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MEASURES OF LAND VALUE FOR UTILITY REGULATION*

Irston R. Barnes †

The appraisal of the land of utility corporations presents problems that are not encountered in the valuation of other utility properties. The basic principles and methods of appraisal applicable to other properties are considered inappropriate for the valuation of lands, and certain inconsistencies between the treatment of land and other properties suggest embarrassing questions as to the principles which should guide the regulation of utility rates. Two concrete problems may serve to provide orientation for the discussion which follows: What elements of cost imposed on utilities in the acquisition of real estate are entitled to consideration in establishing rates? To what extent, if at all, are utilities entitled to claim recognition for any increases in the value of the lands which they employ in the public service? In the matter of procedure many questions arise as to the measurement of land values, questions which reveal the extent to which land valuations are mere matters of opinion.

Land occupies a special status in utility valuations as a result of both economic and legal factors. From the economic standpoint, the special character of land arises from the fact that land does not depreciate but in growing communities tends rather to appreciate in value, that the utility of land is not inevitably destroyed for other purposes when it is devoted to a particular use, and that improvements made to land merge into the land and become inseparable from it. The special legal status of land for utility purposes is the result of judicial precedents, and is evidenced by the valuation techniques applied to land.

In this discussion of the valuation of land, it is proposed to examine the three standards of value which have most frequently been utilized or advocated in regulatory proceedings: original cost, reproduction cost and present value. The legal status of each standard requires analysis, but the fundamental considerations in judging the validity and utility

*This article is a portion of a book on public utility regulation to be published in the near future.
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of each must be economic rather than legal. What are the basic characteristics of each standard? What administrative problems are peculiar to each? What economic repercussions for consumers and investors are implicit in each? To what extent, if at all, do legal precedents interpose an obstacle to an economically sound and desirable policy of land valuation?

**Original Cost**

*Its Meaning*

The connotation of original cost as applied to land is no different from its connotation with respect to other forms of property. It signifies the actual cost of the land to the utility, including the costs of acquisition and any other sums that had to be expended in addition to the formal consideration paid for title to the property. Utilities which require large land areas, especially railroads with their continuous rights-of-way, usually experience greater difficulties in purchasing land than other businesses. Their purchases can seldom be accomplished secretly, so that there is normally substantial enhancement in the prices at which owners are willing to sell. If the utility is not equipped with the power of eminent domain, the payment of hold-up prices and the general increase in the level of prices demanded may force the utility to pay far in excess of what similar sites in the vicinity would cost other purchasers; and even if the utility takes the land requisite for its purposes by condemnation, the costs of condemnation, the payment of severance damages and the high prices characteristic of condemnation proceedings will certainly impose substantial costs on the company. The original cost of utility lands includes all these costs in so far as they are experienced. But if the utility is so fortunate as to have been the recipient of donated lands, no allowance for such property should, of course, appear in the original cost.¹

**Difficulties in the Determination of Original Cost**

For the older utilities in particular, serious difficulties may be encountered in the attempt to determine the original cost of their land holdings. Land was usually the first property to be acquired, and since no replacements of land occur in the operation of the business, there are no subsequent occasions for supplementing inadequate cost records. The absence of records has been an especially serious obstacle in the case of

¹ Augusta Belt Ry., 103 I. C. C. 523 (1925).
the older railroads. More frequently than in the case of other forms of property, land may be acquired for non-monetary considerations, and more often than not, the consideration recited in the deed by which the property is transferred is not the real consideration. Further difficulties are encountered in the frequent necessity of acquiring more land than is required in the public service; where such unused property has been disposed of by the utility, the sum received may be deducted from the original cost of the useful property, but where the non-useful property is still owned by the utility, there is no acceptable basis for the segregation of the costs of the two parts of the tract. So serious are these procedural difficulties, that, despite the Congressional mandate to find original cost of carrier lands, the Interstate Commerce Commission was unable to determine the original cost for a large proportion of the railroads.  

**Legal Status of Original Cost**

The legal status of original cost in the appraisal of lands is the result of dicta and usage rather than of judicial decision. In the earlier Consolidated Gas case, the United States Supreme Court suggested that utilities were entitled to the benefit of increases in the value of their  

2 "... If it is impossible to show from the records of the carrier or from any other source what the carrier did actually pay for these lands at the time they were originally acquired, no attempt is made to estimate such original cost. In some of the earlier valuations such an attempt was made, but the result was clearly valueless and a moment's thought will show that this must inevitably be true. It is difficult to determine after a lapse of from 10 to 50 years the acreage value of the right of way at the time it was acquired. The sources of information which are available upon this point are manifestly of doubtful accuracy. This, however, is not the most serious objection. The lands of a carrier were sometimes donated, sometimes purchased, sometimes condemned. In the absence of records there is nothing to show the proportion in which lands were acquired by these different methods. Even if it were known that a particular parcel was purchased it would be impossible to determine the purchase price even though it be assumed that the market value of adjacent lands is correctly known, for it abundantly appears from observation and from testimony produced by the carriers that the price actually paid is not determined by the market acreage value, being usually more but sometimes less. So of condemnation; without a record of the facts it is impossible to say what damages may have been paid.  

"Plainly, an attempt to estimate original cost would in many cases involve, not the exercise of good judgment but rather of pure speculation. The Commission has not felt justified in expending time and money in an attempt to make these estimates when they would be not only valueless but absolutely misleading when made." Texas Midland R. R., 75 I. C. C. 1 at 164-165 (1918).  

land and similar rights, and in *The Minnesota Rate Cases*, Justice Hughes also appeared to reject original cost as the standard for land valuations:

"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. The property is held in private ownership and it is that property, and not the original cost of it, of which the owner may not be deprived without due process of law...."

Despite these judicial slights, original cost has continued to be used under special circumstances in arriving at land valuations. The Federal Power Commission is required by the Federal Water Power Act to find the net investment cost of hydro-electric projects developed under federal license, and in these determinations, lands are included at their actual original cost, provided this is not more than their fair market value at the time of acquisition. And as will appear later, the Supreme Court seems to incline to original cost as the acceptable measure of the fair value of natural-gas lands and leases.

Adherents to the prudent-investment program of rate regulation have waivered between original cost and present value, though the logic of prudent investment would certainly indicate the use of the original-cost basis for lands as well as for other properties.

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3 "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. We do not say there may not possibly be an exception to it, where the property may have increased so enormously in value as to render a rate permitting a reasonable return upon such increased value unjust to the public. How such facts should be treated is not a question now before us, as this case does not present it." Willcox v. Consolidated Gas Co., 212 U. S. 19 at 52, 29 S. Ct. 192 (1909).
6 In an early decision, the Massachusetts Public Service Commission ruled in favor of original cost for lands:

"Considering this appreciation upon its own merits, car riders cannot fairly be
For purposes of determining the rate base, most commissions and courts have ceased to regard original cost as significant in indicating the value of utility lands.\(^7\)

**The Reproduction-Cost Method**

The use of the reproduction-cost method to determine the value of lands met its Waterloo in the *Minnesota Rate Cases*. Land being incapable of reproduction in the literal sense, reproduction cost was interpreted by the railroads as the cost of reacquiring their present land holdings. The "reacquisition costs" accepted by the lower court had been built up by taking the present value of similar adjacent lands, expected to pay higher fares because land has increased in value, nor ought they to pay lower fares if it should decrease. If the company wishes to sell such property it is, of course, entitled to whatever profit it is able to make; but so long as land is employed in the street railway business it is dedicated to a public use and held subject to the conditions fairly attaching to such use. As the Commission has said in another connection (see House Document No. 1900 of the current year, pp. 88, 89): "While no fair-minded man will deny that those who put their money into public service by building railroads are entitled to the opportunity to earn a fair reward, and even a generous reward if they serve the public well, the notion that this reward is to be determined, so long as their property is devoted to public use, not by investment or by service rendered, but in large measure by the rapid expansion of real estate prices in the larger centers of population, is contrary to sound public policy. It would mean that communities would be penalized by their own growth, and would lose all advantage from the fact that their transportation facilities were created in due season under favorable economic conditions." It should be added that, even if the doctrine of present worth were accepted, the figure used in rate making would clearly be present worth for street railway purposes. In this case no evidence whatever has been submitted that the land has increased in value for such purposes." Bay State Rate Case, (Mass. Pub. Serv. Comm. 1936) P. U. R. 1916F 221 at 252-253.

See also the dissenting opinion of Commissioner Eastman in San Pedro, Los Angeles & Salt Lake R. R., 75 I. C. C. 463 at 535-537 (1923), and the Prudent Investment Bill in New York, Report of Commission on Revision of the Public Service Commissions Law 411-422 (1930) (N. Y. Leg. Doc. 75).


developed largely from opinion evidence, as the base value; to this were added the special costs which it was assumed the railroad would experience in acquiring a continuous strip of land suitable for railroad use,—this sum, the so-called "market value" or "what it would cost the railroad to acquire the land," being developed on the basis of opinion evidence; the "value for railway purposes" was derived by multiplying the "market value" by 1.30 for terminal properties and by 2.00 for rural lands to allow for improvements assumed to be found on the lands, consequential and severance damages and the expenses of acquisition. By this method terminal lands which had cost the carrier $4,527,288.75 were included in the valuation at $17,315,869.45. Furthermore, this inflated sum was a part of the base upon which percentage allowances were made for "engineering, superintendence and legal expenses," for "contingencies" and for "interest during construction." Confronted with such exaggerated claims submitted in the name of the reproduction-cost theory, Justice Hughes' condemnation of this method of appraising land was sweeping and conclusive:

"These are the results of the endeavor to apply the cost-of-reproduction method in determining the value of the right-of-way. It is at once apparent that, so far as the estimate rests upon the supposed compulsory feature of the acquisition, it cannot be sustained. It is said that the company would be compelled to pay more than what is the normal market value of property in transactions between private parties; that it would lack the freedom they enjoy, and, in view of its needs, it would have to give a higher price. It is also said that this price would be in excess of the present market value of contiguous or similarly situated property. It might well be asked, who shall describe the conditions that would exist, or the exigencies of the hypothetical owners of the property, on the assumption that the railroad were removed? But, aside from this, it is impossible to assume, in making a judicial finding of what it would cost to acquire the property, that the company would be compelled to pay more than its fair market value. It is equipped with the governmental power of eminent domain. In view of its public purpose, it has been granted this privilege in order to prevent advantage being taken of its necessities. It would be free to stand upon its legal rights and it cannot be supposed that they would be disregarded.

"It is urged that, in this view, the company would be bound to pay the 'railway value' of the property. But supposing the railroad to be obliterated and the lands to be held by others, the owner of each parcel would be entitled to receive on its condemnation,
its *fair market value* for all its available uses and purposes. ... If, in the case of any such owner, his property had a peculiar value or special adaptation for railroad purposes, that would be an element to be considered. ... But still the inquiry would be as to the fair market value of the property; as to what the owner had lost, and not what the taker had gained. ... The owner would not be entitled to demand payment of the amount which the property might be deemed worth to the company; or of an enhanced value by virtue of the purpose for which it was taken; or of an increase over its fair market value, by reason of any added value supposed to result from its combination with tracts acquired from others so as to make it a part of a continuous railroad right-of-way in one ownership. ... "Moreover, it is manifest that an attempt to estimate what would be the actual cost of acquiring the right-of-way, if the railroad were not there, is to indulge in mere speculation. The railroad has long been established; to it have been linked the activities of agriculture, industry and trade. Communities have long been dependent upon its service, and their growth and development have been conditioned upon the facilities it has provided. The uses of property in the communities which it serves are to a large degree determined by it. The values of property along its line largely depend upon its existence. It is an integral part of the communal life. The assumption of its non-existence, and at the same time that the values that rest upon it remain unchanged, is impossible and cannot be entertained. The conditions of ownership of the property and the amounts which would have to be paid in acquiring the right-of-way, supposing the railroad to be removed, are wholly beyond reach of any process of rational determination. The cost-of-reproduction method is of service in ascertaining the present value of the plant, when it is reasonably applied and when the cost of reproducing the property may be ascertained with a proper degree of certainty. But it does not justify the acceptance of results which depend upon mere conjecture." 8

8 Minnesota Rate Cases, 230 U. S. 352 at 450-452, 33 S. Ct. 729 (1913).

The opinion was equally emphatic in ruling out any consideration of the so-called "railway value" of lands:

"... And where the inquiry is as to the fair value of the property, in order to determine the reasonableness of the return allowed by the rate-making power, it is not admissible to attribute to the property owned by the carriers a speculative increment of value, over the amount invested in it and beyond the value of similar property owned by others, solely by reason of the fact that it is used in the public service. That would be to disregard the essential conditions of the public use, and to make the public use destructive of the public right.
The present-value standard for the appraisal of utility lands has evolved from the Supreme Court's decision in the *Minnesota Rate Cases*. Having rejected the so-called reproduction method of valuing land and holding that actual original cost, even if it could be ascertained, would be inconsistent with the present-fair-value standard as applied to other properties of utility corporations, the question remained to what extent the carriers were entitled to the benefit of any appreciation in the value of their land holdings. The opinion advanced the proposition, without any discussion of its merits, that the maximum measure of the value of utility lands should be "the fair average of the normal market value of land in the vicinity having a similar character." The "rule" as to the fair-value measure for lands reads—

"Assuming that the company is entitled to a reasonable share in the general prosperity of the communities it serves, and thus to attribute to its property an increase in value, still the increase so allowed, apart from any improvements it may make, cannot properly extend beyond the fair average of the normal market value of land in the vicinity having a similar character. Otherwise we enter the realm of mere conjecture. We therefore hold that it was error to base the estimates of value of the right-of-way, yards and terminals upon the so-called 'railway value' of the property. The company would certainly have no ground of complaint if it were allowed a value for these lands equal to the fair average market value of similar land in the vicinity, without additions by the use of multipliers, or otherwise, to cover hypothetical outlays. The allowances made below for a conjectural cost of acquisition and consequential damages must be disapproved; and in this view, we also think it was error to add to the amount taken as the present value of the lands the further sums, calculated on that value, which were embraced in the items of 'engineering, superintendence, legal expenses,' 'contingencies' and 'interest during construction.'" 

"The increase sought for 'railway value' in these cases is an increment over all outlays of the carrier and over the values of similar land in the vicinity. It is an increment which cannot be referred to any known criterion, but must rest on a mere expression of judgment which finds no proper test or standard in the transactions of the business world. It is an increment which in the last analysis must rest on an estimate of the value of the railroad use as compared with other business uses; it involves an appreciation of the returns from rates (when rates themselves are in dispute) and a sweeping generalization embracing substantially all the activities of the community. For an allowance of this character there is no warrant." Ibid., 230 U. S. at 454-455.

9 Ibid., 230 U. S. at 455 (italics supplied).
It may be noted that the present-market-value standards was proposed with no adequate discussion of its advantages or disadvantages; it appeared in the guise of dictum as a counterpoise to the exaggerated claims of the railroads. The true character and significance of this measure of land values has never been subjected by the Court to the searching analysis which its importance would seem to require. In subsequent decisions of the Supreme Court, the market-value rule is mentioned with approval, and on the basis of this approval, the method has been quite generally adopted by the regulatory commissions of the country.

The Character of the Standard

A preliminary consideration of certain of the characteristics of the market-value standard is possible without further analysis of the manner in which it is applied in utility appraisals.

The relation of market-value appraisals to the costs to the utility is of primary concern to the utility managements and investors. While the discussions of the standard generally assume that the utility’s presence will result in an enhancement in the value of surrounding property, such assumptions are certainly not valid in the case of utilities other than railroads, and for railroads the assumption is primarily true only when the adjacent lands are adaptable to industrial and commercial developments. If surrounding property values have appreciated, the increase in value is attributable fundamentally to community growth. At least in the case of local utilities, it must frequently happen that the purchase of property for a gas plant, generating station, or street railway terminals must immediately lower the value of surrounding real estate so that the application of the market-value standard would give a sum lower than the cost to the utility. Also in so far as the costs of acquisition and other overhead costs are excluded from consideration, the market-value rule will yield an appraisal lower than cost unless there has been an offsetting appreciation in general real estate values.

Though the theoretical costs of reacquiring the property were held


unacceptable as a basis for land appraisals on the ground that the carriers could acquire necessary property through condemnation proceedings, the present-market-value rule is not the same as the condemnation value of the property. Condemnation value would include allowance for consequential and severance damages, which are specifically excluded along with conjectural costs of acquisition.

Even with respect to appreciation, it is not the appreciation in the utility land itself which is found and allowed. Appreciation is included in the valuation of land only to the extent that it is found in lands adjacent to those of the utility. And if adjacent lands have appreciated in value, the utility benefits therefrom even though its own lands may have depreciated.

The Measurement of Present Value

The present value of utility lands is obtained by multiplying the number of acres of each category of land by a market-value figure which is a fair average of the normal market value of similar lands in the vicinity.

Actual field appraisals are always necessary in land appraisals, not only to determine the character and extent of the utility's holdings and to identify the similar parcels of land in the vicinity whose market values are to be sought, but also to judge the reasonableness of any value figures that are developed from other sources.

Three classes of evidence are considered in arriving at the fair average of the normal market value of similar adjacent lands: the sale prices of similar adjacent parcels of land, the assessment figures for tax purposes, and the opinions of experts familiar with local real estate values.12

Actual sale prices are considered the best evidence of the market value of adjacent lands.13 It must appear that the adjacent lands whose


prices are available are really similar to those of the utility, and the sales must be representative, that is, not accompanied by any special circumstances that would enhance or depress values. Thus sales to the utility itself come under suspicion lest the consideration reflect the prospective earnings of the company. If sales prices are to have probative force, the sales must be recent, and there must be confidence that the true consideration has been determined.

Assessment for tax purposes must be used with extreme caution. It cannot safely be assumed that the assessed values of real estate conform to the market values. However, if the real estate in a community has been assessed uniformly, there may be a consistent relation between assessments and market values which will make it possible to use assessed values to supplement scanty data as to actual sales. If a reliable ratio of sales prices to assessed values can be developed, that ratio may


be applied to the assessed value of similar adjacent lands for the purpose of finding an imputed market value for utility lands. 20

While perhaps not as reliable as other lines of evidence, 21 opinion evidence is used to supplement the conclusions drawn from sales and assessment figures. It is, of course, requisite that the witnesses be properly qualified and that their testimony be supported by relevant and demonstrable evidence. 22

Many additional considerations are frequently urged on commissions in their appraisal of utility lands. The special adaptability of the lands to the utility use, while often stressed, is likely to be accorded only limited consideration. 23 Prospective or actual earnings attributable to lands are obviously inappropriate. 24 Condemnation awards, either actual or estimated, are usually held to be irrelevant. 25 Although theoretically overhead costs are not allowable in the appraisal of lands, such items do appear in some commissions' valuations. 26 There is general agreement, however, that such specific elements as assemblage values, severance damages and the like are not to be included in the appraisals on the present-value basis. 27

21 Sierra Ry. of California, 149 I. C. C. 171 (1928); West Palm Beach Water Co. v. West Palm Beach, (D. C. Fla. 1924) P. U. R. 1930A 177 at 189.
Natural-Gas Lands and Leases

Natural-gas lands and leases have presented one of the most difficult problems encountered in the appraisal of utility lands. When applied to the natural-gas fields and leaseholds, the present-value rule exhibits special infirmities which have led some regulatory bodies, including the Supreme Court, to abandon present market value as the standard of appraisal for gas properties in favor of a cost standard.

The cases involving the United Fuel Gas Company will serve to develop the problem. In a proceeding before the West Virginia Public Service Commission, the company claimed a present value of $36,449,176 for “gas lands, leaseholds and rights” whose “book cost” did not exceed $6,732,920, the appreciation exceeding the asserted value of all its other property. The claim for appreciation in the value of the gas properties was based upon two types of opinion evidence. There was testimony as to the sums at which the properties could be sold, and estimates, based on the assumed capacity of the fields and the prospective price at which the gas could be sold, were presented of the earnings which the company could expect to realize. Both the commission and the West Virginia Supreme Court, in upholding the commission’s decision, pointed out that the evidence failed to support the company’s claims: it was noted that to base market value upon prospective earnings was not permissible where the earnings depended upon the rates that were being regulated. The appeal directly to exchange or market value for natural-gas leases was rejected on the ground that the estimate was not supported by adequate evidence; that the so-called “open market” for such leases should be more precisely identified and characterized; and that if a natural-gas public utility were the assumed purchaser (and such companies would be virtually the only conceivable purchasers), the evidence of its offer would not be competent to show fair value in a rate case, since the offer would rest indirectly upon the earnings and rates of a public utility.

Questions as to what lands and leases should be included as used and useful property may be ignored in the present analysis. Most natural-gas companies control their producing areas through leases rather than by ownership of the properties. Gas companies commonly have four classes of gas leaseholds: properties that are in active production; lands that are proven but are not in operation; probable lands, unproven and unoperated; and “merely prospective gas lands.”


Ibid., at 591-605. Also, Charleston v. Public Service Comm., 95 W. Va. 91, 120 S. E. 398 (1923); and Natural Gas Co. v. Public Service Comm., 95 W. Va. 557, 121 S. E. 716 (1924).
The United Fuel Gas Company also operated in Kentucky, and finally on January 2, 1929, two cases involving this company, one from Kentucky and the other from West Virginia, reached a decision in the Supreme Court. In the lower federal court, book value had been adopted as the measure of fair value of the company's gas leaseholds for rate purposes. Following a description of the character of the evidence introduced in support of the claim for the alleged appreciation in the value of the gas lands and leases, Mr. Justice Stone's opinion

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33 "The actual cost on this basis of appellants' gas fields is not shown but it appears to have been substantially less than the book value assigned to it. It was stated on the argument that these leases, not only singly but in blocks, are sold in open market, but their market price appears not to have been established.

"Appellants do not accept either cost or market value as the basis of value of their gas rights. Instead they urge that their assembled holdings of gas rights are unique in that they cannot be reproduced and that their value depends largely upon their peculiar nature and situation. They rest their claim to a largely enhanced value over book value upon alternative theories supported by two classes of expert testimony. Appellants' experts, on the basis of geological and mining engineering data, and especially by ascertaining the existing rock pressure of the gas in various pools and by comparing the rate of decrease of rock pressure with the amount of gas produced from these pools in the same period of time, arrived at an estimate of the total volume of gas underlying the proven and probable territory. The results reached by this method were checked by comparison with the actual experience in gas production from selected pools and wells.

"These calculations are supplemented by testimony that in Pittsburgh there is an unregulated market for natural gas used for industrial purposes at 35 cents per 1,000 cubic feet which would, on an estimated changing schedule of annual production, absorb in eighteen years the total estimated reserve of gas in appellants' gas field. At this price, natural gas, it was said, could compete successfully in Pittsburgh, for industrial purposes, with gas produced from soft coal at the prevailing price of $2.75 a ton at the mine. After calculating the cost of getting this gas to the market, distant 130 miles from the nearest point on appellants' mains, providing for all construction costs including the cost of plant and transmission line, the gas when marketed, it was estimated, would pay a fair return upon investment, repay taxes and investment, and leave a balance, when discounted so as to give present value, of $32,458,129. A second witness, taking 30 cents as the market price of gas in Pittsburgh and deducting transportation costs, concluded that the gas in the ground is worth 5 cents per 1,000 cubic feet and arrived at a higher value, $33,155,421. To this latter estimate he added the present estimated cost of acquiring the 552,319 acres of improbable or unfavorable territory at $5.96 per acre, or $3,293,754, making a total estimated present value of appellants' gas field of $36,449,176. In this connection there is evidence, which appears to be unchallenged, that the average cost of acquiring unoperated acreage during 1921 to 1923 was 83 cents per acre and that in 1923 appellants acquired 15,184 acres at a cost of 66 cents per acre.
sets forth objections which would appear to be fatal to any attempt to employ the market-value standard in the appraisal of natural-gas lands and leases:

"In both methods of valuation, the value of property used in a business whose rates are regulated is made to depend on an assumed earning capacity, and the data relied on to establish assumed earning capacity are themselves essentially speculative—so much so as to form no trustworthy basis for the computation of value.

"It is true that a part of appellants' business is not regulated at present.... The unique character of appellants' control over a natural product, limited in amount, asserted here as a basis of value, the obvious necessity of securing franchises or other special privileges to enable them to distribute their product to consumers under the conditions assumed, and other circumstances which subject them to regulation in Kentucky and West Virginia, make inadmissible the assumption that the price to consumers would remain unregulated elsewhere.

"And in other respects the assumed earning capacity is so wanting in probative force as to require its rejection in the circumstances here disclosed. It rests on a prediction, feebly made, that the estimated amount of gas will be available as required through a period of eighteen years; that natural gas so transported and used as a fuel will command a price of from 30 to 35 cents per 1,000 cubic feet through that period in a market yet to be established despite the changes wrought by invention and improved business and manufacturing methods; and a further prediction not only of what plant and equipment must be constructed and maintained to effect delivery of the gas for this period to consumers in the city of Pittsburgh but also of the cost, through a like period, of the construction, maintenance and operation of that plant and equip-

"Appellants' second class of expert testimony is that of men experienced and interested in the production and marketing of natural gas, who purported to assign to appellants' gas field what was described on the argument as its present exchange value or the price which the property would bring if sold by a willing seller to a willing buyer. Three such witnesses testified to a present value of appellants' gas field in amounts varying from $30,000,000 to $35,000,000 and a fourth fixed the value at $45,000,000. Examination of their testimony discloses that these estimates were not based on prevailing prices for gas leases or on actual sales but, as in the case of the geological and engineering experts, upon an estimated or assumed exhaustible supply of gas available to appellants until exhausted, and upon a predictable price for natural gas in unregulated markets through a future period of about eighteen years. Common characteristics of both methods of valuation, therefore, are the estimation on uncertain bases of the volume of gas available and of the price at which it may be sold through a long future period." United Fuel Gas Co. v. Railroad Commission of Kentucky, 278 U. S. 300 at 314-316, 49 S. Ct. 150 (1929).
ment. Such predictions can only be made on the basis of data which are not and cannot be known, and most of which are in the highest degree speculative. Such a process of estimating value is without any known sanction.

"On the record as made, appellants have failed to present any convincing evidence of value of their gas field which would enable us to assign to it any greater value than that which they appear to have assigned to it on their books. This book value, therefore, may be accepted not as evidence of the real value of the gas field, but as an assumed value named by the appellants, which, on the evidence presented cannot reasonably be fixed at any higher figure." 84

In rejecting the application of the market-value test in the United Fuel Gas case, the Court did not go so far as to rule that market value might never be applied in the appraisal of gas leaseholds, 85 but the defects in the proof that were so prominent in this case would seem to be inescapable in any attempt at a market evaluation of natural-gas lands. 86 Furthermore, the acceptance of book value in default of market value should afford no precedent for the general adoption of book-cost figures. The infirmities of book values in an industry characterized by a multiplication of affiliated corporations whose accounting practices are not subject to the strictest regulatory supervision are too obvious to require enumeration.

The affirmative adoption of a legal standard for the valuation of natural-gas lands and leaseholds awaits further rulings by the Supreme Court. The one appropriate standard is the actual cost of the leases.

84 Ibid., 278 U. S. 300 at 317-318.
85 It may be noted that the courts of Pennsylvania and New York have apparently been willing to accept the market-value standard supported by evidence that has been considered unacceptable in other jurisdictions. Erie v. Public Service Comm., 278 Pa. 512, 123 A. 471 (1924); People ex rel. Pennsylvania Gas Co. v. Public Service Comm., 204 App. Div. 73, 198 N. Y. S. 193 (1923), and 211 App. Div. 253, 207 N. Y. S. 599 (1925).

The case in support of the present-value standard for natural-gas lands may be summarized in three arguments: (1) all utility property should be treated uniformly; the present-value standard applies to other types of utility property and should be applied to rights in natural gas properties as well; (2) the "economic rule of equality of exchange" governs all transactions in regulated and unregulated enterprise alike (this argument definitely identifies present value, as used in regulated enterprises, with market or exchange value); and (3) securities have been issued and property rights have become fixed in the light of the established principles of regulation,—hence to depart from the present-value standard would be to the prejudice of innocent third parties, investors and others.

There would appear to be no reason why a public utility exploiting a natural resource should be allowed to appropriate for itself any of the value of the natural resource. The principle is already established with reference to the hydro-electric projects developed under federal license that investors are entitled to a fair return upon the amount of the investment made in the development of the project but they are entitled to no additional income by reason of their right to exploit a natural resource. It may be objected that the water-power rights are assumed to be the property of the whole people, while the ownership of natural gas, or the right to appropriate it, belongs to those who control the surface and have the right to drill gas wells. But if the objection relies on an analogy between natural gas utilities and other industries (as coal and petroleum) engaged in the exploitation of natural resources, it must be realized that these other industries operate under competitive controls, that the tendency is for price to equal the costs of production, and that the payment for the natural resource itself (the royalty payment) is presumably only so much as is requisite to prevent the legal owners from withdrawing their resources from employment. The monopolistic position of the natural-gas utilities with respect to their market makes the analogy to the competitive coal or oil industries imperfect, and of course the presence of active competition has to be presupposed to justify the absence of regulation. Clearly reproduction (or reacquisition) cost and market value are illogical, impractical, indefensible standards for the valuation of natural gas leaseholds. No case can be made for book value. Hence, actual cost or investment, both on the basis of economic principle and in default of an alternative standard, appears to be the one basis for the valuation of property rights of utilities in natural-gas fields. Perhaps such a development is foreshadowed in the Dayton Power & Light case, where book-value figures were adjusted downward by the Ohio Public Utilities Commission and this standard was accepted by the Supreme Court.87

87 Dayton Power & Light Co. v. Ohio Public Utilities Comm., 292 U. S. 290, 54 S. Ct. 647 (1934). The investment cost of the leases was apparently $4,730,444; the commission allowed an appraisal of $7,284,900; while criticizing the commission’s figures as too high, the Ohio Supreme Court affirmed the order; and Justice Cardozo, in commenting on the rejection of figures for present value and market value by the Ohio authorities, remarked, “If those data were unacceptable, the only others left were the entries in the books, and these perforce were followed for lack of anything better.” 292 U. S. at 302-303.

For the opinions of the Ohio court, see Logan Gas Co. v. Public Utilities Comm., 124 Ohio St. 248, 177 N. E. 587 (1931); Columbus Gas & Fuel Corp. v. Public Utilities Comm., 127 Ohio St. 109, 187 N. E. 7 (1933).
The Theoretical Basis of the Present-Value Standard

There is little to distinguish between present value, the legal standard, and market value as the measure in the valuation of utility lands; for all practical purposes, the standard is market value. The market-value standard has been rejected as an acceptable measure of the value of utility structures for two reasons: (i) that market value cannot be determined because utility properties are not bought and sold under conditions that identify a "market price"; and (ii) that the adoption of the market-value standard would involve circular reasoning inasmuch as market valuations would depend upon earnings, which depend upon the rates, which are the subject of the regulation in question. Why are these same objections not conclusive against the application of the present-value standard to lands?

The decisions of the Court have proceeded upon the hypothesis that there is an ascertainable market value for land. It is, of course, axiomatic that the value of land depends upon the income it yields (the economic rent); but it is assumed that the income producing capacity of land is independent of the rates which the utility is allowed to charge. This assumption rests upon the supposed indestructible qualities of land; presumably the utility might expect to be able to dispose of land to other prospective users, and the sum which they would presumably pay is taken as the measure of its present value for purposes of utility rate regulation.

The market-value standard immediately encounters difficulties when land is asserted to have some peculiar value to the utility. To claims for "railway values" and other special values, the Court has returned a negative answer. In the case of the railroads, the refusal to consider special railway values was predicated upon the assertion that the railroads, having the power of eminent domain, might condemn the necessary property, and that the compensation awarded would be measured by the value of the property to the owner whose property was condemned, not by its value to the taker of the property. Yet certain flaws in the consistency of this argument may be noted,—present value does not include the "costs of acquisition" or "consequential and severance damages," which are a part of the condemnation costs. It is only in the appraisal of natural-gas lands that the circular reasoning implicit in the use of the market-value standard has been generally recognized.

Criticisms of the Present Value Rule

The present-value rule for appraisal of utility lands has been doubly criticised as being theoretically unsound and as faulty in its
application. Some of the more basic theoretical objections have just
been noted. Certain weaknesses in application may be itemized.

1. The rigid application of the standard of the "fair average of the
normal market value of similar adjacent lands" may work serious
injustice to the utility. In the absence of appreciation in the value of
the similar adjacent land, the rule may deny the right to a return on
legitimate elements of cost inevitably incurred in the acquisition of
necessary land. It has been suggested that valuable railway rights-of-
way may run through country where the negligible value of adjacent
lands is an unreliable and unfair index of the value of the carrier
lands. And if the present market value rule be strictly construed, it is
altogether possible for the presence of a utility plant so to depreciate
the value of the surrounding real estate as to prevent the utility from
ever having a fair return on that part of its investment.

2. The rejection of the unit valuation of utility real estate, that
is, refusing to value the site and the structures thereon together, creates
another target for valid criticism. Land and buildings, according to the
prevailing methods of appraisal, are valued separately: the structures
are given their full value (perhaps on the basis of reproduction cost
even when the existing buildings would never be reconstructed); and
the site is valued as though unencumbered with buildings which, in
actuality, would have to be razed before the land could be sold, or the
price for the site would have to be lowered by at least the cost of remov-
ing the structures. Except in rare instances, structures cannot be sold
separately from the land. The sound practice would be to value utility
structures at no more than their value for the purposes of the utility,
with the replacement cost as a maximum. And if market value be the
measure of the legal standard for the appraisal of lands, the site value
should reflect the costs involved in making the site available for use,
such as the negative value of removing worthless buildings.

88 Note the dissenting opinion of Commissioner Daniels in Kansas City So. Ry.,
75 I. C. C. 223 at 269-270 (1919).
54, P. U. R. 1930B 33 at 45-46; Manitowoc v. Wisconsin Fuel & Light Co., (Wis.
40 This procedure was suggested in a New York Telephone Company case, in the
dissenting opinions of Chairman Prendergast and Commissioner Van Namee:
"While the valuation of land is determined by its market price, the law assuming
it should be valued at what it would sell for, it is doubtless permissible to show the
existence of peculiar conditions which make such assumption unjust and untrue. That
is, that such portion of the property being valued may have peculiarities of its own, or
be affected by peculiarities existing in other portions of the property.
"Many of the building situated on the company's land could not be sold sepa-
3. The assumption that utility lands would have a value equivalent to that of similar adjacent lands, if the company were in a position to dispose of its land, has also been challenged. It has been pointed out that in so far as railway rights-of-way are not used for railroad purposes they are of no value, and that urban lands must usually be disposed of at great sacrifices, encumbered as they are with specialized structures and frequently being irregular in shape. 41

rately from the land—this fact in itself not being of much moment under the method of valuation—the important fact being that the land could not be disposed of without razing the buildings. While, generally speaking, a building and the land upon which it stands constitute a single unit for the purpose of use or sale, a separate valuation must be made and on a different basis. For the land, the market value, but for the building the cost of reproduction.

"Certain facts, affecting the reproduction value of land and buildings appear in the record of this investigation:

"(a) If reproduction were had, many buildings, particularly in the state outside of New York city, never originally designed for the use of a telephone company or for telephone use—remodelled residences, a stable, rebuilt farmhouses, stores—are of such a character that no telephone company would think of reproducing them for public utility use. Yet for these there was furnished the same elaborate and detailed estimates as to the cost of reproduction, including those costs which would be met, if at all, in the construction of a telephone exchange building in a great city.

"(b) The modern buildings of the company, in the larger cities, are of the character of construction and arrangement (peculiar to the telephone business) to unfit them for any general business uses in the neighborhood where located, and not adaptable for reconstruction.

"The truth of this becomes apparent when we find the company admitting, in connection with its depreciation studies, that certain buildings in New York city, when retired at an early date, will have little or no salvage value. That is to say, that in order to dispose of the land, the buildings will in most cases have to be disposed of at about the cost of removal. . . ." Re New York Tel. Co., (N. Y. Pub. Serv. Comm. 1926) P. U. R. 1926E 1 at 99-100.

41 In Commissioner Eastman’s dissenting opinion in San Pedro, Los Angeles & Salt Lake R. R., 75 I. C. C. 463 at 535-536 (1923), the actuality of these present values is discussed:

"Consider, first, right of way outside of populous centers. We have all had the experience in traveling of seeing stretches of old right of way abandoned when curves and grades were eliminated and utterly useless for any purpose. Made up of cuts and fills and embedded with gravel, cinders, and other forms of ballast, such land becomes practically worthless to the farmer. In a recent case where we authorized the abandonment of an entire railroad I find that our Bureau of Valuation estimated the value of its land on valuation date, based on the market value of adjoining real estate, at more than $900,000. Yet a firm of consulting engineers, reporting to the bondholders prior to abandonment, estimated the salvage value of the same land at $174,000, and of this $150,000 represented parcels which happened to be located in a city.

"It may be thought that these ‘present values’ have greater reality in large cities. But as Justice Hughes observed in The Minnesota Rate cases [230 U. S. 352, 33 S. Ct. 729 (1913)], the values of property along a railroad line ‘largely depend upon its existence.’ If a carrier should be permitted to place itself in a position to sell its city
4. Both the justice and the economic wisdom of the present-value
rule have been repeatedly called in question, especially by those who
believe the prudent-investment principle to be the sound basis for utility
regulation. In effect, the present-market-value standard gives the utility
an artificial and unearned increment when surrounding lands appreciate
in value. The increment is unearned, since the utility is not responsible
in any determinable measure for the increase in the value of the sur­
rounding lands; it is artificial, because as long as the land is retained in
the public service, there is no possibility of the utility taking advantage
of rising real estate values and certainly there is no increase in the value
of the property for the purposes of utility operations. Indeed where it
has taken the property by eminent domain proceedings, the utility usu-

rights of way or terminal lands by ceasing to use them for railroad purposes, for under
no other circumstances could it sell them, the market value of adjacent land in most
cases would at once suffer a material decline. Let us take an actual case. When the South
Terminal station was constructed in Boston, the terminal station and yards at Park
Square, owned by the Boston & Providence, were abandoned in 1899. This railroad
was leased to the New York, New Haven & Hartford. In settlement of its share of the
cost of the new terminal, the Boston & Providence conveyed its abandoned lands to the
New Haven at an agreed value of about $5,000,000. Bear in mind that the tract is a
large one and in the very heart of the city. The transfer was made in 1904. After 19
years some of the parcels are still unsold, and it is my understanding that the utmost
expectation of the carrier is that it will be able to recover the $5,000,000 but not, in
any large measure, the loss in interest and taxes. In a report to the legislature in 1916
(published as House Document No. 1900) the Massachusetts Public Service Commission
had the following to say about this tract, at page 68:

"Since these properties were transferred to the New Haven in 1904 the income
from them, up to June 30, 1915, has been insufficient by $611,381.54 to meet ex­
penses and taxes. Calling the investment $5,000,000 and reckoning interest at 5 per
cent during the ten years, the additional loss in interest has been $2,500,000, making
the total loss to the New Haven Company during the period $3,111,381.54, or almost
two-thirds of the investment. If the loss to the Boston & Providence Railroad Corpora­
tion in the period 1899 to 1904 were included, the total loss would, of course, be a still
larger sum."

In the same report appears this further comment upon other non-carrier land owned by
the New Haven in Boston, at pages 68-9:

"The New Haven Company also furnished the Commission with a sworn list
of the parcels of real estate which it owns in the city of Boston, apart from right of
way, station grounds and terminals, and the Park Square property. The total assessed
value of this real estate, which includes ninety-two separate parcels of land, is
$4,554,350, and, so far as information is available, it appears that the actual cost was
even greater. . . . Much of the land is for sale, but the company does not find it an
easy matter to dispose of it. Many of the parcels, it seems, are irregular in shape and
were acquired in connection with the laying out of new lines or terminals."

Indeed, it might be said that so long as the utility continues to utilize the
land, any increase in its assessment value is to the disadvantage of the utility since it
will be required to pay higher taxes.
ally has a limited deed only, its continued possession of the property being conditional upon its employment in the public service; hence it would have no right to dispose of the property in a free market such as is available for adjacent lands. In this respect it may be said that the lands of the utility are not similar to those adjacent lands which are not employed in the public service.

The large fixed investments which utilities usually make on their land holdings effectively withdraw all such sites from a free market. The value of these sites, like the value of other fixed investments, will necessarily depend upon the profitableness of the enterprise, that is, upon the earnings and rates which are the object of regulation. Furthermore, it may be noted that even with respect to the market values of adjacent lands, they do not fluctuate with the "general prosperity of the community" nor with changes in the general level of prices; their values respond sensitively and violently to changes in the local real estate market, to the costs (largely construction costs) incidental to the employment of land, and to variations in the rates of growth of population and business activity. All of these factors which impinge so sharply upon real estate values should have no bearing upon the relations of the utility to its patrons, and have, in fact, little or no discernible effect upon the value of the particular property which the utility is employing in the public service.

Despite the fact that the present-market-value standard is widely followed by regulatory authorities, the Supreme Court itself has not affirmatively ruled that this is the only acceptable standard for the appraisal of utility lands. The matter is of such importance that it is hard to understand why regulatory commissions have been willing to allow this decision to go by default. It would be a definite step in the direction of a sound system of rate regulation if the present-market-value standard, which has no real significance in the relations between the utility and its patrons, should be abandoned in favor of an actual-cost standard. The adoption of the cost standard for utility lands would protect the investment of utility corporations in a way that is not possible under the adjacent-market-value rule, and would assure that all of the costs imposed upon the utility in the acquisition of its lands would find recognition in the establishment of rates; the consuming public would benefit by the greater definiteness and certainty that would attach to valuation procedures, and by the elimination of the possibility that they might be called upon to pay a return on land values inflated as a result of public improvements to which they have already contributed in taxes.