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THE VALUATION OF PUBLIC UTILITIES FOR THE PURPOSE OF RATE MAKING

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A PUBLIC UTILITY is defined as: An enterprise which has dedicated its property to a public use, and supplies a commodity or renders a service of a public necessity to the public. The enterprise may be under public or private ownership.

The valuation of a public utility for the purpose of rate making is only one of the powers and duties of the governing commission or board. However, the problem of valuation is the chief and most persistent difficulty, encountered by courts, commissions and the utilities, in the regulation of utilities. The power to regulate utilities is not a matter of contention. Ever since the Granger cases, particularly *Munn v. Illinois*, 94 U. S. 113 (1876), it has been conceded that public utilities may be regulated under the police power of a state.

The proper theory of the valuation of public utilities has been an unending source of trouble to the Interstate Commerce Commission, State Commissions, State and Federal Courts and the United States Supreme Court.

It is thought by many of the lay public that the public utilities and public service corporations in fixing rates strike upon an arbitrary figure as the rate which is to be charged the public for the commodity or service used. This is not the case. Aside from the fact that public utilities sometimes contract with a municipality as to the rate to be charged the public for a commodity or service, the usual procedure is by the valuation of the property of the public utility for the purpose of arriving at a fair and just rate, fair and just both to the public and the utility. This procedure is comparatively recent and has

developed since the decision in 1898 of *Smyth v. Ames*, 169 U. S. 466.

When a valuation is found it is denominated the rate base. A public utility is justly entitled to earn on the monetary value of its property used and useful the same rate of return that it would or could receive if the value of its property, in money, were invested in good securities at the market rate of return. Consequently, one of the first steps to be taken in establishing a rate to be charged the public by a public utility is to ascertain the fair value of the property used and useful by the utility in supplying a commodity or service at the time of the appraisal.

This article is to treat more the different theories of valuation and the disputatious differences between the different theories rather than the elements and things that go to make up the total final value or rate base arrived at under whatever theory of valuation is used.

VALUATION THEORIES.

The theories or methods used in the valuation of public utilities property are:

- (a) Original cost, sometimes called Actual cost or Historical Cost.
- (b) Cost of Reproduction or Replacement Cost.
- (c) The Prudent Investment Theory. (proposed)
- (d) Present Value.

Cost and value in public utility regulations are not synonymous. Advocates of original cost or original cost to date contend that no greater "value" should be placed upon a plant or system than it actually cost to date and that therefor the "value" to be given a particular plant or system is its "cost". To determine this cost under this theory recourse must be had to the records or books of the company. It has invariably developed, in the earlier cases, that the records were lost or the books were not properly kept, and were therefore of no evidentiary value. Again no value is given to the unearned increment, e. g. in real estate, or to franchise value, strategic value, going value, good-will, or earning power. The real estate may have been, as often was the case, in the first instance a gift from the community to induce the establishment of a

public utility in the community. This theory, for many reasons, was not satisfactory to the utilities. Nor were the courts, in many instances, favorable to this theory. In *Wilcox v. Consolidated Gas Co.*, 212 U. S. 19, Justice Peckham said:

“And we concur with the court below in holding that the value of the property is to be determined as of the time when the inquiry is made regarding the rates. If the property which legally enters into the consideration of the question of rates has increased in value since it was acquired, the company is entitled to the benefit of such increase. This is, at any rate, the general rule.”

In the Minnesota Rates Cases, Justice Hughes, now Chief Justice, announced:

“It is clear that in ascertaining the present value we are not limited to the consideration of the amount of the actual investment. If that has been reckless or improvident, losses may be sustained which the community does not underwrite. As the company may not be protected in its actual investment, if the value of its property be plainly less, so the making of a just return for the use of the property involves the recognition of its fair value if it be more than its cost.”

Some more equitable rule to determine fair value had to be evolved, and out of the dissatisfaction with the original cost theory grew the Cost of Reproduction theory. Cost of reproduction while not amenable to strict definition may be somewhat defined as follows: That amount of money or estimated investment which would be required to reproduce the same or existing plant or system if the existing plant were non-existent, but not to reproduce an equally effective plant.

In estimating the “cost of reproduction new” of an existing railroad, Vanderblue in *Railroad Valuation* depicts the following mental picture:

“The road bed is assumed to disappear, and in place of the smoothed and well-tended grade the conditions met at the time of construction are restored. The right of way and terminal properties pass into private hands to be devoted to the same use as adjoining tracts. The equipment vanishes, the working force is scattered. The very corporate existence ceases. * * * The population, rural and urban, does not desert the line of the road; busy factories and warehouses stand at the edge of a primeval right of way, which is overgrown with trees and underbrush. Everything awaits the advent of the courageous promoter who shall place surveying parties in the field, secure the charter, arrange financial matters: in short, set out to restore the plant of the road which in imagination has been made to disappear, yet which in fact exists. What will it cost?”

The cost, arrived at under this theory, will be cost of reproduction new. But the cost of reproduction theory did not fully meet the need and was subjected to as much criticism as the original cost theory. Whitten in his work, *Valuation of Public Service Corporations*, 2nd ed. Sec. 324, says:

“Cost of reproduction may mean the cost of a substitute plant of the most modern, approved design capable of performing the same service as the existing plant. If the old plant were wiped out, what would it cost at present to construct a plant capable of performing the service now performed by the old plant? In the case of a water plant, perhaps an entirely new source of supply would be used and the distribution system radically changed; in the case of a gas plant, a different process of production employed and a few large gas holders substituted for many small ones; in the case of an electric plant, larger units of production employed; in the case of a railroad, there might be a radical relocation and realignment of roadbed, and important changes in methods of construction. The present value of the old plant is measured by the cost of an equally efficient new plant less an allowance for the depreciated condition of the old plant. This seems to be the most logical method of arriving at present structural value. One difficulty in applying it arises from the fact that in many cases it is exceedingly difficult and expensive to determine on an equally efficient substitute plant.”

Further in this same work at page 646, it is said:

“The difficulties of the reproduction method were also discussed in *Fuhrmann v. Cataract Power and Conduit Company*, * * * Chairman Stevens said: ‘This method of ascertaining the fair amount of the investment, although it has been treated with favor, is also subject to severe criticism. This first arises from the practical impossibility of ascertaining with any reasonable degree of accuracy the cost of reproduction new. This impossibility has been demonstrated in most attempts which are made.’”

Pond on *Public Utilities*, 3rd ed. Sec. 594, says:

“*Reproduction less depreciation.*—The adoption of the theory of reproduction is attended with practically all the difficulties of that of original cost, and the application of either must be attended with a reduction of the amount of the depreciation which the plant has sustained, except so far as its parts may have been repaired or replaced; nor does the theory of the original cost or the cost of reproduction take into account a valuation of the plant as a going concern with an established income. This element of value is generally accepted and is to be added to original or reproduction costs.”

Of late years the Prudent Investment Theory has been advanced by some authorities as the proper rule to use in valuation cases. This theory is not in general use and is only recommended. Justice Brandeis is an advocate of the pru-

dent investment theory. However, the United States Supreme Court is not of the same opinion as Justice Brandeis. Prudent Investment means what it implies, i. e., investments made prudently. It precludes the idea of giving value to investments made with poor or bad judgment, losses sustained through poor management, excessive salaries and excessive promotional and organization expenses. This feature of the prudent investment theory, of course, is not objectionable to the fair mind, but in the last analysis it is akin to original or actual cost and differs from actual cost in that actual cost may embody imprudent investments and expenditures. In the Southwestern Bell Telephone case, 259 U. S. 318, Justice Brandeis, in dissenting from the majority opinion, said:

“The adoption of the amount prudently invested as the rate base and the amount of the capital charge as the measure of the rate of return would give definiteness to these two factors involved in rate controversies which are now shifting and treacherous, and which render the proceedings peculiarly burdensome and largely futile. Such measures offer a basis for decision which is certain and stable. The rate base would be ascertained as a fact, not determined as matter of opinion. It would not fluctuate with the market price of labor, or materials, or money. It would not change with hard times or shifting populations. It would not be distorted by the fickle and varying judgments of appraisers, commissions, or courts. It would, when once made in respect to any utility, be fixed for all time, subject only to increases to represent additions to plant, after allowance for the depreciation included in the annual operating charges.”

There is another suggested test to determine value. It is Outstanding Capitalization. Some persons contend that the value of a utility is to be measured by its outstanding capitalization. Advocates of this method advance the argument that since the issuance of stocks and bonds of public utilities is under the control of the regulating body that the rate of return to the utility should have some relation to the outstanding securities. But when it is considered that it is the valuation of the physical property of the utility that is sought and not its nominal “paper” value it is clear that there may be a wide discrepancy between actual present value of a company and its outstanding capitalization.

Present value is the true and only test of the fair value of a utility, be that present value arrived at by one or all of the known theories. The United States Supreme Court in

Smyth v. Ames, before the term "Present Value" was coined used the phrase "the present as compared with the original cost of construction."

Many proposed suggestions to determine fair value were offered as the true test, such as the valuation for taxation, valuation for condemnation proceedings and valuation for bargain and sale or market value. For obvious reasons these proposed methods met with failure. Tax laws differ widely. Taxation may in part be based upon market value and earning power of a utility. The market value and earning power of a utility is dependent upon the rate to be charged. It is, therefore, folly to use taxation value to determine rates when market value or earnings are not established until the rate is established. The same is true of the condemnation theory. Intangibles are valued in condemnation proceedings but not all intangibles are valued in rate making proceedings. As to the purchase and sale or market value theory, apart from other objections, a very material objection is that it isn't every day that a public utility has a ready and willing purchaser or a quoted market value. Market value depends upon earnings, earnings depend upon rates, and rates are what are sought to be established. It is vicious circle reasoning.

THE CASES.

Smyth v. Ames, *supra*, in valuation proceedings for rate making is the landmark case, and though decided thirty-two years ago is still controlling, notwithstanding that Justices Holmes, Stone, and Brandeis do not agree with it. In it the matters to be taken into consideration in valuation proceeding for rate making are thus set out:

"In order to ascertain that value the original cost of construction, the amount expended in permanent improvements, the amount and market value of its bonds and stock, the present as compared with the original cost of construction, the probable earning capacity under particular rates prescribed by statute, and the sum required to meet operating expenses, are all matters for consideration, and are to be given such weight as may be just and right in each case. We do not say that there may not be other matters to be regarded in estimating the value of the property. What the company is entitled to ask is a fair return upon the value of that which it employs for the public convenience. On the other hand, what the public is entitled to demand is that no more be exacted from it for the use of a public highway than the services rendered by it are reasonably worth."

Many authorities quarrel with this decision, but Justice Hughes, in the Minnesota Rate Cases, *Shepherd v. Simpson*, 230 U. S. 352, adhered to its principles. Likewise did Justice McReynolds, who wrote the majority opinion in the O'Fallon case, *St. Louis and O'Fallon Ry. Co. v. U. S.*, 42 S. Ct. 384, (May 20, 1929), the opinion saying:

"The elements of value recognized by the law of the land for rate making purposes have been pointed out many times by this Court. *Smyth v. Ames*."

The O'Fallon case was a recapture case and not a rate making case, but the elements of valuation are the same in recapture cases as in rate making cases.

The decided cases follow *Smyth v. Ames* in general, with some deviations dependent upon the facts of the cases. The principal cases are *Reagan v. Farmers, etc.*, 154 U. S. 362, *Knoxville v. Knoxville, etc.*, 212 U. S. 1, *Minnesota Rate Cases, supra*, *Southwestern Bell Tele. Co. v. Pub. Service, etc.*, 262 U. S. 276, *Bluefield, etc., v. Pub. Service Com.*, 262 U. S. 679, *McCardle v. Ind., etc.*, 272 U. S. 400.

Whenever a proposed valuation and rate is fixed by a regulating commission or board, which is not satisfactory to the utility or public service corporation, the utilities seek an injunction setting up the allegation that the valuation and rate discriminate, and are confiscatory and deprive the utility of its property without due process of law under Articles V and XIV of the Amendments to the United States Constitution or the similar provisions in state constitutions.

The utilities now advocate the cost of reproduction theory. William Jennings Bryan was counsel for the State of Nebraska in *Smyth v. Ames* and in that case contended, and most firmly, that the true test of the value of a railroad for rate making purposes was the cost of reproduction. The railroads then were contending that the only right basis of value for the purpose of rate making was original cost. Were the case of *Smyth v. Ames* to be reargued now by the same attorneys who argued in 1898, they would simply trade theories and could, with grace, exchange briefs, each contending for a change of theory. Economic conditions and the changing value of the

dollar are the real causes responsible for the differences of opinion concerning valuation theories.

It would seem that some more satisfactory and quasi permanent method of determining fair value is desired by all concerned, not to forget the consumer and stock and bond holder. Of late years the consumer of the commodity of a public service company—public utility—is also in many instances a holder of the company's stock or bond. If he as a consumer demands a lower rate for the commodity he uses, he can only expect to receive a decreased dividend on his security. If he wishes a larger dividend on regular average earnings, he can only expect to pay a higher rate for the commodity or service. He is in a dilemma.

The State of New York has recently appointed a Special Legislative Commission on the Revision of Public Service Commission Law with the idea of formulating policies and principles dealing with public utilities. To allow the public utility, in valuation proceedings, a present fair value is beside the point. The difficulty lies in the method or ways of arriving at the fair value. This commission is divided as to which of two plans is the more feasible. The majority recommend that the local State Commission contract with the utilities respecting their individual valuations for ten year periods, thus crystallizing or "freezing" a definite valuation for ten years, allowing, however, for value fluctuations according to the swing of prices of labor and materials and other factors affecting values. The minority desire to establish a permanent "frozen" valuation based on the theory of prudent investment. The minority plan is called the Bauer plan, Bauer being the author of several works on public utility regulation.

Whether the rule laid down in *Smyth v. Ames* is correct or not or whether it should be overruled remains to be seen. Eminent jurists and writers contend the rule is obsolete and does not meet the changed economic conditions. The criticism of *Smyth v. Ames* by Justice Brandeis has much merit. His theory might, perhaps, establish a fixed method of valuation that would protect the rights of all concerned. He says in the *Southwestern Bell Telephone Co.* case, *supra*, at page 308:

“What is now termed the prudent investment is, in essence, the same thing as that which the court has always sought to protect in using the term present value. Twenty-five years ago, when *Smyth v. Ames* was decided, it was impossible to ascertain with accuracy, in respect to most of the utilities, in most of the states in which rate controversies arose, what it cost in money to establish the utility; or the money cost with which the utility was established; or what income had been earned by it; or how the income had been expended. It was, therefore, not feasible, then, to adopt, as the rate base, the amount properly invested or, as the rate of fair return, the amount of the capital charge. Now the situation is fundamentally different. These amounts are, now, readily ascertainable in respect to a large, and rapidly increasing, proportion of the utilities. The change in this respect is due to the enlargement, meanwhile, of the powers and functions of state utility commissions. The issue of securities is now, and for many years has been, under the control of commissions, in the leading states. Hence the amount of capital raised (since the conferring of these powers) and its cost are definitely known, through current supervision and prescribed accounts, supplemented by inspection of the commission’s engineering force. Like knowledge concerning the investment of that part of the capital raised and expended before these broad functions were exercised by the utility commissions has been secured, in many cases, through investigations undertaken later in connection with the issue of new securities or the regulation of rates. The amount and disposition of current earnings of all the companies are also known. It is, therefore, feasible now to adopt as the measure of a compensatory rate—the annual cost, or charge, of the capital prudently invested in the utility. And hence it should be done.”

Until some better theory is evolved *Smyth v. Ames* is the guiding beacon.

Referring again to the recent action taken by the State of New York in appointing a Special Legislative Committee for the purpose of formulating policies and principles dealing with public utilities, Bauer, in *Public Utilities Fortnightly*, April 3, 1930, has written an article discussing the Bauer plan and the Prendergast plan. In a foot-note he says:

“Since the above was written, the Revision Commission has made its report to the New York Legislature. There was a majority and minority report. The latter adopted the Bauer plan and incorporated it in a proposed bill. The majority agreed that a fixed rate base and return are essential to affective regulation, but instead of the mandatory provisions, it proposed to include the plan in contracts between the state and the companies; it doubted whether a mandatory system could be enforced against a shift to higher or lower prices. The minority believed that the contract plan would not be accepted by the companies on a reasonable basis. While it admitted that there may be a constitutional question as to the mandatory provisions when prices have risen or fallen sharply, it believed the policy would be

sustained because of its inherent reasonableness and because of its necessity on administrative and financial grounds."

It will be interesting to read the act that will be passed, if passed, growing out of the "proposed bill". Perhaps out of this action by the State of New York may spring a nucleus from which may emerge a solution of the vexing and at the present time refractory theories of valuation.

COLERIDGE DIDN'T TELL IT ALL

"In Xanadu did Kubla Kahn
A stately pleasure dome decree,
Where Alph, the sacred river ran,
Through caverns measureless to man,
Down to the sunless sea."
He ran the place a month or two
And kept things going pretty free,
And then his creditors put him through
Involuntary bankruptcy.

J. H. DENISON.