STANDARDS OF SERVICE FOR TELEPHONE, GAS AND
ELECTRIC UTILITIES IN OKLAHOMA AND OTHER
SELECTED STATES.
STANDARDS OF SERVICE FOR TELEPHONE, GAS AND ELECTRIC UTILITIES IN OKLAHOMA AND OTHER SELECTED STATES.

by

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Dean of the Graduate School.
I. PUBLIC UTILITIES AND PUBLIC WELFARE.

In beginning a comparative study of standards of service of public utilities it is well to review briefly their nature and development and the development of their regulation. Although this study cannot go into a detailed analysis of conditions of development, characteristics of utilities and a review of cases concerned with regulation a general discussion will enable the reader to grasp more readily what follows.

This study relates particularly to telephone, gas and electric utilities and special attention will be given to Oklahoma. Some consideration will also be given to other industries "affected with public interest". In a general history of the industry railways, water supply, sewers and other public utilities will be considered because the telephone, gas and electric divisions are of comparatively recent development and certainly all will agree that only in the past few years have they occupied any marked commercial importance which would make their regulation necessary.

Possibly the earliest form of public business on record was the public wells of ancient times, then followed the public works of the Romans which includ-
ed water and sewer systems and highways. The Greeks maintained public baths. Cities on the Mediterranean Sea improved their harbors and there are records of canals in China dating from very ancient times. Later certain cities provided for the lighting of streets by means of flickering oil lamps thus marking another step in advancement of public works. (1)

These forms of public service represent only the beginnings in ancient times, but they were to have their influence in that such service was to come into use as time advanced. These early developments were not only the recognition of the necessity for such service but also the concept that such service should be controlled by government authority.

The public works program had a severe set-back during feudal times and many of the improvements already in evidence were destroyed by invading armies or fell into disuse and decay. The growth of cities halted, and very little commerce was carried on between the different countries or communities. The constant warring between the feudal lords was scarcely conducive to development of public works of any kind. (2)

After the feudal lords had held sway for some time, kings gradually regained power and with the

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(2) Ibid. Pages 15-16.
unification of their kingdoms cities had marked growth and commerce began to spread to distant lands and public improvements once more were in evidence. The industrial revolution had its effect on the progress which was rapidly taking place. The invention of many machines made the economic order more complex and social problems increased. The division of labor, with its many evils, both apparent and real, which was taking place cast its shadow over the future of industrial and social development. (3)

Government monopolies were in some instances abused by rulers who had no desire to promote the welfare of the public. Private monopolies were often granted to friends and followers in payment for services and these privileges were also managed for the benefit of the few and the detriment of the many.

As private capital entered the field to furnish public services still further abuses were evident. Failure to recognize the nature of the service offered may be charged with part of this tendency. The general conception was that the operator should as much as he wish and that competition should be encouraged among such companies as among those in other types of business. It was the common belief that only by keeping

(3) Ibid. Pages 15-18.
bidding against each other for business could the lowest rates to the consumer for the services be had.

This attitude held for many years and long after the railroads became of widespread importance in this country this policy was followed. As time went on an effort was made to eliminate competition, duplication of service, and to stop price wars. Legislative bodies were beginning to realize that such services were necessities in the present economic order and to regulate their sale by law.

Under present conditions the water supply, gas and electric supply, telephone and transportation service are practically indispensable. Compare these services with police protection, street maintenance and lighting, fire protection and sewers, courts, and schools of our cities today. Schools close for vacations, police take a holiday, and courts are closed at times, but suppose the gas supply was shut off, local transportation stopped or telephones ceased to operate for a few hours in one of our metropolitan cities. Picture the water supply non-existent or the electric current absent from the transmission lines for a short time and the fire protection system is useless, the sewers are out of order and the street lighting systems cease to be of any benefit. We must
recognize the great importance of both the public utilities and the public institutions for they must exist together and operate efficiently in order that the public may be best served. (4)

In quite recent years changes in organization of companies furnishing services of a public nature have taken place. The first companies were small local undertakings financed by local capital in most cases and intended to serve only local groups. Then came the "trust" which tended to centralize the management, but this method of organizing the operating companies was soon declared illegal. In a short time other means of control were devised to bring the smaller companies under one management. As improvements in technical operation came and production increased the operations of single companies spread to other communities. Consolidation has taken place, thereby bringing a number of smaller companies together under a single management. A company financially strong and favorably situated has in many cases acquired the property and franchise of smaller companies. This consolidation has brought about more economical operation through technical changes and because of their size they are able to realize other savings not available to the smaller companies. (5)

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Increasing centralized control of the industry has been brought about by the holding company form of organization. By this system a large number of small operating companies and in many cases very large operating companies have been brought together under one management. This form of organization has many advantages to the small operating company which cannot employ highly trained technical skill and are too small for the most efficient administrative and financial management. Too, in many cases, this centralized control results in advantages to the consumer in that he is assured more constant and efficient service. The large holding company employs a staff of capable engineers, financial and legal advisers and executives who direct the general policies of the operating companies and furnish them advice concerning equipment and construction which would not be readily available to the small company otherwise, or at any rate only at a prohibitive cost. (6)

The holding company also has the advantage of being able to purchase construction materials and supplies at lower prices than the small operating companies because of the larger lots purchased. Furthermore, the holding company has the advantage in the sale of securities to obtain capital. The holding company being so

(6) Ibid. Pages 9-10.
much larger and more widely known is able to market securities in larger quantities, at lower interest rates, and at less cost per dollar of capital raised than the individual operating companies. This is logical because the securities of the holding company are based on properties of a more diversified character and the location is perhaps widely distributed, thereby making earnings less susceptible to local conditions of prosperity or depression. (7)

The advent of the management company also relates to a centralized control. The management company consists of a highly trained organization employed to manage a group of entirely independent utilities. This group may be managed in this way much more efficiently and with a degree of skill which the independent company could not secure except at a much higher cost. Management company administration of the smaller companies is not brought about by ownership, but merely by contract and the agreement may be terminated by the employing utility.

The management company administration has many advantages over the holding company control, but does not insure the stability of earnings because the financing of the holding company is of a more diversified character. The independent companies in a management group may be affected by depression or prosperity in

their immediate territory or within their industry, whereas, in a holding company, with varied interests, the earnings of the whole group would probably be about the same due to more services rendered and communities served. Holding company and management company administration today represent more than seventy-five (75) per cent of all privately owned public utility property in the United States. (8)

A public utility is a business which furnishes an indispensable service to the public. Each type of service classed as a public utility must be first considered by the courts and so determined by judicial decision. Among those which have been so established are: common carriers by land and water, water supply, gas, electricity, telegraphs, telephones, bridges, warehouses, sewers, hospitals, and ice plants. (9)

The above are not recognized in all states nor does the above list include all the businesses which are classed as public utilities, but it does serve very well as a representative group.

One of the most distinguishing characteristics of a public utility is that it must serve equally all who demand its services. In a discussion of the nature of public utilities we must consider that they are in most cases practically natural monopolies.

Although we cannot say they are wholly monopolistic, competition is so restricted in their field of service that they are much different than enterprises which do not enjoy special privileges. (10)

These monopolistic conditions are advantageous to both the utilities and their customers. Capital costs and fixed charges are so high that any duplication of service brings higher operating costs. The laying of two mains by competitive gas companies or the construction of two transmission lines to serve the same territory by competitive companies would necessitate higher charges for the service rendered if the utilities are to receive adequate return on their investment.

The high capitalisation of public utilities may best be shown by a comparison with the capitalisation of other industries. A public utility on the average has a capitalisation of not less than four times its annual revenues, whereas, some manufacturing concerns have annual revenues amounting to more than three times their capitalisation. Carrying this comparison still farther, the average capitalisation of manufacturing enterprises in the United States is about three-fourths of their annual revenues. (11)

Another particular characteristic of public utilities is that they are public servants. The owner of an
ordinary business may supply the needs of his customers at the time they call for the merchandise or service or he may not as he wishes. He may keep an adequate stock to supply their needs or he may keep a very inadequate stock to supply them. He may charge one customer more than the next if he sees advantage to himself in doing so. Such is not the case with public utilities. They must serve all who apply and make extensions within reason in order to furnish the service. They must maintain an adequate supply at all times even though large quantities are required at one period of the day and scarcely none at other times. They must give equal service to all without discrimination and charge the same price of everyone for the same service. They are subjected to certain rules of liability for loss or injury to their patrons in certain cases which the ordinary business is not subject to. (12)

Public utilities are compensated for these obligations by their earnings being maintained during depression as in prosperity, in theory at least, because they are allowed rates to provide a return on the capital invested. They are also granted the privilege of making reasonable rules and regulations for the conduct of their business. These rules relate to matters affecting the users of the service rendered but ordinarily
arily are beneficial to these users. The utilities are granted the right of eminent domain in many instances and receive special franchises for operation in towns and cities and for privileges to use the streets and alleys of such municipalities.

Because public utilities are allowed adjustments of rates from time to time to meet business conditions, and sometimes for other reasons as well, they have a record of stability of earnings which is not found in any other industry. The service rendered has a relatively constant demand and aids in keeping public utility earnings high. It would seem that the use of street cars, electric lights, and gas changes little during periods of business prosperity and adversity as compared with changes in consumption of many other products and services. Although changes are made in utility rates from time to time so they will conform with changes in business activity there are often some discrepancies. In 1925 the cost of living was about sixty-seven per cent higher than in 1914, while street car fares were only forty-seven per cent higher and gas rates were thirty per cent higher. Electric rates were lower by about eight per cent principally because of improvements in production, the increased use of electric current for industrial purposes, and better
distribution of the load throughout the day and throughout the year. (13)

The development of regulation has come only with the growth of industries classed as public utilities. It has been said that "competition is the life of trade", but in public utility service the reverse is often true and such a system would result in the "death of service". In the control of public utility rates and services we must find a substitute for competition which we do through regulation.

Franchise grants which fixed service standards and rates were found to be inadequate as a means of controlling the public utilities especially after they became large and powerful companies serving a number of communities. These long term franchises did not take into consideration changes in character of the service nor was it possible to forecast possible cost of service under changing conditions. Direct legislation was used for a time to regulate public service companies but proved to be cumbersome and unsatisfactory because a large legislative body or a city council, having many other duties and with no special knowledge of problems relative to public utilities, is so often influenced by political rather than economic reasons. Under such conditions formulation and

(13) Ibid. Pages 22-25.
enforcement of legislation requiring adequate service at reasonable rates is almost impossible. (14)

Regulation by commissions is the delegation of legislative authority to subordinate bodies. Such bodies are a combination of legislative, executive, and judicial branches of governmental power but at the same time separate from those branches in operation. They have power to set forth what shall be done, enforce their rules and at the same time act as a court to determine whether or not its orders and rules are being carried out.

The first regulation of widespread importance was that of the railroads. The railroads were first regulated by the legislatures of the various states, then state commissions were formed, and when it was found that the state commissions could not properly regulate them because of the large proportion of interstate traffic the Interstate Commerce Commission was created to govern interstate commerce leaving only that proportion of traffic represented by intrastate business to the regulation of the state commissions. (15)

The powers of the state commissions have been enlarged and extended to include the supervision of all utilities in many cases and to exercise these powers extensive regulatory and investigational machinery has been put into operation to act for the public

(14) Ibid. Page 93.
(15) Ibid. Pages 93-94.
in maintaining adequate service and to see that the utilities are permitted to earn an adequate return on their investment.

To complicate the problem of state commission regulation a number of utilities operate in more than one state or are affiliated with other companies operating in more than one state. Uniform regulatory methods are considered desirable under such conditions and such standardization is under consideration by committees of associations interested in administrative, regulatory, legal and financial phases of public utility business.
II. STANDARDS OF SERVICE.

This study will consider the statutory provisions and rules and regulations regarding telephone, gas and electric service in the states of Arizona, Missouri, Illinois, Oklahoma, Pennsylvania and Wisconsin. These particular states were chosen for study because their rules were obtainable and because of their geographical location. The rules for representative western and southern states could not be had, either because none had been published, or because the supply had been exhausted. The above states represent the East, the Middle West, and the Southwest sections of the country as well as offering a comparison of regulation in the older and the newer states. Oklahoma is the only state of the six studied for which the constitutional provisions for commission regulation could be obtained for use in this study.

The laws relating to the formation of state commissions and to the delegation of legislative, judicial and executive powers to them will be considered from the standpoint of constitutional provisions and legislative enactments. The state courts authorized to review orders and rules of the commissions will receive some attention as well.
A. STATUTORY PROVISIONS.

First to be taken up will be a consideration of statutory provisions in Oklahoma laws regarding powers and duties of the commission. Then will follow the laws of the other states to be studied and a comparison of the provisions of the other state statutes with those of Oklahoma.

The Corporation Commission of Oklahoma was organized in 1907 having been provided for in the state constitution. The commission is composed of three elective members, serving for a term of six years, who receive a salary of $4,000 per year. In addition to the three commissioners there is a staff of engineers, inspectors, experts, accountants, and stenographers who serve the commission. The total number on the staff within the department is fifty-five including the three commissioners.

By reference to Table I it will be seen that the Oklahoma commission is older than any of the other six studied except that of Wisconsin. The dates given in the table are those for the establishment of the present commissions. The first Illinois commission was established in 1871, but the organization was changed by a new law which became effective in 1921.
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<td>6</td>
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<td>6</td>
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<td>Supreme</td>
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</tr>
</tbody>
</table>

(1) Chairman receives $10,500.
(2) Governor must have consent of the Senate to remove commissioners.

Source: Bonbright Utility Regulation Chart. (1928)
A commission was organized in Missouri in 1876, but a new one was established in 1913. The Pennsylvania Public Service Commission was first organized and established in 1907 and in 1913 the present form took its place. In 1874 the State of Wisconsin established its first Railroad Commission, but the present commission of that state dates from 1905. In Arizona the present commission is the original commission as is that of Oklahoma and dates from the year 1910 when the law creating it was first drawn up.

Further study of Table I will show the number of commissioners in the states selected to vary from three to seven. Three of the six states, Arizona, Oklahoma, and Wisconsin, have three members in their commissions, and in two of these three states the commissioners are elected rather than appointed as is the case in the other four states. The commissions organized at a later date than 1910 have five or seven members, but to say that Missouri has five commissioners and Illinois and Pennsylvania seven because of later organization cannot be verified. As much depends upon the size and ability of the staff assisting the commissioners as upon the number of commissioners.

It is also interesting to note the term of office and the salaries of the commissioners of the different
states. Four states, Arizona, Missouri, Oklahoma, and Wisconsin, have commissioners serving for a term of six years; whereas, Illinois commissioners serve for four years and the Pennsylvania commissioners hold office for ten years. The members of the Pennsylvania Commission receive $10,000 per year which is more than the commissioners in any of the other six states receive. Illinois commissioners receive $7,000, the Missouri commissioners $5,500, the Wisconsin commissioners $5,000, the Oklahoma commissioners $4,000 and those of Arizona are allowed $3,000.

A few words regarding commissions in other states might be of interest in this connection. The State of New York pays each of her five commissioners in the public utility regulatory body a salary of $15,000 and their tenure of office is ten years. The California commission is composed of five members, serving a term of six years and receiving $8,000 per year as remuneration for their services. On the other hand New Jersey commissioners receive only $1,200 for their term of six years. The State of Delaware has no commission to regulate public utilities.

Referring again to table I it will be seen that in only one state studied, Wisconsin, is there no provision for the removal of the commissioners. In Arizona
they may be removed by recall, in Illinois by the governor, in Missouri by the governor or the legislature, in Pennsylvania the governor may remove them with the consent of the senate, and in Oklahoma they may be removed by impeachment.

Before commenting on the state courts which are authorized to review the orders issued and rules formulated by the commissions the constitutional and statutory provisions relative to commission regulation of public utility corporations in the states to be studied will be considered briefly.

The Constitution of Oklahoma sets forth the general powers of the Corporation Commission in the following words: (16)

"The Commission shall have the power and authority and be charged with the duty of supervising, regulating and controlling all transportation and transmission companies doing business in this State, in all matters relating to the performance of their public duties and their charges therefor, and of correcting abuses and preventing unjust discrimination and extortion by such companies; and to that end the Commission shall, from time to time, prescribe and enforce against such companies, in the manner hereinafter authorized, such rates, charges, classifications of traffic, and rules and regulations, and shall require them to establish and maintain all such public service, facilities, and conveniences as may be reasonable and just, which said rates, charges, classifications of traffic, and rules and regulations, and requirements, the Commission may, from time to time, alter or amend....." "The authority of the commission (subject to review on appeal as hereinafter provided) to prescribe rates, charges, and classifications of traffic, for transportation and trans-

mission companies, shall, subject to regulation by law, be paramount; but its authority to prescribe any other rules, regulations or requirements for corporations or other persons shall be subject to the superior authority of the Legislature to legislate thereon by general laws: ...."

The same section gives the commission power to prescribe and enforce rates, inspect books and papers of the public service corporations, act upon discriminatory practices, fix rates upon notice, handle objections, and to arbitrate controversies between a company and its employees.

The Corporation Commission is given powers of a court of record for the taking of evidence, punishment for contempt and has power to enforce its orders and to punish persons or corporations for disobeying its orders. The procedure for appeals to the Supreme Court are given and provision is made that acts of the commission may be superseded only by the Supreme Court. Rules of evidence to be observed in presenting a case to the Supreme Court for review are prescribed. No new evidence, not submitted to the commission, may be presented to the supreme court because the commission has power to certify the facts of each case and state the reasons for such rules or orders as may have been objected to. The Supreme Court may call for further evidence from the commission in which case the commission will investigate and
and submit findings not originally presented to the court. (17)

The Commission's jurisdiction over public utilities is set forth in the statutes as follows: (18)

"The Commission shall have general supervision over all public utilities, with power to fix and establish rates and prescribe rules, requirements and regulations, affecting their services, operation, and the management and conduct of the business thereof, and the method in which same is conducted. It shall have full visitatorial and inquisitorial power to examine such public utilities, and keep informed as to their general conditions, their capitalization, rates, plant, equipments, apparatus, and other property owned, leased, controlled or operated, the value of the same, the management, conduct, operation, adequacy, security and accommodation afforded by their service, but also with respect to their compliance with the provisions of this Act with the Constitution and laws of this state, and with orders of the Commission."

In the above quotation from the Oklahoma Statutes it will be noted that the Corporation Commission shall have "power to fix and establish rates and prescribe rules requirements and regulations, affecting their services, operations, etc." It is in this particular grant of power relating to rules for service that this study is concerned. The rules prescribed by this commission will be compared with those set forth by the commissions in the other states to be considered after a discussion of the statutory provisions in these states relative thereto.

(17) Ibid. Article IX. Sections 19, 20 and 22.
(18) Compiled Oklahoma Statutes. (1921) (Bunn). Chapter 15. Article I. Section 2463.
Considerable similarity exists between the statutory provisions of each state regarding the powers of the commissions for regulating public utilities. As the comparison which follows is surveyed this condition will become more apparent.

The Arizona laws grant regulatory powers to the Corporation Commission of that state in the following words: (19)

"The Commission is vested with power and jurisdiction to supervise and regulate every public service corporation in the state and to do all things, whether herein specifically designated or in addition thereto, which are necessary and convenient in the exercise of such power and jurisdiction; and every public service corporation shall comply with every order, decision, rule or regulation made by the commission in any matter relating to or affecting its business as a public service corporation, and shall do everything necessary to secure compliance with and observance of every such order, decision, rule or regulation."

It is the duty of the Commission to receive reports and statements from the utilities, it may investigate and fix rates, and may order additional facilities to promote the security and convenience of the public whenever deemed by it to be reasonably necessary.

The manner in which the Commission may fix rules and methods of service for utilities is set forth in the following manner: (20)

"Whenever the commission shall find that the equipment, appliances, facilities or service of any public service corporation, or the methods of manufacture, distribution, transmission, storage or supply employed by it, are unjust, unreasonable, unsafe, improper, inadequate or insufficient, the commission shall determine what is just, reasonable, "

(20) ibid. Article 2. Chapter 15. Sec. 692.
safe, proper, adequate or sufficient and shall fix the same by its order of regulation. The commission shall prescribe regulations for the performance of any service or the furnishing of any commodity and upon proper demand and tender of rates, such public service corporation shall furnish such commodity or render such service within the time and upon the conditions prescribed."

Under certain conditions the commission may order connections and joint rates between telephone or telegraph companies, or it may order joint use of facilities by public service corporations when considered advisable. The commission may order safety devices, investigate accidents, establish systems of accounting, order depreciation account to be carried, and may provide rules and regulations for the issue and sale of securities by public service companies.

The Arizona Commission may prescribe standards of service for electrical, gas and water companies and has the right to test appliances in use: (21)

"The commission may ascertain and fix just and reasonable standards, classifications, regulations, practices, measurements, or service to be furnished and followed by all electrical, gas and water corporations; ascertain and fix adequate and serviceable standards for the measurement of quantity, quality, pressure, initial voltage or other condition pertaining to the supply of the product, commodity or service furnished or rendered by any such public service corporation; prescribe reasonable regulations for the examination and testing of such product, commodity or service and for the measurement thereof; establish reasonable rules, regulations, specifications and standards to secure the accuracy of all meters and appliances for measurements; and provide for the examin-
ation and testing of any and all appliances for measurements; and provide for the examination and testing of any and all appliances used for the measurement of any product, commodity or service of any such corporation."

The Illinois Commerce Commission Law specifies the powers and duties of the Illinois Commerce Commission over utilities as follows: (22)

"The Commission shall have general supervision of all public utilities, except as otherwise provided in this Act, shall inquire into the management of the business thereof and shall keep itself informed as to the manner and method in which the business is conducted. It shall examine such public utilities and keep informed as to their general condition, their franchises, capitaliza-

panies the law gives the following: (23)

"The commission shall have power to ascertain, determine and fix for each kind of public utility suitable and convenient standard commercial units of service, product or commodity, which units shall be lawful units for the purposes of this Act; to ascertain, determine and fix adequate and serviceable standards for the measurements of quantity, quality, pressure, initial voltage or other condition pertaining to the performing of its service or to the furnishing of its product or commodity by any public utility, and to prescribe reasonable regulations, for examining, measuring and testing such service, product or commodity, and to establish reasonable rules, regulations, specifications and standards to secure the accuracy of all meters and appliances for examining, measuring, or testing such service, product, or commodity...."

All appeals from orders of the commission are taken first to the circuit or superior court and any appeal taken further is reviewed by the supreme court of the state. (24)

In Missouri the powers of the Public Service Commission are stated by the statutes as follows: (25)

"The jurisdiction, supervision, powers and duties of the public service commission herein created and established shall extend under this act (chapter):

5. To the manufacture, sale or distribution of gas, natural and artificial, and electricity for light, heat and power, within the state, and to persons or corporations owning, leasing, operating or controlling the same; and to gas and electric plants, and to persons or corporations owning, leasing, operating or controlling the same.

6. To all telephone lines, as above defined, and all telegraph lines, as above defined, and to every telephone company, and to every telegraph

(23) Ibid. Article IV. Section 64.
(24) Ibid. Article V. Sections 68 and 69.
company, so far as said telephone and telegraph lines are and lie, and so far as said telephone companies and said telegraph companies conduct and operate such line or lines, respectively, within this state."

General powers of the commission in respect to gas, water and electric corporations are laid down in the Public Service Commission Law. The commission has the general supervision of all gas corporations, electrical corporations and water corporations, may investigate these companies from time to time in order to ascertain the quality of gas or water supplied and methods employed in manufacturing and distributing gas and electricity. The commission may order reasonable improvements to be made to further the safety and convenience of the public. It has the power to fix standards for measurement of purity or illuminating power of gas, prescribe efficiency standards for electric supply systems and to prescribe reasonable minimum and maximum pressure at which gas shall be distributed. The commission may prescribe uniform methods for keeping accounts, may prescribe safe, adequate and efficient property to be maintained and require reports as to the financial operation of each utility corporation. The commission may also inspect meters, approve or not approve incorporation and franchises, regulate securities to be issued, regulate the transfer of franchises,
and may value the property of the public service corporations. The commission shall investigate complaints as to service when made by the mayor of the town or by a petition of twenty-five consumers or purchasers of the commodity or service. (26)

As pertains to the regulation of telephone and telegraph corporations the commission has power and must examine their general conditions, capitalization, franchises, leases and operations with respect to adequacy of service and with respect to their compliance with the law. The commission may investigate such corporations as to "any act done or omitted to be done" either upon its own motion or upon complaint. Telephone and telegraph corporations must provide adequate service and the commission may order repairs or changes either upon its own motion or upon complaint properly filed, in order that proper service shall be maintained. (27)

The Public Service Commission of Pennsylvania has general administrative power and authority to supervise and regulate all public service companies doing business within the state. This grant includes power to inquire into and regulate the service, rates, fares, tolls, or charges of telephone and telegraph companies. The commission may hold a hearing, either

(26) Ibid. Article IV. Sections 69 and 81.
(27) Ibid. Article V. Sections 90 and 92, Par. 1.
either upon its own motion or upon complaint and issue an order or rules and regulations upon its determination of facts. Its jurisdiction extends to service, facilities, rules, regulations, practices, and/or classifications of all public service companies operating within the state. (28)

The powers and duties of the Pennsylvania commission are further enumerated as follows: (29)

"The commission may after hearing had upon its own motion or upon complaint, establish such standards of facilities and service of public service companies as shall be reasonably necessary for the safety, accommodation, or convenience of its patrons, employees, and the public; and require, by an order to be served in the manner herein-after provided upon every public service company affected thereby, the facilities or service of such public service companies to conform to such standards. The commission shall also have power, after hearing had upon its own motion or upon complaint, to require public service companies to make all such repairs, changes, alterations, additions, extensions, and improvements, in and about their facilities and service, as shall be reasonably necessary and proper for the safety, accommodation, convenience, and service of their patrons, employees, and the public.

"In addition to the foregoing expressly enumerated powers, the commission shall have full power and authority, and it shall be its duty, to enforce, execute, and carry out, by its orders, rulings, regulations, or otherwise, all and singular the provisions of articles two and three of this act, relating respectively, to the duties and limitations, and to the creation and the powers, and limitations of powers, of public service companies; and, all and singular, the other provisions of this act, and the full intent thereof, and shall have the power to rescind or modify any such orders, rulings, or regulations."

(29) Ibid. Article V. Sections 13 and 27.
The powers and duties of the Wisconsin Railroad Commission are quite similar to those of the other state commissions. It was impossible to secure a copy of the Wisconsin law relative to provisions for the commission and its powers for this study, but the rules of the commission which set up standards of service have been secured.

By reference to Table II a comparison of the powers of each of the commissions may readily be made. All state commissions studied, except that of Oklahoma, are granted power to regulate the capitalization of public service companies and to control the issue of securities by them. The Oklahoma commission has power to inquire into the capitalization, but apparently only for the purpose of determining the rates to be allowed. The Pennsylvania commission is granted power to regulate the securities issued by public service companies, but only upon a certificate of valuation or certificate of notification.

All six of the states studied grant statutory or constitutional powers to their commissions for the regulation of electric, gas and telephone companies, and in each case these commissions have power to regulate service rendered and to prescribe standards for each type of service. Such rules have been formulated by
<table>
<thead>
<tr>
<th>COMMISSION POWERS</th>
<th>ARIZONA</th>
<th>ILLINOIS</th>
<th>MISSOURI</th>
<th>OKLAHOMA</th>
<th>PENNSYLVANIA</th>
<th>WISCONSIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>TO REGULATE SECURITIES ISSUED</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td>LIMITED</td>
<td>YES</td>
</tr>
<tr>
<td>TO REGULATE GAS UTILITY COMPANIES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>TO REGULATE ELECTRIC UTILITY COMPANIES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>TO REGULATE TELEPHONE COMPANIES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
</tbody>
</table>

(1) Securities are issued on Certificate of Valuation, issued by the commission, certifying that the securities are issued for money, labor done or money or property actually received; or by a Certificate of Notification by the utility to the Commission showing amount, preferences, purpose and terms.

(2) No specific rules for telephone service standards have been promulgated.

Source: Bombright Utility Regulation Chart. (1928)
the six state commissions in order to set up reasonable standards for the service of public utilities, except that the states of Arizona, Oklahoma and Pennsylvania have not set up such rules for telephone service. In Wisconsin and Illinois fairly detailed rules have been formulated for regulating telephone service standards but the Missouri rules could not be obtained for this study. Oklahoma, although without such rules at this time, has them under consideration, but has not officially approved them.

Table III shows that the states of Arizona, Illinois, Pennsylvania and Wisconsin require reports of accidents to the commissions while Missouri and Oklahoma do not. Missouri provides for the investigation of railroad and street car accidents but makes no provision for report of electrical, gas and telephone company accidents. Oklahoma requires the report of serious accidents resulting in loss of property or life by storm or fire. In all six of the states reports of the financial operations of the public service operating companies may be required and are published in all but the State of Arizona. In Oklahoma and Pennsylvania the reports are not open to the public. Oklahoma is the only one of the states studied which does not make specific provision for complaints,
### TABLE III. COMPARISON OF MISCELLANEOUS ITEMS RELATIVE TO REGULATION OF PUBLIC UTILITIES IN SELECTED STATES.

<table>
<thead>
<tr>
<th></th>
<th>ARIZONA</th>
<th>ILLINOIS</th>
<th>MISSOURI</th>
<th>OKLAHOMA</th>
<th>PENNSYLVANIA</th>
<th>WISCONSIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCIDENT REPORTS REQ'D</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>REPORTS OF FINANCIAL</td>
<td>ARE OR MAY BE REQUIRED</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>OPERATION OF PRIVATELY OWNED PROPERTIES:</td>
<td>PUBLISHED</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>COMPLAINTS MADE BY</td>
<td>CONSUMER</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td>PROVISION</td>
</tr>
<tr>
<td></td>
<td>COMMISSION</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td>PROVISION</td>
</tr>
<tr>
<td>POWER TO REGULATE SERVICE OF MUNICIPAL PROPERTIES</td>
<td>NO</td>
<td>NO</td>
<td>ONLY</td>
<td>NO</td>
<td>WATER</td>
<td>ELECTRIC</td>
</tr>
<tr>
<td>INDETERMINATE PERMIT LAW</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
</tr>
</tbody>
</table>

(1) Except Street Car, Intermural and Auto Bus Properties operated by Municipalities.

Source: Bonbright Utility Regulation Chart. (1928)
either by the consumer or by the commission. In each of the other states complaints may be made by the consumer or by the commission itself for investigation. The Arizona, Illinois and Oklahoma commissions do not have power to regulate municipal properties in any phase of service. The Missouri commission may regulate municipal properties furnishing water, gas and electric service and Pennsylvania only water service by municipalities may be regulated by the commission.

Included in Table III is an analysis of the indeterminate permit law with regard to its application to the states being studied. Of the six states only Wisconsin now has such a law in force. The Oklahoma legislature passed such a law and a large number of utility companies of the state had surrendered their franchises to the Corporation Commission in order to receive the extended permit. In December, 1929, the Supreme Court of Oklahoma declared such a law unconstitutional and therefore inoperative. In order to secure an indeterminate permit law in this state a constitutional amendment will now be necessary, unless the Supreme Court should reverse its decision. However, only three states, Wisconsin, Indiana and Louisiana, have an indeterminate or terminable permit law and in Louisiana its operation is limited to cities having a population of 100,000 or more.
In all states included in this study, except Oklahoma, appeals from the commission's orders are taken first to a circuit or superior court and then to the supreme court of the state. In Oklahoma the supreme court reviews the evidence direct from the hearing by the commission on any cases appealed. In each instance when an appeal from the commission's order is made the evidence is certified by the commission and given the reviewing court. The burden of proof lies with the complainant to show the action or order of the commission to be unjust or unreasonable. If additional evidence is discovered subsequent to hearing by the commission, the commission may be ordered by the court to give hearing for such additional evidence and certify the same to the court of review.

Further comparison of the statutory provisions will be postponed until consideration has been given the rules set up by the state commissions regarding standards of service.
B. COMMISSION ORDERS AND RULES DEFINING STANDARDS OF SERVICE.

Consideration will now be given to orders and rules for standards of service in the states of Arizona, Missouri, Illinois, Oklahoma, Pennsylvania, and Wisconsin. This study of rules and regulations was made from those published by the public service commissions of the states studied. Each of the six states named above has rules for gas and electric service but only two sets of rules for telephone standards, those for Wisconsin and Illinois, are available for study. Missouri rules for telephone service could not be obtained and Pennsylvania, Arizona and Oklahoma have prescribed none. The Pennsylvania commission decides each case relative to telephone service upon its own merits and has promulgated no rules as standards of good practice. In Arizona, the telephone companies are operating under the rules of the Interstate Commerce Commission which set forth standards for construction and equipment, but do not relate specifically to the type of service rendered by the utility to the consumer. The State of Oklahoma has no rules for telephone service, but such are under consideration by the Corporation Commission and it is expected that they will be approved shortly but it is impossible to use them in this study.
1. GAS SERVICE STANDARDS.

In this study gas standards of service relate to the quality of gas required, the pressure and to rules regarding measuring equipment. In Table IV standards for quality and pressure are shown while in Table V the rules relating to meters and to records are shown.

Table IV shows that the monthly average B. T. U. (British thermal units) heating value of gas set by the commissions ranges from six hundred for Arizona, to 570 for Missouri, 565 for Illinois and 520 for both Pennsylvania and Wisconsin. The minimum B. T. U. heating value is 550 in the State of Arizona, 550 in Illinois, 530 in Missouri and 500 in the State of Pennsylvania. The State of Wisconsin has no specific minimum B. T. U. requirements but provides for variation in heat value as follows: (30)

"Each utility furnishing gas service must supply gas of such standard of heating value as will enable it to obtain the greatest practicable efficiency with its equipment and the raw materials available, giving due consideration to the uniformity of the quality of the service rendered. A minimum monthly average shall be maintained of not less than 520 British thermal units total heating value per cubic foot, as referred to standard conditions of temperature and pressure. No fluctuations from the standard selected by the individual companies shall exceed 4 per cent below, or 5 per cent above, that standard. The tests to determine the heating value of the gas shall be made anywhere within a one-mile radius of the center of distribution."

TABLE IV. COMPARISON OF STANDARDS AND REQUIREMENTS FOR GAS SERVICE IN SELECTED STATES.

<table>
<thead>
<tr>
<th></th>
<th>ARIZONA</th>
<th>ILLINOIS</th>
<th>MISSOURI</th>
<th>OKLAHOMA</th>
<th>PENNSYLVANIA</th>
<th>WISCONSIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>MONTHLY AVERAGE B.T.U.</td>
<td>600</td>
<td>565</td>
<td>570</td>
<td>NO PROVISION</td>
<td>520</td>
<td>520</td>
</tr>
<tr>
<td>HEATING VALUE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MINIMUM B.T.U.</td>
<td>550</td>
<td>530</td>
<td>520</td>
<td>NO PROVISION</td>
<td>500</td>
<td>(1)</td>
</tr>
<tr>
<td>HEATING VALUE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRESSURE AT METER NOT ABOVE</td>
<td>NO Rule</td>
<td>10 in.</td>
<td>2 in.</td>
<td>8 oz.</td>
<td>8 in.(2)</td>
<td>6 in.</td>
</tr>
<tr>
<td>PRESSURE AT METER NOT BELOW</td>
<td>1½ in.</td>
<td>2 in.</td>
<td>2 in.</td>
<td>2 oz.</td>
<td>1½ in.</td>
<td>2 in.</td>
</tr>
<tr>
<td>UTILITY REQUIRED TO MAKE TEST OF PRESSURE</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>GRAINS OF SULPHUR ALLOWED PER 100 CUBIC FEET OF GAS</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>NO PROVISION</td>
<td>30</td>
<td>30</td>
</tr>
</tbody>
</table>

(1) Must not vary more than 4% above nor more than 5% below the standard selected by the individual company.

(2) Maximum pressure for natural gas may be fourteen inches.

Source: Published rules and regulations of the respective state commissions.
The utilities operating in Oklahoma furnish only natural gas to the consumers and there are no minimum or monthly average requirements for heating value of the gas. The Corporation Commission of Oklahoma has specified, however, that every public service corporation is obligated to furnish a fair, average quality of the general gas production, reasonably suited to meet the needs and requirements of its consumers. (31)

In the State of Illinois, the monthly average heat value of 565 B. T. U. and the minimum heat value of 550 have been departed from in at least one instance wherein a company was allowed to furnish gas having a heating value of 480 B. T. U. because the earnings of the company would be reduced below a fair rate of return if a higher heating value of gas was maintained. (32) Tests had previously been made and results obtained to show that a minimum standard of 450 B. T. U. would secure more efficient operation than a higher standard and not lessen the usefulness of the consumer's facilities. (33)

Further study of Table IV shows some variation in the maximum and minimum pressure standards of the different states studied. The State of Arizona has has no maximum pressure standard having only a minimum standard of 1½ inches of water pressure. Illinois,

(31) Public Utility Reports. 1926 A. Pages 554-569.
(33) Ibid. 1925 D. Pages 16-34.
Missouri and Wisconsin have a minimum pressure standard of 2 inches of water pressure at the meter while the maximum pressure is 10 inches, 8 inches and 6 inches of water pressure respectively. The State of Pennsylvania has a maximum standard of 8 inches and a minimum of 1½ inches of water pressure. In Oklahoma the pressure limits are set in ounces of pressure, whereas, in the other states the limits are expressed in inches of water pressure. Oklahoma limits are two ounces for the minimum and eight ounces for the maximum. It would seem that both methods of expressing the pressure are almost equal since the pressure limits are about the same in each case.

It will be noted that Wisconsin allows a variation of only four inches of water pressure between the maximum and minimum limits while the other states allow a variation of six to eight inches or ounces as the case may be. Oklahoma rules specify a minimum of two ounces and a maximum of eight ounces pressure, but the rule also specifies that on any day the maximum pressure shall never be more than twice the minimum pressure on that day. (34) In Wisconsin the rules provide that the maximum pressure shall never be greater than double the minimum pressure at that outlet with no qualification that it shall apply to only one day. (35)

The State of Arizona makes no provision for variation in pressure whether daily or for each utility, except that the pressure shall never be below 1½ inches of water pressure. The rules of the State of Missouri provide that the maximum pressure on any day at any consumer's service shall never exceed twice the minimum pressure at that outlet on that day. (36) The Illinois rules provide that the daily variation of pressure at the meter outlet shall never be greater than one hundred per cent of the minimum pressure at the outlet of that meter.(37)

The rules regulating pressure variation in the State of Pennsylvania apply to both manufactured and natural gas. The maximum and minimum limits for manufactured gas pressure are 8 inches and 1½ inches of water pressure while those for natural gas are 14 and 1½ inches respectively. The daily variation in the pressure of manufactured gas shall never be greater than 100 per cent of the minimum pressure. In the case of natural gas the daily variation in pressure at the outlet to any one meter on the system shall never exceed four inches of water pressure above or below the normal pressure maintained at such point of delivery.(38)

In each of the states studied the rules provide

that variation in pressure beyond the limits provided shall not be considered an infringement of such rules if the variation was beyond control of the utility. In some instances the variation may be caused by sudden changes in weather conditions and in others by changes in consumer demand and use from time to time without notice to the utility. In such instances it would be injustice to apply the rules strictly.

The utilities in each of the six states are required to make tests of both pressure and heating value at specified intervals. In some of the states studied the utilities having over five hundred consumers in one city must maintain a graphic recording pressure gauge in service at all times. In other states the same rule applies to utilities operating in cities having a population of 2500 or more. It may be necessary for the utility to maintain more than one gauge of the above type if the number of consumers is such as to demand it. In small cities and towns the utility may not be required to maintain such a gauge as described but may be required to have a portable gauge to be used at different points throughout the system. It is specified in most cases that such portable gauges shall be kept in continuous use at all times.
As regards the purity of the gas each of the six states studied, except Oklahoma, permit no more than 30 grains of sulphur to each 100 cubic feet of gas. Oklahoma rules make no provision for such purity, possibly because only natural gas is furnished by the utilities of this state. In none of the states studied is more than a trace of hydrogen sulphide allowed in the manufactured gas furnished. The rules for the State of Missouri not only specify standards of purity with reference to the sulphur content but also specify that not more than 5 grains of ammonia shall be contained in each 100 cubic feet of gas. It is required that each utility whose output exceeds fifty million cubic feet of manufactured gas shall provide and maintain apparatus to determine the total sulphur and apparatus to determine the total ammonia in the gas. However, a gas utility furnishing only water gas or oil gas is not required to have apparatus to determine ammonia contained in the gas. It seems that Missouri is the only state in this study which sets up a limit for the amount of ammonia in the gas furnished and requires the utility to provide equipment to test the gas for ammonia content.

In Missouri, Pennsylvania and Wisconsin each utility whose yearly output of gas is more than twenty million cubic feet is required to maintain a complete standard calorimeter for determining the heat value of
the gas on at least three days of each week. In Illinois a utility furnishing more than 15 million cubic feet of gas per year must have calorimeter equipment which will meet the approval of the commission and must test the heat value of the manufactured gas at least five days of each week. When natural gas is furnished by the utility the heat value must be determined at least three times each year. In other cases the utility is required to make tests as the commission may require them. Oklahoma has no heating value standards for gas furnished and requires no calorimeter equipment to be maintained by the utilities operating in the state. Arizona specifies a monthly average heat value and a minimum heat value but has no rule requiring the utility to maintain calorimeter equipment.

In Table V will be found a number of requirements relating to standards for gas meters. Since the meter is a very important part of the equipment and is the instrument whereby the amount to be charged the consumer is determined it is essential that they be accurate. Rules designed to increase the accuracy of measurement are for the protection of the consumer because the utility is generally careful that the meters do not register less than the amount of gas furnished.
<table>
<thead>
<tr>
<th>METERS</th>
<th>ARIZONA</th>
<th>ILLINOIS</th>
<th>MISSOURI</th>
<th>OKLAHOMA</th>
<th>PENNSYLVANIA</th>
<th>WISCONSIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tested Before Being Placed in Service</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Allowable Error Not Above</td>
<td>3%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Years of Service Allowed Without Test</td>
<td>3</td>
<td>7</td>
<td>5</td>
<td>5 (1)</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Record of Test Must Be Kept</td>
<td>YES</td>
<td>YES</td>
<td>2 YRS.</td>
<td>NO</td>
<td>RULE</td>
<td>YES</td>
</tr>
<tr>
<td>Tested Free By Utility</td>
<td>YES</td>
<td>YES</td>
<td>12 MOS.</td>
<td>6 MOS.</td>
<td>12 MOS.</td>
<td>6 MOS.</td>
</tr>
<tr>
<td>When Consumer Requests</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Referee Tests Made by the Commission</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td>PROVISION</td>
</tr>
<tr>
<td>Refund of Overcharge If Meter is Fast</td>
<td>NO</td>
<td>RULE</td>
<td>YES</td>
<td>NO</td>
<td>YES, IF 3% FAST</td>
<td>YES</td>
</tr>
</tbody>
</table>

(1) Applies to domestic meters only. Large positive meters tested each year. 
(2) If accurate, consumer pays for test; if not, utility must pay.

Source: Published rules and regulations of the respective state commissions.
The position of the consumer is such that he is unable to determine the accuracy of the meter himself because he is unfamiliar with meters and is not able to judge accurately the amount of gas which he is using. It is therefore necessary for the public service commissions of the various states to set up rules of accuracy for meters and prescribe tests to be made.

In considering the rules for meter standards those rules relative to tests before the meter is installed will first be considered. Of the six states studied Missouri is the only one which does not have a specific rule requiring that meters must be tested before being placed in service.

There are specific rules in each state setting limits of time which a meter may be in service without a test of accuracy. These periods range from three years in Arizona to seven years in Illinois. Missouri, Oklahoma and Pennsylvania allow a period of five years to elapse without the meter being tested unless a test is requested by the consumer. In Oklahoma the five year period allowed applies only to domestic meters, because large positive meters must be tested each year and other meters are tested according to their type. The State of Wisconsin allows a meter to be in service not longer than four years without being tested to determine its accuracy.
Provision is made in all six of the states for tests to be made more frequently than above noted if requested by the consumer. In the states of Illinois, Oklahoma and Wisconsin the utility is required to test the meter free each six months if requested to do so by the consumer. In Arizona and Missouri a period of one year must elapse before the utility is required to test the meter free of charge if it is found to be accurate within the limits specified. The consumer may, however, request that his meter be tested more frequently or after a shorter period of time has elapsed from date of the last test than that set forth in the rules and if it is accurate within the limits specified he must pay for the test otherwise the utility bears the expense. In Pennsylvania the consumer may have his meter tested by the utility at any time he desired it and if the meter is found to be in error the utility pays the cost, but if it is found to be accurate within the limits specified the consumer must pay for the test at a rate set by the commission.

Pennsylvania is the only state of the six which has no provision in its rules for referee tests to be made by the commission. In each of the other states a consumer may ask for a test of his meter to be made by the commission and if the meter is accurate within
the limit set in the rules the consumer must pay the fee for such test, but if it is in error beyond the percentage allowed the utility must pay the consumer the amount of the fee paid by him to the commission. The allowable error in each of the states is less than two per cent except in Arizona where an error of three per cent is allowed.

In all of the states considered in this study, with the exception of Oklahoma, the records of meter tests must be kept. Missouri provides that such records must be kept at least two years while the other four states specify no definite period for holding such records.

In the matter of a refund to the consumer when a meter is found to be in error in favor of the utility the rules differ somewhat. Three states, Arizona, Missouri and Wisconsin, have no provision for such refunds, but Oklahoma, Illinois and Pennsylvania make provision for such payment. In Oklahoma if the meter is three per cent fast the consumer shall receive a refund computed for one-half of the period since the last test, but in no case shall this period exceed three months. If it can be shown at what time the inaccuracy of registration began the refund is to be computed for that time. If the meter is slow
the consumer may be billed for the unpaid portion which is to be computed as described above with reference to a refund.

In the State of Pennsylvania the refund is computed from the date of the test back over the entire period of the current bill, but no provision is made for an additional charge to the consumer in case the meter was registering slow at the time of the test. In Illinois the error is considered to have existed six months unless the meter has been installed for a shorter period of time, or the time at which the meter began to register in error can be determined, in which case such period shall be used. If the meter is slow the utility may render a bill for the unbilled portion of the gas used by the consumer in case it amounts to more than fifty cents or the utility is not at fault for allowing the meter to remain in error.

Other specific rules are laid down by some of the states studied but cannot well be compared because there are no rules in the other states of like nature. Oklahoma and Illinois have rules which provide for extensions of service above the free limit. The charges to the consumer for such extensions are outlined in detail and in the Illinois rules illustrations are given of the methods to be used in their computation.
Oklahoma has quite detailed rules as to deposits to be made by the consumers to guarantee payment of bills, the information to appear on the consumer's bill, provisions for discontinuance of service for violation of rules, and provisions for the replacement of meters and changes in location. Missouri also has specific rules relative to rendering of bills, deposits required, handling of deposits by the utility, and detailed rules as to the records to be kept. Oklahoma rules specify records to be kept also and their nature.

2. TELEPHONE SERVICE STANDARDS.

Since it was impossible to obtain rules for standards of telephone service in more than two of the six states selected for study it will be necessary to confine attention to those available and to information obtained from other sources for this study. It is not unlikely that the practices in those states which have published no specific rules are very much the same as those in states that have published them.

The rules under consideration by the Oklahoma Corporation Commission are quite similar to those of Wisconsin and Illinois. Approval of the rules for (39) Permission was given to examine the proposed rules before approval.
telephone service by the Oklahoma commission is being withheld until decision is handed down by the State Supreme Court on a case involving the operation of hotel telephone systems of a special type. (40)

In a study of rules of this nature it is very noticeable that a marked similarity exists between the rules of one state and those of another. It is quite likely, although not verified, that the later set of rules are modeled closely after the earlier set. It is to be expected in any event that the rules of one state for telephone service will be quite similar to those of any other state. It is the purpose of such a set of rules to insure better service to the user of the telephone by the elimination of crosstalk and noise, the limitation of the number of subscribers on each line or exchange to prevent overloading, to insure proper maintenance of equipment, handling of calls and other causes of annoyance. Irregularities and interruptions of service and the revision of directories are also important matters for which regulation is provided in the rules.

Some of the states have specific orders which give standards of construction for telephone lines and central stations and exchanges. In Arizona the Interstate Commerce Commission standards are used as standards of good construction. It is not with

(40) Verbal statement of Mr. Richardson, Telephone Engineer for the Corporation Commission.
standards of construction, however, that this study is concerned, but rather with the type of service rendered by the equipment in use and the operators employed.

Both Wisconsin and Illinois have rules providing that the lines and equipment shall be such as to eliminate all cross-talk and noise as nearly as is practicable. It is provided that the number of subscribers on any one line shall not be greater than is consistent with good service. In Wisconsin the rule recommends that not more than ten or twelve subscribers be placed on one line and if conditions will permit this number should be reduced. In Illinois the rules provide that not more than four subscribers be connected on any local exchange line and not more than ten on any rural line having a length of five miles or less. In the case of longer rural lines not more than fifteen subscribers shall be permitted. In both states service of a higher class is to be rendered to subscribers who demand it.

The Wisconsin rules specify lines for through traffic as follows:

"Rule 3. Each utility, furnishing service alone or jointly with other utilities in two or more cities, villages, or other exchange points, shall provide at least one line for through traffic between such points, along which few, if any, subscribers' instruments are installed."
The Illinois rules require such lines for through traffic much the same as Wisconsin does, but allows no subscribers telephones on the line or lines. In both states it is provided that toll stations may be installed on such lines if through traffic is light, but when such stations interfere with the through traffic they must be removed. More than one line may be required for the exclusive use of through traffic if the number of calls is large enough to justify it.

The Illinois and Wisconsin rules require that tests and inspections be made to determine that the lines, instruments and other equipment are in proper condition and that the utilities shall keep them so. Illinois requires that permanent records of test and inspections be kept by the company along with recommendations of repairs to be made. Traffic studies are required to be made and recorded at intervals of not more than sixty days by each utility in Illinois. These studies are to include the number of calls made during the busy hour and other periods of the day and night, the way in which the traffic is divided between operators and the time of day when the heaviest loads occur. The telephone utilities in Wisconsin are required to have sufficient switchboard capacity and a sufficient operating force to handle the traffic at all times. Traffic studies are also required to
be made frequently enough to show the commission that sufficient operating force to handle the traffic and all equipment necessary for efficient service are being used.

Telephone utilities are specifically required to make reasonable provision against failure of lighting or power service, fires and storms, sudden increases in traffic, illness of operators, or other emergencies which might impair the service if not promptly met.

The rules regarding answering time in both Wisconsin and Illinois are about the same. In Wisconsin exchanges serving five hundred or more subscribers should answer 94 per cent of the calls within ten seconds or less. In Illinois an exchange five hundred city subscribers is considered to be giving reasonably prompt service if 95 percent of the calls are answered within ten seconds or less. All other regular exchanges should answer 90 per cent of the calls within ten seconds or less. Small exchanges where operators do other work may render slower service which will be considered adequate. The utilities are required to adopt rules and regulations covering the phraseology and methods to be used by operators in handling regular and special calls in order to give more rapid and efficient service.
Directories that have more than 1500 subscribers listed in them must be revised at least semi-annually in Wisconsin while in Illinois those having 1000 listed are required to be revised in a like period. All other directories are to be revised at least once each year. In Wisconsin, however, there is a provision in the rules making it unnecessary for exchanges to revise their directories within the period set if the changes to be made are few and negligible. In some instances, however, it is recommended that more frequent revision be made in both states if the changes are numerous. The directories are required to contain instructions and rules governing local and toll service and methods of payment as may be necessary to inform subscribers of their rights and obligations.

The rules of both Wisconsin and Illinois require that each utility shall make reasonable efforts to eliminate interruptions and irregularities and to correct them promptly when they occur. The utilities must keep a record of the complaints and irregularities of service in both states, showing the day and time at which the trouble was reported, the nature of the trouble, its duration, and final disposition. The Illinois commission also has a rule relative to the maintenance of switching lines. It is required
that the utility as nearly as is practicable to do so keep all lines and equipment connected with its exchange in working order.

Neither Wisconsin nor Illinois provide specific rules with regard to the adequacy of toll service but both offer a few suggestions which if followed will aid in giving efficient service. The commissions recommend that the toll messages be routed so as to be most efficient, that each utility should test its toll circuits every morning and after storms in order to eliminate trouble promptly and where toll lines are used jointly by more than one utility the one charged with maintenance should be notified as soon as possible after trouble is discovered. Accurate and convenient timing devices are recommended to be installed in order that charges may be computed correctly and that toll service may not be unnecessarily delayed. The commissions suggest that the operators cultivate not only distinct articulation but low tones and pleasing voice because such will materially aid the service. It is suggested that a record be kept of the condition of long distance circuits entering the exchange for the convenience of the utilities in properly maintaining their lines and for the commission's information.

Such information as was found in sources other than the commission's published rules relative to telephone service are of a more general nature and do
not apply specifically to service standards. Primarily, such information deals with discrimination and competition. The Missouri commission recommended that a telephone company should file a rule when longer hours of service would be furnished by it for a particular season of the year. (41) In another instance the same commission permitted a competitor to enter the established territory of another utility when it was shown that the existing utility was not rendering reasonably adequate service. (42) In Wisconsin the commission ruled that a telephone utility should make a charge for moving telephones from one location to another or for changing the type of instrument because otherwise discrimination would exist. (43)

The above paragraph does not deal with the published rules and regulations for telephone standards of service but is given to indicate the practices in regard to enforcement of rules and the manner of handling cases not covered by the rules. It is obvious that no set of rules could cover every contingency that might arise and at the same time be flexible enough to permit most efficient operation of the utility rendering the service.

(41) Public Utility Reports. 1924A. Pages 625-628.
(42) Ibid. 1926A. Pages 573-581.
(43) Ibid. 1924B. Pages 289-291.
31. ELECTRIC SERVICE STANDARDS.

All of the six states included in this study have a set of published rules setting up standards of good service for that particular state. In Table VI is shown a comparison of the rules and regulations relative to electric service standards and records required in order to determine whether or not the utility is abiding by them.

Examination of Table VI shows that the states studied require that a meter must not be left in service if it registers in error above a specified percentage. In Arizona the allowable error is three per cent, while in Missouri, Pennsylvania and Wisconsin a meter must be in error four per cent before it is required to be removed or repaired and adjusted.

The states of Illinois and Oklahoma allow different percentages of error for meters of different types and take into consideration the load being carried at the time of the test. In Illinois the average error for any type meter should never be more than two per cent. The error at heavy load is not to be more than one per cent for any type meter while the error at light load may run as high as four per cent for commutator and mercury types and
three per cent for induction types. Illinois also has a specific rule relative to accuracy of demand meters and a table showing the allowable error for each load and type. The Oklahoma rules provide that no meter shall remain in service which registers on the average more than two per cent in error. If a meter registers more than plus two or minus four per cent on light load or plus or minus two per cent on heavy loads it shall be removed or adjusted. Demand meters are to be tested in Oklahoma much the same as they are in Illinois. The regulations in each of the six states specify that any meter with an incorrect gear ratio, dial train or other mechanical defect shall not be placed in service or allowed to remain in service.

The second division of Table VI shows that all the states studied require tests of electric meters at the time of installation or within a short time thereafter. It is provided that a meter may be in use up to thirty days in Missouri and Wisconsin or sixty days in Pennsylvania and Oklahoma before the initial test is made. Tests of the meters must be made on the consumers premises after the meter is hung in its permanent position. Periodic tests of the meters are also required and must be made from time to time usually depending upon the type and
TABLE VI. COMPARISON OF RULES AND REGULATIONS RELATIVE TO ELECTRIC SERVICE STANDARDS IN SELECTED STATES.

<table>
<thead>
<tr>
<th></th>
<th>Arizona</th>
<th>Illinois</th>
<th>Missouri</th>
<th>Oklahoma</th>
<th>Pennsylvania</th>
<th>Wisconsin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meter must be removed or adjusted if in error more than 5%</td>
<td>3%</td>
<td>1% (1)</td>
<td>4%</td>
<td>2% (1)</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Meters must be tested before installation</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Periodic tests required</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Records of meters tested required</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Voltage survey req required</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Require records of interruptions</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

(1) Depending upon type of meter and load.
(2) Or within 30 days after in Missouri and Wisconsin and within 60 days in Pennsylvania and Oklahoma.
(3) Utility must also furnish consumer with written report of test.

Source: Published rules and regulations of the respective state commissions.
capacity of the meter. The Arizona rules require that each electric service meter be tested at least once in two years without any qualification as to the type meter or the load. In each of the other states a schedule is given of the period of time which may elapse between tests of meters of various types and capacities. These range from one to four years depending upon the state and the type meter to be tested. In Missouri the periods are from one to two years for the different meters while in the other four states the periods range from one year as a minimum to thirty and forty-eight months as a maximum time limit.

The utilities are specifically required to keep records of the meter tests made and in Missouri the utility is required to furnish the consumer with a written report of the test as well. In each of the states this study covers it is provided that referee tests of electric meters shall be made by the commission in that particular state upon request from the consumer. A nominal charge of from one to four dollars is made for such tests and if the meter is accurate within the limits set by the rules the consumer pays for the test; whereas, if it is in error the utility pays for it and may be required to refund overcharges
to the consumer or may bill him for the unbilled portion of current used if the meter is found to be slow.

Voltage surveys are required to be made by the utilities in each of the states studied and in some instances a graphic recording voltmeter must be in service at all times. In other cases a portable recording voltmeter may be all that is necessary in addition to indicating voltmeters. Arizona is the only state included in this study which does not set up a standard for voltage variation. The variation in the other states is allowed to be from three per cent to ten per cent depending upon whether light or power service. The power service voltage is permitted the widest variation but during certain hours the lighting circuit voltage may vary more than specified. Lighting circuits other than those in cities are allowed greater variation than are those within the city limits.

Each of the states require that a record of interruptions of service be kept. These records must give the time, duration and cause of each interruption. In Wisconsin an explanation of what shall be considered an interruption is given as a period of over thirty seconds during which the voltage on the circuit is less than eighty per cent of its normal value. In
Oklahoma an interruption is defined as a failure of any portion of the system or equipment whereby the voltage is reduced to less than fifty per cent of the standard voltage for a period of three minutes or longer. In every case interruptions shall be taken care of as quickly as possible.

As in the case of gas service rules some of the states included in this study have more complete and detailed regulations than others. The Arizona rules are in both cases more brief than the others and are not as specific. In some of these states the rules describe the nature of the bills to be rendered by specifying the information to appear thereon. In the Missouri rules information is to be found regarding deposits and the manner in which the utility shall handle them with regard to whether or not interest shall be paid to the consumer. Illinois and Oklahoma rules give regulations for extension of lines above the free limit and specify charges that may be made by the utility for such extensions. Illinois has a set of rules regulating rural service which apply to the organization of mutual lines and the service to be rendered to the individuals, mutual lines or corporations. The regular rules for standards of service evidently apply to rural service as well.
Oklahoma and Illinois set up a rule regarding standard frequency. Both states require that each utility adopt a standard frequency and that it shall maintain this frequency within five per cent of the standard chosen at all times. The Pennsylvania rules only require that the consumers be notified and meters tested if the frequency is changed. In Arizona, Wisconsin and Missouri no provision is made for standards of frequency or for changes in frequency.

As in the case of gas service rules the Oklahoma commission has provided for discontinuance of service under certain conditions. Violation of the rules or non-payment of bills or for tampering with measuring instruments or equipment may cause the service to be discontinued. Utilities furnishing either gas or electric service must file maps with the commission each year, or revise them at like intervals, showing the location of lines, mains, substations and other equipment owned by them. Telephone companies operating in Oklahoma are also required to file maps showing location of their equipment such as exchanges, toll and rural lines and routes from town to town. (44) The Oklahoma commission requires that accident records be kept and a report made to the commission if a request is made for one.

It is not to be expected that a study of this nature will deal directly with every specific rule of each state commission but only that it shall be a good sample of the rules of the states studied. The information given should be sufficient to indicate the extent of the study made and to give material necessary for determining adequacy of the rules and regulations in force in each of the six states studied.
III. ENFORCEMENT OF REGULATIONS RELATIVE TO STANDARDS OF SERVICE.

This study is primarily for the purpose of comparing the rules and regulations for standards of service and to a certain extent for a determination of the adequacy of rules in the states studied with particular emphasis on those for Oklahoma. It is thought advisable, however, to devote a few pages to consideration of the enforcement of such rules because such material is of a relevant nature and may serve to disclose obsolete rules and possibly show some facts relative to rules that are yet needed.

If a utility is serving a fairly homogeneous territory wherein the requirements of the consumers are practically the same at all times a set of rules may be drawn up which will be comparatively easy to enforce. It is in those places where various types of service are required that difficulty arises in the enforcement of specific rules. The rules set up by the commissions are a description of good practice and in some instances it may be necessary to alter the requirements. It is sometimes found that a utility can and is furnishing a better grade of service than the rules call for and in such instances they should do so. The commissions should see that all utilities
furnish the best grade of service that they can efficiently, taking into consideration what the consumers are able to pay for the service.

The commissions should regulate the utilities so that they will be modern and progressive. They should first investigate the case thoroughly and then after consideration of all facts relative thereto decide what rules should be promulgated and what means should be devised to enforce them. In connection with the purpose of the commissions the following quotation is given: (45)

"The commissions had been intended to serve as positive agencies to represent the public interest, but they have been gradually transformed virtually into judicial bodies. Particularly in rate cases, they have come to sit principally as judges to receive evidence in legal form from opposing sides, and to base their decisions and orders upon the record thus made. In such hearings they do not actively represent the public, but they pass judgment upon the public side as presented formally by other representatives. This is not only a shift from original intention, but results in inadequate public representation. The company side is, naturally, presented completely and efficiently."

Whether or not standards of service are being upheld will depend greatly upon the machinery provided for investigation and enforcement. A commission may be vested with ample powers for enforcement, but lack funds with which to carry on investigational work necessary to determine whether or not the ser-

vice being rendered is adequate. In some instances the commission may act only upon complaint of the consumer or an official, such as the city mayor, representing a group of consumers. If a commission is properly organized and financed so that it can it should do investigational work continually in order to check the service rendered at all times.

It seems that practically all of the commissions are inadequately financed to carry on their work. They have relatively small sums with which to carry on the work of investigating and regulating companies having enormous capitalization. The salary paid to the commissioners is very low, in many cases, in proportion to the responsibility placed upon them. Competent officials cannot be obtained unless a fair salary is paid and they cannot exercise the powers vested in them unless sufficient funds are provided.

The State of New York pays her commissioners a salary of $15,000 and the five members serving on the commission are appointed to a term of ten years. Both salary and tenure of office are very high when compared with those of many of the other states. A commission recently selected to investigate the question of public utility regulation in New York recommended an increase in the staff and higher pay for the regulating officers. The commission also recommended a spec-
ial counsel to represent the public before the commission and that the commission be given power to regulate holding companies and other affiliated concerns as well as operating companies. (46)

The members of the Oklahoma Corporation Commission receive little more than one-fourth as large a salary as that paid the members serving the New York commission and in many of the other states the commissioners are paid less and the terms of office are even shorter as well. It is to be expected that the New York commissioners and the commissioners of such states as California and Pennsylvania should receive greater compensation for their services because of the volume of work to be performed. It does not appear, however, that such a wide difference should exist.

In order to have an efficient commission for regulating public utility services it should be as nearly as possible free from political influences. It is perhaps debatable whether commissioners should be elected or appointed but carefully-regulated appointments, taking into consideration qualifications for the office, would seem best. It is noticeable that the states having a high degree of industrial development have the appointive type, whereas, in the South, generally speaking, the elective type prevails.

A number of the states give the public service commissions power to regulate the securities issued by public utility corporations while others do not. The Oklahoma Corporation Commission is not vested with such power and one of the other state commissions considered in this study, that of Pennsylvania, has only limited powers. In order to have proper regulation of rates of public utilities the security issues should be under some degree of control. Since the consumer is vitally interested in the price he pays for service the rates are as important or more so than standards of service. The commissions endeavor to adjust rates to such a figure that the consumer receives a maximum of service for a minimum cost and at the same time allow the utility company a reasonable return on its investment. This cannot be done if the management of the utilities is allowed to manipulate securities until the company is overcapitalized. The chairman of the New York commission makes the following statement concerning the manipulation of securities:

"The question which has aroused public comment and certainly has proved of great concern to public service commissions everywhere is the exorbitant prices that have been paid and are being paid by holding companies for properties they have been acquiring. In many instances these prices bear no possible relation either to reproduction value of the property acquired nor to its potential earning possibilities."

If the commissions cannot regulate the issuance of securities, and the holding companies are allowed to capitalize at this enhanced valuation and rates to be adjusted to give a fair rate of return to the holders of securities, then the consumer is in need of other protection. Since holding companies have attained great size and occupy an important place in the operation of public utilities their regulation is very important. The problem of their regulation resolves itself, first of all, into the agency by which they shall be controlled. The state commissions should either be given power to regulate them at least with respect to operating expenses, financing and management policies of the operating companies under their control, or a federal agency is necessary to cope with the problems involved outside the jurisdiction of the state commissions.

Very little attention is given to efficiency of management in the regulation of rates of public utilities. The efficiently managed utility is subject to the same rules for reduction of rates as the utility which is operating with a lower scale of efficiency. Efficiency should be considered in the fixing of rates as nearly as it is possible to measure such efficiency. The following quotation gives one writer's
opinion on the subject:(48)

"Regulation, both by states and by federal government, should give promise of encouraging initiative in management and indeed should give management a fairly free rein, but both operating companies and parent organizations should be held responsible for results and allowed a rate of return in accordance with the contributions which they make toward efficiency in management and toward maintenance of satisfactory service."

There are some people who seem to believe that rules for standards of service will tend to keep the degree of service rendered from progressing because the standards set by the rules will be accepted as satisfactory when it would be quite easy to furnish a much better grade of service. This seems to be the attitude of Mr. L. H. Kinnard, President of the Bell Telephone Company of Pennsylvania in the following quotation:(49)

"There is obviously no simple test for telephone service. All proposals for standards of telephone service include standards to be applied to a considerable number of separate subjects. My observation has been that where such a situation is met, to establish standards for a great number of separate parts is not only misleading, but by its influence toward rigidity, retards progress. In popular parlance, it easily lends itself to the situation where 'alibis' are of as much interest as results. We have found in the management of the telephone business that where certain technical standards of performance are used in detailed operations, we can never allow the attainment of those standards to be used as demonstrating the existence of satisfactory service or vice versa."

"The establishment of rigid standards of telephone regulation, certainly at this stage of the art, inevitably involves a confusion between standards of results and the methods or appliances for producing

(48) Ibid. Page 196.
results. There can be hardly any question that where the character or results of service are not affected, the method by which the results are attained is purely a matter of management and not one of regulation. In a situation such as ours is at present, where it would not be practical in significant language to state standards of service except in terms of methods of production, it would not only be embarrassing to the management of the utility and to the regulatory body, but would dangerously interfere with progress in production methods and in the improvement of the standard of service itself. It is easy to see how this would be so, for if a standard of service is stated in terms of the devices to be used or the methods to be employed, then that part of the organisation expected to secure improvements has its horizon always limited by the consideration of a device or method that may be assumed to be good enough merely because it was officially satisfactory at the time of its adoption.

* * * * *

"Another objection to the adoption of standards of service in the telephone industry is the important one of its effect upon the morale of the working and subordinate supervisory forces. The adoption of standards necessarily requires a close acceptance of the standards as a governing policy for the general management. At the present time any standards must be incomplete and misleading, as they cannot possibly take into proper account substantial differences in conditions. The carrying out of a policy based on certain rigid standards inevitably requires that where the job meets the technical standard requirements, it would be designated as a good job; and where it does not meet the technical standard requirements it would be known as a poor job upon which supervisory work has to be done. The subordinate supervisory forces and the working forces themselves, thoroughly understanding the conditions, would recognize the inadequacy and the misleading character of the tests that would then be applied to performance, and the effect of designating as 'good service' that which is merely technically good under favorable conditions, and as 'bad service' that which is merely technically bad under unfavorable conditions, without taking into account the general and over-all character and
quality of service, would be unquestionably bad and would react, of course, on the service itself. We find it necessary in practical operations to be exceedingly careful on this point and not to use standards for one part of the job that may be easily susceptible to measurement if it is not feasible to adopt standards for another equally important part of the job not susceptible to measurement. To do so inevitably results in lack of balance and bad service, and the discouragement of those who are willing and capable of doing the best over-all job."

Possibly rules which are too specific in their requirements would tend to bring about slower advancement in improvement, but if a set of rules describe minimum service and it is the practice of the commission to encourage the utilities to give better service this should not be the case. Changes in the building of equipment and plant make regulation necessary which cannot be foreseen and provided for in a specific set of rules. These advances must be met as they arise and the service given regulated in accordance with present conditions.

A high degree of uniformity exists among the forty-eight state commissions relative to authority to regulate public utilities. Greater strengthening of many of the commissions and clarification of the law is needed. A uniform utilities law has been proposed and if enough of the states would adopt it there should be less confusion than at present. A copy of this law could not be obtained for this study.
CONCLUSIONS.

This study was conducted largely for determining the adequacy of the Oklahoma rules and regulations regarding standards of service for public utilities and would be incomplete without a summary of what might be done to provide more adequate and efficient regulation. The rules provided by the commission are reasonably complete but proper enforcement is not carried out. The investigational side, especially of a survey type, should be extended and strengthened. Surveys upon the motion of the commission should be more frequent for the determination of changes or improvements which should be made.

The following suggestions are offered for improving the regulation of Oklahoma public utilities and their standards of service:

1. Commissioners should be appointed rather than elected and paid more for their services. This should be done in order to keep the regulatory machinery out of politics more and to attract competent men to the office.

2. Powers of the commission should be extended to the regulation of holding companies and of security issues.

3. An indeterminate or terminable permit law should
be provided for by constitutional amendment.
4. Sufficient working staff and adequate funds should be provided in order that the commissions may carry on investigational work properly.
5. Some means should be devised, after careful study, for recognition of efficiency in management of public utility properties.

Regarding regulation which will apply to all of the states it would seem that a federal commission should be established to regulate utilities in matters outside the jurisdiction of the state commissions. This commission might control interstate service and holding companies in matters beyond the control of the state commissions.
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