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Valuation as Affected by Recent Decisions

By

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of Wisconsin



Presented before the
Accounting Section
of the
Wisconsin Utilities Association
at Green Bay, Wisconsin,
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VALUATION AS AFFECTED BY RECENT DECISIONS

At the meeting of your accounting group last year, one of the speakers discussed the status of the law of utility valuation as at that time and traced its development from the early days of public regulation. His conclusion was that although courts require that consideration be given to present day prices in fixing the value of utility property, those prices need not be controlling.

It is not my purpose to attempt to review the whole vast field of valuation, on which there has been such a great volume of expression during the whole period of regulation. It seems to me, however, that it may be quite pertinent to attempt at this time to comment on, in what is hoped to be a helpful way, certain aspects of valuation, on which the practices and policies of commissions and valuation engineers have been anything but uniform,—in fact, have been largely uncertain and confusing. Of course, among these points are prominently the emphasis by the courts of the element of reproduction new at recent pricing, the treatment of overhead expenses or costs, and going value, especially as related to this doctrine.

The Indianapolis and Waukesha Cases

Since the time of your last meeting there has been a United States Supreme Court decision in the Indianapolis Water Case, and a Wisconsin Supreme Court decision in the Waukesha Gas & Electric Case, which have

had an important bearing upon the law of valuation which the Railroad Commission of Wisconsin is required to apply. The Indianapolis Water Company case, although not, as I understand it, requiring that controlling weight be given to current prices, seems to clearly indicate the thought of the court that the weight to be given to such prices must be material and considerable and that a more or less nominal recognition of them would not comply with the law.

In the Waukesha Gas & Electric Company case, the Wisconsin Supreme Court said, in substance, that it was doubtful whether any valuation not based substantially upon current prices would meet the requirements of the federal courts. The Wisconsin Supreme Court apparently has placed an interpretation on the decisions of the United States Supreme Court, which, to my mind, goes way beyond the intention expressed by that court.

Regardless of this, however, we must face the fact that hereafter the valuations of public utility properties must be based in large part upon cost of reproduction at current prices, even though we may disagree as to how much weight must be given to those prices. This makes it pertinent to inquire just what is meant by cost of reproduction. In a sense, the application of current prices in lieu of those shown upon the company's books representing its investment would represent a cost of reproduction, that is, they would represent a cost of reproduction under the conditions and accounting methods under which the company's property and plant account was

built up. This is quite a different matter from a cost of reproduction based upon an engineer's estimate of what it would now cost to replace the properties without reference to their historical development or to the accounting methods which were employed. For example, a company may own a considerable under-ground system without having to cut through permanent pavement in the construction of any of it. A cost of reproduction which represents merely the substitution of current prices for those shown in the company's fixed capital account would not give any effect to the present day cost of cutting through pavement. On the other hand, a true cost of reproduction, that is, the amount which it would now cost to construct the plant, would have to include the cost of cutting through and replacing permanent pavement.

Similarly, much of a company's system especially the rural distribution system of an electric company, may have been financed by customers' contributions and yet a true cost of reproduction would include the cost of constructing those rural lines. One of the very purposes of requiring the customers' contributions was to so arrange matters that the companies would not have to earn a return upon amounts so provided, and yet, if we are to be required to use a real cost of reproduction as the basis for valuation and as the basis for establishing rates, the cost of building the rural lines would have to be included and rates based upon it.

In the evolution and development of the law to the present point, at which we are required

to give material and substantial consideration to cost of reproduction at present prices, the courts have not carried along with the development of their theory any clarification on points at which the theory may be differently applied. One is left to surmise whether an estimate of original construction cost at present prices to the extent that such construction cost represents property paid for by the company is the sort of cost of reproduction to which reference is made, or whether the cost of reproduction, under presently existing conditions, of all property to which the company has title is to be used.

Piece-Meal Development

However, I can find nothing in the decisions which seems to indicate that in the application of present day prices we are to ignore the historical development of the utility. It seems to me the intention, rather, that we shall use not a true cost of reproduction, but a modification of the company's investment by the application of present day prices. This applies to the physical, tangible property of the company.

If we are not to use a true cost of reproduction for the physical, tangible property of the company, the question at once arises as to what basis should be applied in the case of certain overhead items. Overhead items are estimated more or less definitely by appraisal engineers whose reports are based on the assumption that the property is to be replaced as a unit at the present time. However, the overhead costs which would be experienced in

a complete replacement of the property may be something entirely different from those actually experienced by the company, even though all such costs which were actually experienced had been charged to fixed capital accounts. For example, in the piece-meal development of a property, interest during construction is likely to be a smaller proportion of the total than it would be in its complete reproduction. The effect of contingencies will already be represented in the cost of tangible property, where in an estimated reproduction this effect can only be allowed for in general terms and based upon general estimates. Similarly, it is doubtful whether in the piece-meal development of many properties there is actually such engineering expense incurred, regardless of the allocation of the charge, as would be incurred upon its complete reproduction. During times when prices were more or less normal and stable, it was quite general to use an estimated cost of reproduction as a substitute for the actual investment. Now, however, the actual investment and the estimated cost of reproduction are so divergent that one cannot be used in lieu of the other. It seems to me, therefore, that it becomes important that we know whether the cost of reproduction which we should use should reflect the historical development of the property or whether it should be an estimate of the cost assuming a construction de novo and as a unit.

It may be well to bear in mind that historically the purpose of physical valuation of railroads and utilities was to obtain an estimate

of the fixed capital which could be used where true investment was not ascertainable. I do not believe that it is a proper principle of valuation to ignore the historical features in the development of the property. In other words, even if present day prices are to be used, it seems to me that they should be applied to the facts as developed in the company's history and that in the treatment of overhead items and donated properties and all such items, as cutting through pavement, they should be applied upon a historical basis in so far as the installation of the tangible property was concerned.

While the federal decisions, including the Indianapolis Water Case, have pointed very strongly toward a rejection of other elements of value designated in the old case of Smythe vs. Ames, the impracticability, unjustness and unfairness of this new method is still being vigorously challenged. The decision of the Interstate Commerce Commission in the St. Louis-O'Fallon Railway valuation, the opinion in which was written by Commissioner B. H. Meyer, clearly and succinctly reaffirms in detail the soundness of the judicious investment theory of valuation. It is, I think, one of the clearest recent expressions treating on that subject. Of course, one must keep in mind the fact that possibly the Supreme Court of the United States might sustain the findings of the Interstate Commerce Commission, in large part, without reversing its position in the Indianapolis Water Case. It must be remembered that the valuation methods reaffirmed in the St. Louis-O'Fallon Case grow

out of the special statutes applicable to railway properties. While the distinction between other utility properties and railway properties may not logically exist, the statutes, on examination, will disclose marked differences.

The Worcester Case

It is rather interesting to find that one of the oldest and most conservative of the state regulatory commissions has recently vigorously assailed the doctrine of the Indianapolis Water Company Case. I refer to the opinion of the Massachusetts Department of Public Utilities handed down on June 3, 1927. There were pending before the Department complaints against the Worcester Electric Light Company, demanding that the maximum rates of the company be reduced. It appeared in evidence that the proceeds of the sale of stock, including a good deal of stock sold at premium, were in excess of \$4,000,000; that the company had enjoyed earnings and dividends since 1920 of from 7% to 27.2%; that it had accumulated surplus in excess of \$1,500,000, and that the market value of its stock was about six times its par value.

The Department has used the following language in repudiation of the doctrine of reproduction at recent costs less depreciation:

“We are of the opinion that in this Commonwealth a rate based upon reproduction value less observed depreciation is not only unsound legally and historically but also economically. * * * Regulation should be certain, definite and capable of speedy

application in the determination of rates which will do justice both to the public and to the owners of the utility. We believe that a rate base which takes as the controlling factor capital honestly and prudently invested possesses these qualifications and under normal conditions is sound both in law and in economics."

The Department further says:

"It (that is, reproduction cost) assumes the reproduction of a plant, which as a matter of fact would not be reproduced as is, and on a basis which men of sound business judgment do not consider in determining the value of their plants for other than rate making purposes. Depending as it does upon the level of prices of labor and materials projected into the future, it creates a constantly varying rate base, which is not easily or speedily capable of determination, but, on the contrary, involves long and expensive investigations, culminating in a composite guess not based wholly upon facts but upon conjectures as to the future. And when that composite guess, called the reproduction value, is finally determined, the factors may have so changed that it can no longer be of value, and the process must be repeated. It does not enable justice to be done speedily and efficiently either to the public or to the investor. In periods of enhancement of prices, the public, under this theory, is compelled to pay exorbitant rates. In periods of depressed prices the investor is compelled to receive much less than

a fair return upon the capital invested. A goodly portion of the plants of many of our electric companies was built after the war in an era of high prices. If there should be a sharp decline in prices in the next ten years, rates, based upon the reproduction theory, would be such as would prevent the investor from receiving a fair, if any, return upon his investment. A theory which produces such results cannot be maintained. * * *

The Department in its opinion expresses something in the nature of a threat. Even if it is not a threat, it is a very pertinent and incisive reminder of the legal status of the permits in that Commonwealth. It is true that this comment would not be easily applicable to the situation in Wisconsin, for the reason that the methods provided by law here for terminating permits or amending them are not so liberal and broad as they are in Massachusetts. As you well know, our law in the absence of facts constituting non-user or mis-user, provides for only one method for terminating a permit, and that is by purchase by condemnation of the property, and secondly by amending the exclusive right of service by the granting of competitive permits.

The Massachusetts Department has this to say regarding franchise rights in Massachusetts:

“In this Commonwealth the permits, issued to gas and electric companies to use the highways for their distribution equipment, are subject to revocation by the state

at any time. Such companies have been given no permanent rights in the highways and their use of them is at the will of the Commonwealth. The very charters of the companies may be altered, amended or repealed at any time by the Commonwealth. We cannot believe that the property of such companies situate in the public highways, subject at any time to an order of removal by the Commonwealth, can or should, for rate making purposes, be subject to any such rule of law as that which the company advances. Nor does it seem either logical or economically sound to contend that the conduits of the company in the public highways become more valuable as the Commonwealth or its municipalities lay down better and more expensive pavements and roads upon conduits."

With more or less modification, the Massachusetts opinion no doubt pretty effectively expresses the attitude of practically all of the state commissions. As evidenced in recent decisions and opinions, it is apparent that in states where the Supreme Courts of such states have not given a final adverse opinion on the subject, the commissions are still at liberty to follow their own convictions in this regard. We quite thoroughly realize that this attitude by the Wisconsin Commission is no longer tenable in the light of the holding in the Waukesha Case. It may be of interest to say that the Massachusetts Department, possibly anticipating a reversal in court, did make a finding of the value of the property in ques-

tion, based on reproduction cost less depreciation, and found that such value would not exceed \$10,000,000. The company, however, submitted a number of engineering and accounting valuations in which the value so found was in excess of \$17,000,000. It is evident from this finding that valuation engineers, in attempting to apply the rule of the Indianapolis Case, may vary as widely in their conclusions as they ever did in working under the investment theory.

Overhead Costs

A very significant and important element of valuation is the allowance always claimed and made usually in part as claimed for overhead costs. The term costs in this connection under a strict application of the method giving dominance to reproduction at current prices would be inapplicable, for the reason that in making valuations on the investment basis, at least to a considerable extent, the costs of engineering and supervision, the interest costs, the cost of organization and legal expense, for taxes, could measurably be ascertained from the accounts of the company. This would not be true for the item listed under omissions, which would have to be based largely upon general experience.

The practice of the Wisconsin Commission has been in the past to allow approximately 15% for these so-called overhead costs. One case has been before the Commission where claims have been made as high as 49% of the physical value, as allowances for overheads, and in these claims have been included such

items as time-keeping, warehouse operation, undistributed hauling, employment expense and transportation, fire insurance, liability and personal injury insurance, watching, lighting, guarding, flood protection, waste and shrinkage, water and sewerage, emergency protection, claims and damages, hauling and erecting construction equipment, maintenance-power contract, camp equipment investment, repairs and renewals to same, auxiliary operation equipment, investment in same, small tools investment, dismantling plant, auxiliary operation suspense, board and boarding house loss.

To these items could be added a considerable number of others. It frequently appears that the total results reached by valuation engineers are not so far different, and it may be that where overhead costs are estimated at a sum as high as 49%, of which I have spoken, of the physical value, the total value will not exceed the amount found by valuation engineers where the overhead costs are only 15 or 20%. The difference is in the matter of approach.

The Wisconsin Commission in arriving at its estimate of overhead costs has included in the application of specific pricing, as much as possible, all overhead costs and expenses applicable to the pricing of specific items. This method, of course, greatly enhances the prices for specific items and largely diminishes the percentage estimates of the cost of the physical plant where none or few of these overheads are allocated to the pricing of specific items.

The Commission has in the past included and will continue to include in their specific costs such items as liability insurance, fire insurance, waste and shrinkage, camp costs, tools, boarding house costs, and in fact all of such items as may be measurably, accurately allocated to these items. Oftentimes our engineers have found on checking valuations by other engineers that the percentage allotted to engineering costs has been largely in excess of our figures by reason of the fact that the construction jobs have been undertaken by engineers on a percentage basis. Now the mere fact that a job has been performed by an engineer on the basis indicated does not mean that his charges are properly designated as engineering expense or cost. It is apparent too that many of these costs which are frequently included in the claimed percentage for engineering and legal service are reflected in the savings effected by expert legal advice and expert engineering service and supervision. Some engineers also include in construction overhead such items as the cost of raising money, commissions, and bond discounts. The Commission in all cases rejects these items as legitimate overhead expense, for the reason that all of these expenses are cared for in other ways than by making them a direct capital charge. This is particularly true of companies that have reached a profitable operating stage and have continued in that condition for some time. The proper requiting of the company for costs and expenses of this sort should be made by amortization in the rates and charges and revenues of the company.

One of the great difficulties in applying the reproduction cost theory less depreciation is the assumption of engineers adhering to that theory of valuation that the entire plant and property will be produced before any part of it is put in operation. Such theory does great violence to nearly all experience and to the history of the development of utility plants. The time, we think, will never come when so much of the history of the plant may be excluded from the matter of valuation as will disclose the method of its development.

We all know from actual experience that it very seldom happens that a whole complete plant, subject to valuation, has been constructed and put into operation as a unit. The Commission's practice is to allow 5% on the entire property, and we have sometimes been impressed with the fact that this may be too liberal. After operation is once started on a portion of the plant, it is usual that the remainder of such plant is constructed in smaller units and put into operation in a very much shorter period of time than the plant considered as a whole. It is sometimes claimed that our method in this regard is unfair, for the reason that the money is frequently raised by the sale of securities, including bonds, preferred stock and common stock, and the money thereon realized before construction is undertaken. But that claim is not in accord with the facts, because modern financing is not generally done in that way.

We find that companies frequently issue short-time notes, borrowing the money only as they need it, and that interest payments

frequently begin only at the time of the presentation of bills for materials, and frequently permanent financing, especially in established companies, is not undertaken until after the completion of construction when the short-time notes are taken up by the issue of permanent securities.

The amount the Commission has customarily allowed for taxes, as a part of the overhead, is 1½%, which probably is liberal enough because of the fact that in Wisconsin, at least, only such property as is in existence in taxable form on May 1 of each year is assessable for that year, and that additional property placed in the plant in taxable form during the year thereafter will not be assessable until the following year on May 1.

Omissions

We may refer too to the treatment of omissions. Our engineers have drawn a marked distinction between the words "omissions" and "contingencies". When construction is originally proposed, many of the later developments in such construction are unknown and cannot be foreseen. There will often be changes in plans, foundations may reveal great difficulties in expense, and engineers generally will make a fairly liberal allowance for such contingencies. It is only after completion of the construction that it is usually possible to discover these unforeseen costs. It is quite evident that after a plant has been completed, all of these things that were contingencies at the inception of the project have become realities and the history of the con-

struction of the plant discloses, or should at least disclose, if such history is accessible, the actual experience of the company, and these things designated as contingencies have become ascertained facts and can be so treated in the valuation.

It is evident, however, that in large and intricate properties, and even to a certain extent in smaller ones, however carefully an inventory may have been made of the items of property, certain items properly included in the valuation will have been overlooked and omitted. The experience of our valuation engineers, and of engineers generally, we think, has indicated that a 2% allowance for such omissions is ample to cover a just estimate of such omissions. It is, of course, clear that the more accurate the inventory, the smaller the percentage should be which is allowed for this purpose, and it is perfectly plain that this is purely an estimate and an item properly included in an overhead, because the fact cannot be definitely and accurately ascertained.

To recapitulate briefly, therefore, and to indicate the standard generally followed now by the Commission in making allowances for overheads, the 15% so allowed is made up of the following items:

Engineering and Supervision	5%
Organization and Legal Expense ..	1½ %
Interest during Construction	5%
Taxes	1½ %
Omissions	2%

From this discussion, it must become more or less evident that a valuation engineer to properly perform his functions must be more than a mere designer or supervisor of construction work. In his experience in these capacities, he does not have, to any sufficient extent, opportunities of studying and learning what overhead costs may be. It is evident that these can be ascertained only by studies of the actual records of the development of the project, and these studies can only be undertaken by engineers who have also training and practice in research work, or assisted by accountants or engineers acquainted with the accountant's practice.

Going Value

Another aspect of valuation of which I should like to speak briefly is the question of going value or value as a going concern. In various cases which have been tried before the Railroad Commission attempts have been made to substantiate a value over and above that of the fixed property, various bases of estimating this excess having been employed. Among these bases are a study of the historical deficits during the development period, an estimate of the deficits which would accrue if the property in business were to be reproduced as a whole, an attempt to relate the going concern value to the amount of revenue obtained in a fixed period, and in addition various arbitrary estimates, such as 10% or 15% of the physical property, have been employed. It seems to me that all of these bases are subject to criticism and have very serious short-

comings. The reason for this is that any one of them can be applied to any property in such a way as to show a going value over and above that of the physical property, even though as a matter of common sense such value cannot possibly exist. Any one of them can be applied to a utility which is thoroughly unprofitable and which has no commercial possibilities in such a way as to show a considerable going concern value over and above the physical property. Some of them may serve a purpose as indicating the cost of developing a certain volume of business, but that seems to me quite a different thing from establishing a value. The utility which has not earned a profit and which has no prospects of earning a profit under any schedule of rates which could be established commercially is not worth the cost of its physical property, regardless of the theory of jurists or engineers or economists.

The value of a utility property as a going concern is the only value which that property can have for purposes of rate making. The theory that that value must always be in excess of the cost or of the estimated cost of reproduction of the physical property is utterly ridiculous. If the venture has been a mistaken one and has no prospects, the value simply does not exist, and yet any one of the methods which have been employed in various cases as an indication of a value over and above that of the physical property will indicate such value to exist in any case. Value cannot be determined arbitrarily by the application of formulae. The determination of value as a basis in rate cases is a matter of

judgment. The existence of that value is a matter of fact, and it cannot be created by the arbitrary application of any method. If the business is successful or, if lacking present success it appears that it can look forward to a successful future, the value of the property as a going concern may be greater than the cost or the estimated cost of the physical items of which its tangible structure is composed. On the other hand, if the business is not successful and cannot be made so, it is contrary to reason to claim that there is intangible value conveyed by the existence of an unprofitable business, adding something of value over and above the physical structure. The principle is not materially different from that which governs the sale of private businesses. A competitive business which is not profitable and which it appears cannot be made so, certainly does not have a value anything like that of a highly successful business with equal physical properties, and yet the methods which have been suggested for determining the going concern values of utility properties would show as great or greater values for the unprofitable business as for the profitable ones.

The courts seem to have lacked the economic conception of value in their discussions of many phases of the question of the valuation of utility property. Cost is not value, and, generally speaking, value cannot exist unless the property is productive of income. No one, except a stock jobbing broker would pay very much for a property which cannot earn more than its operating expenses, nor would any business man approached to buy such a prop-

erty attribute any particular value to it. Value is a matter of fact depending upon the property and the business and if the business is unprofitable, the ownership of the property is unprofitable and its value is impaired thereby. The courts have apparently failed to recognize that just as a utility property with a profitable business is worth more than the bare cost of its physical structures, so if the business is unprofitable the value is less than the cost of the physical property. Instances are not lacking in which utility properties have been valued for purchase and sale at very much less than the bare cost of the physical property, although in the keen competition for acquiring utility properties in the last few years, and particularly in the very recent years in which the promoter has played a part, almost any utility property could be sold to someone at a substantial price. The speculative marketability of utility properties, of course, does not establish their value for rate making purposes, nor does it necessarily follow that the sale of a property at less than the cost of its physical plant would of itself establish a value at that figure. The point that I am making, however, is that, if the business is unprofitable, the going concern value is not equal to that of the physical property. If the community has retrograded very seriously, if values generally in the community have been impaired, the value of the utility as a going concern can hardly fail to decline also.

I have in mind one case, that of the water works at Whitewater, in which the water

works property was sold to the city a number of years ago on voluntary sale for \$80,000, where an appraisal very closely representing original cost of the property amounted to about \$120,000. The population of the city had declined, the distribution system was not particularly well adapted to the present population, and the business was not profitable. Certainly, in this case, its owners must have recognized that actually it did not have a going concern value equal to its physical cost.

The going value is not an item to be superimposed upon the physical value. The value which the Commission must determine and utilize is the going concern value. The going concern value is the value of the entire property as a going concern and is the only true value of such property. Methods of building up a claim for value over and above that of the physical property, to my mind, are practically of no value as evidencing the worth of the going concern. What a utility is worth as a going concern must be determined by the facts at the time the valuation is made, including probably a reasonable estimate of its future. Deficits which have been incurred may be some evidence of what it has cost to establish a business, but they have little or no value as an evidence of what that business is worth. Estimates of the cost of reproducing a business do not indicate what the business will be worth unless it can be known in advance what business will result. Arbitrary estimate of 10% or 15% of the value of the physical property or of one or two years'

gross earnings are merely apparently methods which have no logic for their support.

The Commission must exercise its judgment in fixing the value of a utility property for rate making purposes and the only value which it can fix is what it thinks the property is worth as a going concern.

