe lines, mains, and distributing systems so as to be able at all times to furnish an adequate supply of gas for domestic consumption, and to furnish at all times an adequate amount of the proper quality of gas for heating, cooking, and lighting. It was alleged that the two companies had failed in all respects to comply with this order, particularly from December 8 to December 13, 1917, inclusive. Specifically, it was complained that the companies provided inadequate pipe-line facilities with the result that the natural gas supply was subject to frequent interruptions. These interruptions were alleged to have been the cause of great discomfort to consumers dependent upon gas for cooking and heating. In many cases it was claimed that actual expense was incurred by consumers in that they were forced to purchase other types of heating equipment, and that in some cases it was necessary to suspend business activities because of the lack of heat.

As an example of the insufficient facilities provided, it was claimed that the distributing company had failed to establish and maintain storage facilities for a reserve supply of natural gas.

[1] Concerning the intercorporate relationships of the two gas companies, one complaint filed with the commission alleged that the companies had practically the same stockholders, and that more than 50 per cent of the stock of each was owned by "a certain foreign corporation." While not discussing this subject specifically in its decision, the commission stated that its records were complete as to the ownership of the two companies, and that there was no evidence to support the allegations made in the complaints concerning the subject.

Finally, one of the complaints stated that the Oklahoma Gas & Electric Company had compelled consumers to pay bills promptly, regardless of the cause for unwillingness of the patron to do so, and had discontinued gas service on failure to make prompt payments.

In answer to the various charges made, each of the companies involved submitted a statement setting forth its side of the question. The Oklahoma Gas & Electric Company admitted that on the dates referred to in the complaints there was a shortage of gas in Oklahoma City. It also admitted that it did not maintain any reserve supply, and stated that it was not practical to maintain tanks for storage of natural gas in such quantities as would have been necessary to provide sufficient gas on the dates mentioned. During 1916 the gross revenue from gas sold in Oklahoma City amounted to $926,000. Of this, the distributing company received less than $300,000. It was estimated that if the commission ordered the company to provide storage capacity adequate to take care of the shortage during the periods covered by the complaints, the company would incur a loss of not less than $900,000 per year. If the commission ordered the storage capacity to be maintained jointly by the two companies, the Oklahoma Gas & Electric Company would still be subjected to an outlay of at least $300,000 a year more than it would receive from the sale of natural gas in Oklahoma City.

As evidence of its effort to provide all possible gas for domestic consumption, the Oklahoma Gas & Electric Company stated that it had deprived all industrial customers, including its own electric generating plant, of the use of gas for fuel, thereby incurring a loss of many thousands of dollars because of the necessity of using more expensive fuel.

In its answer to the complaints filed with the commission, the Oklahoma Natural Gas Company stated that it had been engaged for 10 years in the business of transporting natural gas to be sold in Oklahoma City and in other towns. During that time it had used every means within its power to deliver at all times an adequate supply of gas for all purposes. Except on rare occasions, including the few days referred to in the complaints, an adequate supply had been maintained. The company maintained that it did not represent that there would always be available an adequate supply of natural gas; on the contrary, it had advised the

public to have other fuel on hand for emergencies. While it admitted that the Oklahoma Gas & Electric Company had a franchise to serve Oklahoma City, it denied that the public had a right to depend entirely on natural gas for fuel. It was stated that the reason people wished to use gas was because of its relatively low price and convenience, and not because of the lack of other fuel. Thus, it was claimed, the public had every opportunity to obtain other fuel that it would have had if natural gas had not been available.

As evidence of its desire to furnish an adequate supply of natural gas, the Oklahoma Natural Gas Company stated that not only had it always furnished all gas which it could produce or purchase in the vicinity of its existing pipe lines, but also it had voluntarily extended its pipe lines in an effort to obtain new sources of supply. The company's original pipe line connecting Oklahoma City with the gas fields was a 12-inch line serving not only Oklahoma City, but also Edmond, Guthrie, Shawnee, Chandler, and various other towns. At the time of construction, the line was stated to have been adequate to supply the needs of the towns connected. However, since that time there had been a substantial increase in the population of the territory served. At the same time, the gas supply had shifted from place to place as original fields were depleted and new fields were developed. Reaching these new fields was accomplished only at great cost to the company, especially in view of the fact that the new areas might last only two or three years. The company claimed that the various fields which it had reached had been exhausted by waste rather than by use, while the company had done everything in its power to bring about conservation.

In its efforts to supply the growing demand, the Oklahoma Natural Gas Company stated that, in addition to reaching out into new fields, it had built an additional 12-inch line alongside its original line for a distance of 30 miles out of Oklahoma City to Wellston. Furthermore, it had extended its main line to a new field by building a new 12-inch line for 53 miles in a northerly direction from Wellston, at a cost of $800,000. This main-line extension, completed December 18, 1917, made available a new supply of approximately 20,000,000 cubic feet of gas per day.

After the submission of the companies' answers to the complaints filed with the commission, hearings were begun early in

January, 1918. Testimony was offered by numerous witnesses as to the inadequacy of service at the times specified in the complaints. No evidence was offered to controvert the testimony on this point. Witnesses for the companies supported the statements made in the written answers as to the scope of service which the public had a right to expect from the companies, and as to the efforts of the Oklahoma Natural Gas Company to provide facilities for adequate service. Experts produced by the companies were examined as to the scientific questions involved having to do with pressure, volume, number of heat units available under varying conditions, and as to the reasons why improvement in service was impossible at certain times.

In its decision the commission stated that if its duty lay in the strict enforcement of the letter of its every order and regulation, rather than in the prescribing and enforcing of such measures as would afford the public the greatest degree of relief from wrongs suffered by reasons of service not performed, then the logical order in this case would be a fine on account of failure to comply with the order requiring gas companies to furnish adequate service. However, it was believed that because of the peculiar conditions of the case, the most satisfactory type of action involved a somewhat different procedure.

It appeared to the commission that the question for determination in the interest of the public was to what extent the service performed by the companies was inadequate, and whether the collection by the companies of a full price for such service as was rendered would constitute extortion or would be otherwise unreasonable or unjust. It was stated that in Oklahoma the rate for gas was subject to control by the Oklahoma Corporation Commission. Furthermore, the quality of service was considered to have an inevitable relation to the rate charged. Deterioration in quality without relative decrease in rate was stated to be equivalent to an increase in rate.

In determining the extent to which the service rendered was inadequate, the commission compared the actual pressure maintained in the gas mains at the times mentioned in the complaints with normal pressure. According to evidence presented by the companies, a pressure of 4 ounces was considered to be normal. At approximately 30 locations throughout Oklahoma City, continuous records were kept by the company of pressure maintained

in the mains. These graphs were kept by means of gauges operated in connection with recording devices run by clockwork. Thus, when in proper running order, each of these devices showed the gas pressure at its location for each hour of the day and night. It was explained by a company witness that extremely cold weather sometimes interfered with the proper working of these gauges by causing the clocks to stop.

For the purpose of ascertaining pressures maintained during December, 1917, and January, 1918, the company furnished the commission with the complete record of all gauges for the two months in question. It was discovered that considerable trouble had been experienced by the company in keeping the gauges operating during that period because of the cold weather. However, there was sufficient evidence in the charts available to enable the commission to determine the character of the pressure maintained at all times at all stations. If the clock at a certain station was shown to have stopped at a certain time, comparison of the record of another station showing substantially similar pressure was considered an indication of what the complete record for such station would probably have shown. The number of instances in which such indirect methods were used was small.

In order to arrive at a basis for calculations, it was necessary to make certain assumptions. For example, it was assumed that the pressure registered at the mains was the same as that received by the consumers. Actually, the latter was lower as a result of the distance from the main. Thus, in this matter certain elements of doubt were resolved in favor of the companies. In other cases it seemed advisable to use averages of several gauges in order to avoid unnecessarily complicated calculations. In these instances certain concessions were made in favor of the companies and others were made in favor of the public.

As a basis of computing the extent to which the service offered was inadequate, the commission considered that the companies assumed to give satisfactory service 24 hours a day. From the pressure charts it was calculated how many hours per month the service was inadequate. Full credit was allowed for each hour when pressure was four ounces or better. Hours when pressure was 3 ounces were rated at 75 per cent; 2 ounces, 50 per cent; 1 ounce, 25 per cent; and less than 1 ounce, 0 per cent. For example:

12 hours at 3 ounces pressure were considered 9 hours normal.
12 hours at 2 ounces pressure were considered 6 hours normal.
12 hours at 1 ounce pressure were considered 3 hours normal.
12 hours at less than 1 ounce pressure were deducted in whole from the total number of hours in the period.

It was admitted by the commission that the method used did not take into account the amount of gas actually consumed at subnormal pressures.

After the determination of pressure at the various points at which the company maintained recording devices, it was necessary to make an extensive study of the company's distribution system in order to ascertain in what areas of the city pressure was approximately equal. In doing this, certain factors were taken into consideration, such as location of high-pressure mains, distance from recording devices, and density of population. Finally, the city was divided into seven districts on the basis of similar pressure characteristics. The consumers in these districts were allowed certain discounts, ranging from 8 to 25 per cent, on their bills for December, 1917, and January, 1918. These discounts, which were to be taken after the regular allowances for prompt payment, were to apply only to gas used for domestic purposes, such as heating and cooking, in residences only. The company agreed on its part to defer enforcement of collection of January bills.

In regard to the other complaints filed with the commission, it was found that the provision of storage facilities to insure an adequate supply of gas was not feasible. In commenting upon the inability of the companies to render adequate service at certain times, the commission stated that gas, on account of its inherent nature, does not circulate under low temperatures with the same ease and rapidity as it does otherwise. Therefore, in periods of extreme cold, service might become unsatisfactory even when volume and pressure were both sufficient to insure good service under normal conditions. The commission also held that the Oklahoma Natural Gas Company was not guilty of negligence in failing to extend its pipe lines to more abundant sources of gas.

The commission stated further that it did not consider the method proposed in the case at hand to be a satisfactory solution to future differences between the customers and the companies. It was recommended that before the coming of another winter the gas companies submit some plan whereby service to a portion of its patrons might be curtailed so that there might be satisfac-

tory service to the remainder. At the same time consumers were advised to take precautions against future gas shortages by having on hand, at times of severe cold, alternative facilities for providing heat.

The Oklahoma Natural Gas Company appealed the decision of the Oklahoma Corporation Commission to the Oklahoma Supreme Court. While the company did not deny that at the times in question there was inadequate service, it did deny that the commission had the right to require the discounting of bills below the usual amount allowed for prompt payment. It contended that natural gas was a commodity for which utilities were entitled to payment on a quantum basis, as shown by meter readings, and that adequacy or inadequacy of service did not enter into the payment of bills. Thus, the action of the commission was beyond its jurisdiction and deprived the company of its property without due process of law.

In affirming the commission's decision, the Oklahoma Supreme Court stated that the former's order could not be said to be a taking of property without due process of law. Hearings had been held before a legally constituted tribunal, and the company was not denied any of the rights constituting due process of law. Furthermore, the court stated that there was no evidence presented that the discounts allowed had reduced the company's revenue to a point where an inadequate return was being received on its investment. If such were the case, the company would be at liberty to petition the commission for an increase in rates.

According to the court, the order providing for discounts on customers' bills was a reasonable exercise of the jurisdiction of the commission over the service rendered by utilities.

Concerning the contention of the company that natural gas was a commodity, the court stated:[1]

> Appellant contends that natural gas is a commodity, . . . and that the formula worked out by the Commission for discounting bills denied the utilities pay for a portion of the commodity furnished. While, as a matter of fact, the product of natural gas, as it comes from the wells and is put into interstate pipe lines, may be a commodity of interstate commerce, the furnishing of natural gas to domestic consumers under the laws of the state of Oklahoma and the rules and regulations of the Corporation Commission is the rendering of a service, and the failure to transport gas with sufficient pressure to render service

[1] *Oklahoma Natural Gas Company* v. *State*, 188 Pac. 338, 341.

notwithstanding meter readings, which the Commission found indicate only volume, is a failure to render service. Volume of natural gas, it appears, is only one factor in indicating service, and is not the determining factor in indicating what service was rendered, or the pay which the utility should receive therefor, and failure to receive payment on the basis of volume measured at the consumers' meters is not, therefore, a failure to receive payment for service, and is not taking of the property of the gas utility without due process of law.

The Oklahoma Natural Gas Company appealed the decision of the Oklahoma Supreme Court to the United States Supreme Court. Again the company contended that the commission's order was contrary to the Fourteenth Amendment. The company contended that it supplied all the gas it could produce, and the commission found that it was not negligient in failing to supply more gas; nevertheless, the company was penalized "for failing to supply gas which nature had not produced."

The United States Supreme Court affirmed the commission's order and the decision of the lower court. In answer to the arguments of the company, it stated:

> The company assails . . . [the decisions] as depriving it of property without due process of law. We cannot assent. Both the Commission and the supreme court decided, construing the charter of the company, that it, the company, was required to render efficient service, and we concur in that view and that it was competent for the state to compensate the deficiency in the service—deficiency in the supply of gas—by a rebate of the payments to the company. The percentage of reduction and its adequate relation to a deficiency in service were necessarily determined by the Commission from the case as presented to it, and the supreme court, upon consideration, affirmed the determination as a just and supported relation. In the judgments of the Commission and the court we are unable to see error, certainly not an infringement of the 14th Amendment.
>
> We repeat, therefore, the action of the Commission and court was not, as represented by the company, a requirement of the impossible. It was simply and clearly the determination of what the franchise of the company required and the obligation to perform it, and the failure to perform justified a reduction of the fees charged or, if paid, a proportionate repayment.

Should regulatory bodies attempt to reward utilities for efficiency and penalize them for inefficiency?

SECTION VII

REGULATION AND MANAGEMENT

1. Relation Between Regulation and Management

103. The Milwaukee Electric Railway & Light Company (B)[1]

In September, 1931, the Wisconsin Public Service Commission handed down an opinion regarding the policies of The Milwaukee Electric Railway & Light Company in experimenting with promotional rates in an attempt to increase its earnings.[2] The commission indicated that this case raised some very important questions regarding the relationship between management and regulation.

Concerning the general conditions confronting the street railway industry, the commission said:

> It is common knowledge that most street and interurban railways throughout the country have been suffering a serious decline in earning power during the past decade or so. Thousands of miles of electric railway track, laid with exaggerated hopes of financial success and community benefit have been abandoned; scores of cities served by street railways have seen track service give up the ghost. It is hardly too much to say that these utilities have come to be regarded as moribund in cities of a minimum traffic density. Their owners and operators seem to have taken a fatalistic view, indicating by their conduct that they feel powerless to change the riding habits of the community, and that it can only be a matter of time until most of the survivors will also be overcome by the persistent tide of red figures. In the very teeth of the competition of motor vehicles most of the managers have resorted to the largely ineffectual expedient of rate increases and to superficial operating economies.
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> What has been true of the country at large has been true for the most part of Wisconsin. Many miles of street railway track have been abandoned in this state, and interurban lines have diminished in number and importance.

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[1] Prepared from an official copy of the decision of the Public Service Commission of Wisconsin, 2-R-26, September 3, 1931. The case has been published in P.U.R. 1931E, 289.

[2] See case entitled The Milwaukee Electric Railway & Light Company (A), p. 448.

What the ultimate outcome will be, of course, no one can predict with assurance. The increased use of the private automobile for urban transportation has already resulted in intolerable street congestion, and in vexing and expensive parking problems. It may prove to be cheaper in the long run for municipalities to encourage and even to actually subsidize street railway operation than to attempt to solve the motor vehicle parking and traffic problems which are becoming increasingly acute. It may be that the pendulum has swung as far toward individual urban transportation as it may, and that considerations of convenience and cost will soon force a greater reliance upon the street and electric railway.

With reference to the responsibility of a commission in cooperating with the management of a public utility and concerning the application of the commission's theories to a concrete case, the following statements were made:

Whatever the course of future developments affecting these utilities, it is certain that the problems they present are ones which give this commission concern. If a Wisconsin public utility is unable to maintain its credit, or if it sickens and dies, this commission under whose supervision it has been operating during most of its life cannot disclaim all responsibility for the event. It is not the duty nor within the power of this or any other commission to guarantee the securities, the credit, or the earnings of any public utility. But we do deem it our duty to encourage and support with every resource at our command competent and public-spirited management in its efforts to extend and improve services essential to the public welfare and thereby to maintain or to improve earnings and credit position.

Certain recent applications which have been made to us informally by The Milwaukee Electric Railway & Light Company have afforded us an opportunity to apply these views of our functions to a concrete situation. . . .

During the past two years, but more particularly within the past six months this company has been making a determined—and apparently a successful effort—by managerial ingenuity and resourcefulness to promote street and electric railway riding, and thus win back a part of the market lost to the motor vehicle. Whereas during the past year on virtually every other comparable street railway in the country there has been a definite tendency for riding to decrease, on the Milwaukee system riding has been maintained on a comparatively constant level, and in spite of an unprecedented industrial depression there has been even a tendency toward increased riding until the last two or three months, when unemployment has apparently increased markedly. In a business with a constantly expanding market it does not require exceptional managerial ability to furnish good service and earn a return. To produce such results in the face of a constantly declining market is a genuine accomplishment.

After analysis and favorable comment upon the various fare experiments which had been made by the company, the commission made the following statements concerning the relation between regulation and management:

We have taken the occasion in this opinion to state our policy of encouraging alert and public-minded managerial policies. The relation between a regulating agency and management is a subject so vital that we believe it advisable to state somewhat more fully the views which will guide us in the future when issues touching upon this relation arise for determination.

At the outset we wish to make clear that we have no desire to draw to ourselves nor are we willing to accept any of the responsibility for the solution of distinctly managerial problems. It is only when there is clearly a *public interest* to be conserved, protected, or promoted that we have any concern with managerial decisions and discretion.

That a commission is not the manager of the utilities subject to its regulatory jurisdiction and that it may not substitute its judgment for that of owners and managers is a frequently stated proposition of public utility law [cases cited]. . . .

And yet everyone with the least familiarity with regulation knows that commissions constantly substitute their judgment for that of the managers and owners, with the assent of the courts. Prescribed classifications of accounts, service complaint proceedings, rate orders, and extension rules are typical examples; others might be cited. Where company policies and practices do not touch any considerable public interest—as, for example, how the duties of the various departments are to be distributed—there can be no question that the principle of non-interference with management is sound. But where the public has an immediate and substantial stake in any managerial determination it is inevitable and imperative that this commission review, weigh, and, if need be in rare cases veto the judgment of the management. Any other conclusion renders regulation nugatory and useless.

It is our view that the commission should be a critic of management, a critic seeking every opportunity to encourage and commend alertness, public spirit, and resourcefulness, as we have sought to do in the instant proceedings and as we expect to do in the future, as well as to condemn and if necessary penalize management which is incompetent and unmindful of, or unresponsive to, the public's interest. Obviously, what we have said is applicable with equal force to the management of publicly and privately owned utilities.

Is the theory stated by the Public Service Commission of Wisconsin one which should be applied with reference to the relation between regulation and management? See case entitled The Milwaukee Electric Railway & Light Company (A), p. 448.

2. Control of Contracts between Public Utility and Nonpublic Utility Businesses

104. Brooklyn Union Gas Company (B)[1]

In July, 1930, the Brooklyn Union Gas Company petitioned the New York Public Service Commission to permit it to sell its $16,000,000 coke-oven plant to the Brooklyn Coke and By-Products Corporation, a subsidiary of the Koppers Company and a business corporation not under the jurisdiction of the commission.

Although approval of another contract was not requested, it was placed in evidence. It was between the same companies, and it fixed the terms and conditions under which the Brooklyn Coke and By-Products Corporation was to operate the coke-oven plant and sell gas and coke to the Brooklyn Union Gas Company. This contract was for a period of 25 years, with provision for renewal or termination at the end of such period, or thereafter, under conditions set forth therein.

Counsel for the Brooklyn Coke and By-Products Corporation placed this contract before the commission solely to show that the Brooklyn Union Gas Company would meet the requirements of Sec. 65 of the Public Service Commission Law. The part of this section referred to was as follows:

> Section 65. Safe and adequate service; just and reasonable charges; unjust discrimination; unreasonable preference. 1. Every gas corporation, every electrical corporation and every municipality shall furnish and provide such service, instrumentalities and facilities as shall be safe and adequate and in all respects just and reasonable.

Counsel for the Brooklyn Union Gas Company contended that this provision did not require that every gas corporation should actually own and operate all the facilities required, but that the statute had been complied with if this company had a contract with another company, such as the one submitted to the commission for its inspection, for the delivery of gas from a plant which would provide an adequate supply; that the only matter legally before the commission was the sale of the plant.

[1] *Re Brooklyn Union Gas Co.*, P.U.R. 1930D, 255.

Counsel for the Brooklyn Coke and By-Products Corporation made the following statement:

> It may be (we do not say it necessarily would be) that the amount of gas supplied by the gas company to its consumers would be adequate for their needs, so long as the proposed contract is in force and the coke company fulfills its contract but there would not be an adequacy of plant capacity under the ownership and control of the gas company. The only way of spelling out adequacy of facilities would be to take into consideration the facilities of the petitioner plus those of the coke company and to treat them all as a unit. But they would not all be the facilities of the gas company.

The commission pointed out that if it approved the sale of the Brooklyn Union Gas Company's coke-oven plant, it would not have authority, under the law, even to inspect it or examine the records of the operating company; that all the control for which the legislature had provided would be eliminated, so far as the coke-oven plant was concerned.

To meet this objection, counsel for the Brooklyn Union Gas Company attempted to construe an amendment to the law made by the New York Legislature in 1930 (Chap. 760) as placing the Brooklyn Coke and By-Products Corporation under the jurisdiction of the commission. This act related to holding companies and extended the jurisdiction of the commission to control over such companies. Such jurisdiction as would be obtained in this case arose from the connection between the Brooklyn Coke and By-Products Corporation, the Koppers Company, and the Brooklyn Union Gas Company.

The commission was not impressed with the argument that it would have control over the coke-oven plant if the Brooklyn Union Gas Company sold it. It pointed out that the limited jurisdiction which it might have under the new law would be a poor substitute for the control it could exercise over the coke-oven plant were it to remain in the hands of the Brooklyn Union Gas Company. Attention was also called to the fact that if approval of the commission was not necessary to validate the operating contract between the Brooklyn Union Gas Company and the Brooklyn Coke and By-Products Corporation, as counsel contended, it followed that this contract could be changed at any time, eliminated entirely, or even assigned to another company entirely beyond any limited control provided for by the 1930 legislation.

The commission considered the case important as a precedent, stating that if it were proper under the circumstances and conditions set forth in the record to approve the transfer of the gas plant in this case, there would appear to be no reason why under similar circumstances and conditions which could be duplicated in the case of other companies, other coke-oven plants and perhaps all the gas-generating plants belonging to gas companies should not be transferred to corporations not under the jurisdiction of the commission.

The mention of such a possibility seemed to the commission to show how unwise it would be. The commission pointed out that if such sales were approved, an immense amount of gas property under the jurisdiction of the commission would be made free from control and regulation; that the regulation of gas rates—already a difficult task—would be made much more difficult. Concerning this phase of the problem the commission said:

> The rate to be charged for gas consists of a number of elements. One of the most important is the cost of production. This frequently varies from one-third to one-half of the final price charged. If the commission had no jurisdiction over the company generating the gas and could not even investigate the costs relative thereto in the plant actually furnishing the supply, it would be obliged either to accept the price which the manufacturing company charged to the distributing company or to depend upon expert testimony as to a reasonable purchase price.
>
> Counsel suggests that the burden would be upon the gas company to show the reasonableness of the price paid. This is more theoretical than real, for it has been the practice of companies to meet the burden of proof merely by producing witnesses to testify that a given price is a reasonable price, and this would be particularly true in the case of coke oven plants where the price charged for gas depends so greatly upon what can be obtained for coke and other by-products. The public is generally at a disadvantage when it comes to the production of expert testimony, and expert testimony is often most unsatisfactory, particularly when actual cost could be obtained if the commission had jurisdiction over the companies generating or supplying gas and all of their operations and cost data. The experience of the commission shows that this is not a theoretical difficulty but a real difficulty and to take action which would of necessity increase the difficulties in rate proceedings is particularly unwise.
>
> In view of what has already been said, it is unnecessary to discuss the reasons given for the proposed transfer. Suffice it to say that the testimony does not show any ultimate gain to the public commensurate with the loss which would be sustained and the increased difficulties of

regulating gas service and rates which would follow approval of the pending application.

105. BOSTON CONSOLIDATED GAS COMPANY

Boston Consolidated Gas Company was formed in 1903 by a special act of the Massachusetts General Court[1] (the legislature) as a consolidation of several companies previously manufacturing and distributing gas in Boston and vicinity.[2] According to the act, the company was granted permission to engage in the business of manufacturing and distributing gas for lighting and other purposes throughout the territory previously served by the companies forming the consolidation. In 1922 the company was granted permission by the Massachusetts Department of Public Utilities to purchase the East Boston Gas Company, and the Newton and Watertown Gas Company. Several years later, in 1928, the properties of the Citizens Gas Light Company of Quincy were acquired, and in 1931 the Charlestown Gas & Electric Company was merged with the company.

By 1937 the Boston Consolidated Gas Company was furnishing gas through 2,101 miles of mains to an area, including Boston and many of its suburbs, with a population of approximately 1,500,000.

At the time of its organization, all the common stock of the Boston Consolidated Gas Company was acquired by the Massachusetts Gas Companies, a voluntary association formed in 1902, for the purpose of combining under one management the operations of the eight separate gas companies comprising the Boston Consolidated Gas Company. Through an exchange of stock, control of Massachusetts Gas Companies was subsequently obtained by Eastern Gas and Fuel Associates. In March, 1936, Massachusetts Gas Companies was dissolved, control of Boston Consolidated Gas Company being vested directly in Eastern Gas and Fuel Associates.

Eastern Gas and Fuel Associates (originally Eastern Gas and Coke Associates) was formed in July, 1929, by The Koppers interests of Pittsburgh as a Massachusetts voluntary association. This association was part of an integrated organization formed

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[1] *Mass. Acts*, 1903; Chap. 417, as amended by *Mass Acts*, 1905; Chap. 421.

[2] These companies included: Boston Gas Light Company; Brookline Gas Light Company; Bay State Gas Company; Roxbury Gas Light Company; South Boston Gas Light Company; Dorchester Gas Light Company; Jamaica Plain Gas Light Company; and Massachusetts Pipe Line Gas Company.

under one management for the purposes of producing, transporting, and selling bituminous coal; converting coal into coke, gas, and other products; distributing and selling these products; and carrying on certain other operations. In 1937 the Eastern Gas and Fuel Associates was functioning as both an operating and a holding company, its business consisting of the manufacture and sale of coke, gas, and other by-products, operation of blast furnaces, and the ownership of coke distribution stations in Massachusetts.

The corporate structure of the Eastern Gas and Fuel Associates and its main subsidiaries, and the principal functions performed by the various companies were as follows:

Company	Principal Function
Eastern Gas and Fuel Associates.....	Holding and operating company, manufacture and sale of coke, gas, and other by-products, operation of blast furnace and ownership of coke distribution stations in Massachusetts
Boston Consolidated Gas Company..	Public utility, gas distribution
Old Colony Gas Company.	Public utility, gas distribution
Philadelphia Coke Company...	Coke and gas, manufacture and sale
The Connecticut Coke Company	Coke and gas, manufacture and sale
Koppers Connecticut Coke Company.	Coke sales
New England Coke Company.....	Coke sales
The Koppers Coal Company.....	Coal production and sale at wholesale, ownership of ships
New England Coal & Coke Company.....	Coal sales at wholesale
Castner, Curran & Bullitt, Inc....	Coal sales at wholesale
Hi-Carbon Fuel Company.....	Coal sales at retail
Koppers Stores, Inc.....	Stores in Pennsylvania mining territories
Mystic Iron Works.....	Pig iron sales
Mystic Steamship Company.....	Operation of colliers
Boston Tow Boat Company.....	Operation of tug boats

SOURCE: Poor's *Public Utility Volume*, 1937, p. 971.

Boston Consolidated Gas Company owned and operated a water gas plant located in Everett, Massachusetts, which had a daily manufacturing capacity of 24,000,000 cubic feet. This plant, however, was inadequate to meet the total requirements of the company. Consequently, most of the gas distributed by the Boston Consolidated Gas Company was purchased from Eastern Gas and Fuel Associates. In 1937, contracts in effect between the two organizations provided for the delivery to the Boston Consolidated Gas Company of gas up to a maximum of 40,000,000 cubic feet daily.

Under the laws of Massachusetts, the Department of Public Utilities was granted the power to review and approve contracts between public utilities and their affiliated companies.[1] Furthermore, in the act providing for the incorporation of the Boston Consolidated Gas Company it was provided that:[2]

> Said Boston Consolidated Gas Company shall not purchase any gas until the board of gas and electric light commissioners have found after public hearing that the price to be paid for the gas to be purchased is less than it would cost said Boston Consolidated Gas Company to make its gas in gas works of standard type properly equipped, suitably situated and of sufficient capacity to make all the gas required by the whole district supplied by said company.

Compare the issues in this case with those presented in the case entitled Brooklyn Union Gas Company (B).

Is it probable that a coke company or an oil company could sell manufactured or natural gas at a lower price than that at which a gas company could provide its own supply?

Appraise the regulatory methods followed in both states in attempting to insure a satisfactory supply of gas at reasonable prices.

How would a commission determine a rate base in such a case as that of the Boston Consolidated Gas Company?

106. SIXTY-SEVEN SOUTH MUNN, INC.[3]

In 1928 Sixty-Seven South Munn, Inc., which owned and operated an apartment house in East Orange, New Jersey, applied to the Public Service Electric and Gas Company of that city for permission to install a master meter. Sixty-Seven South Munn, Inc., proposed to purchase energy under the power rates and to resell to its tenants at the residential rates charged by the Public Service Electric and Gas Company. It entered into a contract with the Meter Service Corporation, which was to read the meters, bill the tenants, and collect from them.[4] The difference between the power rate and the residential rate was to be split between Sixty-Seven South Munn, Inc., and the Meter Service Corporation.

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[1] *Laws of Massachusetts*, Chap. 164, Sec. 94-A, B, C.

[2] *Mass. Acts*, 1903; Chap. 417, Sec. 6.

[3] *Re Sixty-Seven South Munn, Inc.* v. *Public Service Electric and Gas Co.*, P.U.R. 1929A, 329.

[4] This company furnished, installed, and maintained meters.

The Public Service Electric and Gas Company refused to install a master meter, but offered to install a house meter for measuring the current used to light the halls and run the elevator, and to install a meter in each apartment.

Sixty-Seven South Munn, Inc., filed a complaint with the New Jersey Board of Public Utility Commissioners, charging denial of adequate and proper service and unjust and arbitrary discrimination, and asked the commission to require the installation of a master meter.

The commission dismissed the complaint, holding that it was not in the public interest for either Sixty-Seven South Munn, Inc., or the Meter Service Corporation to sell current to the tenants, as there was nothing to show that the tenants would benefit. Part of the operation would be beyond the control of the commission, as the Meter Service Corporation was not a public utility, and in case of dispute, the corporation could cut off the tenant's service in order to enforce payment, the tenant having no means of redress. Furthermore, the Meter Service Corporation was not obligated to test meters or to maintain them in good condition, and there was some question as to the course it might pursue if a meter were fast. The commission said:

> This if limited in its effect to the parties immediately concerned in the instant case might not be of public concern. But a ruling as to the duty of the utility might have a far reaching effect.

The commission pointed out that customer-service costs tended to decrease per customer as the number of customers increased, and that when a landlord introduced submetering he received, by using the power rates, benefits designed for people who otherwise would have constructed their own plants, and by removing customers from the company, his action tended to increase the cost per customer to the company. The commission then pointed out the apparently profitable nature of the transaction and suggested that the utility company was entitled to that profit. The commission said:

> A meter supply company, not a public utility, and not subject to regulations prescribed to protect the interests of customers, by buying current at the low quantity rate and selling at the utility's rate for smaller quantities might have a considerable margin of profit. Apparently the Complainant who proposes to share the profit believes this to be so. Otherwise it is difficult to see why there should be insistence

upon the company supplying the current in the manner desired. If arrangements between the owners of apartment houses and meter supply companies, by virtue of which the latter are substituted for electric utilities in supplying service to tenants, are profitable, it would be natural for other owners to make similar arrangements. A multiplicity of such cases would take from the utility a large number of those who would be its customers.

The commission held that the principle of submetering was the same as if another electric utility should try to enter territory already served by an electric company:

The adverse effect upon the utility and the public served might equal if not exceed that which would result if another electric utility extended its lines into a part of the territory in which the respondent is under obligation to supply service.

In the event of an attempt by a public utility to make such extension, it would be the Board's duty to prohibit it if it did not appear to be necessary and proper for the public convenience and would not properly conserve the public interest. This being so, is it the Board's duty to issue an order which, in effect, would turn over to be supplied by a meter supply company those who would otherwise be customers of the respondent? Should this be done, in the face of an evident disadvantage to the customers who do not complain that they cannot obtain service from the respondent?

Sixty-Seven South Munn, Inc., contended that the present case was no different from cases where the landlord supplied current as a part of the service and charged for it in the rent. It was pointed out that the commission had made no objection to that practice, and that it was generally sanctioned by commissions. In connection with this point, the commission made the following statement:

Office buildings, hotels, and apartment hotels are generally operated in such a manner that there is furnished to the tenant as part of the rent, services such as heat, light, refrigeration, janitor, and maid services. All of these services are included in the monthly or annual rent charges and become part of the incidents to the tenancy. The relations between the parties according to the terms of the lease or contract are those of landlord and tenant. Where, however, electric energy is to be delivered to the landlord and he resells electricity to his tenants, not as part of the terms and conditions of the tenancy but as a separate commodity, the energy to be measured by the installation of meters and sold at a rate per kilowatt to be determined by the landlord, the relation

of landlord and tenant does not exist. The landlord, in effect, is performing some of the usual functions of the public utility company.[1]

In conclusion, the commission outlined its position as the regulatory body of the state as follows:

It was intended by the legislature in establishing the Public Utility Commission, with the powers set forth in the statute, that all phases of public utility activities, relating to their dealings with the public as to rates and service, should be under the control and supervision of the state. If the public utility company itself desired to create an agency to purchase its current and redistribute it in the manner requested by the complainant, that agency would not be subject to regulation and it might well be regarded that the utility company, through subterfuge, was reselling its current to the consumers free from regulation as to rates of service. Any plan or method which takes from the state the power to fully regulate and control rates and service between the public and the company cannot be regarded with favor by this Board. Such a plan is opposed to the policy of regulation adopted by the state and is not in harmony with the best interests of the public.[2]

107. GELSAM REALTY COMPANY, INC.[3]

In 1928 the Gelsam Realty Company, Inc., of New York City, petitioned the New York Public Service Commission to require the New York Telephone Company to list tenants separately in the telephone directory under the realty company's telephone number. The New York Telephone Company refused to do so. The president of the Gelsam Realty Company, Inc., admitted that when he applied for a switchboard and service, he was made aware of the company's fixed policy, which was also called to his attention in a letter, as follows:

This company's rates, rules and regulations governing the furnishing of telephone service are based upon the principle that the service to be furnished is for the subscriber's own use.

Service was first provided for the Gelsam Realty Company, Inc., in December, 1927. No request was made at that time for subtenant listings. Later, complaint was made that it was almost

[1] The New York Commission in *Realty Supervision Co.* v. *Edison Electric Illuminating Co.*, P.U.R. 1917B, 962, held that submetering by pooling consumption was "contrary to the principle of 'one customer, one service, one meter,' which has been insisted upon by this Commission as the one principle which will give justice to all."

[2] The decision of the commission was upheld by the New Jersey Court of Errors and Appeals. The U. S. Supreme Court refused to review the case, 283 U.S. 828, 51 Sup. Ct. 352 (1931).

[3] *Gelsam Realty Company, Inc.* v. *New York Telephone Co.*, P.U.R. 1929A, 224.

impossible to rent offices to small business concerns at a profit unless telephone service with individual listings could be provided; that the restriction of the installation of private branch exchange systems for the purpose of furnishing general exchange service to other than the subscriber and his immediate representative (with certain exceptions noted later) was improper and discriminatory; that the telephone contract at $4.75 per month (for individual listings including a fixed number of messages) was out of proportion to the rent which small businessmen could pay for office space in rooms such as were rented by the Gelsam Realty Company, Inc.

The New York Telephone Company claimed that in furnishing service it required direct contractual relations, direct cooperation with users in all matters affecting their service, and direct settlement of accounts, including any claims or adjustments that might be required. It was maintained that in accordance with this conception of telephone service, the company had provided its classes of service, the design of its equipment, and had arranged its rate structure. The following tariff provision was filed with the New York Public Service Commission in 1915:

> A business message rate extension station may be located at any point designed by the subscriber except as stated below. Installations of private branch exchange service systems for the purpose of furnishing general exchange service to other than the subscriber, and his immediate representatives are restricted to hotels and apartment houses, in connection with which stations may be located in shops, stores or other business places in the same building for house service only, and not for general exchange use. In such cases where exchange service is desired in addition to house service, separate application must be made.

The New York Telephone Company maintained that the foregoing tariff provision was designed to prevent "the growth and development of just such a scheme for furnishing telephone service to subtenants," as was requested by the Gelsam Realty Company, Inc.

The New York Public Service Commission made the following analysis of the issues involved:

1. It would establish a third party between the telephone company and the users of its service.
2. The middleman would use only such equipment as he considered necessary.

3. All of the company's dealings with the real users of its service would have to be through the medium of this third party over which the company would have no control, since presumably the middleman would not be considered a utility.

4. Many difficulties would be thrown in the way of providing efficient service, not only from the standpoint of the telephone utility but also in the way of regulation, and service complaints would undoubtedly multiply with very little chance of reasonable or timely correction and adjustment.

5. Further, if the practice were acknowledged and followed, there seems to be no limit to such utility service, because it could not be restricted to one building or a group of buildings or even to an entire city block.

The commission pointed out that while there were some gas and electric companies in the city of New York and elsewhere which had been permitted to furnish such service, that fact did not appear to justify an order by the commission to the telephone company to permit such a practice. The commission contended that there are many differences between the service furnished by a telephone utility and that of a gas or electric utility; that in one instance a specified commodity is delivered, capable of measurement, comparison, and restriction as to quantity and quality; that a telephone utility provides service between two parties; that because of faulty equipment, or unsatisfactory connections for service, the other party to the conversation suffers equally with the subtenant or the person procuring such service through the middleman; that poor electric or gas service affects primarily the consumer himself.

The commission also pointed out that in the ordinary private branch exchange the subscriber is really the only user of the service, for he is operating it in his own interest, and can control the character of such operation, but when service is furnished to subtenants or other independent subscribers, the party operating the switchboard, not being the real user of the service, does not have the same interest in the character of operation that the private branch exchange subscriber or the telephone company itself would have.

In its decision, the commission made the following statement:

The Company having had a prohibition filed against this character of service for many years, based on reasons which seem sound and equitable, it would seem that the complaint should be dismissed, both on the record here reviewed and further, that the policy of permitting

the intervention of a third party between a utility and the ultimate user of its product, is not one which should be encouraged, unless and until changed situations or different public demands require such action.

What problems are involved in the foregoing cases from the standpoint of (1) the public utility, (2) the consumer, (3) regulation?

3. Regulation Involving Coordination of Services of Competing Utilities

108. SOUTHERN CALIFORNIA TELEPHONE COMPANY[1]

In 1933 the City of Los Angeles filed a complaint with the California Railroad Commission which stated:

> That if and when the city of Los Angeles (and its departments) installs, constructs, owns, and operates its own intercommunicating telephone system, equipment, and service, it desires and requests physical connections between the facilities of its system and those of the system owned and operated by the Southern California Telephone Company which will provide for and allow said city and its departments unlimited and unrestricted exchange, message, and toll telephone services through and over the facilities of the system operated by said company, at fair and reasonable rates to be established and ordered by, and placed on file with, this Commission.

The City of Los Angeles stated at the time of its petition that it was a subscriber for telephone service furnished by the Southern California Telephone Company, a member of the Bell System. The various departments of the city government had a total of 2,877 telephone instruments, 24 private branch exchange switchboards, and 316 trunk lines. The average monthly bill for telephone service was $17,402.

In answer to the city's complaint, the Southern California Telephone Company stated that the commission did not have the authority to require the company to render service so materially different from the type it had offered to render. It was also claimed that a general application of the policy of connecting the company's lines with privately-owned facilities would lead to the destruction of efficient telephone service to the main body of telephone subscribers.

Before rendering its decision on the city's complaint, the California Railroad Commission examined the reasons which had apparently caused the city to file the application. It was stated

[1] *City of Los Angeles* v. *Southern California Telephone Company*, 2 P.U.R. (N.S.) 247 (1934).

that "the motive which seemingly actuates the city in its plan to acquire and maintain its own telephone facilities is to obtain a reduction in the cost of its telephone service." The commission observed that no complaint had been made as to the quality of the service rendered by the Southern California Telephone Company. Furthermore, the city raised no objection to the reasonableness of the telephone company's rates.

From its investigations the commission concluded that the plan which had been suggested to the city by its engineers apparently called for the installation of new equipment virtually identical with the telephone facilities already provided by the company. Thus, it was assumed by the city that the charges made by the telephone company would be reduced, as the latter would be required to furnish only trunk line service to the city-owned and city-managed private exchange. According to calculations made by the city, only $6,682 of the average monthly telephone bill of $17,402 was allocable to local and long distance message charges and central trunk line service. The remainder was assumed to be a rental charge for the physical equipment furnished the city, including switchboards, telephone instruments, wires, cables, and other appliances. Thus, by owning its own telephone facilities, the city estimated that it could effect a monthly saving of $10,720, less the cost of maintenance and carrying charges on the new equipment.

Considerable testimony was offered which presented conflicting opinions as to the probable cost to the city of owning and operating a private telephone system. The commission believed, however, that this testimony was immaterial, since the regulatory body was not called on to consider the expediency of the city's plan, or the possible effect which a private exchange would have on the city's monthly telephone bill.

In the opinion of the commission, the question at issue was whether the telephone company should be required to render service to a subscriber who insisted upon owning and maintaining the instruments and other facilities located on his premises. The icty maintained in its petition that the company at the time was offering service to various subscribers, including a department of the city, without requiring company ownership and maintenance of equipment. Thus, it was contended, the company was obligated to render such a service to all subscribers at their request, and

refusal to connect a city-owned system with the company-owned lines would constitute unlawful discrimination.

An examination was made of the cases in which the city charged service was being rendered to privately owned systems. It was stated that the company at times connected its trunk lines to the private systems of steamships during their stay in port. From the viewpoint of the commission, this action, under special contract, did not indicate any intention on the part of the company to give up ownership and control of facilities throughout the area served. The temporary nature of the ship telephone service obviously made it impossible for the company to install and maintain its own facilities.

Another instance cited by the city was the connection of company trunk lines with the private facilities maintained by the United States Government at certain military posts. It was stated by the commission that the government considered the ownership of all public utility services to be essential for purposes of national defense. Furthermore, there would be some question as to whether the telephone company could refuse to connect its lines with the government systems without violating certain provisions of the national grant to the telephone companies for the use of post roads. For these two reasons the commission believed the company could not seriously question the government's right to own its own facilities.

It was also claimed that the company's rate structure contained evidence of intention to connect trunk lines with certain privately owned systems. In June, 1930, the company had acquired a small utility serving several communities in Southern California. At that time this small company had in effect certain rates which were charged to patrons owning their own private branch exchange. From 1930 to the date of the city's complaint, no steps had been taken to change the situation. The commission declared that this condition should be remedied, but that the mere fact of the existence of such a situation in the rate structure of a predecessor company did not obligate the Southern California Telephone Company to offer the same privilege throughout the territory served.

Still another case was cited by the city as reason why the telephone company should connect its trunk lines with the city's private exchange. Los Angeles, through its department of water and power, maintained a private telephone system which con-

nected the main offices of the department with certain points on the aqueduct supplying water to the city. This system was for the use of the department's employees only. In 1914 the Department of Water and Power had requested that these facilities be connected with the telephone company's private branch exchange located in the department's main offices in Los Angeles. It was stated that public safety required such a connection. The company complied with this request and entered into a private leased-wire agreement with the department which provided for the interconnection. A special feature of this agreement was that the private line was to be used only for interdepartmental messages, and not for calls through the telephone company's central exchange to or from its general telephone subscribers.

At the time of the city's complaint to the commission, this agreement was still in force. It was claimed by the city that numerous calls had been made over this joint system through the company's central exchange, and that the company had been aware of this practice for a number of years. In the opinion of the commission, the Southern California Telephone Company had the right to assume that the contract executed in 1914 would be respected. If it was not respected, the company could trace the calls and ascertain their source only by "unusual policing methods." The opinion was also expressed by the commission that there was some question as to whether the Department of Water and Power had realized that outside calls over the leased wire constituted a violation of its contract with the telephone company. Members of the commission concluded that whatever the facts might be, they did not support the city's complaint against the company, and that if any discrimination did exist, it was in favor of the city and not against it. Furthermore, from the cases cited by the city, the conclusion could not be drawn that the company was offering to connect its lines with privately owned telephone facilities.

In denying the city's complaint to require the company to connect its lines with privately owned and managed telephone facilities, the commission stated:

> We are firmly of the opinion that such a retrogressive step in telephone utility regulation should not be taken. The Commission has frequently expressed the opinion that a divided ownership of telephone equipment and responsibility for its maintenance is not compatible with efficient telephone service. It has frequently been declared that

a telephone utility must own and maintain all facilities required for the transmission of messages from one subscriber to another.

. . . . . .

. . . No matter how efficient the plant first installed by the city, the responsibility for adequate exchange service to and from other subscribers' stations throughout the company's service area would then be a divided responsibility such as the Commission has frequently condemned. The responsibility would be divided in respect to the design, installation, maintenance, and repair of the instrumentalities required for telephone communication. The adequacy of telephone service rendered to one subscriber depends of necessity upon adequate service to all. If the responsibility now imposed upon the utility in respect to these essentials of adequate telephone communication were eliminated as to one subscriber, obviously it could be enforced as to none. Were the utility's duty limited only to the furnishing of adequate central office equipment and trunk line wires leading to private installations not of its selection or under its control, a deteriorated telephone service to all subscribers would inevitably result.

The commission also commented as follows upon the city's request that rates be set for the use of the telephone company's trunk lines, if the original petition for connection was granted:

It may be observed merely that should we have arrived at a contrary conclusion on the principal question presented, the rates then to be fixed would be based upon the cost and value of the service rendered by the defendant utility, not upon a "rental" of equipment used in the rendition of that service. Its existing rate schedules are not so designed as to permit one part of a subscriber's charge to be termed a "rental" for facilities supplied, and the other part assigned as the cost of telephone exchange service.

In 1937, Pennsylvania revised its public utility law. Section 408(b) reads as follows:

The commission may, upon complaint or upon its own motion, after reasonable notice and hearing, by order, require one or more public utilities, engaged in a telephone or telegraph business, to connect their facilities, through the medium of suitable trunk lines, with such manual or automatic inter-communicating telephone or telegraph systems as may be wholly owned or leased by such public utilities, or by any other person or corporation. Rates for such trunk line connections and service shall be in accordance with tariffs filed with and approved by the commission.

What are the issues involved in this case and in the Pennsylvania law? Do you agree with the decision of the California commission?

4. Regulation Involving Purchase Price Paid by One Utility for Another Utility

109. New York Power and Light Corporation (B)[1]

In 1928 the New York Power and Light Corporation petitioned the New York Public Service Commission for permission to acquire the stock of the Ticonderoga Electric Light & Power Company. The Ticonderoga Electric Light & Power Company had neither generating equipment of its own nor interconnection with any high-power transmission line. Its equipment consisted of pole lines, meters, and accessories, and power was purchased from the Ticonderoga Pulp & Paper Company, located in the village of Ticonderoga.

The New York Power and Light Corporation served all the area surrounding Ticonderoga either directly or through its subsidiary, the Port Henry Light, Heat & Power Company. The acquisition of the Ticonderoga Electric Light & Power Company would form a connecting link between the properties of the New York Power and Light Corporation on the south of Ticonderoga and those of the Port Henry Light, Heat & Power Company on the north, and would thus make possible the extension of a high-power transmission line to supply the latter company. The petitioner claimed that such a plan would reduce the cost of supplying power to its subsidiary and that, through the consolidation of all its properties, better service could be rendered to the public.

The principal business concern in Ticonderoga was the Ticonderoga Pulp & Paper Company. There was no evidence presented to indicate that there would be any considerable increase in domestic consumption in the territory of the Ticonderoga Electric Light & Power Company; nor did the commission believe there was any prospect of a greater sale of power for industrial purposes.

The New York Power and Light Corporation was anxious to sell additional energy which was available from its existing facilities. The Ticonderoga Pulp & Paper Company could utilize the

[1] *Re New York Power and Light Corporation*, P.U.R. 1928E, 781.

surplus power which it had been selling to the Ticonderoga Electric Light & Power Company. The paper company had even discussed the possibility of purchasing power from the New York Power and Light Corporation.

An appraisal made by the engineers of the Ticonderoga Electric Light & Power Company, which was checked by the engineering and accounting divisions of the commission, showed the value of the property as of December 31, 1927, to be as follows:

Fixed Capital, Electric	$105,392.88	
Cash	723.71	
Accounts Receivable	7,313.51	
Materials and Supplies	1,495.27	$114,925.37
Less		
Notes Payable	$ 31,985.00	
Accounts Payable	10,298.03	
Federal Income-Tax Liability	823.25	
Interest Accrued	307.55	
Retirement Reserve	8,643.14	
Reserve for Contribution for Extensions	2,404.72	$ 54,461.69
		$ 60,463.68

The appraisal included items for organization, engineering, and superintendence, legal expenses, and interest during construction. The company had outstanding capital stock of $16,000, consisting of 160 shares of stock of the par value of $100 each. For this property the New York Power and Light Corporation proposed to pay $283,870.95, which was more than four and one-half times the valuation according to the appraisal filed with the commission by the Ticonderoga Electric Light & Power Company.

The income statement of the Ticonderoga Electric Light & Power Company for the year ending December 31, 1927, was as follows:

Operating Revenues	$57,719.53
Operating Expenses	48,219.67
Net from Operations	$ 9,499.86
Nonoperating Revenue	None
Gross Income	$ 9,499.86
Interest and Income Deductions	1,902.50
Net Income	$ 7,597.36

The commission admitted that the consolidation of all the properties of the New York Power and Light Corporation within the Ticonderoga territory would be of advantage to the public in that it would provide a dependable source of power by means of the

high-power transmission line;[1] also it would be to the public's interest to have available to the local utility the engineering and commercial experience of the petitioners.

The commission was not convinced, on the other hand, that there was any probability of a reduction in rates as a result of the transaction. The rate in Ticonderoga for residence lighting was approximately 10 cents per kilowatt-hour, while in Port Henry it was a little over 13 cents. The cooking and refrigeration rate in Port Henry was 5 cents for the first 20 kilowatt-hours, 4 cents for the next 5 kilowatt-hours, and 3 cents for all over 25 kilowatt-hours (with a 10 per cent discount), while the rate in Ticonderoga was a flat one of 4½ cents. The retail-power rates were but slightly lower in Port Henry than in Ticonderoga.

The commission maintained that there was nothing in the evidence submitted to show how the income derived from the Ticonderoga Electric Light & Power Company could be greatly increased; that there was no immediate prospect that the Ticonderoga Pulp & Paper Company would become a customer of the consolidated utility; and furthermore, that since Ticonderoga was not a large or growing community there appeared to be no prospect of any substantial increase in the sales of power for domestic or for industrial use. As to the construction by the petitioner of a high-power line to connect its properties on the south with the Port Henry property in order to furnish a more reliable and cheaper source of power to the latter company, the commission did not believe that in order to accomplish the result it was necessary for the petitioner to pay "the very high price" which it proposed to pay to acquire the Ticonderoga Electric Light & Power Company.

On this point, the commission said:

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[1] In August, 1926, the Genesee Valley Gas Company, Inc., filed a petition with the New York Public Service Commission, asking authority to acquire the common capital stocks of several companies, including the Ticonderoga Electric Light & Power Company. Although no evidence was presented to show just how the Genesee Valley Gas Company, Inc., evaluated the Ticonderoga Electric Light & Power Company stock at over $2,000 a share, it was stated that it valued its contract with the Ticonderoga Pulp & Paper Company at over $1,085 per share of the electric company's stock. The commission stated that in its opinion the Genesee Valley Gas Company, Inc., had not furnished adequate reasons for acquiring the common capital stock of the Ticonderoga Electric Light & Power Company; that the properties of the Ticonderoga Electric Light & Power Company were too remote for the formation of a logical unit; and that the only consideration appeared to be a financial one. Consequently, the commission denied the acquisition as not in the public interest. P.U.R. 1927B, 600.

The petitioner could, by securing a franchise therefor from the village of Ticonderoga, construct a transmission line. Such a transmission line which did not distribute electricity in the village of Ticonderoga would not be a competitor of the existing service company. The cost of construction of such transmission line would be no greater than it would be if the petitioner acquired the stock of the Ticonderoga Company. The reason given does not seem to justify the price proposed to be paid for the stock of the Ticonderoga Company at more than four and one-half times any possible valuation thereof based on the appraisal, which valuation is considerably higher than book value.

Concerning the interest of the public in the purchase of public utility properties at inflated prices, the commission said:

While not of record in this case, it is common knowledge that there is at present in the State of New York, a competitive struggle between several large utility corporations for the acquisition of the property and franchises of single electric distributing units. This competition seems to have induced the offering of prices for these single operating units beyond the possibility of any reasonable return thereon. Such a condition is certainly not in the interest of the public, and it is hard to conceive how it is in the interest of the stockholders of the companies making the offers. Probably it is not the duty of this commission to act in the interest of the stockholders who are represented by boards of directors selected by them. It is, however, clearly the duty of this commission, under section 70 of the Public Service Commission Law, to make thorough examination of the facts and protect the interests of the public, and where the price to be paid is greatly in excess of the fair value of the property represented by the stock, it is our opinion that the public interest requires the disapproval of the application, unless it be shown that a good and sufficient reason for the granting of the petition exists independent of the fair value of the property and that the consuming public will be benefited thereby. The right to grant or withhold permission given in section 70, Public Service Commission Law, carries with it the exercise of discretion in the discharge of a public duty.

While the granting of the present application might not permit the petitioner to use the purchase price as a rate base in a subsequent proceeding, we believe that the proposed purchase at a price so largely in excess of the fair value of the property represented by such stock, is not beneficial to the public interest but detrimental thereto.

Should a commission have the power to determine the price which one utility should pay for another?

Would the price paid affect the rates?

5. Commission Regulation of Public Utility Accounting

110. American Telephone & Telegraph Company *v.* United States

The Federal Communications Commission was given power in the Communications Act of 1934[1] to prescribe (Sec. 220) "in its discretion" the "forms of any and all accounts, records, and memoranda" to be kept by utilities subject to the act, "including the accounts, records, and memoranda of the movement of traffic as well as of the receipts and expenditures of money." This power had previously been vested in the Interstate Commerce Commission.[2] That body framed rules for telephone companies to take effect in 1913 and revised rules effective January 1, 1933. The jurisdiction of the Interstate Commerce Commission over telephone companies was transferred to the Federal Communications Commission in the act of 1934.

The Federal Communications Commission prepared a "draft of a uniform system of accounts" which was considered at "a conference with representatives of the companies and of the state commissions." The outcome of the conference was the order of the commission of June 19, 1935, to take effect January 1, 1936. This was to apply to telephone companies engaged in interstate commerce which had an average annual operating revenue in excess of $50,000.[3]

The American Telephone & Telegraph Company brought suit in the United States District Court in the Southern District of New York, to enjoin the enforcement of the order of the Federal Communications Commission governing the system of accounts for such telephone companies. The National Association of Railroad and Utilities Commissioners representing 46 states with jurisdiction over telephone utilities, had endorsed the proposed system

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[1] 48 Stat. 1064.

[2] 42 Stat. 624 (Sec. 20) (5).

[3] *Uniform System of Accounts for Telephone Companies*, prescribed by the Federal Communications Commission in accordance with the provisions of the Communications Act of 1934, Issue of June 19, 1935, Effective January 1, 1936, Government Printing Office, 1935, 124 pp.

and appeared in this suit by intervening as a party defendant. In addition, the Public Service Commission of the State of New York pleaded for the order as *amicus curiae*.

The District Court refused to enjoin the commission's order,[1] and the case was appealed to the United States Supreme Court.

In its decision, the Supreme Court focused its attention upon the following orders of the commission, or provisions of the act to which the telephone companies had submitted objections:[2] (1) the "original cost" provisions; (2) the provisions regarding just and reasonable charges; (3) the classification of plant used "in present service or held for use thereafter"; and (4) the burden of expense in conforming with the new accounting system.

The Original Cost Provisions.—The commission's proposed system of accounts called for four new balance sheet accounts, each being a subtitle of the general title of "investments." The first of these (100.1) was described as "Telephone Plant in Service." It included the "original cost [defined by Instruction 3(S.1)] of the company's property used in telephone service at the date of the balance sheet." The second (100.2), "Telephone Plant under Construction," included the "original cost" (as so defined) of "construction of telephone plant not completed ready for service." The third (100.3), "Property Held for Future Telephone Use," included the "original cost" (so defined) of "property owned and held for imminent use in telephone service under a definite plan for such use."

"Original cost" or "cost" as applied, for example, to franchises, patent rights, right of way, telephone plant, etc., meant the actual money cost (or current money value of any consideration) of property at the time when it was first dedicated to public use, "whether by the accounting company or by a predecessor public utility." In instances where such actual costs were unknown, estimates of such costs were to be substituted instead.

From the foregoing analysis it will be seen that the total of these three accounts, representing the original cost of property "acquired by the accounting company from other telephone utilities" might be greater or less than the investment in such property by that company. Under the commission's proposed

[1] 14 Fed. Supp. 21 (1936). On two minor matters, the lower court upheld the utilities but these were not considered by the United States Supreme Court.

[2] 299 U.S. 232; 57 S. Ct. 170 (1936); 16 P.U.R. (N.S.) 225.

accounting system, the difference was to be taken care of by the fourth account, namely, "Telephone Plant Acquisition Adjustment" (100.4). This account was to include the difference between (1) the amount of money (or money's worth) actually paid for telephone plant acquired, including additional expenses involved in its purchase; and (2) the original cost [Instruction 3(5.1)] of such plant or other facilities and franchises, etc., minus the amounts of reserves for depreciation and amortization and amounts of contributions to any predecessor companies, for construction and acquisition of such property. Here also, if the actual original cost was not known, these various entries were to be based upon estimates.

A rule with regard to this account provided that "the amounts recorded in this account (100.4) with respect to each property acquisition shall be disposed of, written off, or provisions shall be made for the amortization thereof in such manner as this commission may direct."

The telephone companies contended that by the "original cost" provisions, they were prevented from recording their "actual investment in their accounts." For that reason the accounts would not fairly reveal their financial situation "to shareholders, investors, tax collectors and others." The telephone companies expressed concern that account 100.4, representing the difference between original and present cost, was not to be "reckoned either wholly or in part as a statement of existing assets, but must be written off completely." They maintained that it was a mandatory duty for the commission "to extinguish the entire balance recorded in that account" and that its presence under "investments" was a misleading title.

This interpretation of the commission's obligations under the act did not impress the Supreme Court. It did not interpret the act or the commission's rules thereunder as requiring the commission "to write off the whole or any part of the balance in 100.4 if the difference between the original and present cost" was "a true increment of value." "On the contrary," said the court, "only such amount will be written off as appears upon application for appropriate directions to be a fictitious or paper increment."

To avoid any misunderstanding on this point and to give the utilities some assurance as to the actual accounting practice to be followed by the commission with regard to this item, the court

requested the assistant attorney general to present a written statement on behalf of the commission in order to clear up this issue. He followed the court's instructions and stated that, "the Federal Communications Commission construes the provisions of Telephone Division Order No. 7C issued June 19, 1935, pertaining to Account 100.4" as meaning "that amounts included in Account 100.4 that are deemed, after fair consideration of all circumstances, to represent an investment which the accounting company has made in assets of continuing value, will be retained in that account until such assets cease to exist or are retired; and in accordance with paragraph (C) of account 100.4 provision will be made for their amortization thereof in such manner as this commission may direct."

With regard to the significance of this interpretation by the Federal Communications Commission, the court said:

> We accept this declaration as an administration construction binding upon the commission in its future dealings with the companies . . . [cases cited] . . . This case in that respect is sharply distinguished from New York Edison v. Maltbie, 1935, 244 App. Div. 685, 9 P.U.R. (N.S.) 155, 281 N.Y. Supp. 223; 1936, 271 N.Y. 103, 15 P.U.R. (N.S.) 143, 2 N.E. (2nd) 277, where under rules prescribed by the Public Service Commission of New York, there was an inflexible requirement that an account similar in some aspects to 100.4 be written off in its entirety out of surplus, whether the value there recorded was genuine or false. The administrative construction now affixed to the contested order devitalizes the objection that difference between present value and original cost is withdrawn from recognition as a legitimate investment.[1]

The court further stated that it was not impressed by the argument of the companies that the accounting classification was arbitrary because "the fate of any lien" or "its ultimate disposition" remained in "some degree uncertain" until the commission had given "particular directions" with reference to any such item. The court believed that being included in the adjustment account automatically classified an item as "provisionally a true investment, subject to be taken out of that account and given a different character if investigation by the commission" showed it to be deserving of "that treatment." The court held that such a reservation did not "amount to a departure from the statutory power to fix the forms of accounts for 'classes' of carriers rather

[1] 299 U.S. 232, 241.

than for individuals." The court further stated that "the forms of accounts *are*[1] fixed, and fixed by regulations of adequate generality. What disposition of their content may afterwards be suitable upon discovery that particular items have been carried at an excessive figure must depend upon evidentiary circumstances difficult to define or catalogue in advance of the event. If once there was any need for explanation more precise than that afforded by the order, it is now supplied, we think, by an administrative construction which must be read into the order as supplementary thereto."

The court pointed out that even if property had been acquired from a nonaffiliated, or rival system, there was always a possibility that it was "nuisance value only," and "not market or intrinsic value for the uses of the business" that had dictated the price paid. In light of such possibilities the court felt that the work of the commission might be facilitated by incorporating into the accounts a statement of the cost "as of the time when the property to be valued was first acquired by a utility or dedicated to the public use."

The utilities also objected to original cost because they feared they would not be permitted to recover depreciation expenses actually incurred on actual investment, and would be required instead to compute depreciation charges on the cost to a prior owner. But the court felt that this argument was based on a false assumption, namely, that the "telephone plant acquisition adjustment" must "inevitably be written off" and not be "subject to the treatment appropriate to genuine assets." The court said:

> Here again, the construction of the regulations by the commission itself is enough to dispel the fear that in their practical operation they will become instruments of hardship. Without dwelling on the testimony, we content ourselves with a quotation from the statement filed by counsel at the conclusion of the argument. The commission there informs us that "when amounts included in account 100.4 are deemed, after a fair consideration of all the circumstances, to be definitely attributable to depreciable telephone plant, provision will be made for amortization of such amounts through operating expenses, through the medium of either account 613 [which covers the amortization of intangible property] or account 675 [which includes all operating expenses not properly chargeable to other accounts]."

[1] Italics in the court's decision.

The court felt it was obvious that account 675 had been inserted as "a catchall to cover previous omissions," and stated that it was unnecessary "to inquire whether under an ideal system of accounting the amounts to be amortized would be chargeable to an account entitled in some other way." The court was satisfied with the ruling of the commission that such items would find "lodgement" in account 675 "with an appropriate entry betokening their meaning." The court said that "a system of accounts might be awkward or imperfect, and yet not so 'arbitrary or outrageous' (Norfolk and W. Ry. Co. v. U.S. 287 U.S. 134, 1932) as to justify a court in restraining its enforcement."

The utilities insisted that amortization was an afterthought as applied to account 100.4, and that an amendment of the rules would be necessary if the commission were to resort to such a process. But the court felt that the record did not justify such an interpretation. It held on this point that "in setting up the amortization reserve account (172) the rules expressly provide that 'it shall also be credited with any amounts which the commission may authorize under a plan to amortize the balance in account 100.4, Telephone Plant Adjustment Acquisition Adjustment.'"

The utilities also contended that the act (Sec. 220b) required more specific directions than had been given by the commission with respect to depreciation or amortization. The court disposed of this objection by quoting that section which provided that "the commission shall as soon as practicable prescribe . . . the classes of property for which depreciation charges may be properly included under operating expenses." The court maintained that "one of the very reasons for establishing" account 100.4 was that "in advance of inquiry by the commission as to the property there included" it was "impracticable to determine what portion of it" might be "properly subjected to charges of this nature." "When that inquiry has been completed," said the court, "the commission will be in possession of the necessary data. Provision will then be made for amortization of any amounts in the account that may properly be classified as investment in depreciable property. The label is unimportant, whether depreciation or amortization, if the substance of allowance is adequately preserved."

Another objection made by the utilities to the "original cost" provisions of the commission's order was that it required

them, where actual costs were unknown, to enter an estimate instead. Such procedure they felt was so arbitrary as to "mutilate their accounts" and expose them "to the hazard of criminal prosecution."

The court cited the fact that what had been ordered by the commission was expressly authorized by the statute itself; that to invalidate the order would be to invalidate the statute also. The court felt that in most instances original cost would be ascertainable but it was not convinced that in cases where trustworthy records were lacking the obstacles in arriving at an equitable estimate would be insuperable. Even in such an event the court believed means would "be at hand whereby an avenue of escape from injustice" would be "opened without resort to the drastic remedy of declaring the order void." Pointing out that "estimates are at times inevitable in any system of accounts," the court called attention to the fact that even "under the system previously in vogue the total purchase price which was entered in an account known as 'telephone plant' was subdivided into a series of accounts covering respectively pole lines, cable, aerial wire, and other classes, and distributed among them." "If the price was a lump sum," said the court, "there was need to resort to estimates in the process of subdivision. So also estimates were always necessary upon the retirement of plant or equipment acquired at varying rates unless the articles were so clearly identified that the dates of acquisition and the prices then paid for each of them were susceptible of ascertainment upon the face of the accounts themselves." The court maintained that "all that could be said" of the present regulations was that they "made the occasion for estimates more frequent than in former years and the process more involved." The court was not convinced that the "difference in degree" was "proved to be so great as to drag nullity in its train." If instances should occur where intelligent estimates could not be made with approximative correctness, the court felt that such an exceptional event would "justify resort to the commission for particular instructions." "In no event," could the court see "a substantial hazard of criminal prosecution." On this point the court said:

To subject the company or its officers to prosecution for a crime, the violation of the act must have been knowing and wilful. Communications Act of 1934, Sec. 501, 502; Hygrade Provision Co. v.

Sherman 266 U.S. 497, 502, 69 L. ed. 402, 406, 45 S. Ct. 141; United States v. Murdock 290 U.S. 389, 78 L. ed, 381, 54 S. Ct. 223. Penalties do not follow upon innocent mistakes.[1]

A final objection of the companies involving original cost was that even when property recorded in the adjustment account (100.4) was recognized by the commission as a continuing investment, there would be difficulty in determining the amount to be written out of that account when the property was withdrawn. But the court could see no reason why this difficulty would be any greater than it would be if the same property had been recorded in a single plant account "without separation of the original cost from the cost at later dates." In any event, the court felt there was ample provision in the commission's rules "for clarifying instructions whenever duty is uncertain."

Provisions Regarding Just and Reasonable Charges.—The second main line of attack by the utilities was with respect to instructions concerning just and reasonable charges. These instructions [2(B1)] were:

> All charges to the accounts prescribed in this classification for telephone plant, income, operating revenues, and operating expenses, shall be just and reasonable, and any payments by the company in excess of such just and reasonable charges shall be included in account 323 "Miscellaneous income charges."[2]

The court pointed out that the purpose of this requirement was to prevent "padding of the accounts by charges knowingly and willfully entered in excess of what is just and reasonable" and that "only if knowingly and willfully so entered" would there be any penalty. The court held that there was "surely nothing arbitrary in establishing a standard of behavior so consistent with good morals"; that "on the contrary the need for such standard" had been "made manifest for years as the result of intercorporate relations" that were "matters of common knowledge." The court held that the commission must have power to prevent evasion of its orders and be able to detect in any "formal compliance or in the assignment of expenses a 'possible concealment of forbidden practices.'" "In such a context," said the court, "the standard of the 'just and reasonable' is not unduly vague." Quoting from

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[1] 299 U.S. 232, 245.
[2] *Uniform System of Accounts for Telephone Company, supra*, p. 694.

one of its previous decisions (*Hygrade Provisions Co* v. *Sherman, supra*), the court added: "Moreover . . . since the statutes require a specific intent to defraud in order to encounter their prohibitions, the hazard of prosecution which appellants fear loses whatever substantial foundation it might have in the absence of such a requirement."

Classification of Plant in Present Service or Held for Future Use. The third category of objections urged by the utilities was with regard to the classification of plant as used in present service or held for use thereafter. It has been pointed out that telephone plant in service was to be placed in account 100.1, and that property "held for imminent use in telephone service under a definite plan for such use" was to be included in account 100.3. Other property held for future use not imminent or definite was to be entered in still another account, 103, which included "Miscellaneous Physical Property."

The utilities contended that such a classification was "so vague as to be arbitrary." Concerning this issue the court said:

> We do not look at it that way. Property held for imminent use in telephone service and under a definite plan will include spare plants kept in reserve as a measure of prudent administration. Such uses had consideration by this court in a recent operation. Columbus Gas & Fuel Co. v. Ohio Public Utilities Commission (1934), 292 U.S. 398, 78 L. ed. 1327, 4 P.U.R. (N.S.) 152, 54 S. Ct. 763, 91 A.L.R. 1403. Property held in present telephone use comes very near to defining itself. If particular situations shall develop ambiguity or doubt the commission will be available for clarifying instructions.[1]

Burden of Expense in Conforming to Accounting Orders.—The fourth series of objections urged by the utilities that the expense of conforming with the new accounting system would be unreasonable were dismissed by the court with the observation that it did not feel these expenses would "lay so heavy a burden upon the companies as to overpass the bounds of reason."

In this decision the court placed much emphasis upon the significance of the difficulties which have been created by certain intercorporate practices on the part of the utilities. The court pointed out that "at times obscurity or confusion" had been "born of such relations," and it expressed a conviction that there was widespread belief that "transfers between affiliates or sub-

[1] 299 U.S. 232, 247.

sidiaries complicated the task of rate making" for regulatory commissions and impeded "the search for truth." "Buyer and seller in such circumstances," said the court, "may not be dealing at arm's length and the price agreed upon between them may be a poor criterion of value."

With regard to the problems confronting the regulatory commissions as the result of such developments, the court said:

> This court is not at liberty to substitute its own discretion for that of administrative officers who have kept within the bounds of their administrative powers. To show that these have been exceeded in the field of action here involved, it is not enough that the prescribed system of accounts shall appear to be unwise or burdensome or inferior to another. Error or unwisdom is not equivalent to abuse. What has been ordered must appear to be "so entirely at odds with fundamental principles of correct accounting [cases cited] . . . as to be the expression of a whim rather than an exercise of judgment [cases cited]. . . . Then too, in gauging rationality, regard must steadily be had to the ends that a uniform system of accounts is intended to promote.[1]

The court quoted from one of its earlier decisions to the effect that:

> The object of requiring such accounts to be kept in a uniform way and to be open to the inspection of the Commission is not to enable it to regulate the affairs of the corporations not within its jurisdiction, but to be informed concerning the business methods of the corporations subject to the act that it may properly regulate such matters as are really within its jurisdiction.[2]

The Supreme Court accordingly affirmed the decree of the lower court which refused to enjoin the enforcement of accounting control under the Communications Act of 1934.

What, in your opinion, are likely to be the effects of such control over utility accounting as is illustrated by this case on (1) public utility financing, and (2) public utility management?

To what extent, if at all, do you believe it would be feasible to develop some "operating cost yardsticks" that could be utilized effectively by regulatory commissions?

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[1] 299 U.S. 232, 237.
[2] *Ibid.*

6. Commission Regulation of Dividend Payments

III. COLUMBIA GAS & ELECTRIC CORPORATION[1]

In March, 1938, the Columbia Gas & Electric Corporation filed an application with the Securities and Exchange Commission pursuant to Sec. 12c[2] of the Public Utility Holding Company Act of 1935, for approval of the declaration and payment of certain dividends. The dividends proposed in the application were the regular quarterly payment on the company's cumulative 6 per cent preferred stock, Series A; its cumulative preferred stock, 5 per cent series; and its 5 per cent cumulative preference stock. These dividends were normally payable on February 15, May 15, August 15, and November 15, 1938. In addition, the application requested approval of the payment of dividends on the common stock, not to exceed 50 cents per share during 1938. It was proposed that all the dividends included in the application be charged to an account designated "Surplus at December 31, 1937."

The Columbia Gas & Electric Corporation, a holding company registered under the provisions of the Public Utility Holding Company Act of 1935,[3] owned the securities of subsidiary operating companies serving parts of New York, Pennsylvania, Ohio, West Virginia, Virginia, Maryland, Indiana, and Kentucky. The corporation was formed in Delaware in 1926 as a result of a merger, through an exchange of stock, of the Columbia Gas & Electric Company and the Ohio Fuel Corporation.

In October, 1926, at the initial meeting of the new corporation the directors authorized the chairman of the meeting to appoint a committee for the purposes of studying the manner in which the corporation's balance sheet should be set up, and determining what part of the consideration to be received for stock to be issued

[1] Securities and Exchange Commission, Holding Company Act Releases No. 1055, April 9, 1938, and No. 1152, July 5, 1938. *Re Columbia Gas & Electric Corporation*, 23 P.U.R. (N.S.) 132 (1938).

[2] Section 12(c) of the act made it unlawful for any registered holding company "to declare or pay any dividend on any security of such company or to acquire, retire, or redeem any security of such company, in contravention of such rules and regulations or orders as the Commission deems necessary."

[3] 49 Stat. 803.

should be considered as capital and what part surplus. The recommendations of this committee were to be submitted to the board. Under the General Corporation Law of Delaware in 1926, the directors of a company were given the power to place a value upon the consideration against which shares of stock were to be issued. Not until 1927 were directors expressly authorized by Delaware law to allocate a portion of such consideration to capital account and a portion to surplus. This power of allocation, however, was included in the certificate of incorporation of the Columbia Gas & Electric Corporation.

In accordance with the authorization of the directors, a committee was appointed and a report was submitted on October 14, 1926. The recommendations of this committee were adopted by the board of directors of the Columbia Gas & Electric Corporation, the value of the assets acquired by the corporation being set at $265,133,541, of which $195,184,800 was allocated to capital and $69,968,741 to surplus. After certain necessary adjustments, the surplus balance was finally set at $67,372,510.

With reference to these transactions the Securities and Exchange Commission stated that because the committee's report was open to several different interpretations, it might be argued that the values entered on the company's books exceeded the amounts authorized by the board of directors because "by the process of computing the consolidated net worth the generally accepted accounting principle of eliminating the surplus of the subsidiaries as of the date of their acquisition by the predecessor holding companies of the applicant was disregarded." "Furthermore, the effect of the method of recordation" seemed to the commission "to perpetuate certain items of unrealized appreciation, upward revaluations, and other questionable items which had existed on the books of the predecessor companies." With respect to these matters the commission said:

> Without attempting to determine the relative merits of the eighty-odd revaluation transactions, and without intending to foreclose a future inquiry therein, it would appear that the total of the upward revaluations to date is in the neighborhood of $72,000,000. . . . If all of these revaluations were taken out of applicants' investment account, there would be no presently existing surplus and the company's capital as stated would be impaired.[1]

[1] Release No. 1055, April 9, 1938, p. 4.

From the time of the organization of the corporation until the filing of the application with the commission in 1938, the surplus account was never divided between "Capital Surplus" and "Earned Surplus." Earnings were credited to the account, and all dividends, including both stock and cash, were charged to it. A summary of the changes in surplus from the time of the formation of the corporation until December 31, 1937, was as follows:

Credits	
Surplus Credited in Connection with Organization	$ 67,372,510.45
Net Earnings	202,555,347.22
Total	$269,927,857.67
Debits	
Dividend on Preferred and Preference Stocks Paid in Cash	$ 68,971,481.87
Dividend on Common Stock Paid in Cash	106,500,456.34
Total Cash Dividends	$175,471,938.21
Dividends on Common Stock Paid in Common Stock	36,383,831.97
Dividends on Common Stock Paid in Preference Stock	25,000,000.00
Other Charges—Net	19,810,478.04
Total	$256,666,248.22
Surplus at December 31, 1937	$ 13,261,609.45

Among the factors considered by the commission in reaching a decision on the corporation's application was the fact that the original surplus amount could be questioned because of the accounting procedure followed. Furthermore, despite the legality of the practice under the laws of Delaware, the payment of dividends from capital surplus was open to severe criticism. It was also observed that between 1926 and 1937 the corporation's surplus account had decreased substantially, such decrease resulting in a large measure from the fact that since its organization the corporation had paid out in dividends an amount in excess of its earnings.

The commission also stated that under the company's amended certificate of incorporation, the liquidating value of the preferred stocks was in excess of their par values. The total amount of this excess was $9,680,780.

Attention was also called to the fact that at the time of the application there was pending against the corporation and some of its subsidiaries certain extraordinary litigation, the amounts in question totaling approximately $88,000,000.

Finally, the commission considered the downward trend of business commencing in 1937 and the uncertainties relative to the possible improvement of the corporation's earnings in 1938.

In view of these considerations the commission decided that it should not approve the corporation's petition for payment of dividends on its common stock. This decision was deemed "necessary and appropriate to protect the financial integrity of the applicant and of companies in the applicant's holding company system, to safeguard the working capital of applicant's public-utility subsidiary companies, to prevent the payment of dividends out of capital or unearned surplus, and to prevent the circumvention of the provisions of the Public Utility Holding Company Act of 1935 and of Rule 12C-2."[1]

Concerning the proposed payment of dividends on the preferred and preference stocks, the commission recognized the desirability of maintaining the uninterrupted dividend record on these stocks. However, the commission did not wish to approve, as a general proposition, the payment of dividends out of capital surplus. It was decided to permit the payment on February 15 and May 15, 1938, of the preferred and preference dividends as requested. These dividends were to be charged to the account "Surplus at December 31, 1937."

These payments were to be approved, however, only upon the condition that "an equivalent amount be restored to said surplus account out of the first earnings accumulated after December 31, 1937." The commission reserved judgment with respect to proposed dividend payments on August 15 and November 15, 1938.

With regard to its powers over payment of dividends by registered holding companies, the commission said:[2]

> . . . Section 12(c) makes unlawful the declaration or payment of any dividends in contravention not only of rules and regulations of the Commission, but also of its orders. Rule 12C-2 in providing that no dividends shall be declared or paid out of capital or unearned surplus, does not exhaust the power vested in the Commission by Section 12(c) of the Act and it is conceivable that under certain circumstances the Commission might prohibit the payment of dividends out of earned surplus by order, provided that the prescribed statutory standards existed.

In May, 1938, the Columbia Gas & Electric Corporation again applied to the Securities and Exchange Commission for approval

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[1] *Ibid.*, April 9, 1938, p. 8.
[2] *Ibid.*, p. 6.

of the payment of preferred and preference dividends on August 15, 1938. The commission found that the provisions of its earlier order had been complied with, and that available evidence indicated that the corporation's 1938 earnings would be sufficient to cover the August 15 dividends. In view of this situation, approval of the payment was granted upon the condition that, if earnings were not sufficient and any part of the dividend was charged to "Surplus at December 31, 1937," an equivalent amount should be restored to this account out of the next available 1938 earnings.

What, in your opinion, should be the role of management and regulation in the determination of dividend policy?

7. Reorganization of a Public Utility under the Public Utility Holding Company Act of 1935

112. American Water Works & Electric Company, Inc.[1]

In 1937 the American Water Works & Electric Company, Inc., filed a plan of reorganization with the Securities and Exchange Commission for the purpose of enabling the company and its subsidiaries to comply with the provisions of subsection (b) of Section 11 of the Public Utility Holding Company Act of 1935.[2]

Section 11 of the Public Utility Holding Company Act contained the so-called "Death Sentence." This section of the law required the commission to examine the corporate structure of all registered holding companies and their subsidiaries, the relationships among the companies in the system, the character of their interests, and the properties owned or controlled, in order to determine the extent to which the corporate structure of all companies in such systems might be "simplified, unnecessary complexities therein eliminated, voting power fairly and equitably distributed" among security holders, and the "properties and business thereof" confined "to those necessary or appropriate to the operations of an integrated public-utility system."

At the time of its application to the commission the American Water Works & Electric Company, Inc., and its subsidiaries were furnishing electric service to portions of Pennsylvania, West Virginia, Ohio, Maryland, and Virginia. This area extended roughly 300 miles north and south and 300 miles east and west. Companies in the American Water Works System also operated gas utilities mainly in West Virginia and to a lesser extent in Pennsylvania and Maryland. In addition to gas and electric operations, the system was engaged in a number of other businesses not classed as public utilities under the Public Utility Holding Company Act of 1935. These included water works,

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[1] Securities and Exchange Commission, Holding Company Act Release No. 949, December 30, 1937.

[2] 49 Stat. 803.

coal, appliance sales, electric railway, and bus transportation; also bridges, agriculture, and certain other minor operations. Of the total business of the system, approximately 60 per cent was represented by its public utility operation, 30 per cent by water activities, and the remaining 10 per cent by miscellaneous activities.

The corporate organization of the American Water Works & Electric System in 1937 is shown in Exhibit 1. This organization chart classifies the various companies in the system as utilities or nonutilities, and as holding companies, or public utility and holding companies as defined in the act.

Certain definitions and features of the Public Utility Holding Company Act required careful consideration by the officials of the American Water Works & Electric Company System before presenting a plan of reorganization.

A holding company was defined in Sec. 2(7) of the act as "(A) any company which directly or indirectly owns, controls, or holds with power to vote, 10 per centum or more of the outstanding voting securities of a public-utility company" or of "a company which is a holding company by virtue of this clause or clause (B); unless the Commission, as hereinafter provided, by order declares such company not to be a holding company." Also according to clause (B) of Sec. 2, a holding company was defined as "any person which the Commission determines, after notice and opportunity for hearing, directly or indirectly to exercise (either alone or pursuant to an arrangement or understanding with one or more other persons) such a controlling influence over the management or policies of any public-utility or holding company as to make it necessary or appropriate in the public interest or for the protection of investors or consumers" that such person be subject to the "obligations, duties, and liabilities imposed in this title upon holding companies."

The act provided that the commission should by order declare a company not to be a holding company under clause (A) if the commission found that "the applicant (i) does not, either alone or pursuant to an arrangement or understanding with one or more other persons, directly or indirectly control a public-utility or holding company either through one or more other persons or by any means or device whatsoever, (ii) is not an intermediary company through which control is exercised, and (iii) does not,

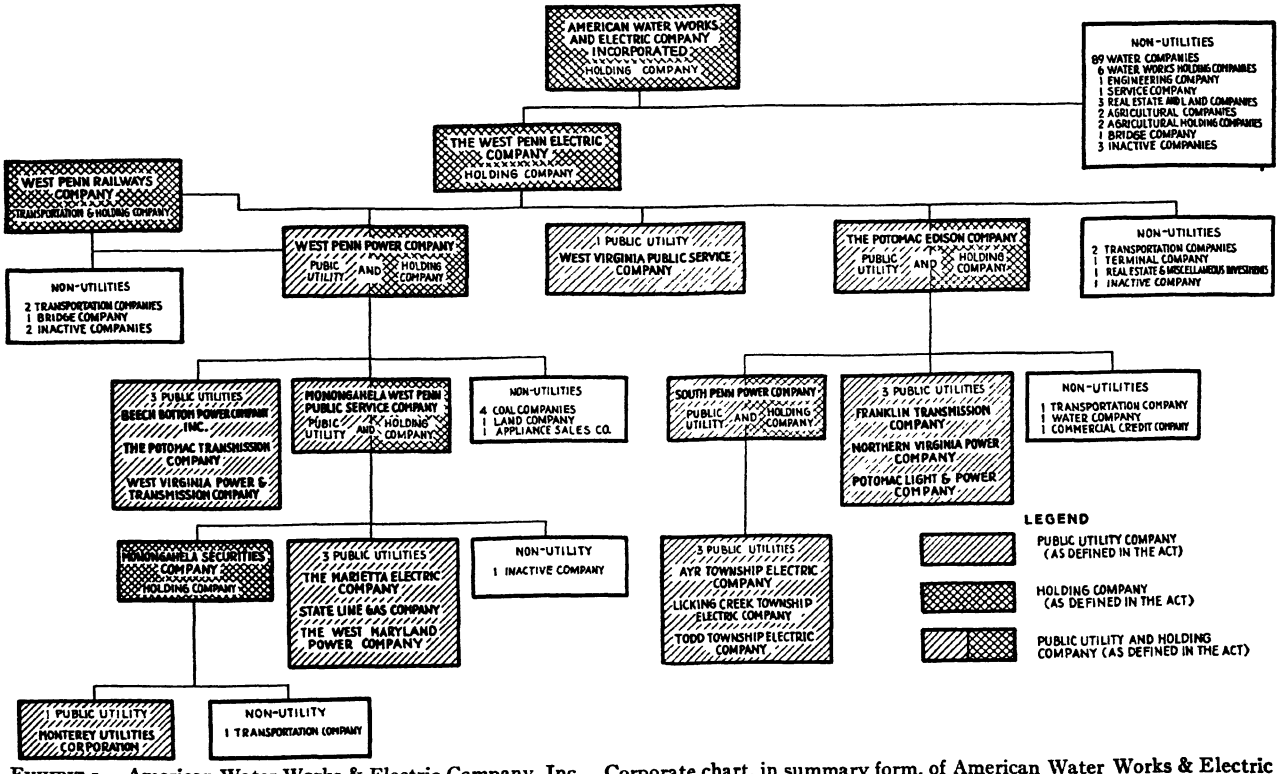


EXHIBIT 1.—American Water Works & Electric Company, Inc. Corporate chart, in summary form, of American Water Works & Electric Company System.

SOURCE: Securities and Exchange Commission, Release No. 949.

directly or indirectly, exercise (either alone or pursuant to an arrangement or understanding with one or more persons) such a controlling influence over the management or policies of any public-utility or holding company as to make it necessary or appropriate in the public interest or for the protection of investors or consumers that the applicant be subject to" the act.

Similar provisions to those just given regarding holding companies were included in the act concerning subsidiary companies. For example, if 10 per cent or more of the voting securities of a public utility company was controlled by some other system, it was to be considered a subsidiary to that system. Likewise, similar provisions to those applying to a person becoming a holding company were applied to a "person" who might be deemed by the commission to be a subsidiary.

An affiliate was defined as (A) any person, or (B) any company that directly or indirectly owned or controlled or held with power to vote 5 per cent or more of outstanding voting securities of a specified company, or (C) any individual who was an officer or director of such company or of any company which was an affiliate thereof under clause (A). Finally, an affiliate was defined (D) as any person or class of persons which the commission determined stood in such relation to a company that there was liable to be such an absence of arm's length bargaining in transactions between them as to make it "necessary or appropriate" in the public interest, or for the protection of investors or consumers that such person be subject to the act.

An "integrated public-utility system" as applied to electric utility systems was defined in the act as:

> . . . 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;[1] . . .

As applied to gas utility companies, an integrated system was defined as:

[1] Sec. 2(a) 2(9) (A).

. . . 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.[1]

As soon as practicable after January 1, 1938, the commission was to require, after notice and opportunity for hearing, that each registered holding company and each of its subsidiaries take such action as the commission might find necessary to limit the operations of the holding company system of which such companies were a part "to a single integrated public-utility system," and to such "other businesses" as were "reasonably incidental or economically necessary or appropriate to the operations of such integrated public-utility system."

The commission might permit a registered holding company to continue "to control one or more additional integrated public-utility systems" if it found after notice and opportunity for hearing that (1) each such additional system could not be operated independently without loss of substantial economies, which could be obtained by retention of such holding company control; that (2) all such additional systems were located in one state or in adjoining states or in a contiguous foreign country; that (3) the continued combination of such systems under the control of such holding company was "not so large (considering the state of the art and the area or region affected) as to impair the advantages of localized management, efficient operation, or the effectiveness of regulation."

The commission might also permit "as reasonably incidental or economically necessary or appropriate to the operations of one or more integrated public-utility systems" the retention of an interest "in any business (other than the business of a public-utility company as such)" which the commission might find "necessary or appropriate in the public interest or for the protection of investors and consumers and not detrimental to the proper functioning of such system or systems."

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[1] Sec. 2(a) (29) (B).

The commission was given power to require that each registered holding company and its subsidiaries take such steps as the commission might find necessary to ensure that the corporate structure or continued existence of any company in the holding company system did not "unduly or unnecessarily complicate the structure or unfairly or inequitably distribute voting power among security holders." In carrying out this provision of the act, the commission could require a registered holding company or any associated or subholding company within the system to take such action as the commission might find necessary in order that such holding company should "cease to be a holding company with respect to each of its subsidiary companies which itself has a subsidiary company which is a holding company." But the commission was not authorized (except for the purpose "of fairly and equitably distributing voting power" among security holders) to require any change in the corporate structure or existence of any company which was not a holding company or any company "whose principal business" was that of a "public-utility company."

Under the act, a registered holding company or any of its subsidiaries might take the initiative (any time after January 1, 1936) in submitting a plan to the commission "for the divestment of control, securities, or other assets or for other action," by such company or any of its subsidiaries for the purpose of enabling such companies to comply with Sec. 11 of the act. If the commission found such proposed plan, as submitted or as modified, fair and equitable and in accordance with the provisions of the act, it might make an order approving such plan.

Orders of the commission with reference to the simplification or elimination of holding company systems were to be complied with within one year, but if the commission found that an applicant could not "in the exercise of due diligence" comply within that time it could extend the period of time not exceeding one year, provided the commission deemed such extension "necessary or appropriate in the public interest or for the protection of investors or consumers."

In carrying out the simplification of holding companies, the commission could apply to a court of the United States, which, as a court of equity, might to such extent as it deemed necessary for purposes of enforcement of the commission's order "take exclusive jurisdiction and possession of the company or companies and the

assets thereof, wherever located." The court was given jurisdiction in any such proceeding to appoint a trustee, and the act provided that the court might "constitute and appoint the commission as sole trustee to hold or administer under the direction of the court the assets so possessed."[1] The court was not to appoint any other than the commission as receiver or trustee without notifying the commission and giving it an opportunity to be heard before making such appointment. In no proceeding under Sec. 11 could the court appoint the commission as receiver without its consent.

The plan presented by the American Water Works & Electric Company to the commission was primarily one of corporate simplification. No change in the actual physical properties of the system was contemplated at that time. As a result of the transfer of security and property holdings, and the dissolution, merger, and realignment of certain subsidiaries, including several "second degree" holding companies, it was proposed that the corporate organization of the system be changed as shown in Exhibit 2. In order to carry out this simplification program, the company proposed to issue certain securities. Details as to these securities were to be presented to the commission for approval at a later date.

Under the reorganization plan, as shown in Exhibit 2, the electric operations of the system would be carried on through three holding companies. The West Penn Power Company would operate exclusively in the western and north central parts of Pennsylvania. Its three wholly owned public utility subsidiaries would operate in states adjacent to the area served by their parent. The separate corporate identities of these subsidiaries were to be preserved for jurisdictional reasons.

The Monongahela West Penn Public Service Company would render service in northern West Virginia. Four of its wholly owned utility subsidiaries would serve territory in adjacent states, their separate corporate identities again being preserved for jurisdictional reasons. The remaining utility subsidiary, West Virginia Public Service Company, would operate in West Virginia. The reorganization plan contemplated, however, the ultimate merger of the latter company with its parent.

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[1] Sec. 11(d).

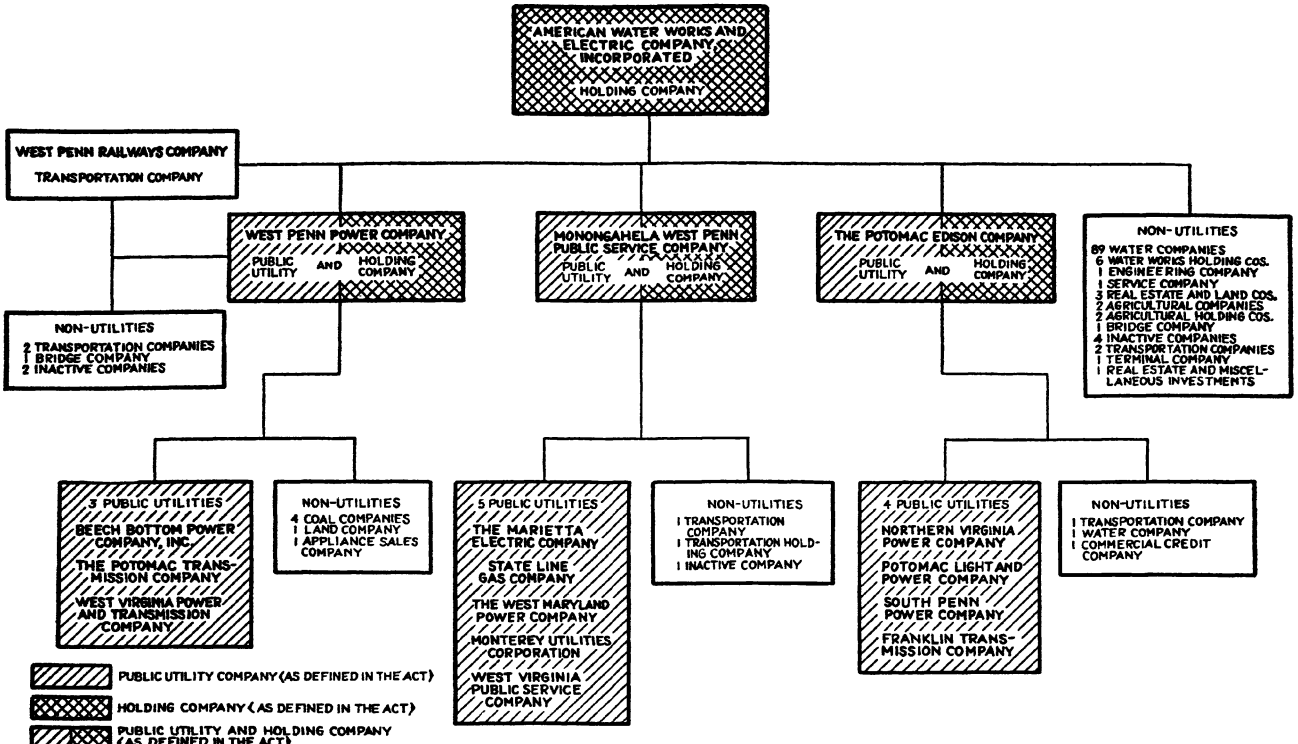


EXHIBIT 2.—American Water Works & Electric Company, Inc. Corporate chart, in summary form, of American Water Works & Electric Company System after giving effect to proposed reorganization.

SOURCE: Securities and Exchange Commission, Release No. 949.

The third holding company, The Potomac Edison Company, would operate exclusively in Maryland. Through four electric utility subsidiaries it would render service in Virginia, West Virginia, and Pennsylvania. Here also the separate corporate identities of the subsidiaries were to be preserved for jurisdictional reasons.

It was stated that West Penn Power Company, Monongahela West Penn Public Service Company, and The Potomac Edison Company would carry on operations through their subsidiaries in adjacent states because the territories thus served belonged to the natural service areas of the respective holding and operating companies. It was further stated that the generating, transmission, and distribution facilities of the American Water Works System were, with certain minor exceptions, physically interconnected.

Three of the subsidiary companies of the American Water Works System distributed gas at retail. In the case of all three, Monongahela West Penn Public Service Company, State Line Gas Company, and The Potomac Edison Company, the gas operations were carried on in the same territories that the system served with electricity.

Through stock ownership, American Water Works & Electric Company, Inc., controlled directly 45 water operating and holding companies. Through American Communities Company another group of water operating and holding companies was controlled. American Communities Company was organized in 1936 jointly by the American Water Works & Electric Company, Inc., and the Chemical Bank & Trust Company of New York. The former acquired complete voting control of the new company, which in turn held control of Community Water Service Company, a holding company for over 40 water companies. It was stated that with an investment of approximately $550,000, the American Water Works & Electric Company, Inc., controlled the total assets of the Community Water Service System, amounting to about $64,000,000.

In addition to electric, gas, and water properties, the American Water Works System included electric railway, bus, and bridge businesses, which had been acquired mainly from a predecessor company. In some cases unprofitable railway lines had been abandoned, while in others it had been necessary to establish bus lines in order to obtain permission to cease railway operations.

The company also had acquired a toll bridge in connection with its electric transportation business. With minor exceptions the railway, bus, and bridge businesses were carried on in the same territory served by gas and electric subsidiaries.

Through a number of subsidiary companies the American Water Works & Electric Company, Inc., controlled two coal mining properties, approximately 10,000 acres of agricultural land in California, an office building in Pittsburgh used by a subsidiary company, and an office building in New York not used in connection with the system's operations. The company stated that it was anxious to dispose of its agricultural land holdings and its New York building.

In its decision upon the application of the American Water Works & Electric Company, Inc., the Securities and Exchange Commission found that the electric properties of the system conformed to the provisions of the Public Utility Holding Company Act of 1935 relative to integrated public utility systems.

Concerning electric and gas operations of the system under one management, the commission stated:

> 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.[1]
>
> The evidence adduced in this case warrants the conclusion that the combined electric and gas operations are so inter-related as to justify this Commission's findings that the two types of public-utility enterprises carried on by applicant's subsidiaries constitute together a single public-utility system.

In the opinion of the commission the management of the directly owned water companies was sufficiently related to the management of the gas and electric properties to warrant their retention. Furthermore, available evidence indicated that these water properties had been a stable source of revenue. The coal and appliance sales businesses were also declared to be "reasonably

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[1] "The question of public policy as to the common ownership of gas and electric facilities in the same territory is apparently left by the statute to the decision of the States (see Section 8)." Commission's footnote.

incidental and economically appropriate to the operation of the applicant's integrated public-utility system."

The commission felt that steps should be taken to eliminate American Communities Company and to reorganize the Community Water Service System, especially in view of the American Water Work's small equity in the system. A reasonable opportunity was allowed the company to effect these changes and a final decision by the commission was deferred. A tentative conclusion was reached, however, that upon satisfactory completion of the suggested changes, the retention of the water properties would be considered appropriate.

Concerning the transportation properties of the system, the commission recognized them to be "in the nature of an inheritance from an earlier age when electric transportation was of more importance than the business of electrical distribution." The commission also realized that these operations were of relatively minor importance in comparison with other activities. Furthermore, considerable difficulty was apprehended in satisfactorily disposing of these interests. In view of these facts, it was found that the retention of the transportation properties was appropriate. Provision was made, however, that these interests should not be expanded without approval of the commission, "except to the extent necessary to furnish adequate service in the territory now being served or the substitution of bus transportation necessitated by the abandonment of electric railway service."

The commission was of the opinion that the ownership of the agricultural land in California and the unused office building in New York was not "reasonably incidental or economically appropriate" to the public utility operations of the system. In order, however, to avoid a forced sale of these properties with the possibility of an unreasonable loss to stockholders, the commission allowed the company a reasonable time in which to dispose of the holdings. The commission found what it considered to be an unsatisfactory condition in the distribution of voting power among preferred and common stockholders of the American Water Works System. To correct this situation the commission stated that it expected the company to effect such changes as would be necessary in order "to give more adequate protection to the preferred stockholders in the event of certain continued dividend defaults."

Reference was also made to the fact that evidence before the commission indicated the presence of certain revaluations of property and investments on the books of members of the American Water Works System. While the proposed reorganization plan did not provide for the elimination of these revaluations, the commission indicated that attention should be given to this matter, and that the acceptance by the regulatory body of the immediate plan should not be construed as giving approval to the revaluations in question.

Finally, consideration was given to the manner in which the proposed reorganization plan enabled the company to comply with the requirements of subsection (b) of Sec. 11 relative to simplification of corporate structure. It was found that the plan as submitted, with certain exceptions, met the provisions of the section in question. Final approval was contingent upon the consummation of the previously considered changes in the American Communities Company, and the submission of a detailed financial plan by which the proposed corporate changes were to be effected.

How do you evaluate the provisions of the public utility holding company act with respect to simplification of holding company systems?

Do you believe that public utility management through holding companies had become too highly centralized? Is there any danger that Federal regulation of public utilities may become too highly centralized?

What, in your opinion, is likely to be the effect of the provisions of the public utility holding company act brought out in this case upon (1) the financing of public utilities; (2) state regulation of public utilities; (3) public utility rates?

8. Regulation Involving Interstate Trade and Intercorporate Transactions

113. State *v.* Interstate Power Company[1]

In 1929 the Hartington Electric Light Company brought suit against the Interstate Power Company of Delaware and its subsidiary operating in Hartington, Nebraska, to prevent these companies from charging rates which were designed to drive the Hartington Electric Light Company out of business.

The Interstate Power Company of Delaware controlled the Interstate Power Company of Nebraska, which had been formed in 1927 to take over the properties of the Minnesota Electric Distributing Company and the Tri-State Utilities Company, the latter operating, among others, a property at Hartington, Nebraska. In 1927 the primary or "top" rate of the Tri-State Utilities Company in Hartington was 18 cents per kilowatt-hour. Considering this rate excessive, the city of Hartington, in an endeavor to secure relief from what were deemed exorbitant charges, induced the promoters of the proposed Hartington Electric Light Company, doing business as the Western States Public Utilities Company, to furnish electricity to the city under a contract with a top rate of 9 cents per kilowatt-hour. During the agitation which preceded the formation of the Hartington Electric Light Company, the Tri-State Utilities Company reduced its rate in Hartington from 18 to 14 cents. After the Hartington Electric Light Company had been formed, the Cedar Light and Power Company was organized by the Interstate Power Company of Nebraska, to which the Tri-State Utilities Company sold its properties in Hartington. The Cedar Light and Power Company established a 6-cent rate. The Hartington Electric Light Company, asserting that the Cedar Light and Power Company was in effect a subsidiary of the Interstate Power Company of Delaware, formed for the purpose of driving it out of business, claimed that the action of the Cedar

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[1] *State ex rel. Spillman* v. *Interstate Power Co.*, 226 N.W. 427 (1929); P.U.R. 1929E, 358.

Light and Power Company was in violation of a Nebraska statute to the effect that:

> Any person, firm or company, association or corporation, foreign or domestic, doing business in the state of Nebraska and engaged in the production, manufacture, or distribution of any commodity in general use, that shall intentionally, for the purpose of destroying the business of a competitor in any locality, discriminate between different sections, communities, or cities of this state by selling such commodity at a lower rate in one section, community, or city, than is charged for said commodity by said party in another section, community, or city, after making due allowance for the difference, if any, in the grade or quality and in the actual cost of transportation from the point of production, if a raw product, or from the point of manufacture, if a manufactured product, shall be deemed guilty of unfair discrimination, which is hereby prohibited and declared unlawful.[1]

The state of Nebraska intervened in the case and asked the Nebraska Supreme Court to enjoin the Interstate Power Company of Delaware from "unlawfully destroying the business of a competitor" and also "from combining and conspiring" to monopolize and to restrain intrastate commerce in violation of the law of Nebraska. Specifically, the Nebraska Supreme Court was asked to enjoin the Interstate Power Company of Delaware from putting into force in Hartington a schedule of rates carrying "a top rate of six cents per kilowatt-hour."

According to the record at the time of this suit the Interstate Power Company of Delaware owned and controlled "more than 42 million in assets situated in Iowa, Illinois, Wisconsin, Minnesota, North Dakota, South Dakota, Nebraska and Oklahoma." The record also indicated that the Interstate Power Company of Delaware was itself a subsidiary of the Utilities Power & Light Corporation of Chicago which owned, operated, and controlled "similar properties in some twelve different states."

The court said that evidence in the record justified the conclusion that the sale of electricity at 9 cents would show a profit, while the schedule with the 6-cent top rate would result in an unavoidable loss. The difference to the consumers between the two rates was said to be some $12,000 in favor of the 6-cent rate. On the other hand, under the terms of the 9-cent rate, on the basis of the contract with the Hartington Electric Light Company, some

[1] Sec. 3432, Comp. Stat. 1922.

$8,500 would be credited on the purchase price of the plant; under the 6-cent rate it would not only be impossible to realize this profit but there would be a loss of approximately $4,000. When the business was divided between two competitors, as the amount of business to each decreased the loss suffered under the 6-cent rate would decidedly increase. The court went on to say:

> This conclusion is more than borne out by the estimate furnished by the engineers of the "control" which appears in the record in the form of analysis of the proposition made by the Western States Public Utilities Company to Hartington, Nebraska, on the basis of the generation and distribution of 250,000 kw.-hr. annually, and that discloses that there would be an annual deficit resulting at [in] $15,630. Competent evidence also tends to establish that the cost to the "control" of generating the electrical energy for use at Hartington at the time of the institution of the state's action was, as near [ly] as could be ascertained, not less than 2.45 cents per kw.-hr. wholesale, and in view of the division of business at that place, following the commencement of business by the Hartington Electric Light Company, results in an actual loss to the Cedar Light & Power Company. In fact, there can be no question but what the six-cent rate, with the business divided as it now exists in the city of Hartington, not only eliminates from consideration the provisions of the contract made by the city of Hartington relative to the acquirement by it of the plant erected by the Hartington Electric Light Company, but is inadequate and noncompensatory to such a degree that renders permanent competition on this basis wholly impossible and the ultimate destruction of the Hartington Electric Light Company unavoidable.
>
> A careful consideration of this phase of the evidence in the record impresses the mind with the truth of the conclusion that the "control" who directed the installation of the six-cent rate must be taken to have intended the natural consequences of their act. On this basis the conclusion is also inevitable that the Cedar Light & Power Company was dedicated when brought into being by those responsible for its existence to the work of the restoration and preservation of the monopoly which had previously existed at Hartington in the field of business in which it was destined to engage. This necessarily entails the destruction of competition and ruination of its competitor. This conclusion is not only consistent with the measures it is actually sought to carry out but with the motive which its "control" undisputably expressed. There is no escape from the conclusion that what was done by it and its agents and the several corporate entities thus controlled in furtherance of its plan and purpose was done intentionally for the purpose of destroying the business of the Hartington Electric Light Company, in a manner inhibited by the terms of the Nebraska statutes and violative of the public policy of the state; that, so far as the question of fact is concerned the conclusion upon which the decree of the district court in

this case rests not only finds ample support in the record but is the conclusion which the record as an entirety necessitates this reviewing court to adopt.

Concerning the purpose of the intercorporate relationships of the various companies which were defendants in the suit the court said:

> It fairly appears from the record as an entirety, what certain testimony establishes as an admission on part of the agents of the "control" then engaged in the transaction of its business, that the "six-cent rate was a fighting rate," and "that the Cedar Light & Power Company was a fighting company" organized for that purpose "and to get around the damned Nebraska antidiscrimination statutes."

Was the application of the Nebraska statute to the utility business sound? Would such a law affect in any way a policy for state-wide uniformity of utility rates?

What light does this case throw on the importance of the management policies of a holding company?

Should a publicly owned and operated utility make "fighting" rates and operate at a loss to put privately owned and operated utilities out of business?

114. PENNSYLVANIA GAS COMPANY[1]

The Pennsylvania Gas Company, a corporation organized under the laws of Pennsylvania, transmitted and sold natural gas in that state and in New York. Through the use of pipe lines about 50 miles in length the gas was brought from the source of supply in Pennsylvania and sold to consumers in Jamestown, Ellicott, and Falconer, New York. The company also sold natural gas to consumers in Warren, Corry, and Erie, Pennsylvania.

In 1919, consumers of gas in Jamestown, New York, filed a complaint with the New York Public Service Commission (second district), demanding a reduction of gas rates in that city. The commission asserted its jurisdiction over the rates for the gas which had been transported from without the state, and the commission was sustained by the Court of Appeals of New York. The case was then appealed to the U. S. Supreme Court.

In its decision that court said:

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[1] *Pennsylvania Gas Co.* v. *Public Service Commission*, 252 U.S. 23; 40 Sup. Ct. 279 (1920); P.U.R. 1920E, 18.

We think that the transmission and sale of natural gas produced in one state, transported by means of pipe lines, and directly furnished to consumers in another state, is interstate commerce within the principles of the cases already determined by this court. . . .

This case differs from *Public Utilities Commission* v. *Landon*, 249 U.S. 236; 63 L. ed. 577; P.U.R. 1919C, 834, wherein we dealt with the piping of natural gas from one state to another, and its sale to independent local gas companies in the receiving state, and held that the retailing of gas by the local companies to their consumers was intrastate commerce, and not a continuation of interstate commerce, although the mains of the local companies receiving and distributing the gas to local consumers were connected permanently with those of the transmitting company. Under the circumstances set forth in that case, we held that the interstate movement ended when the gas passed into the local mains; that the rates to be charged by the local companies had but an indirect effect upon interstate commerce, and, therefore, the matter was subject to local regulation.

In the instant case, the gas is transmitted directly from the source of supply in Pennsylvania to the consumers in the cities and towns of New York and Pennsylvania, above mentioned. Its transmission is direct, and without intervention of any sort between the seller and the buyer. The transmission is continuous and single, and is, in our opinion, a transmission in interstate commerce, and therefore, subject to applicable constitutional limitations which govern the states in dealing with matters of the character of the one now before us.

The general principle is well established and often asserted in the decisions of this court that the state may not directly regulate or burden interstate commerce. That subject, so far as legislative regulation is concerned, has been committed by the Constitution to the control of the Federal Congress. But while admitting this general principle, it, like others of a general nature, is subject to qualifications not inconsistent with the general rule, which now are as well established as the principle itself.

In dealing with interstate commerce, it is not, in some instances, regarded as an infringement upon the authority delegated to Congress, to permit the states to pass laws indirectly affecting such commerce, when needed to protect or regulate matters of local interest. Such laws are operative until Congress acts under its superior authority by regulating the subject matter for itself. In varying forms, this subject has frequently been before this court. The previous cases were fully reviewed and deductions made therefrom in the Minnesota Rate Cases. . . . The paramount authority of Congress over the regulation of interstate commerce was again asserted in those cases. It was nevertheless recognized that there existed in the states a permissible exercise of authority, which they might use until Congress had taken possession of the field of regulation. After stating the limitations upon state authority, of this subject, we said: "But within these limitations, there necessarily remains to the states, until Congress acts, a wide range

for the permissible exercise of power appropriate to their territorial jurisdiction, although interstate commerce may be affected. It extends to those matters of a local nature as to which it is impossible to derive, from the constitutional grant, an intention that they should go uncontrolled pending Federal intervention. Thus, there are certain subjects having the most obvious and direct relation to interstate commerce, which nevertheless, with the acquiescence of Congress, have been controlled by state legislation from the foundation of the Government because of the necessity that they should not remain unregulated, and that their regulation should be adapted to varying local exigencies; hence, the absence of regulation by Congress in such matters has not imported that there should be no restriction, but rather that the states should continue to supply the needed rules until Congress should decide to supersede them. . . . Our system of government is a practical adjustment by which the national authority, as conferred by the Constitution, is maintained in its full scope, without unnecessary loss of local efficiency. Where the subject is peculiarly one of local concern, and from its nature belongs to the class with which the state appropriately deals in making reasonable provision for local needs, it can not be regarded as left to the unrestrained will of individuals because Congress has not acted, although it may have such a relation to interstate commerce as to be within the reach of the Federal power. In such case, Congress must be the judge of the necessity of Federal action. Its paramount authority always enables it to intervene at its discretion for the complete and effective government of that which has been committed to its care, and, for this purpose and to this extent, in response to a conviction of national need, to displace local laws by substituting laws of its own. The successful working of our constitutional system has thus been made possible."

The rates of gas companies transmitting gas in interstate commerce are not only not regulated by Congress, but the Interstate Commerce Act expressly withholds the subject from Federal control.[1] [References to Interstate Commerce Act given.]

The thing which the state commission has undertaken to regulate, while part of an interstate transmission, is local in its nature, and pertains to the furnishing of natural gas to local consumers within the city of Jamestown, in the state of New York. The pipes which reach the customers served are supplied with gas directly from the main of the company which brings it into the state; nevertheless, the service rendered is essentially local, and the sale of gas is by the company to local consumers, who are reached by the use of the streets of the city in which the pipes are laid, and through which the gas is conducted to factories and residences as it is required for use. The service is similar to that of a local plant furnishing gas to consumers in a city.

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[1] A Federal statute regulating the transportation and sale of natural gas in interstate commerce by the Federal Power Commission became effective July 11, 1938.

This local service is not of that character which requires general and uniform regulation of rates by congressional action, and which has always been held beyond the power of the states, although Congress has not legislated upon the subject. While the manner in which the business is conducted is part of interstate commerce, its regulation in the distribution of gas to the local consumers is required in the public interest, and has not been attempted under the superior authority of Congress.

It may be conceded that the local rates may affect the interstate business of the company. But this fact does not prevent the state from making local regulations of a reasonable character. Such regulations are always subject to the exercise of authority by Congress, enabling it to exert its superior power under the commerce clause of the Constitution.

The principles announced, often reiterated in the decisions of this court, were applied in the judgment affirmed by the Court of Appeals of New York, and we agree with that court that until the subject matter is regulated by congressional action, the exercise of authority conferred by the state upon the Public Service Commission is not violative of the commerce clause of the Federal Constitution.

115. KANSAS NATURAL GAS COMPANY[1]

The Kansas Natural Gas Company, a Delaware corporation, was engaged in producing and buying natural gas. For the most part this gas came from Oklahoma and was transported to Kansas and from Kansas into the state of Missouri. Some gas was, however, produced in Kansas. In each state the company sold and delivered it to distributing companies, which in turn sold and delivered it to local consumers in numerous communities in these states. The gas originating in Kansas was mingled for transportation in the same lines with that originating in Oklahoma. The pipe lines were continuous from the wells to the place of delivery.

Three cases involving state regulation of the rates for gas transported in interstate commerce by the Kansas Natural Gas Company were consolidated for argument by the U. S. Supreme Court. The three cases were alike in the fact that they arose from the action of the Kansas Natural Gas Company in making an increase of rates for gas sold to distributing companies from

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[1] Three cases were involved in this controversy, which was appealed to the Supreme Court. They were *State of Missouri ex rel. Jesse W. Barrett* v. *Kansas Natural Gas Co.; Kansas Natural Gas Co.* v. *State of Kansas ex rel. A.E. Helm; State of Kansas ex rel. Fred S. Jackson* v. *Central Trust Co. of New York et al.*, 265 U.S. 298 (1924); 44 Sup. Ct. 544; P.U.R. 1924E, 78. See also case entitled Western Distributing Co. *v.* Public Service Commission of Kansas, p. 735.

35 cents to 40 cents per thousand cubic feet. This action was taken in Missouri without the consent and approval of the public utilities commission of that state, and in Kansas, notwithstanding a previous order of the Federal court fixing a 35-cent rate, and without the approval of the Kansas Public Utilities Commission for a rate in excess of 35 cents.

The power of the utilities commission in each state was challenged on the ground that the rates for the gas transported in interstate commerce were not subject to state control. Mr. Justice Sutherland, who delivered the opinion of the Supreme Court, said that the three cases presented the single question whether the business of the Kansas Natural Gas Company, consisting of the transportation of natural gas from one state to another for sale and delivery to distributing companies, was "interstate commerce free from state interference."

The business of the Kansas Natural Gas Company, with an exception not important in this case, was wholly interstate. The sales and deliveries were in large quantities not directly to consumers but to distributing companies for resale to consumers. There was no relation of agency between the Kansas Natural Gas Company and the distributing companies, or other relation except that of buyer and seller, and the interest of the former ended with its delivery to the latter, to which the title and control passed absolutely.

In its decision, the Supreme Court said:

> The question is, therefore, presented in its simplest form; and if the claim of state power be upheld, it is difficult to see how it could be denied in any case of interstate transportation and sale of gas. Both Federal Courts denied the power. The state court conceded that the business was interstate and subject to Federal control, but rested its decision the other way upon the fact that Congress had not acted in the matter, and that, in the absence of such action, it was within the regulating power of the state. The question is controlled by familiar principles. Transportation of gas from one state to another is interstate commerce; and the sale and delivery of it to the local distributing companies is a part of such commerce.
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> The line of division between cases where, in the absence of congressional action, the state is authorized to act, and those where state action is precluded by mere force of the commerce clause of the Constitution, is not always clearly marked. In the absence of congressional legislation, a state may constitutionally impose taxes, enact inspection

laws, quarantine laws, and, generally laws of internal police, although they may have an incidental effect upon interstate commerce. . . . But the commerce clause of the Constitution, of its own force, restrains the states from imposing direct burdens upon interstate commerce. In Minnesota Rate Cases (*Simpson* v. *Shepard*) 230 U.S. 352 . . . Mr. Justice Hughes, speaking for the court, said: "If a state enactment imposes a *direct burden* upon interstate commerce, it must fall, regardless of Federal legislation. The point of such an objection is not that Congress has acted, but that the state has directly restrained that which, in the absence of Federal regulation, should be free." The question is so fully discussed in that case that nothing beyond its citation is required.

The contention that, in the public interest, the business is one requiring regulation, need not be challenged. But Congress thus far has not seen fit to regulate it, and its silence, where it has the sole power to speak, is equivalent to a declaration that that particular commerce shall be free from regulation. . . . With the delivery of the gas to the distributing companies, however, the interstate movement ends. Its subsequent sale and delivery by these companies to their customers at retail is intrastate business and subject to state regulation. . . . In such case the effect on interstate commerce, if there be any, is indirect and incidental. But the sale and delivery here is an inseparable part of a transaction in interstate commerce—not local but essentially national in character—and enforcement of a selling price in such a transaction places a direct burden upon such commerce inconsistent with that freedom of interstate trade which it was the purpose of the commerce clause to secure and preserve. It is as though the Commission stood at the state line and imposed its regulation upon the final step in the process at the moment the interstate commodity entered the state, and before it had become part of the general mass of property therein. . . . There is nothing in *Pennsylvania Gas Co.* v. *Public Service Commission*, 252 U.S. 23 . . . inconsistent with this view. There the gas company, a Pennsylvania corporation, transmitted gas from Pennsylvania into New York, and sold it directly to the consumers. The service to the consumers, which was the thing for which the regulated charge was made, was essentially local, and the decision rests upon this feature. Mr. Justice Day, in the course of the opinion, said: "The pipes which reach the customers served are supplied with gas directly from the main of the company which brings it into the state; nevertheless the service rendered is essentially local, and the sale of gas is by the company to local consumers, who are reached by the use of the streets of the city in which the pipes are laid, and through which the gas is conducted to factories and residences as it is required for use. The service is similar to that of a local plant furnishing gas to consumers in a city." The commodity, after reaching the point of distribution in New York was subdivided and sold at retail. The Landon Case [249 U.S. 236], so far as this phase is concerned, differs only in the fact that the process of division and sale to consumers was

carried on, not by the Supply Company (Kansas Natural Gas Company), but by independent distributing companies.

In both cases the things done were local, and were after the business in its essentially national aspect had come to an end. The distinction which constitutes the basis of the present decision is clearly recognized in the Landon Case. The business of supplying, on demand, local consumers, is a local business, even though the gas be brought from another state, and drawn for distribution directly from interstate mains; and this is so whether the local distribution be made by the transporting company or by independent distributing companies. In such case the local interest is paramount, and the interference with interstate commerce, if any, indirect and of minor importance. But here the sale of gas is in wholesale quantities, not to consumers, but to distributing companies for resale to consumers in numerous cities and communities in different states. The transportation, sale, and delivery constitute an unbroken chain, fundamentally interstate from beginning to end, and of such continuity as to amount to an established course of business. The paramount interest is not local but national,—admitting of and requiring uniformity of regulation. Such uniformity, even though it be the uniformity of governmental nonaction, may be highly necessary to preserve equality of opportunity and treatment among the various communities and states concerned. See, for example, *Welton* v. *Missouri*, 91 U.S. 275, 282. . . .

That some or all the distributing companies are operating under state or municipal franchises cannot affect the question. It is enough to say that the Supply Company is not so operating, and is not made a party to these franchises by merely doing business with the franchise holders.

116. ATTLEBORO STEAM AND ELECTRIC COMPANY[1]

This case involved the constitutional validity of an order of the Public Utilities Commission of Rhode Island putting into effect a schedule of prices applying to the sale of electric current in interstate commerce.

The Narragansett Electric Lighting Company, a Rhode Island corporation, was engaged in manufacturing electric current at its generating plant in Providence and selling it for light, heat, and power. The Attleboro Steam and Electric Company, a Massachusetts corporation, was engaged in supplying electric current for public and private use in the city of Attleboro and vicinity in that state.

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[1] *Public Utilities Commission* v. *Attleboro Steam and Electric Co.*, 273 U.S. 83; 47 Sup. Ct. 294 (1927); P.U.R. 1927B, 348. *Attleboro Steam and Electric Co.* v. *Narragansett Electric Lighting Co.* 295 F. 895 (1924); P.U.R. 1925A, 268; 46 R.I. 496; 129 Atl. 495 (1925); P.U.R. 1925E, 495.

In 1917 these companies entered into a contract by which the Narragansett Electric Lighting Company agreed to sell to the Attleboro Steam and Electric Company, for a period of 20 years at a specified basic rate, all the electricity required by the Attleboro Steam and Electric Company for its own use and for sale in the city of Attleboro and the adjacent territory. The current was to be delivered by the Narrangansett company at the state line between Rhode Island and Massachusetts and carried over connecting transmission lines to the station of the Attleboro Steam and Electric Company in Massachusetts, where it was to be metered. The Narragansett Electric Lighting Company filed with the Public Utilities Commission of Rhode Island a schedule indicating the rate and general terms of the contract and was authorized by that commission to grant the Attleboro Steam and Electric Company the special rate therein shown. Current was thereafter supplied in accordance with the terms of the contract, and the generating plant of the Attleboro Steam and Electric Company was dismantled.

In 1921 the Public Utilities Commission of Rhode Island authorized the Narragansett Electric Lighting Company to put into effect a schedule increasing the special rate to the Attleboro Steam and Electric Company; but its enforcement was enjoined on the ground of the lack of an essential finding by the commission.

In 1924 the Narragansett Electric Lighting Company filed with the commission a new schedule, purporting to cancel the original schedule and establish an increased rate for electric current supplied, in specified minimum quantities, to electric lighting companies for their own use or sale to their customers and delivered either in Rhode Island or at the state line.

The Attleboro Steam and Electric Company was in fact the only customer of the Narragansett Electric Lighting Company to which this new schedule would apply.[1]

The commission found that, owing principally to the increased cost of generating electricity, the Narragansett Electric Lighting Company in rendering service to the Attleboro Steam and Electric Company was suffering an operating loss, without any return on the investment devoted to such service, while the rates to its

[1] No other electric lighting company supplied by the Narragansett Electric Lighting Company required, either then or prospectively, the quantity of current necessary to make the proposed rate applicable.

other customers yielded a fair return; that the contract rate was unreasonable and that a continuance of service to the Attleboro Steam and Electric Company under it would be detrimental to the general public welfare and prevent the Narragansett Electric Lighting Company from performing its full duty to its other customers;[1] and that the proposed rate was reasonable and would yield a fair return, and no more, for the service to the Attleboro Steam and Electric Company. The commission thereupon issued an order putting into effect the rate contained in the new schedule.

From this order the Attleboro Steam and Electric Company appealed to the Supreme Court of Rhode Island which—considering only one of the various objections urged—held, on the authority of *Missouri* v. *Kansas Gas Company*, 265 U.S. 298, that the order of the commission imposed a direct burden on interstate commerce and was invalid because of conflict with the commerce clause of the Constitution. A decree was, therefore, entered reversing the order and directing that the rate investigation be dismissed.[2] The case was then appealed to the U. S. Supreme Court.

Mr. Justice Sanford, in delivering the majority opinion of the Supreme Court, said in part:

It is conceded, rightly, that the sale of electric current by the Narragansett Company to the Attleboro Company is a transaction in interstate commerce, notwithstanding the fact that the current is delivered at the state line. The transmission of electric current from one state to another, like that of gas is interstate commerce and its essential character is not affected by a passing of custody and title at the state boundary not arresting the continuous transmission to the intended destination.[3]

The petitioners contend, however, that the Rhode Island Commission can not effectively exercise its power to regulate the rates for electricity furnished by the Narragansett Company to local consumers, without also regulating the rates for the other service which it furnishes; that if the Narragansett Company continues to furnish electricity to the Attleboro Company at a loss this will tend to increase the burden on the local consumers and impair the ability of the Narragansett Company to give them good service at reasonable prices; and that,

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[1] The evidence showed that in 1923 the Narragansett Electric Lighting Company had 71,554 customers and that about one thirty-fifth of the current which it produced went to the Attleboro Steam and Electric Company.

[2] 46 R.I. 496; 129 Atl. 495 (1925); P.U.R. 1925E, 495.

[3] 273 U.S., 83; 47 Sup. Ct. 294.

therefore, the order of the commission prescribing a reasonable rate for the interstate service to the Attleboro Company should be sustained as being essentially a local regulation, necessary to the protection of matters of local interest, and affecting interstate commerce only indirectly and incidentally. In support of this contention they rely chiefly upon *Pennsylvania Gas Co.* v. *Public Service Commission*, 252 U.S. 23; and the controlling question presented is whether the present case comes within the rule of the Pennsylvania Gas Company case or that of the Kansas Gas Company case upon which the Attleboro Company relies.

. . . . . .

It is clear that the present case is controlled by the Kansas Gas Company case. The order of the Rhode Island Commission is not, as in the Pennsylvania Gas Company case, a regulation of the rates charged to local consumers, having merely an incidental effect upon interstate commerce, but is a regulation of the rates charged by the Narragansett Company for the interstate service to the Attleboro Company which places a direct burden upon interstate commerce. Being the imposition of a direct burden upon interstate commerce from which the state is restrained by the force of the commerce clause, it must necessarily fall, regardless of its purpose. . . . It is immaterial that the Narragansett Company is a Rhode Island corporation subject to regulation by the commission in its local business, or that Rhode Island is the state from which the electric current is transmitted in interstate commerce, and not that in which it is received, as in the Kansas Gas Company case. The forwarding state obviously has no more authority than the receiving state to place a direct burden upon interstate commerce. . . . Nor is it material that the general business of the Narragansett Company appears to be chiefly local, while in the Kansas Gas Company case the company was principally engaged in interstate business. The test of the validity of a state regulation is not the character of the general business of the company but whether the particular business which is regulated is essentially local or national in character; and if the regulation places a direct burden upon its interstate business it is none the less beyond the power of the state because this may be the smaller part of its general business. Furthermore, if Rhode Island could place a direct burden upon the interstate business of the Narragansett Company because this would result in indirect benefit to the customers of the Narragansett Company in Rhode Island, Massachusetts could, by parity of reasoning, reduce the rates on such interstate business in order to benefit the customers of the Attleboro Company in that state who would have, in the aggregate, an interest in the interstate rate correlative to that of the customers of the Narragansett Electric Lighting Company in Rhode Island. Plainly, however, the paramount interest in the interstate business carried on between the two companies is not local to either state but is essentially national in character. The rate is

therefore not subject to regulation by either of the two states in the guise of protection to their respective local interests; but, if such regulation is required, it can only be attained by the exercise of the power vested in Congress. [Cases cited.]

Mr. Justice Brandeis dissented from the majority opinion of the court. He maintained that the business of the Narragansett Electric Lighting Company was intrastate; that the only electricity sold for use without the state was that which was sold under the contract to the Attleboro Steam and Electric Company, and that that company purchased less than 3 per cent of the electricity generated by the Narragansett Electric Lighting Company. In his opinion the problem was essentially local in character. He contended that the order of the Public Utilities Commission of Rhode Island made to prevent unjust discrimination and to prevent unjust increase in the price to Rhode Island consumers was clearly valid as an exercise of police power unless it violated the commerce clause. He cited *Union Dry Goods Company* v. *Georgia Public Utilities Commission*, 248 U.S. 372, to the effect that the power of a state to regulate the selling price of electricity was not affected by the fact that the supply was furnished under a long-time contract. He did not believe that the Attleboro Steam and Electric Company case was one in which it could be said that the silence of Congress constituted a command that the company should remain free from public regulation, and be free to discriminate against the citizens of the state by which it was incorporated and in which it was selling more than 97 per cent of its electrical energy. He maintained that to prevent discrimination in the price of electricity wherever used did not obstruct or directly burden interstate commerce. In comparing this case with other similar cases, Mr. Justice Brandeis said:

> The case at bar seems to me distinguishable from others in which the state regulation has been held precluded by the commerce clause. In *Missouri* v. *Kansas Natural Gas Company*, 265 U.S. 298, this court held void a regulation which fixed the rates at which gas piped from without the state and delivered to distributing companies could be sold to the latter. The Pennsylvania Gas Company case was distinguished in that there "the things done were local. . . . The business of supplying on demand local consumers is a local business, even though the gas be brought from another state and drawn for distribution directly from interstate mains. . . . In such case the local interest is paramount. . . . But here [*Missouri* v. *Kansas Natural Gas Com-*

pany] the sale of gas is in wholesale quantities, not to consumers, but to distributing companies for resale to consumers in numerous cities . . . in different states. . . . The paramount interest is not local but national. . . . " Page 309 (44 Sup. Ct. 546). It was there emphasized that the "business of the Supply Company, with an exception not important here, [was] wholly interstate. . . . "

In my opinion the judgment below should be reversed.

What effect will the foregoing decisions have upon state regulation of public utilities?

Will these decisions affect public utility organization and management? If so, how?

117. WESTERN DISTRIBUTING CO. *v.* PUBLIC SERVICE COMMISSION OF KANSAS[1]

In July, 1929, the Western Distributing Company, a West Virginia corporation, owning and operating a distributing system for natural gas in Eldorado, Kansas, applied to the Public Service Commission of Kansas for an increase in the gas rates to local consumers. The rates in force at the time of this application had been fixed in August, 1920, by the Kansas Court of Industrial Relations, the body then vested with authority to fix public utility rates.[2] It was the contention of the Western Distributing Company that the rates fixed in 1920 were "insufficient to produce a fair return," and the commission was asked to make an investigation and establish such rates as would be just and reasonable.

When the order of 1920 was made, the Western Distributing Company was purchasing gas, delivered at the city gate, from the Cities Service Gas Company, and in 1929 it was still obtaining its supply from the same company. The current price of 40 cents per thousand cubic feet was being paid under a day-to-day verbal contract. This rate was originally established by the Public Utilities Commission of Kansas in March, 1923, but its order in that case was subsequently rescinded for the reason that the U. S. Supreme Court had held that the Cities Service Gas Company as an interstate carrier was not subject to regulation by the state.[3] The 40-cent rate, therefore, was not fixed pursuant to the order or leave of any public authority.

[1] *Western Distributing Co.* v. *Public Service Commission of Kansas.* 285 U.S. 119; 52 Sup. Ct. 283 (1932); P.U.R. 1932B, 236.

[2] See case entitled Charles Wolff Packing Co., p. 23.

[3] See case entitled Kansas Natural Gas Company, p. 727

The Cities Service Gas Company owned and operated a number of interstate pipe lines and sold natural gas to various distributing companies. The corporate relation between the Western Distributing Company and the Cities Service Gas Company at the time this case was appealed to the U. S. Supreme Court, in February, 1932, was as follows: the common stock of the Western Distributing Company was owned by the Gas Service Company, the capital stock of which was in turn owned by the Cities Service Company. The common stock of the Cities Service Gas Company was owned by the Empire Gas & Fuel Company, a controlling interest in the capital stock of which was owned by the Cities Service Company. In 1923, when the 40-cent rate was put into effect, the distributing companies, including the Western Distributing Company, were not affiliated with the pipe line company, but in the following years the Gas Service Company acquired control of the Western Distributing Company and other local distributing companies which were dependent on the pipe line for their supply of natural gas.

The Western Distributing Company submitted to the commission a valuation of the property on which it claimed a fair return should be earned. The showing was that there were no net earnings on this value, but an annual loss of approximately $40,000. The total expenses of operation and maintenance of the property for the year ending November 30, 1930, according to the evidence, amounted to $283,049.07, of which the largest item, $176,260.32, was for gas purchased. In view of these facts, the commission insisted that in order to determine the reasonableness of the requested increase in local retail rates, inquiry must be made as to the propriety of the 40-cent wholesale rate. The company declined to make any showing with respect to the wholesale rate, claiming that the commission was bound to allow it as a proper element of cost in fixing the new local retail rates. The commission dismissed the proceeding.

The company then filed a bill in the U. S. District Court to restrain the further enforcement of the order of August 17, 1920, or the existing rates thereby established, and to enjoin the commission from interfering with the charging of reasonable rates until such time as some "lawful authority, acting in conformity with law," should approve a new schedule; also to prevent the commission from instituting or prosecuting, in any court or tribunal,

proceedings to litigate any of the matters involved in the hearings before the commission. After answer by the appellees the matter was heard before a court of three judges, constituted as required by Sec. 266 of the Judicial Code. That court, stating that if the company desired an increase of rates it was bound to offer satisfactory evidence regarding all costs, dismissed the bill on the ground that the appellant had not exhausted its remedy before the commission. Thereupon the company appealed the case to the U. S. Supreme Court. In its analysis of the issues involved, and in its decision on these issues, the Supreme Court said:

First: The appellant asserts that the rate charged by the pipe line company for gas delivered at the city gate is an interstate rate and not the subject of regulation by any state authority. The soundness of this contention is conceded by the appellees. But the appellant argues that any inquiry by the state commission into the reasonableness of this charge amounts to an indirect attempt at regulation, an effort on the part of the state to circumvent the paramount federal authority over interstate commerce, and hence an attempt to do by indirection what is forbidden by the federal constitution. The appellees disclaim any intent to control rates charged for interstate service, but say that as the commission's function is to set reasonable rates for the intrastate service rendered by appellant in the city of Eldorado, this necessarily requires a determination of the question whether the price paid for the gas distributed is fair and reasonable. To this end the commission insists upon its authority to make such investigation as will satisfy it upon this point.

Having in mind the affiliation of buyer and seller and the unity of control thus engendered, we think the position of the appellees is sound, and that the court below was right in holding that if appellant desired an increase of rates it was bound to offer satisfactory evidence with respect to all the costs which entered into the ascertainment of a reasonable rate. Those in control of the situation have combined the interstate carriage of the commodity with its local distribution in what is in practical effect one organization. There is an absence of arms' length bargaining between the two corporate entities involved, and of all the elements which ordinarily go to fix market value. The opportunity exists for one member of the combination to charge the other an unreasonable rate for the gas furnished and thus to make such unfair charge in part the basis of the retail rate. The state authority whose powers are invoked to fix a reasonable rate is certainly entitled to be informed whether advantage has been taken of the situation to put an unreasonable burden upon the distributing company and the mere fact that the charge is made for an interstate service does not constrain the commission to desist from all inquiry as to its fairness. Any other rule would make possible the gravest injustice, and would tie the hands of

the state authority in such fashion that it could not effectively regulate the intra-state service which unquestionably lies within its jurisdiction.

The principles applicable in a rate investigation, where similar corporate relationship existed, were recently announced in *Smith* v. *Illinois Bell Telephone Company*, 282 U.S. 133, 152–153, and no purpose would be served by repetition or elaboration of what was there said.[1]

Second: It was shown that in proceedings in the state courts of Kansas and in the United States District Court for Kansas, the 40 cent wholesale rate had quite recently been held reasonable with respect to sales at the gates of other cities. The decisions in those cases were put in evidence before the commission and the contention is that these constituted at least a *prima facie* case for the propriety of the same rate at the city gate of Eldorado. The city, though a party to this proceeding, was not such in the cases mentioned. Obviously it is not bound by the findings made with respect to other cities and towns. Nor is the commission so bound, for it is admitted that the reasonableness of the rate as respects Eldorado was not in issue in the earlier cases. How much weight the commission should give to these adjudications we need not here determine. What we do hold is that they do not make a *prima facie* case in support of the charge under attack.

Third: The appellant adverts to the fact that in its bill of complaint are included a number of averments not denied by the appellees. In brief these are that the company does not own or produce any natural gas; that the only source of supply for the city of Eldorado is the main of the Cities Service Gas Company; that no supply at a lower price can be obtained from any other source; that the same rate is being charged to other distributing companies along the lines of the Cities Service Gas Company, and was being charged by another independent pipe line to another city; that an ineffectual effort had been made to find local gas available to Eldorado; and that appellant had attempted to get a lower rate from Cities Service Gas Company but could not do so. It is urged that as these averments were uncontradicted they constitute, when taken with the facts previously stated, a *prima facie* case for the reasonableness of the rate charged. This might well be true were it not for the fact of unity of ownership and control of the pipe line and the distribution system. An averment of negotiation and effort to procure a reduction in the wholesale rate means little in the light of the fact that the negotiators are both acting in the same interest—that of the holding company which controls both. All of these facts so averred in the pleadings would be far more persuasive with respect to the propriety of the rate if the parties were independent of each other and dealing at arms' length. Where, however, they constitute but a single interest and involve the embarkation of the total capital in what is in effect one enterprise, the elements of double profit and of the reasonableness of intercompany charges must necessarily be the subject

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[1] For the court's position with regard to the issue here involved, see case entitled Illinois Bell Telephone Co. (A), p. 207.

of inquiry and scrutiny before the question as to the lawfulness of the retail rate based thereon can be satisfactorily answered.

Fourth: The argument is made that the proofs demanded by the commission will involve an extensive and unnecessary valuation of the pipe line company's property and an analysis of its business, and that this burden should not be thrown upon appellant. Whether this is so we need not now decide. It is enough to say that in view of the relations of the parties and the power implicit therein arbitrarily to fix and maintain costs as respects the distributing company which do not represent the true value of the service rendered, the state authority is entitled to a fair showing of the reasonableness of such costs, although this may involve a presentation of evidence which would not be required in the case of parties dealing at arms' length and in the general and open market, subject to the usual safeguards of bargaining and competition.

The judgment of the court below was right and it is *Affirmed.*

118. ARKANSAS VALLEY NATURAL GAS COMPANY[1]

In December, 1929, the Arkansas Valley Natural Gas Company, a Colorado corporation, filed an application with the Colorado Public Utilities Commission for the construction and operation of a gas plant for the distribution of natural gas within the city of Las Animas, Colorado. It also applied for a certificate of public convenience and necessity, authorizing the exercise of certain franchise rights granted in an ordinance of the city of Las Animas on January 7, 1929, relative to the distribution of natural gas. Las Animas, a city of approximately 4,500 people, located in the Arkansas Valley, was not being served with either natural or artificial gas.

On November 27, 1929, the applicant entered into a contract with the Colorado Interstate Gas Company, a Delaware corporation, whereby the latter company agreed to sell and deliver, and the Arkansas Valley Natural Gas Company agreed to purchase, all the natural gas requisite for the supply of the consumers in the city of Las Animas, subject to certain conditions set forth in the contract. The Colorado Interstate Gas Company obtained its supply of natural gas from the Amarillo field in Texas and transported it to Colorado, where it was selling to certain utilities which served a number of communities with natural gas. The contract provided that the Arkansas Valley Natural Gas Company

[1] Prepared from official copy of decision of Colorado Public Utilities Commission, No. 2661, Dec. 16, 1929; also P.U.R. 1930A, 454, and 1931A, 415.

should pay to the Colorado Interstate Gas Company 40 cents per thousand cubic feet for gas purchased during the first two years, and for the remaining period of the contract, 45 cents per thousand cubic feet.[1] The 45-cent rate did not apply to natural gas purchased for resale under commercial or industrial contracts; the price paid for this gas was to be 85 per cent of the price chargeable by the Arkansas Valley Natural Gas Company to such commercial or industrial consumers.

The only reference to rates in the ordinance granted by the city of Las Animas to the Arkansas Valley Natural Gas Company was a provision to the effect that the applicant "agree to supply and distribute natural gas to the city and its inhabitants at fair and reasonable rates, which rates shall be subject to regulation as provided by law." As already indicated, the source of supply of the natural gas was by interstate transmission through the pipes of the Colorado Interstate Gas Company. The basic rate for gas which was to be sold to domestic consumers was 40 cents per thousand cubic feet. The charges for gas for commercial and industrial consumers were to be adjusted under special contracts approved by the Colorado Interstate Gas Company.

The commission maintained that since it would have "no jurisdiction whatever, because of their interstate character, over the rates charged by the Colorado Interstate Gas Company to the Arkansas Valley Natural Gas Company," it was unwilling to grant the certificate of convenience and necessity requested without imposing the following conditions. First, if the company at any time could purchase a supply of natural gas at a lower price than provided in its contract with the Colorado Interstate Gas Company, it would be required to do so and give consumers the benefit of the lower prices. Secondly, the company was required "to keep itself informed as to the availability of natural gas from other sources" from which it might obtain natural gas at "materially lower" prices.

In 1931 the commission, with its chairman dissenting, reversed its decision in this case.[2] In the later case the majority opinion held that it was not necessary to the public interest that such a condition be imposed as it had insisted upon in its first decision.

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[1] The contract was to expire on June 23, 1948.

[2] P.U.R. 1930A, 454; P.U.R. 1931A, 415. The commission in the meantime had given further consideration to the issue. See P.U.R. 1930D, 21.

The commission had come to the conclusion that it could protect the public in a rate case by refusing to include in "the rate base such expense" as was "shown to have been incurred improvidently or in bad faith." The chairman of the commission had little confidence in that body's ability to check up expenditures incurred improvidently or in bad faith, and felt the only protection to the public was in such a condition as the commission had imposed in its first decision. He cited *Barrett* v. *Kansas Natural Gas*,[1] and the Attleboro case[2] to show the inability of the Colorado commission to control the rates for gas purchased under such a contract as the one involved in this case except by imposing conditions in the certificate of convenience and necessity.[3]

In the light of this and foregoing cases, what possible (1) cooperation and (2) conflicts do you see between state and Federal regulation of the natural gas business?

119. ELECTRIC BOND & SHARE COMPANY (B)[4]

On December 1, 1928, the Federal Trade Commission filed in a federal district court in New York its application for an order requiring certain officers and employees of the Electric Bond & Share Company to produce specific records and answer questions incident to an investigation being conducted by the commission. This investigation was pursuant to a Senate Resolution directing the commission to investigate and report upon the financial and business structure of the electric power industry and on the policies and practices of holding companies and their affiliated companies.[5]

The issues raised by counsel for the company were whether the Electric Bond & Share Company was engaged in interstate commerce, and whether the attempt to subpoena the records was a

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[1] See p. 727.

[2] See p. 730.

[3] A Federal statute regulating the transportation and sale of natural gas in interstate commerce by the Federal Power Commission became effective July, 11 1938. The act confined Federal regulation to the transportation of natural gas in interstate commerce, and to the sale in interstate commerce of natural gas for resale, for ultimate public consumption, for domestic, commercial, industrial, or any other use, and to companies engaged in such transportation or sale. The act specified that it should not apply to any other transportation or sale of natural gas or to the local distribution of natural gas or to facilities used for such distribution or production or "gathering" of natural gas.

[4] *Federal Trade Commission* v. *Smith*, 1 F. Supp. 247 (1932).

[5] *Senate Resolution* 83, 70 Cong., 1st Sess., February, 1928.

violation of the constitutional prohibition of unreasonable search and seizure.

The case was argued before Judge Knox in the Federal district court for the southern district of New York in February, 1929. While the court upheld the objections of the company and overruled the questions asked the officers of the company by the commission, it assumed that the company was engaged in interstate commerce and held that if either party desired to contest the propriety of this assumption, the matter would have to go to a master; also that if the Federal Trade Commission wished an adjudication to the effect that the intrastate business of the Electric Bond & Share Company was so intimately associated and connected with interstate commerce that all the company's activities were subject to the jurisdiction of the commission, a reference would be required to establish the fact.[1]

Both parties, desiring to take advantage of the opportunity thus afforded by the court, agreed to the appointment of a master, who died before rendering a report. Both parties subsequently entered into a stipulation of facts which it was agreed should stand in the place of evidence that might have been adduced by a master. In accordance with this arrangement the court handed down a second decision in the controversy in August, 1932, in which it considered a contract between the General Electric Company and the Electric Bond & Share Company regarding the purchase of electrical apparatus for its subsidiary or associated companies. The court held that if Electric Bond & Share Company could be regarded as controlling purchases made under the contract with General Electric Company a conclusion that it engaged in interstate commerce was "irresistible." The court made the following statements with reference to the contract and to the intercorporate transactions between Electric Bond & Share Company and its subsidiary or affiliated companies.

> The foregoing recital engenders an insistent thought that, through the interlocking relationship in the several corporations concerned, the Electric Bond & Share Company had much to do with the determination by its denominated subsidiaries as to when and where they should purchase apparatus, materials, and supplies which were required in carrying on their respective businesses; and, also, that, in what was done, the parent company acted in other than a purely brokerage

[1] 34 F. (2d) 323 (1929).

capacity. The phraseology of the contract with General Electric Company gives apparent recognition to the compulsory character of such influence as Electric Bond & Share Company chose to exercise over the affairs of the subsidiaries.

Under the guise of supervisory and advisory services, the parent concern was afforded an opportunity actively to promote purchases from General Electric Company. That it did so in great volume is obvious.

Not only did it charge a fee for advisory and supervisory services performed on behalf of the subsidiaries, but, through the medium of its stock ownership, it became a beneficiary of such profits as accrued to the subsidiaries as a result of the purchases.

. . . . . .

And, indeed, if respondent be regarded as the broker or agent, and if, in connection with such engagements, one of its functions was to arrange for the interstate shipment of supplies to the operating companies, it would thereby also be engaged in interstate commerce.

. . . . . .

Lest it be forgotten, it is well to remind oneself that approximately one-fourth of the operating subsidiaries are partly engaged in interstate commerce in the sale or distribution of electricity or gas. That the interstate transmission of electrical power is interstate commerce is settled beyond doubt.

. . . . . .

It follows that the commerce power, in the exercise of which Congress enacted the Federal Trade Commission Act, is undoubtedly broad enough to comprehend the acts of respondent which have been shown to affect interstate commerce, and, in the light of the foregoing decisions, it would seem clear that respondent is "engaged in commerce" within the meaning of that act.

The manner in which the affairs of the operating companies having to do with interstate commerce are affected by Electric Bond & Share Company as well as its own activities in the purchase and shipment of materials and equipment in interstate commerce, are quite sufficient to bring the respondent within the investigatory authority of the Federal Trade Commission.

. . . . . .

But, say respondents, since the jurisdiction of the commission is limited to interstate commerce, the intrastate business and affairs of Electric Bond & Share Company are outside of the commission's authority, even though concession should be made that the company, as to some matters, engaged in interstate trade. If intrastate trade could definitely be separated from that which is interstate, I should agree.

For example, if the company charged its subsidiaries a specified fee for services rendered in connection with the purchase of apparatus and materials, it might well be that the investigation of the commission should be limited to inquiries relevant to the reasonableness of such charges as were made upon that account.

Such, however, is not the method of operation. The parent company makes a blanket charge for substantially all of its services; and this is based upon certain percentages of the gross earnings of the subsidiaries.

The reasonableness of this charge can not be ascertained merely by inquiring into the cost of rendering the purchasing services. The cost of rendering other services for which a fee is charged must also be determined, because they are inextricably involved with the cost of work having to do with interstate activity.

The commission's jurisdiction must extend, therefore, to all services for which a fee covering an interstate activity is charged.

The court entered an order directing the Electric Bond & Share Company to answer all questions relating to: (1) the cost to it of such services as it rendered the operating companies in return for the payment of a fee based upon their gross earnings; (2) the cost of rendering purchasing services which resulted in interstate movements of materials, apparatus, and supplies to or from any of its subsidiaries, for which a separate fee was charged; and (3) the cost of rendering any services to subsidiary companies engaged in the interstate transmission of electricity or gas, for which a separate fee was charged.

In what manner may the foregoing decisions affect (1) intercorporate relationships of public utilities; (2) public utility accounting; (3) regulation of public utilities?

See case entitled *American Telephone & Telegraph Company* v. *United States*, p. 694.

120. ELECTRIC BOND & SHARE COMPANY (c)

In November, 1935, the Securities and Exchange Commission brought a suit in equity in the District Court of the United States for the Southern District of New York against the Electric Bond & Share Company and certain of its subsidiaries.[1] This suit, based upon the Public Utility Holding Company Act of 1935, sought to enjoin the public utility companies involved from violat-

[1] *Securities and Exchange Commission* v. *Electric Bond & Share Company et al.*, 18 F. Supp. 131.

ing any provision of Sec. 4(a) of the act unless they registered as required in Sec. 5. The provisions of the sections in question were as follows:[1]

[Sec. 4] (a) After December 1, 1935, unless a holding company is registered under Section 5, it shall be unlawful for such holding company, directly or indirectly—

(1) to sell, transport, transmit, or distribute, or own or operate any utility assets for the transportation, transmission, or distribution of, natural or manufactured gas or electric energy in interstate commerce;
(2) by use of the mails or any means or instrumentality of interstate commerce, to negotiate, enter into, or take any step in the performance of, any service, sales, or construction contract undertaking to perform services or construction work for, or sell goods to, any public utility company or holding company;
(3) to distribute or make any public offering for sale or exchange of any security of such holding company, any subsidiary company or affiliate of such holding company, any public utility company, or any holding company, by use of the mails or any means or instrumentality of interstate commerce, or to sell any such security having reason to believe that such security, by use of the mails or any means or instrumentality of interstate commerce, will be distributed or made the subject of a public offering;
(4) by use of the mails or any means or instrumentality of interstate commerce, to acquire or negotiate for the acquisition of any security or utility assets of any subsidiary company or affiliate of such holding company, any public utility company, or any holding company;
(5) to engage in any business in interstate commerce; or
(6) to own, control, or hold with power to vote, any security of any subsidiary company thereof that does any of the acts enumerated in paragraphs (1) to (5), inclusive, of this subsection.[2]

. . . . . .

[Sec. 5] (a) On or at any time after October 1, 1935, any holding company or any person purposing to become a holding company may register by filing with the Commission a notification of registration, in such form as the Commission may by rules and regulations prescribe as

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[1] 49 Stat. 838, 15 U.S.C.A. Sec. 79 *et seq.* This act was approved Aug. 26, 1935.
[2] Section 4(b) provided that any public utility holding company having outstanding securities distributed subsequent to January 1, 1925, in interstate commerce should be required to register under Sec. 5 of the act.

necessary or appropriate in the public interest or for the protection of investors or consumers. A person shall be deemed to be registered upon receipt by the Commission of such notification of registration.

(b) It shall be the duty of every registered holding company to file with the Commission, within such reasonable time after registration as the Commission shall fix by rules and regulations or order, a registration statement in such form as the Commission shall by rules and regulations or order prescribe as necessary or appropriate in the public interest or for the protection of investors or consumers. Such registration statement shall include—

(1) such copies of the charter or articles of incorporation, partnership, or agreement, with all amendments thereto, and the bylaws, trust indentures, mortgages, underwriting arrangements, voting-trust agreements, and similar documents, by whatever name known, of or relating to the registrant or any of its associate companies as the Commission may by rules and regulations or order prescribe as necessary or appropriate in the public interest or for the protection of investors or consumers;

(2) such information in such form and in such detail relating to, and copies of such documents of or relating to, the registrant and its associate companies as the Commission may by rules and regulations or order prescribe as necessary or appropriate in the public interest or for the protection of investors or consumers in respect of—

(A) the organization and financial structure of such companies and the nature of their business;

(B) the terms, position, rights, and privileges of the different classes of their securities outstanding;

(C) the terms and underwriting arrangements under which their securities, during not more than the five preceding years, have been offered to the public or otherwise disposed of and the relations of underwriters to, and their interest in, such companies;

(D) the directors and officers of such companies, their remuneration, their interest in the securities of, their material contracts with, and their borrowings from, any of such companies;

(E) bonus and profit-sharing arrangements;

(F) material contracts, not made in the ordinary course of business, and service, sales, and construction contracts;

(G) options in respect of securities;

(H) balance sheets for not more than the five preceding fiscal years, certified, if required by the rules and regulations of the Commission, by an independent public accountant;

(I) profit and loss statements for not more than the five preceding fiscal years, certified, if required by the rules and

regulations of the Commission, by an independent public accountant;

(3) such further information or documents regarding the registrant or its associate companies or the relations between them as the Commission may by rules and regulations or order prescribe as necessary or appropriate in the public interest or for the protection of investors or consumers.

(c) The commission by such rules and regulation or order as it deems necessary or appropriate in the public interest or for the protection of investors or consumers, may permit a registrant to file a preliminary registration statement without complying with the provisions of subsection (b) [of Sec. 5]; but every registrant shall file a complete registration statement with the Commission within such reasonable period of time as the Commission shall fix by rules and regulations or order, but not later than one year after the date of registration.

(d) Whenever the Commission, upon application, finds that a registered holding company has ceased to be a holding company, it shall so declare by order, and upon the taking effect of such order the registration of such company shall, upon such terms and conditions as the Commission finds and in such order prescribes as necessary for the protection of investors, cease to be in effect. The denial of any such application by the Commission shall be by order.

The Electric Bond & Share Company and its subsidiaries admitted in their answer to the charges brought by the commission that they came within the terms of the sections in question and that they were doing the acts thereby prohibited to an unregistered company. They stated that they had not registered and did not intend to do so voluntarily, because they denied the constitutionality of the act as a whole, and of each section of the act. The companies filed a cross-bill in which they sought an injunction against enforcement of the act on grounds of unconstitutionality, and also asked for a declaratory judgment as to the constitutionality of the act.

The District Court issued a decree in favor of the Securities and Exchange Commission, in which it was provided that until the utilities in question should cease to be holding companies as defined in the act, or should register under the act, they should not carry on any of the activities in interstate commerce or through the mails which were forbidden to nonregistered holding companies. The cross-bill filed by the companies was dismissed.

It was further provided that the decree and the dismissal of the cross-bill should be without prejudice "to any rights or remedies

in law or in equity" which the utilities might have after registering as required in the act. The companies were left free to challenge the validity of any of the provisions of the act other than Secs. 4(a) and 5.[1]

The decision of the District Court was appealed to the United States Circuit Court of Appeals for the Second Circuit. In a decision handed down in November, 1937, the latter court affirmed the decree issued by the District Court.[2] The case then went to the United States Supreme Court, where the decision of the trial court was again upheld.[3]

In seeking a review by the Supreme Court of the District Court's decree, the utility companies contended that the Holding Company Act was invalid as a whole; that the provisions of sections 4(a) and 5 were not separable from the remainder of the act; that the provisions of these two sections, if considered separately, did not constitute a valid regulation of interstate commerce and the mails; and that the cross-bill filed by the companies presented a controversy upon the merits of which the parties concerned were entitled to the judgment of the court.[4]

In its decision the Supreme Court first considered the question as to whether the Electric Bond & Share Company and its subsidiaries were engaged in activities making them subject to congressional regulation. In the findings of fact made by the trial court, the Electric Bond & Share Company was declared to be a "top holding company in a holding company system." The remaining parties to the suit were all subsidiaries of the holding company in question. It was stated in these findings that the electric operations of the Electric Bond & Share system were conducted in 32 states. Some of the subsidiaries operated in a single state, and some in two or more states, transmitting and selling electric energy in interstate commerce.

According to Sec. 13 of the Public Utility Holding Company Act, a registered holding company or its subsidiary was prohibited from entering into or taking any step "in the performance of any service, sales, or construction contract by which such company

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[1] See footnote 1, p. 744.

[2] *Electric Bond & Share Company et al.* v. *Securities and Exchange Commission*, 92F. (2d) 580.

[3] 58 S. Ct. 678.

[4] Brief for Petitioners, Supreme Court of the United States, October Term, 1937, No. 636.

undertakes to perform services or construction work for, or sell goods to, any associate company thereof which is a public utility or mutual service company," except in accordance with such rules and regulations as the Securities and Exchange Commission might set up. The commission was to make rules to the effect that all such contracts were to be performed at cost, except in the case of foreign subsidiaries and in certain unusual circumstances.

Under service contracts the Electric Bond & Share Company had been rendering to its holding companies and operating subsidiaries a wide variety of services covering practically all phases of management of these subsidiaries. Shortly before the institution of the suit in the District Court in 1935 by the Securities and Exchange Commission the parent company ceased rendering these services. Instead, a new subsidiary, Ebasco Services, Incorporated, was formed to perform these functions for subsidiary operating companies, the servicing of the holding companies being discontinued. After the organization of Ebasco Services, Incorporated, service contracts which had existed between Electric Bond & Share and its client holding companies were terminated, and these companies were separately officered and staffed with no interlocking directors, officers, or employees. In addition, Phoenix Engineering Corporation, a subsidiary of Ebasco, was organized to perform, at the request of subsidiaries, construction work for members of the Electric Bond & Share system, other than the American Gas & Electric Company. That subholding company organized its own service company which performed services for subsidiary operating companies.

From an analysis of the operations of the Electric Bond & Share system, and in view of the concession by the companies that the carrying out of the service contracts involved continuous and extensive use of the mails and instrumentalities of interstate commerce, the Supreme Court stated that it could "perceive no ground for a conclusion that the defendant companies" were not "engaged in activities within the reach of the congressional power."

The utility companies, in contesting the validity of the act as a whole, contended that Secs. 4(a) and 5 could not be separated from the remainder of the act and in this manner be separately sustained and enforced. They further declared that the sections in question were purely auxiliary to the other parts of the act and that the purpose of the commission's suit was to compel the com-

panies to submit "to an integrated system of control." Thus, in the opinion of the companies, the sole question to be decided was the constitutionality of the act as a whole. Furthermore, it was contended that this question must be decided before the utilities could be compelled to register.

As an answer to the utilities' argument, the commission stated that while the other provisions of the act were applicable only to registered companies and their subsidiaries, Secs. 4(a) and 5 were "drafted so as to be operative independently" and that the registration provisions themselves constituted "an effective instrument of informatory regulation." Thus, if certain sections of the act were declared to be invalid, it was contended that there was no inherent reason why the remaining provisions could not be enforced.

In analyzing this phase of the argument, the Supreme Court stated that the question at issue was the intent of Congress, rather than its power. In the opinion of the court, Congress had defined this intent in Sec. 32 of the act, which provided: "If any provision of this title or the application of such provisions to any person or circumstances shall be held invalid, the remainder of the title and the application of such provision to persons or circumstances other than those as to which it is held invalid shall not be affected thereby." The Supreme Court held that this provision reversed any presumption of inseparability and established the opposite presumption of divisibility.

Continuing its analysis of the arguments concerning the separability of various sections of the act, the Supreme Court stated:

> . . . It is evident that the provisions of sections 4(a) and 5 are not so interwoven with the other provisions of the act that there is any inherent or practical difficulty in the separation and independent enforcement of the former while reserving all questions as to the validity of the latter. The administrative construction of the statute was formulated in that view. Rule 4 of the Commission provided that any person, in filing any statement under the act, might include an express reservation of constitutional and legal rights. It was on the basis of that construction that this suit was prosecuted and was limited to the enforcement of sections 4(a) and 5. All rights and remedies as to all other provisions of the act are, as we have seen, expressly reserved to the defendants by the decree. Nor can it be said that this reservation is illusory. If this decree is affirmed, it will constitute a specific adjudication that registration will be without prejudice to future chal-

lenge of the validity of any provision of the act, or requirement of the Commission, outside of sections 4(a) and 5. It is idle to contend that registration pursuant to the decree will subject the defendants to the act as an integrated whole or bring into operation against them what the decree expressly excludes.

Thus, it was the conclusion of the court that the construction of the act, including as it did a variety of provisions for regulating holding companies, and the legislative history of the act, when viewed in the light of the intent of Congress, as expressed in Sec. 32, warranted the conclusion that the various sections of the act were separable:

. . . The fact that registration underlies the application of subsequent requirements of the statute does not prevent the provisions of sections 4(a) and 5 from having a purpose and a value of their own. Section 5 not only provides in paragraph (a) for the filing of a "notification of registration," but also requires by paragraph (b) every registered holding company to submit, within a reasonable time after registration, a "registration statement" containing a variety of detailed information as to corporate structure and activities. Thus section 5(b) is itself a "control" provision, which is immediately operative. The duty to supply the described information is separately and definitely prescribed.

It cannot be denied that a requirement of this sort is a regulation which Congress could have regarded as important in itself and could have made the subject of a separate statute. The fact that it is found in a statute imposing other regulations, or that it precedes the application of the others, does not deprive it of its essential character and its capacity to stand alone. Regulation requiring the submission of information is a familiar category. Information bearing upon activities which are within the range of congressional power may be sought not only by congressional investigation as an aid to appropriate legislation, but through the continuous supervision of an administrative body [cases cited] . . . Congress may use this method in connection with a comprehensive scheme of regulation, as, for example, in the case of the Interstate Commerce Commission and the Federal Communications Commission; or Congress may employ this informatory process independently. . . .

Under Sec. 18(f) of the Public Utility Holding Company Act of 1935, the Securities and Exchange Commission was given the power to bring suit to enforce compliance with the act or any rule, regulation or order under the act. It was further provided that upon a proper showing a permanent or temporary injunction or decree should be granted. Under this section the commission had brought the action under consideration solely for the purpose

of enforcing Secs. 4(a) and 5 of the act. Because of the separability, as determined by the court, of the various sections of the act, the latter body could find no reason why the two sections in question could not be separately enforced if they were found to be valid. Furthermore, "in view of this conclusion as to separability, it was held that it was unnecessary to go through the statute in order to determine whether other provisions" were "valid or invalid. . . . "

The next question to which the court turned its attention was that of the validity of Secs. 4(a) and 5, as applied to the Electric Bond & Share Company and its subsidiaries. According to the findings of fact by the District Court, there seemed to be no question as to whether the utility companies were engaged in interstate commerce. The mere fact that such interstate transactions were conducted through subsidiaries did not remove them from the reach of Federal power. In the opinion of the court, it was "the substance of what they do, and not the form in which they clothe their transactions" which determined whether the companies were subject to the control of Congress.

Turning to a consideration of the character of the information required by Sec. 5, the court studied the statements in the act concerning the relations of public utility holding companies and their subsidiaries to the national public interest, and congressional policy, as described in the act, in meeting and eliminating certain evils which were inimical to the national public interest. It was the conclusion of the court that Congress had set forth in the act what it considered to be a factual situation and the need for Federal supervision. As to the right of Congress to require certain information from utility companies engaged in interstate commerce, the court stated:

> . . . we have no reason to doubt that from these defendants, with their highly important relation to interstate commerce and the national economy, Congress was entitled to demand the fullest information as to organization, financial structure and all the activities which could have any bearing upon the exercise of congressional authority. The regulation found in section 5(b) goes no further than to require this information and we are of the opinion that its validity must be sustained.

In regard to the penalties provided in Sec. 4(a) for those violating Sec. 5, the court was of the opinion that no constitutional provisions had been transgressed:

. . . When Congress lays down a valid rule to govern those engaged in transactions in interstate commerce, Congress may deny to those who violate the rule the right to engage in such transactions. [cases cited] . . . And while Congress may not exercise its control over the mails to enforce a requirement which lies outside its constitutional province, when Congress lays down a valid regulation pertinent to the use of the mails, it may withdraw the privilege of that use from those who disobey [cases cited]. . . .

Finally, attention was given to the cross-bill filed by the Electric Bond & Share Company requesting a declaratory judgment as to the constitutionality of the act as a whole. Here again the decision of the District Court was upheld, on the grounds that the company was not entitled to an advisory decree upon a hypothetical state of facts:

. . . By the cross-bill, defendants seek a judgment that each and every provision of the act is unconstitutional. It presents a variety of hypothetical controversies which may never become real. We are invited to enter into a speculative inquiry for the purpose of condemning statutory provisions the effect of which in concrete situations, not yet developed, cannot now be definitely perceived. We must decline that invitation. . . .

How do you appraise the provisions of Secs. 4(a) and 5 of the Public Utility Holding Company Act as regulatory measures, assuming that they might form a separate and distinct statute?

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