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CONTROL OF ELECTRIC RATES IN NORTH CAROLINA*

FRANK W. HANFT**

WHY RATE CONTROL?

The strenuous effort the Roosevelt administration is making to raise the price level has put state utilities commissions in a puzzling position. One of the chief reasons why the public wants such state commissions is that they are expected to keep utility prices down. The people have by no means abandoned this attitude toward the commissions. The inconsistency between the New Deal policy of price boosting and a state policy of dragging down one set of prices which has remained comparatively high, namely, prices of utility services, is commonly ignored. Cross purposes in government are likely to produce futility. When the New Deal has passed the experimental stage, and the price level has reached some degree of stability, either on a high plane under the influence of the national program, or on a lower plane in spite of that program, then the task of adjusting utility rates to the price level can be undertaken with less danger of neutralizing one policy with another.

Apart from the present emergency and the necessity for coordinating remedies, it is usually admitted that it is necessary for the state to police the bargain between electric companies and their customers and to fix the price. What is the reason? The majority of the people have an answer ready—when a state commission lowers rates it saves the customers money. However, those who receive the rates are deprived of the money, and the people as a whole have neither gained nor lost. The shift from the pockets of the rate receivers to those of the rate payers may be a good or bad thing from the standpoint of the welfare of the state, depending somewhat on

*The breadth of the subject prevents a minute treatment of details. This article reveals the broad outlines of electric rate control, with North Carolina materials placed against this background. It is hoped that other articles dealing more intensively with particular aspects of rate control may supplement this panoramic treatment.

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the uses to which the money is put by the electricity consumer as compared with the electricity producer. At all events, rate increases and decreases do not directly swell nor decrease wealth; they merely distribute purchasing power among the people differently. Why should the state lend a hand to the utility consumer at the expense of the producer? The approved answer is that an economic device as dangerous as electricity itself if uncontrolled, and as beneficent if controlled, has been introduced into the electrical industry. That device is monopoly. Commonly each electric company has, and should have, a monopoly in the business of furnishing current in its own territory. The reasons for this monopoly are many. Large fixed capital, slow capital turnover, economies of quantity production, and economies resulting from eliminating duplication may be mentioned. Besides, it would be a great nuisance if three or four electric companies each had a set of poles and wires running along each street in a city so that the companies could compete with one another. Each electric concern has a monopoly, then, of a service which has come to be regarded as essential to modern life. In the absence of rate control the companies would tend to charge prices just short of those which would drive customers to the use of substitutes for electricity in such numbers as to diminish the net return to the companies. It is believed that the electricity producers would thus be enabled, by reason of the absence of competitors offering a better bargain, to seize for themselves not only most of the benefits arising from the development of electricity but also most of the economies resulting from the monopoly fostered by the state in the industry. It is to protect the consumers from the dangers of monopoly, as well as to insure them a share in its benefits, that the state controls electricity prices.

The North Carolina Machinery

In common with most of the states of the union, North Carolina has established as her principal agency for the regulation of utilities, including electric companies, a special state body. This organ of the

1 Cabot, Rate Making and Rate Regulation (1932) 57 A. B. A. Rep. 793, 794.
3 With the exception of Delaware, every state, as well as the District of Columbia, Alaska, Hawaii, the Philippines and Porto Rico, has a public utilities commission. Of the commissions within the United States all but seven have
government has suffered many changes in its name, size, shape, and functions. It began in 1891 as a “Railroad Commission” of three members elected for terms of six years by the General Assembly, at salaries of $2,000 per year. The commission was given powers of control over railroads, other common carriers, steamboats, canals, and express and telegraph concerns. It was also made a board of appraisers and assessors for the taxation of railroads. In 1899, in order to expel the commissioners and put in new ones of the current legislature’s choosing, the General Assembly abolished the Railroad Commission and created in its room the Corporation Commission, which was the same old commission with a new name and new incumbents. These new incumbents were selected by the General Assembly, but it was provided that in future the commissioners were to be elected by the voters. The Corporation Commission existed intact until 1933. During the period between 1891 and 1933 additional utilities were subjected to regulation by the commission. Electrical utilities were brought under its control in 1913.

Besides control of public utilities the commission has from time to time possessed an odd mixture of functions. It has had authority over banks, loan and trust companies, and building and loan associations; jurisdiction over electric light, heat and power companies. A Survey of State Laws on Public Utility Commission Regulation (1928) 5, 7. In 1931, Oregon substituted a single commissioner for her commission. Oregon Laws 1931, c. 103.

P. L. 1891, c. 320. P. L. 1895, c. 133 reduced the salaries to $1500; P. L. 1899, c. 164, §31 restored them to $2000; P. L. 1901, c. 7, §3 added $500 for duties as tax commissioners; P. L. 1907, c. 994, §2 raised the salaries as corporation commissioners from $2,000 to $3,000; P. L. 1921, c. 25, §1, raised them to $4,500, at which figure they continued for about a decade. The salaries of members of the new North Carolina Utilities Commission will be dealt with hereinafter.

P. L. 1891, c. 320.

P. L. 1891, c. 323, §§44-52.


P. L. 1899, c. 164, §1.

Telephones, P. L. 1893, c. 512; street railways, P. L. 1897, c. 206, §2; flume companies, P. L. 1907, c. 39, §4; electric light, power, water, and gas, P. L. 1913, c. 127; water power, hydro-electric power, and water, P. L. 1913, c. 133, §1; any public-service or quasi-public service corporation other than steam railroads in any city, P. L. 1917, c. 136, sub-c. 3, §§1-3; sewers, P. L. 1917, c. 194; motor vehicle carriers, P. L. 1925, c. 50, amended and re-enacted P. L. 1927, c. 136; steam and pipe lines, P. L. 1933, c. 307, §1e. P. L. Ex. Sess. 1921, c. 86 transferred any authority the Corporation Commission may have had over rates of ferries and toll bridges connecting any state highway to the highway commission. For a review of the present copious statutory enumerations of utilities over which the commission has control see (1933) 11 N. C. L. Rev. 245.

See supra note 9.
ciations,\textsuperscript{11} and over industrial banks;\textsuperscript{12} it has been constituted a board of state tax commissioners;\textsuperscript{13} its chairman has been made a member of the municipal board of control;\textsuperscript{14} and of the state board of assessment;\textsuperscript{15} and one of its members has been given the duties of securities commissioner,\textsuperscript{16} with appellate jurisdiction in the Corporation Commission.\textsuperscript{17} Fortunately, most of the items of this incongruous collection of functions have been transferred to other agencies. Such a diversity of duties weakens the possibility that the state will secure or develop men expert in the difficult and highly specialized work of utility control.

The Corporation Commission was abolished in 1933 and its place was filled by a single Utilities Commissioner, who succeeded to the powers and duties of the commission and its individual members.\textsuperscript{18} The commissioner is to be elected for terms of four years\textsuperscript{19} at an annual salary of $4,500.\textsuperscript{20} Two Associate Commissioners are to be appointed for four year terms,\textsuperscript{21} but they act only when called in to sit with the commissioner in described cases of an important nature, and are then paid on a \textit{per diem} basis.\textsuperscript{22} Hereafter in this article the term, "Utilities Commission," will be used to designate the commissioner acting with or without the associate commissioners as the case may be. The Utilities Commission has powers of control over public utilities,\textsuperscript{23} and the duties of Securities Commissioner.\textsuperscript{24}

\textsuperscript{11} P. L. 1899, c. 164, §§1, 2.
\textsuperscript{12} P. L. 1919, c. 225, §9.
\textsuperscript{13} P. L. 1901, c. 7.
\textsuperscript{14} P. L. 1917, c. 136, sub-c. 2, §4.
\textsuperscript{15} P. L. 1933, c. 204, §200.
\textsuperscript{16} P. L. 1925, c. 190; P. L. 1927, c. 149.
\textsuperscript{17} P. L. 1925, c. 190, §18; P. L. 1927, c. 149, §18.
\textsuperscript{18} P. L. 1933, c. 134. For a discussion of the new act and its adjustment to existing statutes see (1933) 11 N. C. L. Rev. 245.
\textsuperscript{19} P. L. 1933, c. 134, §4. The terms of utility commissioners elsewhere range from two to ten years. A six year term is most common. Most commissions have three members. Some have five and some seven. Usually they are appointed by the Governor. In twenty-one jurisdictions they are elected. Salaries vary from $2,000 to $15,000. The average is $4,000. BONBRIGHT & Co., \textit{op. cit. supra} note 3, at 15.
\textsuperscript{21} Appointments are to be made by the Governor with the advice and consent of the Senate. P. L. 1933, c. 134, §11. Two temporary Associate Commissioners are provided for in the act, one to hold office until January 1, 1935, the other until January 1, 1937. \textit{Id.} §11. The Utilities Commissioner and his two associates constitute the Utilities Commission. \textit{Id.} §9.
\textsuperscript{22} \textit{Id.} §§10, 11.
\textsuperscript{23} See (1933) 11 N. C. L. Rev. 245.
\textsuperscript{24} P. L. 1933, c. 134, §8.
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Either directly or by virtue of its position as heir to the powers of the Corporation Commission, the Utilities Commission has frequently repeated general statutory authority over the rates of electrical utilities.\textsuperscript{28} The rates established by the commission are to be

\textit{\textsuperscript{28} N. C. Code Ann. (Michie, 1931), §1035, gives the Corporation Commission \textquoteright such general control and supervision as is necessary to carry into effect the provisions of this chapter and the laws regulating the companies, corporations, co-partnerships and individuals specified herein, over—}

\begin{quote}
\textit{\textsuperscript{3. Electricity, water, and gas companies and corporations, other than such as are municipally owned or conducted, and all other persons, companies and corporations, other than municipal corporations now or hereafter engaged in furnishing electricity, electric light, current or power and gas.}
\end{quote}

\begin{quote}
\textit{\textsuperscript{4. All water power, hydro-electric power and water companies,} etc.}
\end{quote}

\begin{quote}
\textit{\textsuperscript{3. Persons, companies and corporations, other than municipal corporations, engaged in furnishing electricity, electric light current, power or gas.}}
\end{quote}

\begin{quote}
\textit{\textsuperscript{4. All water power and hydroelectric companies or corporations,} etc.}
\end{quote}

\begin{quote}
\textit{\textsuperscript{3. By electric light, power, water, and gas companies, and corporations other than such as are municipally owned or conducted, and all other companies, corporations, or individuals engaged in furnishing electricity, electric light current, power, or in transmitting or selling the same or producing the same from the water courses of this state;}}
\end{quote}

\begin{quote}
\textit{\textsuperscript{4. By all water power and hydroelectric companies or corporations,} etc.}
\end{quote}

\begin{quote}
\textit{\textsuperscript{3. Producing, generating, transmitting, delivering or furnishing gas, elec-}
“reasonable and just.”26 The process whereby “reasonable and just” rates are to be determined will be dealt with hereinafter.

Although the Utilities Commission is the principal agency for regulation of electricity rates in North Carolina, the municipalities still can, if they will, play an important part. Since the 1905 Revisal, cities and towns have had authority, “to grant upon reasonable terms franchises for public utilities.”27 Rates agreed upon between the city or town and the utility under or pursuant to these franchises are subject to change by the state commission,28 but unless the regulatory power of the state is asserted, the franchise rates are binding.29 Their enforceable character as between city and company is not impaired by the fact that they may be set aside by the state.30 Further, in the exercise of its authority to fix rates the commission is likely to approve rates for a municipality agreed upon between the municipal officials and the company.31 Municipalities may make their weight

tricity, steam or any other agency for the production of light, heat or power to or for the public for compensation.”

Section 8 reads: “Whenever the Commission (Corporation Commission), after a hearing having after reasonable notice upon its own motion or upon complaint, finds that the existing rates in effect and collected by any public utility for any service, product, or commodity, are unjust, unreasonable, insufficient or discriminatory, or in any wise in violation of any provision of law, the Commission shall determine the just, reasonable and sufficient rates to be thereafter observed and in force, and shall fix the same by order as hereinafter provided.”

The effect of this multiplicity of provisions is to befuddle and befog anyone seeking a statement of the statutory authority of the Utilities Commissioner over rates of electrical utilities. He finds the statutes full of statements. Here and there and everywhere the commissioner is given such authority.

b N. C. Rev. Stat. (1905) §2916-6; N. C. Code Ann. (Michie, 1931) §2623-6. Under the present provision the grants are not to exceed the period of sixty years, unless renewed. The section does not apply to Cumberland County.

Prior to 1905 cities had no general statutory authority to grant franchises. Such authority might be given a city in its charter. See Elizabeth City v. Banks, 150 N. C. 407, 64 S. E. 189 (1909).


felt by initiating or contesting rate hearings before the commission. From an adverse decision by the commission the municipality is a proper party to carry an appeal to the courts.

Review by the state and Federal courts of commission action in North Carolina has been discussed in this Law Review. The most obvious defect in our procedure for appeals to the state courts is the right to a trial de novo in the Superior Court, with the attendant right to a jury trial. This probably means that the reasonableness of rates fixed by the commission is a jury question. To ask juries to decide whether rates fixed for large utilities are reasonable is as unwise as it would be for hospitals to ask juries instead of physicians to diagnose diseases. The reasonableness of utility rates depends upon factors which a jury simply can not comprehend by reason of sheer ignorance of the subject. It would take years to educate the

1931-32, 120. Numerous additional instances are to be found in the commission reports.

Of course where an electric company serves many municipalities, and charges a uniform rate over the whole system in the states, as two North Carolina companies do, the possibility of an agreement between municipal officers and the company as to rates is reduced.

Electric rates were lowered as a result of a proceeding brought by a municipality in City of Wilmington v. Tide Water Power Co., N. C. Corp. Comm. Rep. 1931-32, 106.

In re Pet. for Increase of Street Car Fares, supra note 28.

For a treatment of the place of the Federal Courts in utility regulation see Lilienthal, The Federal Courts and State Regulation of Public Utilities (1930) 43 HARV. L. REV. 379. The United States Senate on Feb. 6, 1934, passed a bill, S. 752, which then went to the House. The bill provides that no Federal district court shall have jurisdiction to enjoin, suspend, or restrain the enforcement of any order of a state commission nor any action in compliance with such order, where jurisdiction of the Federal court is based solely on diversity of citizenship, or unconstitutionality of the order under the constitution of the United States, where such order (1) affects rates chargeable by a public utility, (2) does not interfere with interstate commerce, and (3) has been made after reasonable notice and hearing, and where a plain, speedy, and efficient remedy may be had in the courts of the state. The act does not affect pending litigation.

This act is the fruit of long and persistent agitation against interference by the Federal courts in state utility rate regulation.

Nichols, op. cit. supra note 7.

Id. at 78.

See id. at 82. In Corp. Comm. v. Cannon Mfg. Co., 185 N. C. 17, 116 S. E. 178 (1923) the reasonableness of electric rates was submitted to the jury in the Superior Court. The appeal to the Supreme Court did not involve the correctness of this procedure, but the court said, 185 N. C. at 23, "On appeal the decisions and rulings of the commission on the hearing are in no way controlling, and the judge, at the trial of the cause in the Superior Court, must submit the same to the jury under recognized and approved principles of law." See also Corp. Comm. v. Henderson Water Co., supra note 28, sustaining a directed verdict upholding the commission's rates where evidence of the matters to be considered in determining reasonable rates was lacking.
average juryman to the point where he thoroughly understands what is involved in the fixing of utility rates. However, it may require a constitutional amendment\textsuperscript{38} to clear our law of this encumbrance left over from an age when litigation arose from simpler economic relationships.

\textbf{CHARTERS AND CONTRACTS}

Before the constitutional prohibition against creating corporations or amending their charters by special act,\textsuperscript{39} the General Assembly had granted numerous charters to utility companies giving them authority to set their own rates.\textsuperscript{40} However, such charter authority does not preclude rate regulation under the power of the state.\textsuperscript{41} Contracts between utilities and consumers setting the price of current are also subject to rate regulation.\textsuperscript{42}

\begin{itemize}
  \item See Nichols, \textit{op. cit. supra} note 7, at 78, 94.
  \item N. C. Consr., Art. VIII, §1. This prohibition became effective Jan. 10, 1917. Prior to that time under Art. VIII, §1 corporations could be formed under special act “in cases where, in the judgment of the legislature, the object of the corporations cannot be attained under general laws.” The change is set forth in Watts v. Lenoir & Blowing Rock Turnpike Co., 181 N. C. 129, 105 S. E. 497 (1921).
  \item The Melrose Power and Manufacturing Co., chartered for sixty years, to supply light, heat, and power, electrical or otherwise, was authorized to furnish electric current to drive machinery, “and to fix . . . payment therefor.” It was also authorized to contract for the sale of electricity. Priv. L. 1911, c. 286. The Carolina-Tennessee Power Co., incorporated for sixty years, empowered to supply light, heat and power, electrical or otherwise, was authorized to supply power and “fix . . . payment therefor.” It also was granted authority to contract for the sale of electricity. Priv. L. 1909, c. 76. The Tryon Electric Light, Water & Power Co., incorporated with perpetual succession, was authorized to sell electricity “for such price . . . and on such terms and conditions as to this corporation may seem proper.” Priv. L. 1907, c. 22. Large numbers of charters contain comparable grants of authority to the companies to fix rates. Priv. L. 1909, c. 48; Priv. L. 1907, c. 183, 260 and 452; Priv. L. 1899, c. 75 and 160; Priv. L. 1893, c. 314.
  \item See Griffin v. Goldsboro Water Co., 122 N. C. 206, 30 S. E. 319 (1898); Watts v. Lenoir & Blowing Rock Turnpike Co., \textit{supra} note 39. N. C. Consr., Art. VIII, §1 as it existed before Jan. 10, 1917, contained the provision that the special acts referred to therein could be “altered from time to time, or repealed.” The amendment of 1917 appears merely to prevent such alterations by special legislation. See also Yadkin River Power Co. v. Whitney Co., 150 N. C. 31, 63 S. E. 188 (1908); Elizabeth City Water & Power Co. v. Elizabeth City, 188 N. C. 278, 124 S. E. 611 (1924).
  \item For a discussion of rates set by franchise contract with a municipality see text, “The North Carolina Machinery.”
\end{itemize}
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PURPOSES SERVED BY RATE REGULATION: PREVENTION OF DISCRIMINATION

One of the major objectives of machinery for rate regulation is to eliminate discrimination. In North Carolina discrimination in utility rates was illegal at common law.\(^4\) It is now forbidden by statute, and the commission is authorized to prevent it.\(^4\) Prior to the act passed in 1933 requiring schedules of rates to be filed with the commission and forbidding the companies to charge other than the rates stated in the schedules,\(^4\) the North Carolina Supreme Court held, where no schedules of rates had been filed with the commission, that a customer could, without any prior action before the commission, by mandamus compel an electric company to furnish him current at the lowest rates offered any other such customer under substantially similar circumstances. This result was reached notwithstanding the fact that complainant was a distributing company, i.e., a retailer, not a consumer, of electricity.\(^4\)

The most obvious kind of discrimination exists when the same electric company, either directly or by giving rebates, charges one customer more than it charges another for the same amount of electricity furnished under the same conditions. Discrimination exists also when electric rates charged by the same company are too high in one locality as compared with another.\(^4\) Perhaps the most diffic-

\(^{42}\) Griffin v. Goldsboro Water Co., supra note 41.

\(^{44}\) N. C. Code Ann. (Michie, 1931) §1054; P. L. 1933, c. 307, §§4, 5, 6, 8.

\(^{45}\) P. L. 1933, c. 307, §§4, 5.


\(^{47}\) An extreme case wherein such discrimination was prevented is Dallas Power & Light Co. v. Carrington, 245 S. W. 1046 (Tex. Civ. App. 1922). Commission decisions reducing rates in municipalities in order to prevent discrimination against them by reason of lower rates offered by the same company in other municipalities are to be found in City of Laclede v. Laclede Elec. Light Co., P. U. R. 1925 E 373 (Pub. Serv. Comm. of Mo.); Re Pub. Serv. Co. of Ind., P. U. R. 1933 B 59 (Pub. Serv. Comm. of Ind.). See also Armstrong, The Municipality as a Unit in Rate-Making and Confiscation Cases (1934) 32 Mich. L. Rev. 289. Such a problem does not arise concerning the system wide rates maintained by two electric companies in this state, the rates being the same for all municipalities served.

In Corp. Comm. v. Cannon Mfg. Co., supra note 37, it was argued by electricity users that rates set by the commission for power in North Carolina would produce discrimination since the company involved had contracted for lower rates to South Carolina customers. The court found no facts to support the argument, but said: [185 N. C. at 30] "Doubtless if it should be made to appear that a power company . . . in an adjoining or other competitive state is presently and voluntarily making contracts at a substantially lower rate than here, our Corporation Commission . . . could well decide that such conditions
cult kind of discrimination to detect and eliminate is present when a company charges too much for one class of service such as residence lighting, as compared with others. All three of the varieties of discrimination mentioned are forbidden in this state, and the commission is authorized to eliminate them.

**Reasonable Rates: The Rate Making Process**

Interest in utility regulation is no longer centered on eliminating discrimination, but on fixing reasonable rates. Regulation as a whole is likely to be judged today by its success in this particular.

The statutory requirements for rate fixing in North Carolina and elsewhere are simple to state but exceedingly hard to achieve. Practically all state statutes, including our own, prescribe in effect that rates shall be “just and reasonable.” Rate schedules must be filed with the commission, must be strictly adhered to, and may be changed only on thirty days notice to the commission, unless the latter decrees otherwise. Whenever the commission of this state, upon a hearing held after reasonable notice thereof, finds that existing rates are “unjust, unreasonable, insufficient or discriminatory, or in any wise in violation of any provision of law, the Commission shall determine the just, reasonable and sufficient rates,” and fix the same by order. The commission may act upon complaint, but it may also act on its own motion.

The task of the commission, then, is to make and keep rates “just and reasonable.” How is the commission to know when a rate meets this simple description? One old, rambling and misty statutory declaration of the matters to be taken into account by the commission exists. It is obviously modeled upon the case of *Smyth v. Ames*, which sets forth the factors to be considered in arriving at might fully justify it in establishing such contract rates as reasonable and just; i.e., eliminating the discrimination against North Carolina customers by establishing as the rate here the rate offered the favored customers in the competitive state.

This problem is dealt with more fully hereinafter under “Rate Classifications and Forms.”

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48 This problem is dealt with more fully hereinafter under “Rate Classifications and Forms.”

49 *Supra* note 44.


52 *Id.* §5.

53 *Id.* §7; BONBRIGHT & Co., op. cit. *supra* note 3, at 10.

54 P. L. 1933, c. 307, §8.

55 N. C. CODE ANN. (Michie, 1931) §1068.

56 169 U. S. 466, 18 Sup. Ct. 418, 42 L. ed. 819 (1898).
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reasonable rates. Both the decision and the North Carolina statute lack clarity, but appear to be groping toward the now familiar process of rate fixing. The process is as follows:

First, the value of the property of the utility used and useful in rendering service to the public is determined. To this end both the statute and Smyth v. Ames include as matters to be considered the original cost of constructing the property, the amount expended in permanent improvements, and the present as compared with the original cost of construction. Smyth v. Ames specifically includes the amount and market value of stocks and bonds of the utility. Both

The statute prescribes that in fixing maximum rates the commission shall consider if proved, or may require proof of, "the value of the property of such . . . corporation used for the public in the consideration of such rate or charge or the fair value of the service rendered in determining the value of the property so being used for the convenience of the public." Such language is an almost impregnable barrier to anyone trying to penetrate to its meaning. Does it mean that the value of the property is to be considered, and that one fashion in which value of property may be determined is by looking to the fair value of its product, that is, the service it renders?

The statute adds, "It shall furthermore consider the original cost of construction thereof and the amount expended in permanent improvements thereon and the present compared with the original cost of construction," etc. These latter factors are significant only for their bearing on value, yet they are placed in the statute in such fashion as to suggest that they are factors to be considered in addition to value.

In Smyth v. Ames, 169 U. S. 466, at 546, [18 Sup. Ct. 418, 42 L. ed. 819 (1898)] appears this language, "And in order to ascertain that value (of the utility property), 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." The earning capacity under the prescribed rates, and the sum necessary for operating expenses, have no bearing on determination of value, but relate to steps in the process of fixing rates after value is determined.

Of course if this original cost was extravagantly incurred it may be scaled down. See Griffin v. Goldsboro Water Co., supra note 41. Original cost thus qualified amounts to the same thing as the amount prudently invested in the property.

That is, the amount it would now cost to build the property. This is commonly called cost of reproduction.

The amount of stocks and bonds issued by a utility has little bearing on the value of its property. The securities may be watered. See Griffin v. Goldsboro Water Co., supra note 41; Salisbury & S. Ry. v. So. Power Co., supra note 2. Or, more rarely, the property may be worth more than the face value of securities issued against it.

The market value of the stocks and bonds has a bearing on the value of the property, but on the other hand rates affect the market value of the stocks and bonds, and rates are the objective of the valuation. In fixing rates to consider a factor depending on rates would allow existing rates to justify themselves.
add a basket clause to catch anything else bearing on value. Assume that the commission is fixing the rates for an electric company, and after due consideration of the mentioned factors and others concludes that the reasonable value of the company's property as it now stands, considering depreciation, is $100,000.

Second, the rate of return to be allowed on the property must be determined. Assume that the commission decides that a fair return to the company on the value of its property is seven per cent. This means that the company is to be allowed to earn annually 7% of $100,000 or $7,000.

Third, the commission must decide what rates or charges to the public for electricity will produce $7,000 a year over and above the operating expenses of the company, including depreciation, for the year.

The above process is commonly followed by commissions where rates are fixed in contested cases. On appeal to the courts it is the process by which the constitutional validity of the rate fixed by the commission is tested. If in the opinion of the court the rates will not be enough to pay a fair return on the fair value of the company's property over and above operating expenses, then the rates are confiscatory and invalid under the Fourteenth Amendment.

N. C. CODE ANN. (Michie, 1931) §1068 states that the commission is to consider, "all other facts that will enable them to determine what are reasonable and just rates." In Smyth v. Ames, 169 U. S. at 547, is the statement, "We do not say that there may not be other matters to be regarded in estimating the value of the property." For some of the matters which have been taken into account in valuation proceedings see State ex rel. S. W. Bell Tel. Co. v. Pub. Serv. Comm., 262 U. S. 276, 43 Sup. Ct. 544, 67 L. ed. 981 (1923) Brandeis, J., concurring, at 294, especially footnote 6. What factors are considered, and what weight is given each, depends on circumstances. For example, if a utility were built efficiently and an accurate record kept of the cost, and rates were fixed before any substantial change occurred in the general level of prices, it would be proper to use the book cost of the property less depreciation to determine its value. Book cost would be the same as the amount prudently invested, and would equal present cost of reproduction of the property. If many years elapsed between the erection of the utility and the rate proceedings, and the property were not efficiently built, then book cost, prudent investment, cost of reproduction, and other factors might each lead to a different result, and each factor is to be considered for what the circumstances show it to be worth.

The first step in this process of rate fixing, namely, determination of the value of the company's property, is the one which has to date attracted the most attention. Value is a versatile word. Value for rate making purposes may be one thing; value for other purposes may be something else. The property of an electric company has at the same time many values, and these values may or may not be different in dollars.

When the property of the company is taxed, the value may be set at a certain figure. If a municipality takes over the utility the value may be placed at another figure. The property may also be valued for the purpose of determining whether the company is solvent. The value for the purpose of fixing rates may be different from any of these.


In other jurisdictions the relevancy of value for taxation purposes in considering value for rate purposes has been variously treated. One court has taken the position that the two kinds of value are identical. See Great Falls Gas Co. v. Pub. Serv. Comm., 34 F. (2d) 297 (D. Mont. 1929). In other instances value for taxation purposes has been used as the sole evidence of value in rate cases. See City of Corona v. Corona Home Tel. & Tel. Co., P. U. R. 1915 F 1014, 1023 (Cal. R. R. Comm.). This is likely to occur where there is no other evidence of value. Re Chesapeake & O. Ry., P. U. R. 1917 D 152 (W. Va. Pub. Serv. Comm.); Re Atchison, T. & S. F. Ry., P. U. R. 1917 F 272 (Kan. Pub. Utilities Comm.). At the opposite extreme stand cases indicating that value for taxation purposes has no bearing at all on value for rate purposes. Vincennes Water Supply Co. v. Pub. Serv. Comm., 34 F. (2d) 5 (C. C. A. 7th, 1929); Re United Traction Co., P. U. R. 1927 D 637 (N. Y. Dep't. of Pub. Serv.); see Pub. Serv. Comm. v. Billings Gas Co., P. U. R. 1933 D 337, 368 (Mont. Pub. Serv. Comm.), wherein is a collection of cases. In Knott v. Chicago, B. & Q. R. R. (Missouri Rate Cases), 230 U. S. 474, 33 Sup. Ct. 975, 57 L. ed. 1571 (1913), certain railroads attacking state statutory maximum rates as confiscatory relied on evidence of the value set on their properties by the state assessing board. The court refused to find confiscation on the basis of such evidence of value. The court pointed out that no members of the board were examined; there was no showing of the grounds for their judgment of value; and it was not shown that the tax valuations were upon a basis proper for determining value on the issue whether rates are confiscatory. Between the cases wherein tax value is used as value for rate purposes, and cases refusing to recognize tax value at all, are cases considering tax value along with other evidence of value. Re Kokomo Gas & Fuel Co., P. U. R. 1921 E 390, 394 (Ind. Pub. Serv. Comm.); City of Lima v. Public Utilities Comm., 106 Ohio St. 379, 140 N. E. 147 (1922); see Customers v. Worcester Elec. Light Co., P. U. R. 1927 C 705 (Mass. Dep't. of Pub. Utilities).

In Temmer v. Denver Tramway Co., 18 F. (2d) 226 (C. C. A. 8th, 1927),
The legal requirements for determining value for rate purposes are artificial. They have to be. Value of property is normally what the property can be sold for. But one does not go down town to buy a utility and bring it home. Public utilities are not bought and sold on the market. Neither can value of a utility plant be fixed by a normal method of arriving at the worth of a business, namely, capitalization of its earnings. It will not do to value utility property according to what the utility earns, for what it earns depends on the rates it charges, and the valuation is being made in order to arrive at rates. In fixing rates to use a valuation depending on rates is to caper around a circle. Therefore some more artificial means of determining value must be used in utility rate making. Accordingly the law has prescribed that value be arrived at by taking into account factors thought to have a bearing thereon. These factors were outlined in the previous discussion of *Smyth v. Ames* and its North Carolina statutory offspring. As was pointed out, both that decision and our local statute specify among the factors the present cost of construction. This means the commission must give some weight to what it would cost to reproduce the identical utility property at the time of the rate making. In a long series of cases the United States Supreme Court held with unbroken regularity that any rate valuation was confiscatory if it did not take into account cost of reproduction when that was higher than original cost. The court did not state how much weight had to be given to this factor as compared with other factors proper for consideration, but the repetition in the decisions that cost of reproduction must be considered tended to cause commissions to emphasize this factor. This precipitated a tremendous controversy between economists, lawyers, and others who support cost of reproduction as a means for or factor in determining value, and those who believe that more effective regulation of utility rates the receiver of a tramway company had earlier brought an action for the purpose of increasing rates, and in that action the value of the company's property was fixed. In the instant case the question of the solvency of the company arises. It is contended that if the property has the value fixed in the rate proceeding, then the company is not insolvent. The court held, however, that value for rate purposes is not the same thing as value for the purpose of determining solvency. Actual value, says the court, is based on what a willing buyer ought to pay, and depends on earnings. Such value could not be used in rate making, for earnings depend on rates, which are the very thing being determined.

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would be possible if the legal requirement that cost of reproduction be considered were abolished or circumvented, and the amount prudently invested in the property were taken as the sole measure of (or substitute for) value. The controversy is important if for no other reason than its size, the mass of writing about it, the ardor shown on both sides, and the present adventures of prudent investment in national politics. Too much has been written on each side to permit a thorough examination of the material, but some of the arguments for prudent investment and cost of reproduction will be summarized.

**Prudent Investment**

Those who would substitute prudent investment for value found according to *Smyth v. Ames* argue:

1. From the standpoint of legal theory all that the utility owner has devoted to the public use is a certain amount of capital, and if he receives a fair return on his outlay nothing has been confiscated.

The North Carolina Supreme Court has repeatedly asserted that utilities are entitled to such rates as will yield them "a fair return on their investment." Corp. Comm. v. Cannon Mfg. Co., *supra* note 37, at 23; In re Pet. for Increase of Street Car Fares, *supra* note 28, at 161. These statements are in all probability mere loose language, not designed to mean that in North Carolina the amount invested in the property is to be substituted for "value" as prescribed by *Smyth v. Ames* and N. C. CODE ANN. (Michie, 1931) §1068. Indeed in Corp. Comm. v. Cannon Mfg. Co., at 31, the court spoke with approval of the fact that the commission followed what is now section 1068. The court apparently did not have in mind the sharp distinction between return on investment and return on value as prescribed by section 1068.

In Massachusetts the local commission substituted prudent investment for the measure of value prescribed by the United States Supreme Court, and succeeded in so doing because the utilities did not take rate cases from the commission to the courts. Goldberg, *The Massachusetts Proposals for Public Control* (1931) 11 B. U. L. Rev. 54.

President Roosevelt, in his campaign speech at Portland, Oregon, Sept. 21, 1933, put forward as one of his proposals for better utility regulation, "Abolishing by law the reproduction cost theory for rate making and establishing in place of it the actual money, prudent investment principle as the basis for rate making." See also an article by Dr. Albert Levitt, special assistant to the Attorney General, *Utilities under the New Deal*, N. Y. Times, November 26, 1933, at 2 XX.

Many of the points in this summary were first brought to the writer's attention in the lectures of Professor Garver of the University of Minnesota. Most of them are the staples which feed the argument between exponents of the two theories, and have been repeated over and over. Some of them can be found in Robinson, *Duty of a Public Utility to Serve at Reasonable Rates* (1928) 6 N. C. L. Rev. 243.

This argument would be impressive if the investment theory were law at the time of the building of the utility. But where a utility has been built in the past, to impose on the owner now a legal rule to the effect that he is not the owner of property, but of an investment, seems of dubious validity.
2. When the amount prudently invested in a utility is once determined, no valuation of the company's property will ever again be necessary. Additions, and replacements of greater cost than the replaced property, will mean merely an additional investment to be added to the original investment. On the other hand, where value depends on cost of reproduction the value changes constantly, and new valuation proceedings are repeatedly necessary. A valuation begun now may be obsolete by the time it is completed because meanwhile the price level of labor and materials needed to reproduce the utility may have gone up or down. Frequent valuations mean prohibitive expense and the ill will of the public toward utilities which rate disputes generate.

3. It is impossible to find out what it will cost to reproduce a given utility. In rate making proceedings the company's engineers arrive at a cost of reproduction which is almost always higher than that arrived at by the engineers representing the public, and sometimes twice as high; the commission commonly arrives at a still different figure, and the courts on appeal are likely to disagree with them all and name a new figure. The testimony as to reproduction costs is supposed to be expert information, is in fact opinion, and opinions vary so widely that endless uncertainty is introduced into rate making. This uncertainty in the process, plus the constant necessity for renewed rate fixing as price levels change, with long drawn appeals to the courts when rates are fixed, has discouraged the bewildered commissions, has killed their initiative, and has made them reluctant to assert their authority to fix rates.

4. Under cost of reproduction utility stocks are highly speculative. This results from the fact that most of the capital of utilities

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70 In Central Ky. Natural Gas Co. v. R. R. Comm., 54 Sup. Ct. 154, 158 (1933) the court referred to "the profound changes in values, costs of service, consumption of commodities, and reasonable return on invested capital which we judicially know took place during the period of more than five years while the case was pending before the commission and the court." In the case of In re Application of the So. Power Co., supra note 63, at 52, the commission in July, 1921, refused to accept as a rate base an appraisal made by the company engineers according to the cost level of June, 1920, "because the price level has already receded from it."


72 In Ill. Bell Tel. Co. v. Gilbert, 3 F. Supp. 595 (N. D. Ill. 1933), rates fixed by a commission in 1923 were still being litigated. The case was back in the district court after an appeal to the United States Supreme Court, Smith v. Ill. Bell Tel. Co., 282 U. S. 133, 51 Sup. Ct. 65, 75 L. ed. 255 (1930).
CONTROL OF ELECTRIC RATES

is contributed by the bondholders. Assume that a utility is erected at a reasonable cost of $100,000, and that of this amount $75,000 is contributed by the bondholders, whose bonds have an interest rate of 6%. Suppose the commission allows on the $100,000 value a return of 7%. The stockholders receive 7% on all the value resulting from their contribution, that is $25,000, plus 1% on the $75,000 value contributed by the bondholders. Now suppose the price level rises 50% so that the cost of reproduction of the utility is $150,000, and the commission allows a return of 8% on this value. The bondholders still receive only 6% on $75,000. Now the stockholders receive 2% on that $75,000, plus 8% on an additional $75,000 of value, although they have contributed only $25,000. Thus it is seen that tremendous profits are possible to stockholders when cost of reproduction is made the measure of value. On the other hand, a severe fall instead of a rise in the price level will wipe out the margin contributed by the stockholders, with the result that the utility will not earn enough to pay the interest on its bonds, and will be insolvent. By contrast, the amount prudently invested in the utility, $100,000, remains the same whether price levels go up or down, hence under prudent investment utility stocks would not be highly speculative, as they now are to the extent that cost of reproduction enters into value on which a return is allowed.

5. Since under prudent investment stocks would be less speculative, the average returns which would have to be paid on them in order to induce investors to buy them would be smaller. Safe, non-speculative investments attract money at lower rates of return.

COST OF REPRODUCTION

Those who support the position of the United States Supreme Court that cost of reproduction must be given weight in determining value, or who approve the practice of some commissions in making it the measure of value, urge:

1. Cost of reproduction is founded on sounder legal logic. If the utility does not receive a fair return on the fair value of its property, then there is confiscation, and property has been taken without due process of law. What property? The property as it now stands, not money invested prudently or otherwise in the past.

2. When price levels rise and fall, values, including values of industrial plants, rise and fall. Property rarely remains worth exactly what was invested in it. To make an exception of public utility
property would mean maladjustment of utilities in the normal industrial order. Some of the points listed separately below are aspects of this general idea.

3. The return to utility owners is really more stable under cost of reproduction than it would be under prudent investment. Under the latter theory, if accompanied by a fixed rate of return on the fixed investment, the utility owner receives during high price levels the same number of dollars he receives during low price levels. But at high price levels he can buy much less with each dollar. He is poorer despite his fixed income. Under cost of reproduction he receives more dollars when prices are up and more dollars are required to give him the same amount of food, clothing, etc. Of course, prudent investment could be accompanied by a sliding rate of return, going up or down with the price level. But this would merely mean casting out the legion of devils that now inhabit the value problem, and allowing them to enter into the rate of return.

4. Cost of reproduction rewards efficiency in construction, since the utility receives a return on what it would reasonably cost to reproduce the utility, and the return is not limited to what actually was spent building it. On the other hand, under the investment theory if the owners exercised extraordinary efficiency and built a plant which would normally cost $100,000 for only $90,000, they would receive no advantage, as their return would be limited to the $90,000 invested. In short, under prudent investment there would be a falling off of efficiency to the point just short of wastefulness such as to brand the investment as imprudent.

5. Similarly, cost of reproduction induces utilities to build at low price levels, whereas prudent investment would impose no penalty on building at high price levels, since in any event a return would be allowed on the higher investment.

6. Assume a fixed return on a definite amount, namely the amount prudently invested, is given. Then assume the price level rises. Utility rates would be low as compared with general prices since utility rates would not have advanced. The result would be an abnormal stimulation in demand for the unnaturally cheap utility service, with attendant unnatural overexpansion of utility plants, and

73 The catch in this argument for cost of reproduction lies in the fact that most utility capital is contributed by bondholders, and their income is fixed regardless of the valuation allowed on the utility property. The fluctuations under cost of reproduction are absorbed by the stockholders. See text argument 4 under prudent investment.
that at a time when the expansion would be at higher costs. The
abnormal overexpansion would saddle high investments on utilities
on which investments consumers would have to pay a return. Then
when prices fall off, returns on these inflated investments would have
to be paid, with the result that utility rates would be abnormally
high compared with other prices, which would produce an abnormal
contraction of demand. This would result in necessity for still
higher rates to pay the constant return, and the higher rates would
cause demand to dwindle further, etc. An abnormal idleness of util-
ity plants and a cessation of expansion would ensue. Utility regula-
tion would thus become a handicap to the industrial order because
utilities would expand unnaturally during high price periods, thus
tending to heighten booms, and contract abnormally during low price
periods, thereby deepening depressions.\textsuperscript{74}

7. Public opinion would defeat the operation of prudent invest-
ment. If a utility were built largely during boom times, and then the
public were obliged during an ensuing depression to pay returns on
the inflated investment, a political hue and cry would be raised
against the utilities. The people would fail to see why utility in-
vestors should continue to enjoy returns on boom time values while
the property of everyone else dwindled in value. This argument is
solidly founded on human nature. During depressions, when pru-
dent investment would result in relatively high utility rates, the public
is most likely to challenge the prices it pays to utilities, just as it
challenges taxes and all other necessary expenditures. Conversely,
during booms, when cost of reproduction results in high returns, the
public, thriving with the boom times, pays less attention to expendi-
tures. It is in a tolerant mood and careless of costs.

If it can be avoided regulation should not take utilities from the

\textsuperscript{74}This argument can be answered in part by saying that utility rates depend
more on operating expenses than on return to the company, and operating ex-
penses would fluctuate normally though the return were fixed. It may be fur-
ther said that electrical utilities furnish a service which is essential, hence will
be demanded regardless of price. This is but partly true. Only a small por-
tion of the sales of electricity are free from competition. Electric power must
compete with coal, electricity for cooking must compete with gas and other
fuels, etc. Further, if electric rates are abnormally high, the amount of
consumption per customer will decrease. One may eat his bread untoasted if
electricity is expensive. That demand may decrease sharply during depressions,
notwithstanding the fact that electricity is “essential,” is shown in N. C. Corp.
Comm. Rep. 1931-32, XVII, where it is pointed out that mills, factories and
machine shops which normally consume electric power were shut down or run-
ning part time. One light and power company reported the loss of 2,869 cus-
omers in six minths.
scheme of things which people acquainted with the fortunes of ordinary business understand.

8. Rates are not uncommonly set separately for each municipality served, on the basis of the property used to serve that municipality. When this is done, then under prudent investment if the plant in one municipality were built during high prices, and a similar plant in a neighboring municipality were built during low prices, the rates in the second municipality would be permanently lower than those in the first, thus giving the second an advantage over the first in seeking new citizens and industries.

THE TWO THEORIES AND PRESENT CONDITIONS

The case for either cost of reproduction or prudent investment is not wholly convincing. The fundamental difficulty is that our industrial order is part controlled and part competitive. Cost of reproduction represents an attempt to make controlled utilities follow the fluctuations of a competitive industrial order. Prudent investment represents a proposal to hold utilities rigid amid the fluctuations of that competitive industrial order. Neither gives promise of complete success. Ultimately the truth may be that our industrial system cannot exist as a house divided; it must be all competitive or all controlled. The tendency of the age is in the latter direction.

At all events an imposing phalanx of arguments has been launched against prudent investment as a solution of the present ills of rate valuations. Furthermore, prudent investment is no longer alluring to the rate payer. At the time Smyth v. Ames was decided it was the representatives of the public who were urging cost of reproduction. When years later the World War sent prices 'skyrocketing, the utilities joyously seized the argument for cost of reproduction, because it meant expanding value of their properties for rate making. Many representatives of the rate paying public then took up the case for prudent investment. If they are not careful they will win their fight. Previous economic experience makes it possible that the country is facing a long period of lower prices. If so, the utilities are

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"This practice was held valid even where a system serves many municipalities in Wabash Valley Elec. Co. v. Young, 287 U. S. 488, 53 Sup. Ct. 234, 77 L. ed. 447 (1933) commented upon: Armstrong, supra note 47; Note (1933) 18 IowA L. Rev. 354; (1933) 2 Geo. WAsir. L. Rev. 119.

"See State ex rel. S. W. Bell Tel. Co. v. Pub. Serv. Comm., 262 U. S. 276, 43 Sup. Ct. 544, 67 L. ed. 981 (1923), Brandeis, J., concurring, 262 U. S. at 303, note 16. Observe how events have fulfilled Justice Brandeis' observations, made at a time when political propaganda had spread faith in permanent pros-
not likely to fight proposals to substitute prudent investment for fair value as at present determined. Prudent investment would perpetuate returns on the full amount of investments made during the inflation era.

As the law now stands prudent investment and cost of reproduction are factors to be considered with other factors in valuing utility property, but the emphasis has been on cost of reproduction. If despite the New Deal a long continued period of low prices follows the late depression it will be to the advantage of the rate payer to keep the emphasis there. In a recent case before the United States Supreme Court a gas company contested rates fixed by a state commission. The court, speaking of the company's evidence of cost of reproduction based on average prices for a period of three years ending Jan. 1, 1930, first pointed out that the object of finding present value is to make possible a prediction of what the value will be during the time the rates are in operation (since the rates should pay a fair return on the fair value). The court then said that cost of reproduction based on average prices for the above mentioned period, "furnished no dependable criterion of values in the succeeding years. The country was facing a most serious decline in prices. It was entering upon a period of such depression as to constitute 'a new experience to the present generation.' It was not the usual case of possible fluctuating conditions but of a changed economic level." The court rejected the cost of reproduction urged by the company as a basis for finding confiscation. The court further intimated that values of the company's properties accumulated after 1917 were higher when the properties were acquired than during the period after Jan. 1, 1931, when the commission's rates were in effect. The court's hindsight enabled it to see that cost of reproduction as of 1926-29 was far above present cost of reproduction.

To the extent that cost of reproduction entered into values fixed during the inflation years those values are now less by the amount of prosperity and enduring high prices. It is to be hoped, however, that the economic policies of the New Deal will modify the causes which would otherwise make probable a long continued low price period.


78 289 U. S. at 311. See also Central Ky. Natural Gas Co. v. R. R. Comm., 54 Sup. Ct. 154, 158 (1933); Ill. Bell Tel. Co. v. Gilbert, supra note 72, at 601.

79 See also Clark's Ferry Bridge Co. v. Pub. Serv. Comm., 54 Sup. Ct. 427, 430 (1934).
the decrease in cost of reproduction. So far as rates depend on those
values, reductions below the rates charged during the boom years are
obviously justifiable.

LESSES PROBLEMS IN VALUATION

The first step in the orthodox rate making process presents the
large problem above set forth, namely, upon what basis value is to
be determined. It presents also a brood of lesser problems. What
property is to be considered in the valuation? Should an obsolete
plant now used only as reserve equipment for emergencies, or facil-

ities acquired but not yet used, be included? How are leases to be
valued? What about franchise value, going concern value, etc.? These lesser problems are too numerous to treat here.

STEPS IN THE RATE MAKING PROCESS: RATE OF RETURN

The second step in the procedure for fixing rates, namely, deter-
mining the rate of return to be earned on the rate base, has been the
field for a battle of opinions resembling somewhat the conflict over
tories of value. On the one hand are those who urge that the rate
of return should be fixed at a figure depending on the rate the utility
had to offer in order to attract the money invested in it. Opposed to
this fixed and rigid rate of return are those who hold that the fair
rate of return should be determined according to conditions existing
at the time of the rate making. The United States Supreme Court
has made this flexible measure of fair return the legal yardstick.
"A public utility is entitled to such rates as will permit it to earn a
return on the value of the property . . . equal to that generally being
made at the same time and in the same general part of the country

80 The North Carolina commission refused to include property acquired but
not yet used in serving the public. In re App. of the So. Power Co., supra
note 63, at 53. See also Los Angeles Gas & Elec. Corp. v. R. R. Comm., 289
U. S. 287, 311, 53 Sup. Ct. 637, 77 L. ed. 1180 (1933), wherein the court ex-
cluded the cost of reproduction of a part of certain gas manufacturing facilities
unnecessary in serving the public because the company was now furnishing
natural gas, of which the supply was adequate.

81 In Corp. Comm. v. Cannon Mfg. Co., supra note 37, at 30, our court in-
timated that it is proper for the commission to make an allowance for going
concern value, but that confiscation does not result if the commission refuses
to do so, citing Galveston Elec. Co. v. City of Galveston, 258 U. S. 388, 42 Sup.
Ct. 351, 66 L. ed. 678 (1922). However, in Los Angeles Gas & Elec. Corp. v.
R. R. Comm., 289 U. S. 287, 313, 53 Sup. Ct. 637, 77 L ed. 1180 (1933), the
court reviewed previous decisions on the subject, and made it plain that going
value must be considered, but that there is no formula binding on the commis-
sions for finding going value.
on investments in other business undertakings which are attended by corresponding risks and uncertainties.” The return should be sufficient to “assure confidence in the financial soundness of the utility” and to maintain its credit. “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.”

Rate of return, like value, presents an issue between those who believe in a fixed, and those who believe in a flexible, standard. It is easy to see arguments on both sides similar to those advanced for and against prudent investment and cost of reproduction. Here too it is doubtful whether a change from the flexible standard adopted by the Supreme Court to the fixed standard urged as a substitute would make regulation more satisfactory. It might make regulation easier.

The actual rate of return deemed fair under the flexible rule of course varies from utility to utility and changes with the times. A favorite figure approved by the Supreme Court in recent cases is seven per cent.

Steps in the Process: Revenues and Operating Expenses

The third step in the orthodox rate making process is to calculate what rates or charges to the public will produce the allowed return on the value set for the utility property over and above operating expenses. This means first that the commission must predict what the revenues under the rates to be fixed will be. Second, it must predict what the reasonable operating expenses will be. If the commission lowers electricity rates, the number of customers will probably increase, as will the amount of current consumed per customer. Total operating expenses are likely to be increased, but the operating expense per customer will probably decrease, since a large number of customers may be served at a lower cost per customer than a small

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64 Wabash Valley Elec. Co. v. Young, 287 U. S. 488, 53 Sup. Ct. 234, 77 L. ed. 447 (1933) (electricity) ; Los Angeles Gas & Elec. Corp. v. R. R. Comm., 289 U. S. 287, 53 Sup. Ct. 637, 77 L. ed. 1180 (1933) (gas) ; Clark's Ferry Bridge Co. v. Pub. Serv. Comm., 54 Sup. Ct. 427 (1934) (toll bridge rates). Robinson, supra note 68, at 279, concludes that 6% was the favorite figure in pre-war cases, and that after a rise to 8% we are working back toward 6%. In City of Wilmington v. Tide Water Power Co., supra note 32, the North Carolina Commission fixed rates which it calculated would provide a return of 8%.
number. In some cases there is the bare possibility that the lesser operating cost per customer will more than offset the decrease in charges per customer, and that the net return per customer will be increased. A somewhat less remote possibility is that although the net return per customer is decreased, the increase in number of customers will result in a greater aggregate net return to the company. In short, it is possible that decreased rates may increase the earnings of the company. In most cases this is not true, but the factors above suggested usually make the percentage of decrease in earnings of the company less than the percentage of decrease in the rate. Thus if rates are cut 20%, the decrease in net return is likely to be somewhat less than 20%. Related problems arise when rates are increased. The increase may decrease the earnings of the company; more likely there will be an increase in earnings, but the percentage of that increase will lag behind the percentage of increase in rates.

In calculating the operating expenses the question arises as to the authority of the commission to allow for the purpose of calculating reasonable rates lesser amounts for certain items of expense than the amounts actually being spent by the company. To illustrate: if a company is paying its president $60,000, and the commission believes that $30,000 would be adequate, may the commission fix rates taking into account as an operating expense a $30,000 salary instead of a $60,000 salary? The authority of commissions in the matter of operating expenses is of great importance, since more than half of the charge made for electricity goes to meet this item. However, this subject is such a large one that no attempt will be made to treat


63 This problem must not be confused with the question whether the commission may order the company outright to pay the president no more than $30,000. It was early asserted in a North Carolina opinion that the public is not to be obliged to pay rates which will meet expenses incurred by inefficient management. Griffin v. Goldsboro Water Co., supra note 41, 122 N. C. at 211.

64 N. C. Corp. Comm. Rep. 1921-22, 5, shows that at that time 76.76% of the income of the electrical utilities of the state went to meet operating expenses, including taxes but not depreciation. Therefore return to the company and depreciation amounted to no more than 23.24% of the income. This means that if the commission cut both the return to the company and its allowance for depreciation in half rates would be reduced thereby but 11.62%. Fair return on the fair value of the utility properties, although voluminously discussed, affects rates paid by the public much less than do operating expenses.
it here, but different aspects of the problem will be reserved for possible discussion in separate articles.88

**Rate Classifications and Forms**

When the commission fixes rates which it calculates will produce the company a fair return on the fair value of its property above operating expenses it is, of course, necessary to determine how the charges of the company are to be apportioned among its customers. Commonly the service of electric utilities is divided into different classes depending on the use made of the electricity, and different rates are charged in each class. Thus a particular company may offer certain rates for residence service, other rates for commercial lighting, for commercial cooking and heating, for small power, for large power, etc. Some companies have great numbers of different classifications; others divide their service into a more limited number of kinds. There is no uniformity in the classifications made by the various companies. Further, there is a variety of rate forms in use by the different electric companies. The simplest rate form is the straight line meter rate, which means a charge of a fixed amount per kwhr (kilowatt hour), regardless of the amount of current used. A common form of rate is the block meter rate, under which for the first block of current the charge per kwhr is a fixed amount, for the next block a lesser amount, etc. To illustrate: the charge may be 10c per kwhr for the first 25 kwhr; 8c per kwhr for the next 25 kwhr; 6c per kwhr for the next 50 kwhr, etc. There are a number of forms of rate based on the maximum demand of the customer at any one time during the month, which demand may be either estimated or measured, or may depend on the equipment of the customer. Many companies add a customer charge to the rate form used, that is, a flat charge per month to each customer regardless of his demand or actual consumption. A better practice is to make a minimum charge and to supply therefor a certain amount of current. Not uncommonly some form of meter rate, which is a rate depending on amount of current used, is combined with a demand charge and a customer charge.

The blocks in a block rate may be of different sizes depending on the company, and the charge per kilowatt hour within the blocks may

88 One of the major operating expenses of an electricity distributing company is the charge for current supplied by the generating company. For a thorough discussion of control of this expense see Erb, *Regulating Wholesale Utility Rates* (1934) 12 N. C. L. Rev. 231. Other types of operating expense are touched upon in Robinson, *supra* note 68, at 245.
vary. Thus company $A$ may charge 10c per kwhr for the first 30 kwhr, and company $B$ may charge 8c per kwhr for the first 50 kwhr, etc. So also the blocks of demand in a demand charge may vary in size and price per unit within the size. Customer charges likewise are different. In view of these differences in rate forms from company to company, and of the differences in classification of service, and of the differences in rate schedules for the various classifications in the same company, it is easy to see that the number of rates offered by the different companies is almost endless.89

Rate forms and classifications of service present a number of problems. Discrimination may exist if charges for one class of service are too high as compared with charges for another. For example, residence rates may be too high, and power rates too low. Further, charges per kilowatt hour in one block may be too much as compared with others. Another difficulty is to determine whether changes in rate schedules are likely to raise or to lower charges to the public. Rate decreases may be rate increases in disguise. A company may decrease the charges per kilowatt hour in a number of the blocks of a block rate, and slightly increase the charges in another block. Then it turns out that most of the customers use an amount of current falling within the block where the rate was increased; hence the public as a whole pays more, not less, to the company. For example, company $A$ may charge for electricity for residence lighting 10c per kwhr for the first 25 kwhr, 9c per kwhr for the next 25 kwhr, 8c per kwhr for the next 50 kwhr, and 6c per kwhr for all additional current used per month. Rates may be decreased 1c per kwhr for each block save the first. The rate for the first block may be increased $\frac{3}{2}$c per kwhr. Then it may prove that the great majority of consumers for residence lighting use 25 kwhr or less, hence are subject to the $\frac{3}{2}$c increase, and only a few consumers obtain the benefit of the 1c decreases. By manipulating classes of consumers and changing the size of blocks rate increases may be still more effectively disguised by being made to appear to be largely decreases.

The most serious objection to the great variety of rates offered by

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89 For a detailed discussion of electric rate forms see Edison Electric Institute Rate Book (1933) VII. The same book contains the principal rates offered by privately owned utilities in cities of 20,000 or over in the United States and Canada. Wadell, Public Utility Rate Studies for N. C. Corp. Comm. (1932), shows the rates offered by four of the large companies operating in North Carolina. He points out [at 13] that the Carolina Power and Light Co. "still has some fifty different schedules in effect."
CONTROL OF ELECTRIC RATES

different companies, and the lack of uniformity in classification of service and rate forms, is that it is impossible for the average person to tell whether the charges of A Company are higher than the charges of B Company. In order to make the rates from company to company comparable it is necessary to begin with some hypothetical customer using current for a given purpose under given circumstances, and then calculate from the rates offered by the different companies how much each would charge this customer per month for certain quantities of current. Uniformity of classifications and of rate forms for each classification would make rates more comprehensible and comparable.

The final step of the commission in the formal rate fixing process, after it has determined how much is needed to pay the company a fair return on the fair value of its property plus operating expenses, is the above outlined task of apportioning these charges to the public in the form of rates.

INFORMAL RATE CONTROL: PERFORMANCE OF THE NORTH CAROLINA COMMISSION

The orthodox process of fixing utility rates as above outlined, when observed by the commission, results in rates which will stand the test when challenged in the courts on the ground that they are confiscatory, provided the commission has succeeded in meeting the legal requirements governing the steps in the process. However, commissions commonly determine rates on a much less formal basis. Where a complaint was made to the North Carolina commission against the rates of a telephone company, and the commission found that the company’s actual earnings were below a reasonable return on either the amount invested in its properties or their assessed value for taxation purposes, the complaint was dismissed. Gas rates were raised on a showing of growing operating expenses and deficits. Telephone rates were increased in the absence of objection where the number of subscribers had grown from 119 to 551 and the value of the plant had increased. The commission advanced

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Studies made on this basis are referred to infra note 112.

Grimes v. So. Bell Tel. & Tel. Co., supra note 63. The Commission also pointed to defendant's small dividends, testimony that the North Carolina rates were not remunerative, etc.


Pet. of Piedmont Tel. & Tel. Co., id. at 14. The commission recited that
gas and street car rates on a showing that increased costs of operation were wiping out net earnings, and that necessary additions and extensions could not be made in view of the company's existing bad credit.\textsuperscript{94} Electricity rates were raised on a showing of increased costs and a deficit, in the absence of evidence contrary to the financial statement of petitioner.\textsuperscript{95} Sometimes rates are approved without any reason at all being given for the decision.\textsuperscript{96} On the other hand, gas rates have been lowered by reason of a fall in prices affecting operating expenses.\textsuperscript{97}

Although rates are thus often and justifiably determined without resort to all the steps of the orthodox process, still in important contested cases it is advisable to go through the formal process so that the commission's rates may have a better chance to survive judicial review. Further, if in this state evidence on the matters involved in the formal process so far as that process is prescribed by statute is offered, the evidence must be taken into account.\textsuperscript{98}

The North Carolina Commission has, in a few cases instituted by utility companies or consumers resorted to an approximation of this formal rate making process.\textsuperscript{99} The writer has discovered no instance in which the commission of this state on its own initiative caused to be made its own valuation of any utility's property and then fixed rates founded on this base. An often repeated charge against the whole system of commission regulation is that whereas the commissions were set up to act on their own initiative in protecting the public, they have become in practice judicial bodies waiting for others to make complaints and bring cases before them. As far as electric rates are concerned our commission has been open to such a charge. The commission has not on its own initiative fixed rates it appeared that the petition for the increase was reasonable. The look of informality in the action of the commission is sometimes due to brevity in the reports; nevertheless it is plain that rate decisions are commonly made without following out completely the formal process for arriving at reasonable rates.

\textsuperscript{94} In re App. of Tide Water Power Co., \textit{id.} at 18.
\textsuperscript{95} In re Pet. of Piedmont Power & Light Co., \textit{id.} at 37. The language of the report is obscure with regard to the nature of the deficit. At all events nothing was said about value, fair rate of return, etc.
\textsuperscript{98} N. C. CODE ANN. (Michie, 1931) §1068.
CONTROL OF ELECTRIC RATES

founded on evidence unearthed through its own investigations. The small consumer of current is in no position to demonstrate that electricity rates are unreasonable; evidence of the reasonableness of rates for a utility of any size, including an appraisal of the utility property, is exceedingly costly to obtain; therefore, save in those instances where some alert municipality has acted to represent its citizens by presenting and substantiating a rate complaint before the commission, the case of the small consumer has in the past gone by default.

There are a number of reasons for this inactivity. First, there seems to have been a belief that prior to the expansion of the commission's power in 1931 the commission had on authority on its own initiative to fix rates, but was obliged to wait for complaints. If this was ever true it is true no longer. Second, funds for the expensive work of conducting valuations have been lacking. Third, experience elsewhere with rate making founded on valuations including cost of reproduction, as already pointed out, has not been such as to stimulate optimism concerning its success.

Would it be desirable for the commission to value the properties of electrical utilities and to fix rates calculated to allow a fair return on those fair values above operating expenses, in view of the uncertainties in the process, the prospect of litigation contesting the results, and the expense? Perhaps the commission should not attempt to

100 The Associate Commissioners provided for under our present law are frankly expected to act only in matters pending before the commission. The initiative of the commission is centered in the Utilities Commissioner. P. L. 1933, c. 134, §10.
101 City of Wilmington v. Tide Water Power Co., supra note 32.
102 P. L. 1931, c. 455.
103 WADDELL, op. cit. supra note 89, at 8. Dr. Waddell states that "until recently" the commission was not empowered to initiate rate proceedings "in a wholesale manner" but was obliged to wait for petitions and complaints.
104 See P. L. 1913, c. 127, §2, conferring on the commission control of electric rates. The commission is given the same control as it already had over railroad rates. See for this authority N. C. Rev. Stat. (1905) §§1099, 1106. There appears to be nothing in the general grants of authority over rates to justify the conclusion that the commission must wait for complaints.
106 "This state never has made any expenditures for the setting up of values of the particular utility properties through extensive appraisals," etc. N. C. Corp. Comm. Rep. 1931-32, IX.
107 WADDELL, op. cit. supra note 89, at 600, sets forth estimates of the cost of appraising the North Carolina properties of four large electric companies operating in this state submitted by eight engineering concerns. The estimates ran from $133,000 to $550,000, depending on the engineering concern and on whether the inventory and appraisal was to be wholly independent or whether it was to be a check of information given by the utilities. Dr. Waddell says,
appraise all the property of all the utilities in the state. But when the commission has reason to believe that the rates of some particular utility are too high, the commission may well value its property and fix its rates, not because there is any mathematical certainty that the valuation will be accurate and the rates arrived at exactly what they should be, but because rate fixing applied to the companies whose rates are most objectionable is a means of putting pressure on all the utilities to keep their rates within bounds. Rate making under the orthodox method is no application of a formula producing as an answer the exactly fair rate. Nevertheless rate fixing is a means whereby the public can keep pressure on the utilities to hold their rates down. If pressure from representatives of the public were abandoned, there is little doubt that many companies would take advantage of their monopoly of an essential service to charge exorbitant rates.

INVESTIGATION, NEGOTIATION, AND COMPARATIVE RATES

There are other means of applying pressure to keep rates within the limits of reasonableness. One is investigation. Official inquiry into rates of utilities, and private research and dissemination of information, are indispensable means of making utility operators reluctant to overstep the bounds of fair dealing. Another is negotiation. The North Carolina Commission in 1932 by conference [at 7] the appraisals would cost “possibly a half million dollars, require a year or more to complete, afford no immediate relief, and, when completed, would represent the opinion of one group of engineers and accountants to be contested by a like group followed by court complications dragging out through the years.”


The General Assembly in 1933 made available, subject to the control of designated state officers, the aggregate sum of $35,000 annually for investigation of utilities, appraisals, audits, and determination of fair rate structures. P. L. 1933, c. 519. While this is not enough for valuations of all utility properties in the state in the near future, it is enough to procure appraisals of particular utilities whose rates may be thought too high.

It would be possible through appropriate legislation to solve the problem of cost of rate fixing by assessing the cost against the utilities as an operating expense. This cost would then be eventually paid by the consumer. It is reasonable that he should pay the cost of his own protection. A partial recognition of this principle existed in N. C. Code Ann. (Michie, 1931) §1032, repealed by P. L. 1933, c. 134, §1. See also Ely, Federal and State Attitudes Toward Public Utilities (1934) 13 P. U. Forr. 283 at 288. For a specific illustration of legislation embodying this principle see Vt. Laws 1925, No. 85, p. 127.

In re Conferences on Public Utility Rates and Service, N. C. Corp. Comm. Rep. 1931-32, XVII. The commission points out that rate controversies are expensive and subject to long delays, and advocates negotiations where possible.
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with four of the large electrical utilities of the state secured rate reductions estimated to produce an aggregate lowering of charges to consumers of $1,167,000 per year.\textsuperscript{111} Negotiations are, of course, stimulated by the commission's rate fixing authority left behind the door.

Comparison of rates with other rates is a further source of pressure on utilities to keep their charges down.\textsuperscript{112} When the same com-

\textsuperscript{111} N. C. Corp. Comm. Rep. 1931-32, III and IV; WADDELL, \textit{op. cit. supra note 89}, at 2. Dr. Waddell estimates the total reductions at $1,107,000.

\textsuperscript{112} The latest North Carolina comparative rate study known to the writer is that to be found in WADDELL, \textit{op. cit. supra note 89}. Dr. Waddell makes a study of electric rates, especially the residential rates of four large companies operating in this state as compared with the average of residential rates charged in the 177 cities of the United States having a population of over 50,000. From Dr. Waddell's studies it appears that both before and after the rate changes of the fall of 1932 (\textit{supra note 111}), the North Carolina charges of three companies were higher for given amounts of electricity per month than in the average of the 177 cities. See graphs, pages 10, 114, 223, 320 and 421.

Conclusions to be drawn from such comparisons should take into account the usual differences under which companies operate, as pointed out in the text. The validity of the comparison between charges of North Carolina companies and average charges in 177 cities having a population of 50,000 or over depends also on whether the rates for substantially all those cities are system-wide rates charged by companies operating in those cities and in other less populous territory, or whether there are a substantial number of instances where the rates are city wide only. City wide rates are scarcely comparable to the system-wide rates charged by one of the North Carolina companies involved.

Dr. Waddell's figures for the average of the 177 cities are taken from a study made in 1932 under the direction of City Commissioner Geo. W. Page by Mr. Otto P. Ortlieb, Engineer of Street Lighting of the City of Trenton, N. J. The cities are listed by states, and the states by regions, such as New England States, Middle Atlantic States, etc. The charges per month for given quantities of current are shown for each city, and the average for each area is likewise shown. The average charges in the five North Carolina cities having a population of 50,000 or over compared as follows with the average charges for all such cities in the South Atlantic states:

<table>
<thead>
<tr>
<th>K.W. used per mo.</th>
<th>N. C. Cities</th>
<th>South Atl. Cities</th>
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<tr>
<td>0</td>
<td>1.04</td>
<td>.91</td>
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<tr>
<td>10</td>
<td>1.10</td>
<td>1.08</td>
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<tr>
<td>20</td>
<td>1.69</td>
<td>1.71</td>
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<tr>
<td>30</td>
<td>2.40</td>
<td>2.39</td>
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<td>40</td>
<td>3.02</td>
<td>3.02</td>
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<tr>
<td>50</td>
<td>3.64</td>
<td>3.64</td>
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<tr>
<td>80</td>
<td>5.38</td>
<td>4.86</td>
</tr>
<tr>
<td>100</td>
<td>6.49</td>
<td>5.72</td>
</tr>
</tbody>
</table>

Since this comparison rates both in North Carolina [\textit{supra note 111}] and elsewhere have been reduced.

Anyone desiring to compare rates charged by a private company in any city having a population of 20,000 or over with rates in other such cities anywhere in the United States and Canada may do so by use of the rate book published by the Edison Electric Institute, 420 Lexington Ave., N. Y. C. Therein he will find rate schedules maintained in all such cities. From these schedules he may calculate the cost for any given amounts of electricity per month for any purpose such as residential use, etc., in the various cities.

The Rankin-Norris resolution passed by Congress and signed by the Presi-
pany supplies service both in North Carolina and another state it has been suggested that lower rates in the other state may justify establishing the same rates here.\textsuperscript{113} The difference between the rates of one company and those of another within the same state is a fertile source of investigations. Comparison of rates now with rates in the past is likewise a regulatory force.\textsuperscript{114} The urge responsible for present movements for rate reductions is the belief that if rates five years ago were reasonable, then the present rates under a depressed general level of prices are too high. Comparisons between rates in one state and average rates elsewhere also perform a function. If the comparison is unfavorable, this may be the source of public clamor which pushes the commission into activity. Further, the action taken by the commission is likely to be influenced by the same comparison.\textsuperscript{115}

Of course, comparisons are not always fair. It may be more expensive to supply service in one state or locality than in another. Availability of water power, distance to coal fields, density of population, the type of demand, the physical character of the region over which the lines extend, and other factors all contribute to justifiable differences in rates.\textsuperscript{116} Nevertheless, if one company charges more than another, the question why is likely to be raised, and justification required. If rates in one state are higher than in others, the same result follows. This enables states having weak commissions to hitch hike at the expense of states where regulation is more efficient. The efficient states succeed in keeping rates reasonable.

dent April 14, directs the Federal Power Commission to investigate and compile electric rates throughout the country. N. Y. Times, April 15, 1934, at 8. From the resultant compilations it will doubtless be possible to make ready comparisons between charges anywhere in force and charges for similar service anywhere else in the country.

\textsuperscript{120} Corp. Comm. v. Cannon Mfg. Co., \textit{supra} note 37, at 30. See also the concurring opinion of Clark, C. J., at 36.

\textsuperscript{124} N. C. Corp. Comm. Rep. 1921-22, 3. The commission speaks of authority, "to adjust public utility rates as the cost of rendering such service may advance or decline."

\textsuperscript{125} For an instance of a frank undertaking to adjust rates in this state on the basis of average rates elsewhere, with allowances for local conditions, see WADDELL, \textit{op. cit. supra} note 89, 7, 8. On one occasion the North Carolina Board of Railroad Commissioners sustained against complaint certain freight and passenger rates partly by comparison with previous rates and with rates elsewhere. In re Assessment and Taxation, and Revision of Freight and Passenger Tariffs, N. C. Board of R. R. Commissioners Rep. 1897, 468. In its report for 1931-32, page VII, the Corporation Commission states that it has under consideration telephone rates, and then inserts extensive tables showing rates in North Carolina and four neighboring states.

\textsuperscript{129} See In re Pet. of So. Power Co., \textit{supra} note 99, at 46; WADDELL, \textit{op. cit. supra} note 89, at 401, 404, 405.
ating in states where regulation is weak cannot charge too much more than these reasonable rates without attracting attention.

If rates in one state are higher than in others this may be evidence that they are too high; but a slender protection to the public is offered by such comparisons. The average of rates elsewhere may be too high, also, due to the failure of commissions generally to function according to expectations, a failure which has caused a nationwide seething of discontent with existing utility regulation, and has produced an outburst of legislation to improve it.\textsuperscript{117}

**Public Ownership**

The spirit of the times has made more formidable than ever another force which helps to keep utility rates in check. That force is public ownership. It has recently made tremendous gains.\textsuperscript{118} Production and sale of electricity under public ownership acquired prestige with the passage of the Tennessee Valley Authority Act of 1933,\textsuperscript{119} setting up a corporation, the board of directors of which are appointed by the President of the United States, by and with the advice and consent of the Senate,\textsuperscript{120} to which corporation are entrusted electricity producing properties of the United States Government at Muscle Shoals.\textsuperscript{121} The corporation is to hold other such properties to be constructed elsewhere.\textsuperscript{122} It is given power to construct dams, reservoirs, power houses, power structures, transmission lines and incidental works "in the Tennessee River and its trib-

\textsuperscript{117} Burgess, *Recent Trends in Public Utility Regulation* (1933), a paper presented at the annual meeting of the Association of American Law Schools, and available in pamphlet form. Mr. Burgess says, page 1, "Certain it is that the past year has witnessed the placing upon the statute books of our several states of more new utility regulations than in any other year during the last twenty." See also Rooks and Booth, *Current Problems of Public Utility Rate Regulation* (1933), a paper presented at the same meeting.

Mr. David E. Lilienthal, Power Director of the Tennessee Valley Authority, in an Associated Press article dated at Washington, Feb. 17, 1934, points to a growing conviction that regulation by commissions has proved inadequate and says that Congress passed the Tennessee Valley Authority Act, post note 119, to supplement such regulation.

\textsuperscript{118} Legislatures in seventeen states at their recent sessions passed laws designed to further ownership and operation of utility plants by states, counties, or cities. Burgess, *supra* note 117, at 2. See also the Tennessee Valley Authority Act, post note 119; and the report of Mr. Joseph B. Eastman, Federal Coordinator of Transportation, *N. Y. Times*, Jan. 21, 1934, at 26, expressing the belief that the ultimate solution of the railroad problem will be public ownership and operation.

\textsuperscript{119} 48 STAT. 58 (1933), 16 U. S. C. A. §831 (Supp. 1933).

\textsuperscript{120} Id. §2a.

\textsuperscript{121} Id. §7a.

\textsuperscript{122} Id. §§17, 18.
The corporation is to perform numerous functions, including the manufacture of fertilizer and explosives, improvement of navigation, and flood control. Surplus power is to be sold, and in the sale of current preference is to be given to states, counties, municipalities, and cooperatives not organized or doing business for profit, but primarily for the purpose of supplying electricity to their own citizens or members. This declared policy of giving a preference to states, counties, and especially municipalities, over private companies, is a tonic to public ownership of distributing systems. Moreover, the incorporation into the new national program of this scheme for government production of electricity on a large scale is a countrywide stimulant to public ownership.

The presence of public ownership and the threat of its expansion is a virile regulatory influence on private companies. Commission control is artificial; and it may itself be controlled or circumvented. The danger of public ownership operates directly on the frame of mind of the private utility owners, and gives them a motive for desiring to serve well and cheaply.

A second fashion in which public ownership makes good its claim to be included as a means of regulating privately owned electric systems is by furnishing a yardstick wherewith to measure the rates and service of the privately owned plants. If municipal rates are

123 Id. §§4j.
124 Id. §§10, 11.
125 The assertion is becoming popular that utilities control the government machinery which controls them. See Levitt, supra note 67; Lilienthal, supra note 117. This popular belief may gain impetus from the recent sensational disclosure by the Federal Trade Commission of "apparently compromising correspondence" between a New York state legislator and a public utility company. N. Y. Times, April 1, 1934, at 1 and 2.
126 The recent North Carolina requirement [P. L. 1933, c. 307, §34] that municipalities supplying certain types of utility service, including electricity, file reports with the Utilities Commission giving the same information as that required from private utilities, should be valuable as a means for making comparison with private plants easier.

Waddeel, op. cit. supra note 89, at 506 sets forth a graph of monthly charges for quantities of current from 10 to 100 kwhr in the average of 41 North Carolina municipalities owning generating or distributing systems, as compared with average charges made by private plants in the 177 cities of over 50,000 reported in Ortlieb, op. cit. supra note 112, and with charges in the 13 such cities which own municipal plants. The latter charges are also reported by Ortlieb. The graph shows the charges for the North Carolina municipal systems to be much higher for any quantity of current than the charges for the 177 cities. The comparison is not strong evidence against the municipal plants, however, because the figures used on the graph for the municipal systems are the figures for residence lighting (this may be seen by comparing the
lower than company rates the companies are called upon to explain. Unfortunately, many if not most municipal plants fail to function as yardsticks. Comparisons between different utilities are always hampered by dissimilarities in conditions, as already outlined. Comparisons between private plants and public plants are hindered by additional dissimilarities. In some municipalities rates are higher than the usual company rates in comparable cities because the municipal plants are made to pay a portion of the expense of the city government. Thus users of electricity are raided for the benefit of the taxpayers. In other municipalities rates are lower than the usual company rates, but investigation shows that the municipal plant pays no taxes or less taxes than a private plant would pay, and that the bonds of the municipal plant are obligations of the city, thus enabling the municipal plant to borrow money cheaply by making it a present of the credit of the taxpayers. Further, the rates of a private company may be fixed for the whole system supplying an area including much lean territory where towns are small and customers few. It is hardly fair to compare the rates in some large city served by the company with the rates in a similar city served by a municipal plant, which plant serves the city only. Its rates are not the average rates for a whole area, but the rates for a select spot. Conversely, the municipal rates in some poor little town should not be compared with the rates of a private company for some town equally poor and little, when the company rates are system rates for a whole area averaging much richer and giving the company the advantage of large scale production besides. Comparison between rates under municipal ownership and private ownership is a valuable means of measuring the reasonableness of the private rates only where the

127 See Elizabeth City Water & Power Co. v. Elizabeth City, supra note 41. Plaintiff water company sought to enjoin defendant city from performing certain acts connected with the erection of a municipal plant, and set up, among other matters, that the municipal plant would offer unfair competition because plaintiff was obliged to pay taxes which the municipal plant would not pay. The court properly held that this was no ground for an injunction. Nevertheless the company's plaint that the municipal plant had an unfair advantage is genuine. Municipal plants should pay taxes.

128 Balanced against this advantage is the company's large scale production.
private systems and the municipal systems are operating under comparable conditions.\textsuperscript{129}

North Carolina has given all cities and towns\textsuperscript{130} authority to own and operate electric systems.\textsuperscript{131} Bonds for the cost of plants may be issued without a popular vote.\textsuperscript{132} The municipality does not impair the obligation of an existing franchise by establishing a municipal system, if the franchise is not exclusive.\textsuperscript{133} The current from the system may be furnished beyond the municipal boundaries. The statute so providing does not limit the distance the municipal lines may go outside the boundaries.\textsuperscript{134} This extraterritorial power is

\textsuperscript{129} One of the purposes of the Tennessee Valley Authority Act, supra note 119, is to furnish a yardstick to measure the reasonableness of the rates of private companies. Lilienthal, supra note 117; Levitt, supra note 67. The yardstick must be used with care or private utilities will be declared short whereas in truth the yardstick is five feet long. In the first place the Tennessee Valley Authority (T. V. A.) is authorized by section 15 of the act to issue bonds on the credit of the United States, bearing not more than 3\% interest. Further, by section 14 the value of the T. V. A. facilities is to be "allocated and charged up to (1) flood control, (2) navigation, (3) fertilizer, (4) national defense, and (5) the development of power." If in determining cost of current the cost of each dam and plant is to be distributed among these items and only a portion considered in cost of electricity, then that electricity can be sold at rates not comparable to private rates. Private companies cannot in this fashion kill several birds with one stone thus reducing the cost per bird. For a round criticism of the T. V. A. yardstick from the private utility viewpoint, see Lawrence, \textit{Utility Investments under the Birchrod and Yardstick} (1933) 12 P. U. Fort. 689.

\textsuperscript{130} N. C. CODE ANN. (Michie, 1931) §§2777, 2786.

\textsuperscript{131} \textit{Id.} §§2787-3, 2807, 2832. Waddell found in this state 9 municipally owned generating plants, and 38 municipally owned distributing systems retailing current purchased wholesale from private power companies. \textit{Waddell}, \textit{op. cit. supra} note 89, at 501. The North Carolina Local Government Commission has recently approved a bond issue of $746,000 for the city of Lexington to be spent largely in erecting a municipal steam plant for generating electricity. The Federal Public Works Administration will be asked to finance the project. (1934) 13 P. U. Fort. 127.

\textsuperscript{132} Fawcett v. Mt. Airy, 134 N. C. 125, 45 S. E. 1029 (1903), overruling earlier cases; Elizabeth City Water & Power Co. v. Elizabeth City, \textit{supra} note 41. The expense is a necessary one within N. C. Const., Art. VII, §7.

\textsuperscript{133} Hill v. Elizabeth City, 291 Fed. 194 (E. D. N. C. 1923), \textit{aff'd.} 298 Fed. 67 (C. C. A. 4th, 1924).

\textsuperscript{134} N. C. CODE ANN. (Michie, 1931) §§2807. The right to furnish current beyond the municipal limits applies although the municipality operates only a distributing system. Holmes v. City of Fayetteville, 197 N. C. 740, 150 S. E. 624 (1929), dismissed for lack of a Federal question, 281 U. S. 700, 50 Sup. 353, 74 L. ed. 1126 (1930).

In spite of this general statute, passed in 1929, authorizing service outside the municipal limits, the legislature continues to empower by special legislation particular municipalities to extend lines beyond the boundaries. Priv. L. 1931, c. 65, empowers the Town of Tarboro to extend its electric system beyond the corporate limits without restriction as to distance. Pub. Local L. 1931, c. 31, grants to municipal electric plants in Beaufort County authority to extend their lines into territory within Beaufort and adjoining counties.
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important, since private companies are finding it profitable to organize large systems serving many localities. The publicly owned plants will be less effective if held in the strait jackets of municipal boundaries. The regulatory force of potential public ownership in this state would be given additional vigor by general laws permitting combinations of municipalities to operate systems, or authorizing the operation of systems over large areas by special regional bodies. Such expansion of the legal machinery for public ownership could be safeguarded by statutory provisions for the administration of all public plants, freeing the managers so far as possible from local politics. A state agency already exists which would hold in check bond issues for erecting and extending the systems, thus curbing the exuberance of municipal promoters.

See Guild, Special Municipal Corporations (1929) 18 Nat. Mun. Rev. 319; Burgess, supra note 117, at 2. Mr. Burgess speaks of recently enacted state statutes "authorizing public utility districts for the ownership and operation of public utility plants, or ownership and operation by the state itself."

Means for accomplishing this purpose to some extent are specified qualifications designed to keep out all except trained men, selection of managers by boards serving without pay after the model of school boards, independence of the managers from political bodies of the local government, adequate salaries and long terms. The writer believes that divorce of management from politics could be furthered by appointing the managers for an indefinite period, and then submitting to the voters at long intervals the single question, "Shall the present manager of the municipal utility be retained?" Until a negative vote no one would be permitted to offer himself or anyone else as a candidate for manager. Thus no one would ever "run against" a manager, and the voters could pass on his competence as a single issue.

N. C. Code Ann. (Michie, 1931) §2492(1)-2492(51).