GOVERNMENT REGULATION OF PUBLIC UTILITIES IN THE UNITED STATES

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OBVIOUSLY, this is too vast a subject to do more than sketch in a brief address. I shall therefore attempt to indicate only the extent of regulation in the United States—Federal and State—and to present what I regard as some of the essentials in effective regulation. Perhaps also it will be useful to point out some present trends, indicating the status, progress, and problems of public utility regulation in the United States.

This discussion necessarily presupposes a knowledge of the political organization of the United States under its constitution. All regulation in the United States may be considered as (1) Federal, or inter-State, that is, concerned only with the regulation of utility service which extends across State lines, and (2) State, or intra-State, which has to do with the regulation of utility services within state lines only.

Government regulation of utilities in the United States began with the regulation of railroads and has extended in most instances to the other services mentioned. The most recent to come under regulation are inter-State bus and truck service, radio, utility holding companies, and, in certain States, water companies.

The year 1935 was marked by a great increase in powers of Federal departments over Federal utilities, their affiliates, and holding companies. In 1934 Congress created the Federal Communications Commission (F.C.C.) transferring to it the powers of other Federal departments relating to wire and wireless communications and enlarging Federal administrative control over these companies. Among the powers thus conferred was that of prescribing systems of accounts to be used by the various companies under its jurisdiction. In the electric field Congress has extended the powers of the Federal Power Commission (F.P.C.) over electric companies and has charted an entirely new course in relation to holding companies under the Securities Exchange Commission. Very few, if any, States have attempted to bring holding companies under the jurisdiction of State commissions, except in so far as they are particularly involved in the affairs of local operating companies. It would
obviously be impossible for a single State to supervise the operations of holding corporations which may and do extend over several States.

Intra-State regulation, being by forty-eight States, is naturally variable. Its extent and effectiveness depend largely upon the wealth and population of the State and the extent of the public utility companies serving it. Regulation consequently varies from nominal, or perfunctory supervision, collecting statistics, &c., to rigorous and complete supervision. Practically all of the States regulate railroad and electric service. Most States regulate gas, telephone, and bus service. A fewer number of States regulate water and steam service.

Perhaps some of you may wonder, as I did, why this subject was placed on the Conference programme. The President, Mr. Elmhirst, partially clarified the purpose in his opening address. Taking electricity as an example of a public utility, we find that on the economic side its use, as a labour saver and a convenience, is growing very rapidly in this mechanical age, while on the social side there is hardly a single factor or commodity which has as much possibility for adding comfort and conveniences to the farm home, or freeing it from so much household drudgery, as central station electric current. So, with the rise of agriculture to the dignity of business and to higher standards of living, electricity has become one of the essentials of the rural occupation and rural living. Much the same may be said of the telephone, of local bus service, and of other services.

It is my view that rigorous regulation by government of private business should be applied only in the case of monopolies. Public utilities are generally essential monopolies. Lest the attitude of many American farmers be misunderstood, I take this opportunity to say, as one of them, that we do not believe in the attempted control of agriculture in the United States whether in the name of agricultural adjustment or of soil conservation.

I shall discuss the regulation of private utility monopoly as such, rather than as applied solely to rural areas, because I believe that the principles to be applied are the same as to urban areas. Although I know that it has been done in some countries, I believe that it is a mistake to separate service to the urban communities from that to rural areas, first because they are necessarily so closely inter-related in their other common community interests, and secondly because the sources of supply and transmission and distribution are and ought to be common, forming a part of an integrated whole. The segregation of rural areas tends to increase the costs of service to them and leads to government subsidies as in the
Province of Ontario, Canada. The reasonable inclusion of adjoining rural areas with cities and villages tends to simplify distribution, to reduce costs, and to equalize rates; and it avoids government subsidies.

Following this policy in New York State we have been able to establish rates for farmers which are substantially the same as those in cities and villages, except in the lower brackets of consumption where minimum guarantees and slightly higher energy rates have been found necessary to cover the higher unit costs of distribution due to less density of population. These minimum bill guarantees are not effective where consumptions at usual rates exceed them, which is usually at 30 to 50 kilowatt hours of use, and, since the average use of energy on farms is larger than in urban domestic use, the guarantee is exceeded in the great majority of cases. What I shall say as to regulation, therefore, applies equally to rural and urban use.

Since plans for extending rural lines are so diverse in the United States, I shall not discuss them here. It should be said, however, that in New York State approximately 40 per cent. of the farms have central station current; 21,000 rural customers have been added during the past year, and within another year fully one-half will be served.

I have been a member of the New York State regulatory commission for six years, so, because of the familiarity with the situation which the practice of regulation in that State has given me, in the discussion which follows I shall use New York State as an example.

New York State was one of the first to begin the regulation of public utilities. As it is one of the most populous and wealthy States, regulation there is perhaps more advanced in scope and effectiveness than in many other States. Otherwise, the history and function of State regulation in New York are more or less typical of those in other States.

Aside from some regulatory control of railroads, a comprehensive public service law was first passed in New York in 1907 when Charles Evans Hughes, now Chief Justice of the United States, was Governor of the State. Regulation of public utilities in the State is, therefore, now about thirty years old.

The functions of the New York State Commission are set forth in the Public Service Law. They include the regulation of all public utility operations as to (1) rates and service; (2) prescribing of uniform systems of accounting; (3) approval of local franchises and plant construction; (4) authorization of the issuance of all securities; (5) investigation of complaints and accidents; (6) tests and inspections of gas and electric meters and railroad equipment; (7) elimination of railroad crossings; (8) valuation of utility properties.
Its functions of supervision and regulation are applied to the following public utilities: (1) railroads, including street railways; (2) common carriers, including buses; (3) electric corporations (including municipal); (4) gas corporations; (5) steam corporations; (6) telephone and telegraph corporations; (7) water corporations (except municipal).

The Commission has a staff of approximately 350 employees and an annual budget of about a million dollars. It regulates about eleven hundred separate utilities having a total fixed capital of several billion dollars. The Consolidated Edison Company of New York alone claims $1,200 million of fixed capital, and the New York Telephone Company, $750 million. The Commission is also authorized to assess costs of certain investigations against utilities up to one-half of 1 per cent. of their gross income, and to employ special accountants, engineers, and other experts in these investigations. Of these we are employing probably about 100 additional persons. Among other things, the activities of this Commission have resulted in reduced rates to the extent of about $100 million in the last six years. That is, the rates of 1936, applied to the consumptions of 1930, would produce $100 million less than would the rates which were in effect in 1930.

The essentials of effective regulation are of course many in detail, but those which it seems to me desirable to discuss on this occasion may be grouped as follows:

1. Service.
2. Original cost records.
4. Issuance of securities.

1. Service. Provision for adequate and permanent service, uniform by classes, non-discriminatory in character, amount, or price, and charged for at simple rates, is the first essential of all regulation. After such service has been provided for on a permanent basis, then its cost should receive consideration. Provision is made in the New York law requiring investigation of either rates or service by the Commission upon the complaint of any municipality or of twenty-five consumers. However, it is my conception of the duty and functions of a regulatory commission that it should not wait for the filing of complaints to investigate, but through examination of the properties, records, and services of the companies a Commission should be ever alert to the needs and the possibilities of better service and lower rates, and whenever necessary should commence proceedings on its own initiative. The New York Commission has followed
this policy and, as its record shows, has initiated large numbers of formal investigations on its own. In addition to these more formal investigations there are, of course, thousands of informal investigations (8,094 in 1935) of individual or minor complaints in which the Commission is able to secure adjustment satisfactory to both customer and company by conference or correspondence.

2. Cost of Service. A principal aim of the New York Commission has been to establish on the books of the companies as rapidly as possible the original cost of the properties used and useful in rendering utility service to the public by various corporations. To accomplish this end it requires that the original cost be related to the inventory of property in such manner that it will be kept up to date by the addition of new construction and the subtraction of property retired. This is called a continuous property inventory. Another objective is to determine the accrued depreciation and the annual rate of depreciation of the property upon the basis of original cost. Many rates are fixed and agreed to by the utility companies upon this simple and generally fair basis—original cost less depreciation.

However, our law, as interpreted by both the highest State and United States Supreme Courts, provides that the utility companies are entitled to earn a fair return on the fair and reasonable value of their properties used and useful in rendering public service. This does not mean that a fair return—perhaps 4 to 6 per cent. under present conditions—is guaranteed on the fair value of the companies' property. It simply means that, if competitive conditions and circumstances permit, a company must be permitted to earn such a reasonable rate of return. To put it in another way, a company cannot be prevented by a Commission from earning a fair return upon the fair value of its property, if it is able to do so.

Naturally, rate proceedings occupy a great deal of the time of the Commission. This is required principally to determine the fair value of a company's property. The basic rule for determining fair value of utility properties was laid down by the United States Supreme Court in a case known as Smyth v. Ames (169 U.S. 466-546). This decision requires the Commission to consider all the following facts in determining a fair value:

- Original cost of construction.
- Amount expended in permanent improvements.
- Amount in market value of bonds and stocks.
- Present as compared with original cost of construction—reproduction cost.
Probable earning capacity under particular rates prescribed by statute.

The sum required to meet operating expenses.

No court, however, has ever determined, except for particular cases, what relative weight should be given to these various elements which go to make up fair value. Here is, then, wide latitude for the judgement of the Commission.

In the past the Commission has found it necessary to spend a great deal of time in determining the original cost of company properties because of the absence of adequate original cost records. This has led the Commission to require the keeping of continuous property inventories priced at original cost. Once these are established and kept up to date it is not necessary to repeat the time and expenditure required to ascertain such costs. Much current progress is being made in setting up these permanent records.

The determination of the cost of reproduction is a phase of rate proceedings which requires a great deal of time and expense. Naturally enough, perhaps, the companies employ many professional witnesses to show reproduction costs and to fight hard to support those claims, which are usually high. This has compelled the Commission to require its staff also to present reproduction cost studies on behalf of the public, which are usually considerably lower than these of the companies. From these two studies it is usually possible for the Commission to arrive finally, after much cross-examination and argument, at the theoretical cost of reproducing a property as required by the courts.

The subject of depreciation and the methods by which depreciation should be calculated is one about which there is great dispute, and which requires much time to ascertain correctly. The New York Commission has prescribed the straight-line method of depreciation, but this is not accepted by the companies, and the State courts have held that the Commission cannot require the companies to keep their books upon this basis, although it has not been held that this method of computing depreciation may not be used in rate proceedings. The companies prefer to use the observed depreciation method. Results arrived at by this method are, in the opinion of the Commission, usually inadequate. Many companies do not have over 2 or 3 or 5 per cent. of their fixed capital in depreciation reserves, and a number of the best companies consider that 10 or 12 per cent. of fixed capital in a reserve for depreciation or retirement is adequate. The Commission sometimes finds as high as 30 or 40 per cent. in electric and 50 or 60 per cent. in gas properties.
Other important matters which must be investigated and determined are:

a. Whether or not proper *retirements* have been made both as to units and costs of these units. In other words, it is necessary to find out just how much of the property which is on the Company’s books is actually used and useful in providing service to the public and to make certain that property not used or useful is removed from the fixed capital on which the ratepayer is expected to pay a return, and at proper amounts.

b. *Overheads* placed by the companies on their books, and whether or not any of these overheads are arbitrary and do not represent proper charges or actual expenditure for necessary overheads.

c. *Intangible items* for which no expenditure has been made. In the case of most of the older companies large items of intangibles and of intangible fixed capital are found, and these are the subject of much testimony and argument. Although it is seldom found upon the books of the companies, claim is always made for what is called ‘going value’, which is generally claimed by the companies to be 5 to 10 per cent. of the total fixed capital.

d. *Write-ups* by means of reproduction appraisals or original-cost appraisals used to supplement actual costs. In a few instances companies have on their books not the actual original cost of their properties but the estimated appraised costs which are sometimes as much as double the actual original cost.

Since a study of all of these matters requires a great deal of time, especially in the case of large companies, which results in delay, a final decision of the Commission sometimes requires as much as two or three years. To remedy this delay the New York Legislature of 1935 authorized the Commission to fix temporary rates upon the basis of original cost less depreciation. In order to meet the requirements of the courts as to a return upon the fair value of a company’s property, a paragraph was added to this law, which provided that any demonstrated deficiency in earnings which might be incurred as a result of the fixing of such temporary rates must be permitted to be recouped by the company through the rates which are finally fixed at the close of the proceeding. The companies carried their opposition to this law to the highest State courts, but in July 1936 the New York State Court of Appeals handed down an all but unanimous decision affirming the law as constitutional.

The other elements involved in determination of rates are more easily measured. The keeping of proper records and accounts of
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revenues and expenses is comparatively simple. However, the Commission finds it necessary to scan some of the expense accounts of the companies very carefully to determine whether or not certain of the expenses are proper, particularly contributions and dues in various organizations; and also whether or not administrative expenses, especially salaries, are unduly large or improper.

3. Systems of Accounting. The prescribing of uniform systems of accounting is a matter of vital importance in efficient regulation of public utilities. After the broad principles of regulation have been established, then regulation becomes a matter of efficient supervision of detailed entries in fixed capital on the books of the companies, proper retirements, and correct keeping of accounts of revenues and expenses. The New York Commission has long had such systems of accounting in effect on electric and gas and railroad utilities, and has recently prescribed new systems for water and omnibus companies. Some of the vital questions which are covered in these systems of accounting, are

(a) the keeping of a continuous property record, already referred to;
(b) the pricing of this property at actual cost;
(c) the setting up of proper unit prices for groups of property;
(d) the retirement of these units of property at these unit costs;
(e) proper provision for annual depreciation and accrued depreciation.

These are only a few of the most important. There are many more. Our uniform system of accounts for electric corporations, for example, comprises a book of 173 pages.

Another important requirement is the keeping of fixed capital, revenues, and expenses, by municipalities or areas. This is required so that, with some allocations of general overhead items, it is possible to determine whether or not a given municipality or given area is being charged too much or too little for service.

Expenses are required to be kept in the following groups: (1) production, (2) transmission, (3) distribution, (4) administration and overhead, (5) taxes, (6) depreciation or allowance for retirements. Of course each of these groups is broken down in more detail. By comparing these group costs among different companies it is possible to determine readily whether or not a particular company’s costs are unduly high, and if so the reasons therefor.

A large staff of engineers to inspect property and accountants to check the companies’ books is essential if such a system of accounts is to be made effective. The New York Commission endeavours to
check the fixed capital records of the companies periodically, and also in connexion with rate proceedings, and to check the revenues and expenses more frequently.

4. *Issuance of Securities.* Under the New York law no securities, even notes—unless they are for a period of less than one year—may be issued by public utilities without authority of the Commission. The Commission's authorization of securities is based on the original cost of the fixed capital of the company, less adequate reserves and earnings.

In many of the older utilities there is a good deal of fixed capital which was not carefully scanned at the time it was entered on the books of the company, including intangibles, write-ups, and unallocated amounts already referred to, and against which, unfortunately, securities have in some cases been issued. Since it is impossible to recall these, refunding must be done upon the basis of actual securities outstanding, though with protective requirements. However, when the securities are retired, or mergers are effected, the Commission exercises great care that no such items are authorized and that the amount of securities actually issued does not represent more than the fair cost of the property less proper depreciation.

The Commission believes that adequate but not excessive reserves and surplus should be provided by the company.

As a result of the greed of many public utilities during the boom years of 1928 to 1930, and their unwillingness to reduce rates, the public in the United States has come to believe that most public utility rates are excessive. Consequently, there has been a rising tide of sentiment not only for reductions in rates, but for public ownership. The Federal administration has capitalized this public feeling by entering into such Federal undertakings as the Tennessee Valley Authority (T.V.A.) project.

There is little doubt that most public utilities of the United States were permitted excessive earnings up to 1930 or 1931. Their greed ran away with their common sense. Subsequent investigations and a new level of prices have clearly indicated that many of these rates are too high. There was a further belief on the part of the public, which was more or less justified by the facts just stated, that regulation was ineffective. Therefore, the Federal Government and many of the State legislatures have recently tightened the laws regulating public utilities, increased the appropriations and the personnel of commissions, and in many ways have greatly increased the possibilities of effective regulation.

Not satisfied with this, a large percentage of the public have in-
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sisted upon utilizing the threat of competition. Under the pressure of public opinion the Legislature of New York, for example, has authorized municipalities to undertake the generation and distribution of electricity and gas under favourable conditions. In addition the Federal Government has advanced sums of money as loans and subsidies to build such plants. This threat of municipal competition against the utilities has been fully as effective on domestic and small commercial rates as is the threat of competition of private plants in industry and among large individual consumers. It may be unfairly used in some cases, but utilities invited it by their attitude.

Between these threats of municipal ownership on the one hand and more effective regulation on the other, the public utilities of the United States have been compelled to change their attitudes and rates materially. As I have already indicated, the rate reductions ordered and negotiated by the Public Service Commission of New York State, for example, have amounted to more than one hundred million dollars.

On the whole I believe that regulated private ownership of public utilities is a more effective method than public or municipal ownership. Municipal ownership is open not only to the possibility but in many instances the probability of political interference and to the inefficiencies which arise as a result of such interference.

In closing I should like to emphasize one final point, especially commending it to the consideration of those who favour the method of municipal ownership of public utilities as opposed to their regulation as private monopolies. By the very nature of the situation municipal ownership almost always begins and usually ends in the cities and villages. Of fifty-six municipalities furnishing their own electric service in New York less than one-fifth furnish this service to the adjoining rural areas, and of those who do serve farms less than one-half do it as cheaply and effectively as the regulated private companies. In fact it is my experience that, particularly in the case of the smaller villages, the municipalities are generally inefficient in furnishing electric service and need supervision fully as much as the private companies.

Perhaps naturally enough, but after all selfishly, a municipality is interested principally in service to its own citizens. It has to be urged and persuaded to serve the contiguous farming areas outside. It is more difficult and often more costly to set up rural service independently. It should be a part of the total area service. When the private companies are deprived of their most profitable business, i.e. that in the more thickly populated centres, by municipal plants which do
not serve the open country, the cost of service is increased, and the rural rates have to be raised. Thus municipal ownership frequently results in a disadvantage to farmers, even when it is to the advantage of the urban area served.

In my opinion private ownership of operating utility companies, at least in the United States, not only lends itself to adequate service at low rates, if properly regulated, but to the necessary inter-connected network of transmission and distribution. But effective supervision and administration can only be secured by proper legislation, sufficient appropriations, and a competent staff which is permitted to function without political interference.

The value of regulation, therefore, as a method of obtaining adequate and satisfactory utility service, depends almost wholly on it being made fully effective. Unfortunately, too much regulation is inadequate and ineffective. I believe that the regulation as practised in New York is producing the desired results.