ORIGINAL

Decision No. 1625

BEFORE THE RAILROAD COMMISSION OF THE STATE OF CALIFORNIA

TOWN OF ANTIOCH,
a municipal corporation,

Complainant,

vs.

PACIFIC GAS AND ELECTRIC
COMPANY, a corporation,

Defendant.

Case No. 400.

B. D. M. Greene for complainant.
Charles P. Cutten for defendant.

THELEN, Commissioner.

O P I N I O N.

The issue in this case is the determination of fair and reasonable rates to be charged by defendant for electric energy supplied to the town of Antioch and its inhabitants.

The complaint alleges, in effect, that the town of Antioch has voted to confer upon the Railroad Commission its powers of control over the defendant public utility; that the rates charged by defendant for electric energy supplied to the inhabitants of the town of Antioch for residence and commercial lighting are as follows:

For residence lighting:

First 30 K.W.H.	per month	8¢ per K.W.H.
Next 70 "	" "	7¢ " "
Next 100 "	" "	6¢ " "
Next 200 "	" "	5¢ " "

For commercial lighting:

First 150 K.W.H.	per month	6¢ " "
Next 300 "	" "	5¢ " "
Next 600 "	" "	4¢ " "
All over 1050 K.W.H.	per month	3¢ " "

Minimum charge: $1.00 per meter;

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that said rates are high and exorbitant and that the service is not reasonably worth the price charged by the defendant; that complainant has been unable to arrive at a satisfactory agreement with defendant with reference to the rate to be charged by defendant for lighting the public streets of Antioch; that defendant has offered to furnish electricity to complainant for said purpose at the rate of $1.45 per month for each 40 candle power series Tungsten lamp and $3.50 per month for each 200 candle power series Tungsten lamp; that complainant deemed said rate high and exorbitant and refused to enter into an agreement with defendant at said rate; that at the present time defendant is charging complainant the flat sum of $128.00 per month for lighting the public streets of Antioch; and that complainant believes that said charge of $128.00 per month is unfair and unreasonable. The complainant asks that this Commission establish the rate at which the defendant may sell electric energy to the town of Antioch and to the inhabitants thereof.

The answer denies all the material allegations of the complaint and alleges that the rates charged by defendant for lighting the public streets of Antioch, and also for service to the inhabitants thereof, are fair and reasonable. The defendant accordingly asks that the complaint be dismissed.

Public hearings in this case were held in San Francisco on August 6 and November 28, 1913, and on January 6, 7, 27, 28 and March 9, 10 and 11, 1914.

The delay between January 28 and March 9, 1914, was caused by the fact that the committee of engineers who were working on the question of the value of the water rights of the defendant had not finished their report. This report was completed prior to the submission of this case but the defendant chose not to present it, and stipulated that if this Commission should make no allowance for the value of water rights in this case, the defendant would raise no objection to such action.

This case has involved a tremendous amount of labor, both on

the part of the Commission and its experts and of the defendant. It has been necessary to investigate defendant's entire hydro-electric system, extending from the crest of the Sierras to the Pacific Ocean, and also that portion of its plant which is engaged in the production and transmission of electric energy produced by steam, as well as the local distributing system in the town of Antioch. The extent of the inquiry is shown by the fact that 62 exhibits have been filed by the defendant, containing information requested by the Commission and its experts, as well as evidence presented by the defendant on its own behalf. These exhibits contain over 600 pages of statistical information. The case for the defendant has been fully and ably presented by its counsel.

After the submission of this case, the defendant filed a brief covering questions both of fact and of law involved in this case. Before considering the issues of fact herein, it will be necessary to consider certain fundamental principles involved in this inquiry. These principles will be considered under the following heads:

(1) Basis of return;

(2) Going concern value;

(3) Depreciation reserve;

(4) Rate of return.

1. BASIS OF RETURN.

The defendant, in its brief, makes the direct claim that this Commission must use as the basis of return the reproduction value new of defendant's system, plus an allowance for so-called going concern value. The matter of going concern value will be considered later in this opinion. I desire now to give consideration to defendant's claim that this Commission, under the authorities, is bound to give a return on the cost of reproducing defendant's system new, and that this is the only basis to which this Commission can give consideration.

That cases may arise in which it would be fair and equitable to give to a utility a return based on the cost of reproducing its

property new is undoubtedly true. It may well be urged that where the cost of reproducing the property new is approximately the same as investment and the utility has done its full duty in keeping its property up to 100 per cent efficiency, and has established a proper depreciation fund the utility may justly claim a return on an estimate of reproduction new.

The claim, however, that rate fixing authorities must give a return on the estimated cost of reproduction new, without consideration of any other basis, seems to me to be without warrant both in common sense and on authority. It will at once occur to a student of public utility problems that if a plant has been permitted to run down below an efficiency of 100 per cent, it may be most unfair to the consumer to allow a return based on the estimated cost of reproducing the property new. If the stockholders take out in the shape of dividends moneys which should be used to keep up the property, they certainly have no right thereafter to claim a return on the basis of reproducing the property new. Likewise, the same result may well follow in cases in which, while the service rendered may for the time be up to standard, the plant has been permitted to deteriorate in such a way that proper repairs and replacements have not been made. A simple illustration will suffice to make this point clear. A water company's mains may have been permitted to wear out, and still they may not be leaking to-day, so that it may well be claimed that the company is furnishing 100 per cent service. To-morrow the pipes may all start leaking, so that the system becomes almost valueless for the transmission and delivery of water. It is obviously ridiculous to say that if the rates were being established to-day, it would be necessary to accord the utility a return on 100 per cent reproduction value new. A contrary conclusion would result in the temptation on the part of the stockholders for the time being to take out all the profits in the shape of dividends and to fail to make the necessary repairs and replacements.

A more fundamental objection to defendant's position is that the reproduction value new theory has no logical or necessary connection with the relationship between a utility and its customers,

and that it represents a basis of return which is largely unscientific and fortuitous. The relationship between a utility and its customers was expressed by Mr. Justice Harlan, in Smythe vs. Ames, 169 U.S. 466, 544, as follows:

> "A railroad is a public highway, and none the less so because constructed and maintained through the agency of a corporation deriving its existence and powers from the state. Such a corporation was created for public purposes. It performs a function of the state."

The same thought is expressed by Judge Van Fleet, in San Diego Water Company vs. San Diego, 118 Cal. 556, 570, as follows:

> "As we have said, it is not the water or the distributing works which the company may be said to own, and the value of which is to be ascertained. They were acquired and contributed for the use of the public; the public may be said to be the real owner, and the company only the agent of the public to administer their use."

The thought expressed by Mr. Justice Harlan and Judge Van Fleet is, that in many respects the relationship between a utility and its consumers may be compared to that existing between principal and agent. While there are, of course, respects in which this analogy will not hold, I think that we may safely look to this relationship as supplying in a large percentage of rate fixing cases one of the most important bases for a return on public utility property, namely, the investment or the original cost, plus the cost of additions and betterments. When weight is given to this basis, it will be apparent that a public utility is entitled to a reasonable return upon such money as it has honestly and wisely expended for the public, but that it should not be allowed a return on money which it has expended dishonestly or without a fair degree of wisdom.

The ultimate question is, of course, always what is fair and just and equitable to be done by the public authority as between the utility and its patrons. If a utility, in pursuance of its duty to the public, has expended money honestly and with a fair degree of wisdom, and it thereafter becomes possible to acquire more cheaply property which it has purchased in the agency, or to secure at a lesser expense labor or material used therein, the utility should not generally be compelled to

suffer the loss but should be entitled to a return on the money which it has spent for the public. On the other hand, if it costs more to reproduce the property at the time of the subsequent rate inquiry, it would seem just as unfair to the consumer to compel him to pay a return on moneys in excess of those which the agent has expended in the service. The injustice of the reproduction value new theory in these two cases, first to the utility and then to the consumer, has been clearly stated by Judge Van Fleet in the San Diego Water Company case, hereinbefore referred to. In that case the question at issue was the basis on which the water company was entitled to a return. Referring first to the unfairness to the water company of applying the basis of estimated reproduction value new in case prices have gone down, Judge Van Fleet, at page 568, says:

> "The construction of a municipal water works is a matter of growth. It is necessary in common prudence, on the one hand to construct the water works of such capacity as to satisfy the needs of the growing city, not only at the moment, but within the near future; and, on the other hand, not to extend them so much as to cast an unnecessary burden on the stockholders, or the present consumers. As such works are a necessity to the city, they must keep pace with, and to some extent anticipate its growth. When constructed they stimulate to that extent the progress of the city, and tend, like all conveniences, to lower the general cost of production of all things. It results that at least the first water system in any city occupies the position of a pioneer. At any expense the works must be constructed, and usually no reward can be realized by the constructors until some time has elapsed. It would, therefore, be highly unjust to permit the consumers to avail themselves of the plea that at the present time similar works could be constructed at a less cost, as a pretext for reducing the rates to be paid for the water. The reduced expense, if it be reduced, is due in part at least to the very fact that the city has been provided at the cost of the water company with increased facilities for doing business."

Referring then to the injustice to the consumer if he is compelled to pay a higher rate on the ground of an advance in prices, Judge Van Fleet, at page 569, continues:

> "Nor would it, on the other hand, be just to the consumers to require them to pay an enhanced price for the water, on the ground that it would now cost more to construct similar works. Such a contingency may well happen; but to allow an increase of rates for such reason would be to allow the water company to make a profit, not as a reward for its expenditures and services, but for the fortuitous occurrence of a rise in the price of materials or labor. The law does not intend that this business shall be a speculation in which the water company or the consumers shall respectively win or lose upon the casting of a die, and upon the equally unpredictable fluctuations of the markets."

Judge Van Fleet thus looks on both sides of the shield and shows how the application of the reproduction value new theory may work just as great an injustice to the utility under one set of facts as it may to the consumer under another. The reproduction value new theory has no necessary relationship whatsoever to the sacrifice which the utility has made. It seems to me no more fair to give a return on $500,000 when the entire amount invested has been but $100,000, than it is to confine a return to $100,000 when the utility has honestly and in good faith invested in its capacity as agent for the public and under its obligations to the public, the sum of $500,000. It should be borne in mind that this criticism is directed more to an estimated reproduction value new at the time of the inquiry than to an estimated reproduction value based on the historical method and on the conditions and prices prevailing at the time when the different portions of the plant were constructed.

Notwithstanding what would seem to be the simple common sense and logic of the situation, the defendant here claims, and other utilities in other cases before this Commission continually claim, that under the established cases this Commission will be compelled to yield a return on the cost of reproduction new of the property, irrespective of any other element. I am of the opinion that a careful consideration of the cases which have been decided by the Supreme Court of the United States, which court alone has the final say in this matter, will show that this position is entirely erroneous. I shall now proceed to a consideration of the principal cases which have been decided by the Supreme Court of the United States on this point.

The original and leading case is Smythe vs. Ames, 169 U.S.466. In that case the Supreme Court affirmed a decree of the lower court enjoining certain railway companies from establishing certain rates prescribed by an act of the legislature of Nebraska, on the ground that the rates so established were confiscatory. In announcing the decision of the Supreme Court, Mr. Justice Harlan uses the following language with reference to the proper basis for public utility rates:

"We hold, however, that the basis of all calculations as to the reasonableness of rates to be charged by a corporation maintaining a highway under legislative sanction must be the fair value of the property being used by it for the convenience of the public. And 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 of the property 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."

He then continues as follows:

"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."

This language must be considered in the light of Mr. Justice Harlan's earlier declaration in the same case, to the effect that a statute or order establishing rates for the transportation of persons or property by railroad will violate the provisions of the Federal Constitution only if it "will not admit the carrier earning such compensation as under all the circumstances is just to it and to the public."

It seems clear that under "all the circumstances" should be included the fundamental circumstance of the character of the relationship between the public and the utility, which relationship, as has hereinbefore been indicated, may in many respects be compared to that between a principal and an agent. Before leaving this case, I desire to draw attention to the fact that Mr. Justice Harlan was urged by the railroads to accept the outstanding stocks and bonds as the proper basis for rate fixing, but that he refused to do so, and that in getting away from that basis, he used the other bases hereinbefore referred to.

In San Diego Land and Town Company vs. National City, 174 U.S. 739, the San Diego Land and Town Company filed a bill in equity in the United States Circuit Court for the Southern District of California, against the city of National City, to obtain a decree

declaring water rates fixed by the defendant to be void as violating the State and Federal constitutions, and to secure an injunction against their enforcement. The decree of the lower court dismissing the bill was affirmed.

With reference to the basis on which a return shall be allowed, Mr. Justice Harlan, at page 757, uses the following language:

> "What the company is entitled to demand, in order that it may have just compensation, is a fair return upon the reasonable value of the property at the time it is being used for the public. The property may have cost more than it ought to have cost, and its outstanding bonds for money borrowed and which went into the plant may be in excess of the real value of the property. So that it cannot be said that the amount of such bonds should in every case control the question of rates, although it may be an element in the inquiry as to what is, all the circumstances considered, just both to the company and to the public."

It is evident that Mr. Justice Harlan had in mind the possibility that the moneys originally expended may have been unwisely or dishonestly expended and that he was trying to get away from the claim that a utility is entitled to a return on the amount of the outstanding securities. There is nothing in this case which justifies the claim that a rate fixing authority must confine itself to the theory of reproduction value new. Mr. Justice Harlan simply states that a utility is entitled to "a fair return upon the reasonable value of the property at the time it is being used for the public." That the time as of which the value must be ascertained is the time of the inquiry, is too well established to permit of any doubt. There is nothing in this case which justifies the conclusion that the property of the utility will be confiscated unless a return is allowed on the reproduction value of the property, without regard to the relationship existing between the public and the utility. No question of appreciation of land values or other values was before Mr. Justice Harlan.

In City of Knoxville vs. Knoxville Water Company, 212 U.S. 1, the Supreme Court reversed a decree of the Federal Circuit Court for the Eastern District of Tennessee, enjoining the enforcement of an ordinance of the city of Knoxville establishing minimum rates for water. In this case, the Master below apparently reached his conclusion on the basis of the cost to reproduce the property new. Mr. Justice

Moody held that this was error, and for that reason, the Supreme Court reversed the order of the lower court. Referring to the reproduction new theory, Mr. Justice Moody, at page 9, says:

> "The cost of reproduction is one way of ascertaining the present value of a plant like that of a water company, but that test would lead to obviously incorrect results if the cost of reproduction is not diminished by the depreciation which has come from age and use."

Continuing, he says, at page 10:

> "The cost of reproduction is not always a fair measure of the present value of a plant which has been in use for many years. The items composing the plant depreciate in value from year to year in a varying degree. Some pieces of property, like real estate for instance, depreciate not at all, and sometimes, on the other hand, appreciate in value. But the reservoirs, the mains, the service pipes, structures upon real estate, standpipes, pumps, boilers, meters, tools and appliances of every kind begin to depreciate with more or less rapidity from the moment of their first use. It is not easy to fix at any given time the amount of depreciation of a plant whose component parts are of different ages, with different expectancies of life. But it is clear that some substantial allowance for depreciation ought to have been made in this case."

For the reason that no such allowance was made, the decision below was reversed. It thus appears that the Supreme Court of the United States, contrary to defendant's position herein, has definitely discarded the theory of reproduction cost new, in a case in which material depreciation has taken place. It is proper to say, before leaving this case, that both sides below started with estimated reproduction cost and that nothing was urged concerning the original investment with betterments and additions.

In Willcox vs. Consolidated Gas Company, 212 U.S. 19, the Supreme Court reversed a decree of the Circuit Court for the Southern District of New York, enjoining the enforcement of an 80 cent gas rate in the city of New York. The principal question in this case was whether a franchise value of twelve million dollars, found by the court below, should stand. Although the court below found that the present value of the franchise was twelve million dollars, Mr. Justice Peckham refused to follow his own language to the effect that the present value of the property is the determining factor, and allowed only a value of $7,781,000, which value had been agreed upon by the state of New York by a statute of 1884.

Referring to the general question of the basis of return, Mr. Justice Peckham, at page 52, says:

> "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. That is, at any rate, the general rule. We do not say that 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. We refer to the matter only for the purpose of stating that the decision herein does not prevent an inquiry into the question when, if ever, it should necessarily be presented."

I desire to draw attention to the fact that while Mr. Justice Peckham uses the general language found in all the cases to the effect that a utility is entitled to a return on the value of the property as of the time when the inquiry concerning the rates is made, he seems also to see the danger ahead if this theory is carried to its logical conclusion. He expressly states that there may be cases when property values have increased so enormously as to make a rate based thereon unjust, and refuses to decide that question.

Finally, in Simpson vs. Shepard, 230 U.S. 352, more commonly referred to as the Minnesota Rate case, decided on June 9, 1913, the Supreme Court, for the first time, examined the question of land values as bearing on the proper basis for establishing public utility rates. Mr. Justice Hughes, while again using the general language with reference to present value found in the earlier cases, gave to the railroads considerably less than the reproduction value new of their lands or the present value thereof, based upon the cost of present acquisition. He refused to allow any multiples for ascertaining the "value for railway purposes" from the so-called "market value" and also made no allowance for overhead expenditures in connection with land, such as administration, superintendence, engineering, taxes, and interest during construction. In refusing to allow anything for these items, Mr. Justice Hughes, at page 455, says:

"Assuming that the company is entitled to a reasonable share in the general prosperity of the communities which 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, can not properly extend beyond the fair average of the normal market value of the land in the vicinity having a similar character. Otherwise we enter the realm of more conjecture."

The same conclusion is then expressed in greater detail as follows:

"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 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 lands the further sums, calculated on that value, which were embraced in the items of 'engineering, superintendence, legal expenses,' 'contingencies,' and 'interest during construction.'"

It can not be disputed that Mr. Justice Hughes did not allow the cost of reproducing these lands new. It is equally clear that he does not allow even as much as thepresent value of the land. As already pointed out, he allows only the "fair average market value of similar lands in the vicinity," without allowing anything for the damages which we all know are caused by severance of railway right-of-way from larger tracts of land and without allowing anything for the expense of acquisition. He simply says that under all the circumstances of the case, including, of course, the tremendous increase in the value of land, the railway company ought to be satisfied if it is allowed a sum "equal to the fair average market value of similar lands in the vicinity," without any addition whatsoever for consequential or severance damages or the expense of acquisition.

Referring directly to the reproduction value new theory, as applied to property which is subject to physical deterioration, Mr. Justice Hughes finds that the court below erred in allowing this basis without the necessary subtraction for depreciation. At page 457 Mr. Justice Hughes says:

"And when an estimate of value is made on the basis of reproduction new, the extent of existing depreciation should be shown and deducted."

Again, at page 458, he says:

"And when particular physical items are estimated as worth so much new, if in fact they be depreciated, this amount should be found and allowed for. If this is not done, the physical valuation is manifestly incomplete. And it must be regarded as incomplete in this case. Knoxville vs. Knoxville Water Co., 212 U. S. 1, 10."

Two conclusions stand out clearly from this case, one being that the Supreme Court of the United States, in this most recent expression of opinion, has definitely discarded the theory of reproduction value new, as to property which has actually depreciated, and the other being that with reference to the very important question of land, the Supreme Court refused to allow the reproduction value new and likewise the full present value, apparently for the simple reason that it would be unfair and unjust to do so.

On these authorities, it would seem clear beyond dispute that the defendant's position to the effect that this Commission must take the reproduction value new basis has been definitely discarded by the highest court in the land. It would seem that the only basis to which the Supreme Court has as yet committed itself is the value which, at the time of the inquiry, under all the circumstances disclosed, is a "fair value" for the purposes of the case. What Mr. Justice Harlan said in Smythe vs. Ames, to the effect that all the elements which enter into the problem must be considered, is still the law.

Defendant, in its brief, quotes from Cotting vs. Kansas City Stock Yards Company, 183 U. S. 79, which case, in turn, quotes from Canada Southern Railway Company vs. International Bridge Company, 8 App. Cas. 723, a House of Lords case, to the effect that the reasonableness of the rate depends not upon what profit it may be reasonable for the utility to make, but on what it is reasonable to charge to the person who is charged. In its last analysis, this is simply a restatement of the claim formerly made that a utility has the right to charge what the traffic will bear. It is not necessary to give further consideration to this theory, for the reason that the Supreme Court of the United States in all its decisions, looks simply to the profit which it is reasonable for the utility to make

and not to the so-called value of the service, except that what the consumer can reasonably afford to pay is the maximum limit of a fair and reasonable rate.

While I thus find myself unable to agree with defendant's argument with reference to the estimated reproduction cost new theory, I find that there is much merit in defendant's attack upon the basis resulting from the subtraction from the estimate of reproduction new of theoretical depreciation based upon mortality tables. Engineers frequently ascertain what they call a "per cent value" by subtracting from the estimated reproduction cost new, an item for theoretical depreciation, which is ascertained by multiplying the average age of each class of material by the theoretical depreciation obtained from so-called mortality tables. The basis so secured may be just as unfair to the utility as the basis of reproduction value new may be to the consumer. Thus, a public utility plant may originally have cost $10,000. The money may have been invested honestly and with a fair degree of wisdom. At the end of three years the plant may be giving 100 per cent service. The component parts have been correlated and the system is in first class working order. While the component parts may not be intrinsically as sound as when they were new, it would be a foolish waste of money to renew them, for the reason that they are doing their work and that they are giving 100 per cent service, without any danger of wearing out in the near future. Under these circumstances, an engineer applying mortality tables and estimating the theoretical depreciation at 5 per cent per year, reaches the conclusion that the present value of the plant is only 85 per cent of the original investment, being the sum of $8500. The Commission is accordingly urged to grant a return based on an estimated present value of $8500. If this return is allowed at the rate of 8 per cent, an allowance of $680.00 will be made for interest. The utility, however, has in good faith paid out of its pocket for capital account the sum of $10,000, and is giving 100 per cent service to the public. What is to become of the remaining $1500 which the company has honestly invested? If a man loans $10,000 on a first

mortgage, he expects interest on the entire sum which he loans and expects ultimately to get back his entire principal. Why should this same man, if he invests $10,000 in a public utility enterprise and keeps up his property in first class condition, so that he is rendering 100 per cent service, be refused a return on the difference between his investment and a theoretical depreciated reproduction value? It may be urged that justice may be done by placing the remaining $1500 in a depreciation fund, which fund may be invested and bear interest. As I shall hereafter show, however, under the provisions of Section 49 of the Public Utilities Act, the income from investment of moneys in depreciation funds of public utilities in this State must be carried in these funds and cannot be used for the payment of interest on investment or operating expenses. The injustice of applying such theory becomes more apparent as the age of materials and structures increases. If the theory is carried to its logical conclusion and the engineer makes no allowance for repairs and replacements, but confines himself strictly to the age of the structures and his mortality tables, there will come a time when the value of the property will have been depreciated to zero, so that no return whatsoever would be allowed. While this may be a fanciful case, it is of value in testing the accurary of the theory. It seems strange that public utilities in protesting against this theory, frequently do not seem to realize that the real reason for their protest is that the application of this theory deprives them of a return on a portion of the money which they have invested. It must also be remembered that the ascertainment of the physical condition per cent of a property is one thing and that the ascertainment of a proper basis on which to give a return may be an entirely different thing. The engineer frequently forgets this distinction and erroneously believes that his work is the same as that of the rate fixing authority.

It must be apparent, however, that it may well happen that a utility under certain circumstances is not entitled to a return on the amount of money invested, and that in such case certain deductions must be made for actual depreciation. For instance, if the utility does not set aside in a depreciation fund a sufficient portion of its income to cover the necessary replacements, from time to time,

to replace portions of the plant which can no longer be used, either because they have come to the end of their natural life or because of obsolescence or inadequacy, and if the moneys which should be set aside in such fund are diverted to the stockholders in the shape of dividends, such diversion is practically equivalent to a payment of dividends out of capital. As the investment has thus been reduced, there must be a corresponding reduction in the basis of return. Stockholders must not entertain the delusion that they can take out all the earnings in the shape of dividends and still claim a return on the basis of the original investment.

A realization of the injustice which frequently follows from the application of the theory of reproduction cost new less depreciation based on mortality tables, is inducing rate fixing authorities to pay more attention to the actual depreciation as shown by an inspection of the plant and to the question whether the necessary renewals and replacements are being made so as to keep the service for the present and for a reasonable time in the future up to a standard of 100 per cent.

After a consideration of these and other fine spun theories, the mind of a practical man instinctively turns for first guidance to the simple question of the amount of money which has been honestly and wisely invested. While it is, of course, evident that there may be many circumstances under which the application of this basis alone would not be equitable, and that qualifications must be made as justice and equity require, it would seem to the lay mind that a rate fixing authority will not go far wrong if, in determining the basis for rates, it first ascertains the amount of money which the utility has invested honestly and with a fair degree of wisdom, in the business which it is conducting for and on behalf of the public.

As Justice Van Fleet says in the San Diego Water Company case, at page 569:

> "For the money which the company has expended for the public benefit it is to receive a reasonable, and no more than a reasonable reward. It is to be paid according to what it has done, and not according to what others may conceivably do. In effect, the bargain between the company and the public was made when the water works were constructed; and this matter is to be determined according to the xxxx state of things at that time."

Some of the necessary qualifications to this test are stated by Justice Van Fleet at page 572, as follows:

"It should, of course, be said that it does not follow that in every case the company will be entitled to credit for all of its current expenditures, or to receive a compensation based on the entire cost of its works. Reckless and unnecessary expenditures, not legitimately incurred in the actual collection and distribution of the water furnished, or in the acquisition, construction or preservation of so much of the plant as is necessary for that purpose, cannot be allowed"""It is the money reasonably and properly expended in the acquisition and construction of the works actually and properly in use for that purpose which constitutes the investment on which the compensation is to be computed."

The same views were expressed by Franklin K. Lane, at that time a member of the Interstate Commerce Commission, in the Western Advance Rate case, 20 Interstate Commerce Commission Reports 307. Referring to the claim of the Burlington Railroad that it was entitled to a return on the entire present value of its property, including an item of one hundred and fifty million dollars of unearned increment of land, Mr. Lane, at page 339, says:

"In the face of such an economic philosophy if stable and equitable rates are to be maintained, the suggestion has been made that it would be wise for the government to protect its people by taking to itself these properties at present value rather than await the day, perhaps thirty or fifty years hence, when they will have multiplied in value ten or twenty fold."

Mr. Lane then reaches the following conclusion as the proper basis of fixing rates:

"The trend of the highest judicial opinion would indicate that we should accept neither the cost of reproduction, upon which the Burlington's estimate of value is made, nor the capitalization which the Santa Fe accepts as approximate value, nor the prices of stocks and bonds in the market, nor yet the original investment alone, as the test of present value for the purposes of rate regulation. Perhaps the nearest approximation to the fair standard is that of bona fide investment--the sacrifice made by the owners of the property--considering as a part of the investment any shortage of return that there may be in the early years of the enterprise. Upon this, taking the life history of the road through a number of years, its promoters are entitled to a reasonable return. This, however, manifestly is limited; for a return should not be given upon wastefulness, mismanagement or poor judgment, and always there is present the restriction that no more than a reasonable rate shall be charged."

With this conclusion as establishing what will generally be the most important circumstances to be considered in ascertaining the fair value of public utility property for rate fixing purposes I heartily concur. I do so, however, with the understanding that there must be a reasonable limit to the period during which a shortage of return may be capitalized. Otherwise, the rate fixing authority will be in the ridiculous position of holding that the greater the early losses, the greater the value of the property for rate making purposes. In concurring I

also have in mind that these different tests are but aids in determining the ultimate fact, which will always be to determine on the facts of the case, what is fair and just as between the utility and its customers.

Certain objections at once occur to the universal application of the investment basis. The first objection is that it would not be fair in all cases to rely on this basis alone. The answer is that it is not intended to urge this basis as one always to be applied under all circumstances, and that it is simply meant to urge this test as generally one of the most important to be applied but that it must be modified as the justice of any particular situation demands. After all, the ultimate thing to be accomplished is to establish justice as between a utility and its customers, and these different tests which I have been considering are but different suggested methods of securing justice in particular cases.

The objection that the investment should not be used as a basis for utility rates, for the reason that it is often difficult to ascertain the original cost, goes not to the correctness of the principle but to the difficulty of applying it in a given case. If the original cost cannot be ascertained in a given case, it, of course, cannot be used in that case. In that event, it would seem that courts and commissions should strive to ascertain as nearly as possible what the original cost reasonably should have been. This result will, in such event, be accomplished by the use of the reproduction cost theory under the so-called historical method. This theory would be used in such event, not for the reason that it is necessarily in itself the proper theory, but because it furnishes in the particular case the best available evidence of what the original cost reasonably should have been.

The objection that a public utility is entitled to all accretions in the investment, whether it be in lands or water rights or what not, is most frequently urged by utilities which, in the same breath, claim that nothing should be subtracted for depreciation. I at times wonder whether these utilities have so little faith in the utlimate victory of the principles of simple justice that they believe that they can succeed in establishing a principle which to the lay mind seems so unfair and inequitable. A discussion of the question of

appreciation in values would lead me so far afield that I deem it unnecessary to go into this matter at this time. I desire, however, to draw attention to the fact that in two of the most important decisions of the Supreme Court of the United States, that court has refused to allow all the accretions in value which had actually taken place. In the Consolidated Gas case, as hereinbefore pointed out, the court refused to allow the accretion in franchise value, and in the Minnesota Rate case, as also hereinbefore pointed out, the court refused to allow the full appreciated value of land.

Leaving this branch of this opinion, I desire to draw the attention of public utility managers to the undoubted fact that exaggerated claims of values on the part of public utilities cannot but react on those who make them. If public utilities insist on being allowed a return on all accretions in value with no diminution for depreciation, they need not be surprised if the people of this country, acting on the suggestion made by Mr. Commissioner Lane in the Western Advance Rate case, decide to take over all these utilities themselves, rather than pay rates on the ever increasing values which have hitherto been urged in connection with land and which are now being urged in this State in connection with water rights.

While I have thus analyzed and commented upon some of the more important theories which are at times presented to this Commission as proper bases for ascertaining the "fair value" of public utility properties for rate making purposes, I desire to have it distinctly understood that this Commission does not commit itself to any one of these theories to be uniformly applied in any class of cases. This Commission will continue, as it has done in the past--relying on the words of Mr. Justice Harlan in Smythe vs. Ames--to consider all the elements which enter into the problem in any given case, and to give to each the weight to which the Commission in equity and justice believes it to be entitled on the facts of any given case. In reaching its conclusion, however, the Commission will continue to give great weight, when the facts can be ascertained, to the amount of

money which the utility has invested honestly, and with a reasonable degree of foresight.

2. GOING CONCERN VALUE.

The defendant claims that to reproduction new an amount should be added for what it terms "going concern value." Defendant's brief does not show clearly the class of expenditures which shall be covered by this item, nor does the brief show the total amount claimed further than the general statement that "an allowance equal to at least twenty per cent of the cost to reproduce the physical property should be added to the value of the physical property to cover costs of developing the business."

That an allowance must at times be made for the cost of developing the business seems clear. In City of Palo Alto vs. Palo Alto Gas Company, (Vol. 2, Opinions and Orders of the Railroad Commission of California, p. 300) this Commission, at page 310, said:

> "That there are certain actual costs incurred in developing the business during its early stages, for which costs the utility is entitled to be reimbursed, just as clearly as it is entitled to a return on the physical portions of its plant, seems too obvious for argument. The investor must go into his pocket to meet one kind of cost just as clearly as the other. There are two schools of thought with reference to the manner in which the so-called 'going concern' value or 'development cost' should be met. The supporters of one school are of the view that these items should be added to capital account, while those of the other school believe that they should be taken care of by rates higher than would otherwise be in effect, during the first years of the utility's existence. The difficulty with the first view is that its adoption will result in the increase of the permanent capital account and the consequent payment of higher rates for all time to come. The difficulty with the latter view is that it casts upon the patrons during the first years the duty of paying rates even higher than the usual relatively high rates which are paid at the outset of a utility's history. I am of the opinion that such costs, legitimately and wisely incurred, should be taken care of in [illegible] way, but the exact method to be pursued, and the extent to which consideration should be given to such items will depend upon the facts of each particular case. It might well be, for instance, that if the utility is unwisely conceived or struggles against unusual difficulties, the cost of developing the business including the early losses may run up to almost the entire value of the physical plant, if not in excess thereof. It may happen also that while in one case the addition of these costs to capital account might be perfectly fair, in another case justice will require that these costs be reimbursed out of higher rates during the first few years, or that some combination of these theories be adopted."

In Thomas Monahan, Mayor of San Jose, vs. San Jose Water Company, Case No. 476, this Commission also said:

"I am firmly of the opinion that necessary development cost which is interest on the idle money in a plant during a reasonable time in which it may reasonably be expected not to be fully productive is as much a part of the cost of the plant as an expenditure for pipe or right of way. What I mean definitely is this: There is presented a field for the operation of a public utility. It is known that this utility after it is constructed and ready to begin operation cannot from the beginning earn a reasonable amount on the investment. A fair degree of wise foresight prepares the business man for these losses in the early days of his business, and if such losses are not to be recouped from earnings after the plant has reached maturity, then the investor cannot be expected to make such investments. But this principle does not justify the investment of money in an enterprise that does not give promise of reaching a paying basis within a reasonable time. If the business is well conceived there will be a uniform approach from the very beginning of the operation of the completed enterprise to a fully paying basis. During the development period, therefore, there will be yearly a decreasing amount of the capital investment which is not returning a reasonable amount, and the interest upon this decreasing amount of idle capital is a part of the cost of the property which must be foreseen and prepared for by the investor and must be allowed by the rate-fixing body."

In City of Milwaukee vs. Milwaukee Electric Railway and Light Company, (Vol 10, Wisconsin Railroad Commission Reports, p.1), one of the most recent and extensive of the decisions of the Railroad Commission of Wisconsin, the Commission, at page 122, says:

> "It is conceded that in addition to the value of the tangible property some allowance is properly made for the cost of building up the business, or the losses sustained before the property has been placed upon a paying basis. Previous decisions of this commission have recognized the necessity of compensating for such early losses and the existence of a going concern value is recognized by both parties to the complaint in the present case. (Citing cases)."

In People vs. Willcox, 141 N.Y.S. 677, Mr. Justice Miller defines "going value" as follows:

> "I define 'going value' for the purposes as involved in this case to be equal to the deficiency of net earnings below a fair return on actual investment due solely to time and expenditures reasonably necessary and proper to the development of business and property to its present stage, and not comprised in the valuation of the physical property. 'Going value' is to be appraised by showing the actual experience of a company, the original investment, its earnings from the start, the time actually required and expenses incurred in building up a business, all expenditures not reflected by the present condition of physical property, the extent to which bad management or other causes prevent or deplete earnings, and any other facts bearing on the question, keeping in mind that the ultimate fact to be determined is not the amount of expenditures, but the deficiency in a fair return to investors due to the causes under consideration."

It will be noted that in each of the ~~three~~ foregoing quotations the basis used is that of actual expenditures, thus following the investment theory. If the reproduction value theory is followed, experts at times estimate the expenditures which would probably be made before the hypothetical or comparative plan to which they refer should have been placed upon an earning basis identical with the existing property. These estimates are largely guesswork and are most unreliable, and will be given very little weight by this Commission, particularly if evidence of the actual facts can be secured. The best evidence of what should be allowed for developing the business is the money which has actually been expended for that purpose.

While the general rule is as thus stated, certain qualifications must be made. The effort to include as "going concern value"

the valuation for "good will" in cases of utilities which have, in fact, a monopoly of the business, has been definitely repudiated by the Supreme Court of the United States in Willcox vs. Consolidated Gas Company, 212 U.S. 19, 52, and Cedar Rapids Gas Light Company vs. Cedar Rapids, 223 U.S. 655, 669. It must also be remembered that if the investment has been unwisely made, or if the plant has been made larger or more expensive than necessary, deficits resulting from these causes should receive very little consideration. The effects of abnormal conditions, bad management, poor judgment, and lack of ordinary care and foresight must be borne by the utility and not by the public.

In considering this element, consideration must also be given to profits which the utility has made in the past. It is just as unfair to ask the rate fixing authority to consider deficits alone and not profits, as it is to ask that in establishing value, appreciation be considered, but never depreciation. If the returns in the past are to be considered, the whole story should be considered and not merely a fragment thereof.

There may also well be cases, particularly those growing out of the relationship between land companies and water companies owned by the same people, in which, while there have been apparent deficits in the operation of the water companies, these deficits have been caused by a desire to sell land by the inducement of cheap water, so that the actual profits have gone into the pockets of the promoters through the land company instead of through the water company. In such a case, careful consideration must be given to the relationship between the land company and the water company, and it does not follow by any means that the water company should have the right, after its owners have made their profits in another way, to come before a rate fixing body and claim what would, in effect, amount to a double profit by asking such authority to allow for it a "cost of developing the business."

3. DEPRECIATION RESERVE.

That an allowance must be made out of earnings to establish a depreciation reserve is generally admitted by courts and commissions. There has been very considerable confusion, however, with reference to the purpose of such fund and the methods to be used in ascertaining the amounts to be set aside in the fund, year by year.

That in the course of time all the elements in a public utility plant wear out and that replacements must be made when their natural life ceases, is clear. It is equally well established that by reason of advances in the art or growth in the business, portions of public utility plants, through what is generally called obsolescence and inadequacy, must be removed before the expiration of their natural life. While ordinary repairs should be classed as operating expenses, the proper function of a depreciation reserve fund would seem to be to take care of replacements made necessary by the wearing out of structures and materials and to the discarding of the same due to obsolescence and inadequacy.

That a utility has the right to look to its consumers for the establishment and maintenance of such fund has been directly established by the Supreme Court of the United States in Knoxville vs. Knoxville Water Company, 212 U.S. 1. In this case, Mr. Justice Moody, at page 13, says:

> "Before coming to the question of profit at all, the company is entitled to earn a sufficient sum annually to provide not only for current repairs, but for making good the depreciation and replacing the parts of the property when they come to the end of their life. The company is not bound to see its property gradually waste, without making provision out of earnings for its replacement. It is entitled to see that from earnings the value of the property invested is kept unimpaired, so that, at the end of any given term of years, the original investment remains as it was at the beginning. It is not only the right of a company to make such a provision, but it is its duty to its bond and stockholders, and, in the case of a public service corporation, at least, its plain duty to the public."

Section 49 of the Public Utilities Act of this State reads as follows:

> "The commission shall have power, after hearing, to require any or all public utilities to carry a proper and adequate depreciation account in accordance with such rules, regulations and

forms of account as the commission may prescribe. The commission may, from time to time, ascertain and determine and by order fix the proper and adequate rates of depreciation of the several classes of property of each public utility. Each public utility shall conform its depreciation accounts to the rates so ascertained, determined and fixed, and shall set aside the moneys so provided for out of earnings and carry the same in a depreciation fund and expend such fund only for such purposes and under such rules and regulations, both as to original expenditure and subsequent replacement as the commission may prescribe. The income from investments of moneys in such fund shall likewise be carried in such fund."

I desire to draw particular attention to the last sentence, under which the income from the investment of moneys in public utility depreciation funds in this State must be carried in the depreciation fund itself. In other words, the interest earned by moneys in the depreciation fund cannot be used for the payment of dividends or for meeting operating expenses. This fund, together with the interest on all moneys invested therein, is a trust fund set aside for the specific purpose of taking care of replacements, whether of worn out material or of material which has become obsolescent or inadequate, in accordance with such rules, regulations and forms of account as this Commission may prescribe. As the interest is to remain a portion of the fund, it would seem that ordinarily in this State the sinking fund basis should be used in determining the amount to be set aside annually in this fund.

The method of determining the amount of money which should go into this fund, year by year, is not entirely free from doubt. It would seem that it is necessary to take into account the actual conditions surrounding the installation and operation of the different classes of material and that the average natural life of the materials in a given plant should be determined from all these facts, with the proper allowance, if any, for salvage. It will not always be easy to make the necessary modifications due to possible obsolescence or inadequacy. However, if the allowance made for these items proves inaccurate, the necessary changes may be made by the rate fixing authority from time to time. It would be possible, as a matter of theory, either to place in the depreciation fund only a sufficient

revenue to take care of the replacements as they actually accrue, year by year, or to place in the fund a sufficient sum so that with its interest it shall take care of replacements in the long run and over the life of the different constituent elements of the utility plant. The application of the first method would result in low rates during the first years of a plant's life, while the replacements are relatively insignificant, with an increase in the rate during the later years of the utility's life, when it becomes necessary to make more frequent and expensive replacements. While, as a matter of theory, either of these policies might logically be pursued, it would seem that because of the difficulty of increasing rates and of the frequent inclination of stockholders to take out all earnings without any thought of to-morrow, it might be wiser to establish the fund on the second basis, as is generally done by railroad and public service commissions.

As ordinary repairs will be charged to operating expenses as they accrue, year by year, and as the interest on the moneys in the depreciation reserve fund will be credited to that fund, the result may well be the establishment of lower depreciation reserve funds than has hitherto at times been the case.

4. RATE OF RETURN.

On the question of rate of return, defendant presented the affidavit of its treasurer, Mr. A. F. Hockenbeamer, to which consideration will be given when I come to the questions of fact involved in this proceeding.

For the present, I desire simply to address myself to the general principles involved in the determination of the rate to be allowed in any given case.

In Willcox vs. Consolidated Gas Company, supra, Mr.Justice Peckham, at page 48, says:

> "There is no particular rate of compensation which must, in all cases and in all parts of the country, be regarded as sufficient for capital invested in business enterprises. Such

compensation must depend greatly upon circumstances and locality; among other things, the amount of risk in the business is a most important factor, as well as the locality where the business is conducted, and the rate expected and usually realized there upon investments of a somewhat similar nature with regard to the risk attending them."

In Re rates of Queens Borough Gas and Electric Company, (Vol. 2, Public Service Commission Reports, First District, New York, p. 544) the Commission of the First District, speaking through Mr. Commissioner Maltbie, at page 576, says:

"Various standards have been suggested for determining a fair rate of return. The one which in our opinion is properly applicable to this case is that the rate should be such that investors would be induced to provide the funds with which to construct and extend a gas and an electric plant within the area in question. If the state were to fix a rate below this standard, capital could not be secured. If investment were made before the state acted, the original capital might be forced to remain, but additional capital could not be secured unless necessary to protect the first outlay."

In City of Palo Alto vs. Palo Alto Gas Company, (Vol.2, Opinions and Orders of the Railroad Commission of California,p.300) this Commission, at page 316, said:

"No fixed percentage applicable to all cases and all classes of utilities can be established by this Commission. Each case must be judged on its own merits. It may well be that a utility in one community would be entitled to one rate of return while a similar concern in another community would be entitled to a different rate. It may be that a large and solidly established utility will not be entitled to as high a return as a smaller utility which is struggling against adverse circumstances. The most that can be said by way of general principles is that the return should be at least the average return which is earned by other classes of business of the same degree of hazard in the same community. The Commission in fixing a rate of return must be liberal, lest too strict a policy result in turning capital to other fields of enterprise. California needs development by public utilities, and this Commission's policy should be a broad and liberal one, so as to encourage capital to develop the State by legitimate public utility enterprises where needed."

It would seem that in general the rate of return should be such rate as is high enough to secure the funds for the development of the business, and that in reaching its conclusion on this point, the Commission should be liberal in its attitude.

I shall now proceed to a discussion of the facts in this case.

The town of Antioch receives its electric energy from a 60,000 volt transmission line of the Pacific Gas and Electric Company, from which line the energy is transformed through a substation located in Antioch. The energy is thence distributed to lighting and commercial customers, a municipal street lighting system, and the California Paper and Board Mills, which mills use electric energy for power purposes. This same substation is also used for the service of electric energy to an 11 K.V. suburban line.

All customers in the city of Antioch are under meter. In March, 1913, there were 227 residence customers in Antioch and 99 commercial customers, in addition to the California Paper and Board Mills. Of the residence customers, 87 used 12 K.W.H. or less, 86 over 12 K.W.H. but not more than 22 K.W.H. and 54 in excess of 22 K.W.H. Of the commercial customers, 23 used 16 K.W.H. or less, 55 used over 16 but less than 85 K.W.H. and 21 used in excess of 85 K.W.H.

The electric energy which is distributed in the town of Antioch is derived from three sources - the hydro-electric properties of Pacific Gas and Electric Company, the steam plants of that company and hydro-electric energy purchased from various other companies. The Pacific Gas and Electric Company's transmission system is a unit, so that electric energy from any of these three sources may at any time when necessary be transmitted to Antioch.

In order to ascertain a fair and reasonable rate in this case, it will be necessary first to ascertain the cost of the service, which I shall now proceed to do under two main heads--the cost of production and transmission and the cost of distribution.

I.

COST OF PRODUCTION AND TRANSMISSION.

Pacific Gas and Electric Company's hydro-electric power plants are as follows - Alta plant, in Placer county, rated capacity 3,000 K.W.;

Centerville plant, in Butte county, rated capacity 6,400 K.W.;
Colgate plant, in Yuba county, rated capacity, 14,200 K.W.;
Deer Creek plant, in Nevada county, rated capacity 5,500 K.W.;
DeSabla plant, in Butte county, rated capacity 1,300 K.W.;
Electra plant, in Amador county, rated capacity 20,000 K.W.;
Folsom plant, in Sacramento county, rated capacity 3,750 K.W.;
Newcastle plant, in Placer county, rated capacity 800 K.W.;
Yuba plant, in Yuba county, rated capacity 660 K.W.;
and Drum plant, in Nevada county, rated capacity 40,000 K.W., the latter plant having been recently completed.

The steam plants of Pacific Gas and Electric Company are as follows--

Station A, San Francisco, rated capacity 42,000 K.W.;
Station B, Sacramento, rated capacity 5,000 K.W.;
Station C. Oakland, rated capacity 21,000 K.W.;
and San Jose steam plant, rated capacity 2,200 K.W.

Pacific Gas and Electric Company also purchases hydro-electric energy, under existing contracts, from Great Western Power Company, Northern California Power Company and Snow Mountain Water and Power Company, and at times purchases small amounts of electric energy from other companies.

The cost of producing energy in the hydro-electric plants of Pacific Gas and Electric Company, of producing energy in that company's steam plants and of the transmission of energy will be set forth in a series of tables which I shall shortly present. Before doing so, however, I think it well, in order to avoid repeated explanations, to draw attention at the outset to certain matters applicable to all these tables, as follows:

(1) Basis of return;
(2) Lands and water rights;
(3) Overhead percentages;
(4) Depreciation annuity;
(5) Rate of return.

1. BASIS OF RETURN.

The basis on which a return is allowed in this case is, in general, the estimated cost to reproduce the physical elements of the property new as of December 31, 1911, plus a proper allowance for overhead percentages, as determined by the Commission, plus the actual expenditures for additions and betterments, properly chargeable to capital account, from January 1, 1912 to January 1, 1914.

The reproduction value new as of December 31, 1911, is taken as one of the elements entering into the basis of return for the reason that the original cost is not available. While probably none of the hydro-electric plants of Pacific Gas and Electric Company other than possibly the Drum plant, has a service value of 100 per cent, and while the basis of depreciated reproduction value would undoubtedly be sustained in this case, the Commission is purposely allowing the higher estimated reproduction value new basis so as to be absolutely fair to Pacific Gas and Electric Company, and also in order to take care of any going concern, water right or other value which Pacific Gas and Electric Company may possibly hereafter be able to prove in addition to the specific allowances herein made. Pacific Gas and Electric Company in this proceeding agreed that a basis should be fixed herein on which to ascertain the cost of energy delivered to all the cities which it serves with electric energy. The Commission desires to establish this basis in this case in such a way that it will not be necessary hereafter to increase it. If decreases hereafter become necessary they can readily be made under the decision in this case. In addition to allowing a reproduction value of the physical elements as of December 31, 1911, although it is clear that the system is not worth the cost to reproduce it new, I desire to draw attention particularly to the fact that the Commission is also including the sum of $842,634.61 for enlargement of the Bear River Canal, which work is as yet non-operative.

No evidence whatsoever was presented as to so-called "going concern" value or of the cost of developing the business, as an entirety. In view of the statement in the eighth Annual Report of Pacific Gas and Electric Company, for the fiscal year ending December 31, 1913, to the effect that in the eight years since its organization the net earnings of the company, after payment of bond interest, have aggregated $21,781,471.00, and that of this amount but 21 per cent was paid out in cash dividends and the remaining 79 per cent was reinvested in the property, applied in the reduction of funded debt, or expended for other corporate purposes, it would seem that it may well be difficult for Pacific Gas and Electric Company to prove that any allowance should be made for cost of developing the business.

With reference to water rights, attention will hereinafter be drawn to the fact that the Commission is allowing the full value of lands as claimed by Pacific Gas and Electric Company, including large excess values due directly to so-called water rights. I am drawing attention to these matters in order to show that the Commission, in allowing in this case a basis of return which contains a ~~very~~ substantial margin above the amount established by the evidence, realizes that Pacific Gas and Electric Company will probably never be able to show elements of value amounting to the margin herein allowed, but is nevertheless willing, in order to avoid the necessity of hereafter increasing the rate, to use as the basis of return the very liberal allowance herein made.

2. LANDS AND WATER RIGHTS.

The Commission is accepting the value assigned to its lands by Pacific Gas and Electric Company, after deducting such lands as the evidence shows to be not properly chargeable to hydro-electric development. The lands so excluded include lands used only in connection with Pacific Gas and Electric Company's water business, as well as timber lands, mining claims and merely prospective reservoir sites,

power house sites and rights of way. An additional allowance is being made under the head of maintenance charges to take care of the additional charge which would have to be made for timber in case Pacific Gas and Electric Company did not own its timber lands.

The amounts allowed for the remaining lands are not only greatly in excess of the moneys paid for them by Pacific Gas and Electric Company and its predecessors, but also include excess values amounting to hundreds of thousands of dollars for increased value due to their location and to the attachment of water rights. The testimony of Mr. Henley for the Pacific Gas and Electric Company clearly discloses this situation.

I desire to draw attention at this point to the fact that several continuations in this case were granted in order to enable a force of expert engineers employed by Pacific Gas and Electric Company to compile a report with reference to the value of that company's water rights. Although this report was finally presented to Pacific Gas and Electric Company prior to the last hearing in this case, the company chose not to present the same or any other evidence concerning the value of its water rights, other than the values contained in the company's estimate of its land values. It would be reasonable, under these conditions, to entertain the presumption that the report of the engineers employed by the Pacific Gas and Electric Company showed that the water rights owned by Pacific Gas and Electric Company have no value in connection with that company's hydro-electric developments. Nevertheless, in this proceeding, in order to avoid possible increases in the rate hereafter, the Commission is allowing the full value of lands as claimed by Pacific Gas and Electric Company, and also the margin over proved value hereinbefore referred to.

3. OVERHEAD PERCENTAGES.

The estimated reproduction value new of the property of Pacific Gas and Electric Company as of December 31, 1913, as prepared by J. G. White & Company, shows overhead percentages used by that company as follows:

Table No. 1.

Overhead Percentages Used by J. G. White and Company.

	Hydro-Electric Division			Sub-Stations		Steam Plants		Electric Lines, etc.				
	Construction 1 Year Duration.	2 Years Duration.	3 Years Duration.	Buildings.	Equipment.	Buildings.	Equipment	Transmission Lines-17 K.V. and over.	Distribution Lines-Under 17 K.V.	Overhead Distribution Systems.	Underground Distribution Systems.	Electric Motors.
	%	%	%	%	%	%	%	%	%	%	%	%
Administration	2½	2	1½	2½	2½	2½	2½	2½	2½	2½	2½	5
Interest during Construction	3	6	9	3	3	3	3	3	3	3	3	½
Taxes during Construction	½	1	1½	½	½	½	½	½	½	½	½	
Liability Insurance	1	1	1	1	1	1	1	2	2	2	2	2
Engineering and Eng. Supervision	8	8	8	8	8	8	8	5	5	5	5	5
Contingencies	8	8	8	8	8	8	8	8	8	8	8	2
Omissions	2	2	2	2	2	2	1	2	2	2	2	
Tools					1		1	2	2	2	2	½
Totals %	25	28	31	25	26	25	25	25	25	25	25	15

(24).

While high percentages for overhead are frequently presented by public utility engineers in connection with estimates to reproduce property new under given conditions, and while, under certain conditions and with reference to certain companies, particularly small companies, it may be necessary at times to allow high percentages in case it becomes necessary to apply the reproduction value theory, the amounts allowed for overhead expenditures in each case must be determined by the facts of that case and by what is found to be just and reasonable in that particular case. In the present case, wehhave a utility which extends over 30 counties of the State, and the different units of which were constructed in relatively short periods of time, piecemeal, and were promptly placed in operation and promptly began to produce revenue. We have also a company which has a large and efficient organization and which is able to construct additions and betterments, from time to time, at considerably less expense than would be the case with reference to a small utility which has no organization. To say that a utility of this kind is entitled to overhead expenditures far in excess of those actually and reasonably incurred in connection with its construction work, simply because the application of a certain theory,-which theory is entirely foreign to the facts of the case--would result in such higher percentages, is of course unfair, unreasonable and absurd.

In the present case the Commission has spent considerable labor in trying to ascertain what overhead charges should properly be allowed. While ordinarily this matter is subject to considerable difference of opinion, it is largely due to the fact that utilities neglect the actual costs and choose to adopt estimates of what overhead expenditures might be incurred if the property ware to be reproduced xxx under entirely different conditions from those which existed during its construction. Little reliable data is available tending to establish the facts in connection with overhead costs. This dearth of information may be explained by the fact that ordinarily no

attempt is made by an operating company to segregate administration, engineering, interest and similar charges to construction. Frequently all or practically all of these charges are assigned to operating expenses.

In the present case, however, the Commission is fortunate in having available the actual expenditures in connection with the expenditure by Pacific Gas and Electric Company during the year 1913 of the sum of $10,107,643.89 upon additions and betterments. In this connection it should be borne in mind that of the total of $85,285,923.92 claimed by Pacific Gas and Electric Company in Exhibits No. 46 and No. 61 as representing the total value of its entire tangible property, both operative and non-operative, the sum of $38,514,781.00 was expended from 1906 to the end of 1913, so that almost one half the entire value claimed by Pacific Gas and Electric Company represents expenditures made by a going concern, already in operation, under conditions largely similar to those which obtained with reference to the expenditure of the sum of $10,107,643.89 in the year 1913.

Of the total expenditures during 1913 for construction purposes, the total amount charged by Pacific Gas and Electric Company on its books for overhead expenditures amounts to $211,862.65, as appears from the following table:

Table No. II

Overhead Percentages Charged by Pacific Gas and Electric Company to Construction in 1913

Department	Total Expense	Percentage	Charged to Engineering and Superintendence Amount
Vice President & Gen'l Mgr.	$ 22,466.19	5	$ 1,122.81
Auditing Department	87,360.67	10	8,736.07
General Engineering	31,678.71	90	28,510.79
O & M Department - Hydro Electric	47,412.53	15	7,111.88
Electric Distribution	35,657.37	65	23,177.29
Gas Engineer	30,903.42	55	16,996.88
Law Department	39,288.78	15	5,893.32
Land Department	36,785.01	100	36,785.01
Purchasing Department	20,643.26	10	2,064.33
Supply Department	10,849.93	50	5,424.96
Stationery Expense	40,742.92	10	4,074.29
Draughting Expense	23,478.89	90	21,131.00
Postage and Envelopes	7,861.37	2½	196.49
Telephone and Telegraph	41,128.61	2½	1,028.21
Scrip and Ticket Orders	20,688.76	80	16,551.01
			$ 178,804.34
Brought Forward from Year 1912			42,967.52
			$ 221,771.86
Segregated to Completed Construction			$ 181,786.53
Segregated to Work in Progress December 31, 1913			39,985.33
			$ 221,771.86

Interest During Construction

Interest during Year 1913	$ 10,096.02
Brought Forward from Year 1912	24,804.60
	$ 34,900.62
Segregated to Completed Construction	$ 30,076.12
Segregated to Work in Progress	4,824.50
	$ 34,900.62

Undistributed Construction Expenditures Year 1913

Engineering and Superintendence	$ 181,786.53
Interest during Construction	30,076.12
	$ 211,862.65

It should be noted that the foregoing expenditure includes all expenses generally known as administrative, engineering, legal, miscellaneous and interest during construction, and that the total thereof, pro rated to non-landed capital invested in additions and betterments during 1913, amounts to only 2.29 per cent. Attention, however, should be drawn to the fact that the interest during construction apparently includes only interest on working capital and that additional allowance must be made so as to completely cover the item of interest during construction. Apparently, additional allowance must also be made for insurance.

Pacific Gas and Electric Company, like other utilities, has apparently charged to operating expenses a portion of the expenditures which should more properly be chargeable to construction. The following table shows the entire general administrative expenses charged to operation during the year 1913, as shown by the books of Pacific Gas and Electric Company:

Table No. III

General Administrative Expense Charged to Operation for 1913

All Districts--All Departments.

Electric, Gas, Railway, Water and Steam Departments:		
Executive Officers	$ 98,442.04	
Vice-President & General Manager	21,343.38	
2nd Vice-President & Treasurer	17,510.39	
Secretary and Cashier	14,474.75	
Auditor	78,624.60	
General Agent	5,709.39	
Property Agent	10,685.51	
Superintendent of Supplies	5,318.79	
Purchasing Agent	18,578.93	
Claims Department	911.45	
Publicity Department	5,007.19	
Law Department	33,395.46	
Drafting Department	2,347.89	
Pension Expense	5,603.94	
Head Office Rent	11,243.14	
Postage Expense	3,293.96	
Stamped Envelope Expense	4,370.92	
Telephone Expense	37,310.09	
Telegraph Expense	2,790.31	
Advertising Expense	9,870.29	
Donations	3,450.95	
Subscriptions to Assoc. etc.	3,634.00	
Newspaper and Periodicals	1,213.18	
Mail Room Expense	1,610.35	
Script Ticket Orders	4,137.75	
Bond Ex., Commission, etc.	15,167.28	
Repairs to Head Office Furniture, etc.	238.81	
Publishing Finance Reports	1,375.15	
Head Office Bldg. Expense	12,349.83	
Exchange and Collections	958.87	
Automobile Expense	8,862.38	
Stationery and Printing	36,568.64	
Magazine Expense	4,739.09	
Railroad Co., Expense	945.15	
Plant Appraisement	35,493.54	
Sundries	24,840.71	
P.P.I.E. Subscription	20,200.00	
Rate Cases	684.78	
Public Accountants	8,252.75	
Total		$ 571,655.63
Electric Department:		
Civil Engineering Dept.	869.62	
Commercial Dept.	16,506.67	
Elec. Distribution Dept.	6,902.65	
Electric Construction Dept.	1,339.79	
O & M Dept. (Hydro-Elec)	35,847.73	
O & M Dept. (Steam Elec)	7,537.20	
Chief Eng. Hydro-Elec.	958.51	
Total		69,962.17
Electric,Gas & Steam Depts.-Industrial Dept.		1,438.61
Electric & Gas Depts.-Appliance Dept.		11,635.06
Gas Department-Gas Engineer		10,599.10
T o t a l		$ 665,290.57

If the entire general administrative expenses charged to operation in the year 1913 had been charged to construction, and had been added to the amount of $211,362.65, which was the total amount actually charged to construction, the resulting total of $887,153.22 would amount to only 8.77 per cent of the total sum expended for additions and betterments in the year 1913. To assume that the entire expenditures charged to operation should have been charged to construction, is to make an assumption which is very obviously contrary to the fact, for the reason that it is clear that the major portion of the amount charged to operation should properly be charged to that account, for the reason that the Pacific Gas and Electric Company is a going concern, conducting operations in at least 30 counties of the State. The addition has been made simply to show that even under the violent assumption that the entire amounts charged to operation for general administrative expenses should be charged to construction, these amounts when added to the amounts actually charged to construction would yield a total for all overhead expenditures except a portion of interest during construction and insurance, which is but a fraction of the amounts claimed by the experts of Pacific Gas and Electric Company in this case in applying the hypothetical reproduction value new theory.

I desire now to direct my attention to particular items generally included under the head of overhead charges.

It would seem that if one third of the administration expenses incurred during the year 1913 and one half of the legal expenses were charged to construction, at least the proper amount would be so charged. An allowance must also be made for organizing a construction force.

Referring now to engineering and superintendence, the Pacific Gas and Electric Company's Annual Report for the year 1913 contains the following item:

Engineering and superintendence--1913 (electric)..... $154,587.22

This amount, which includes the entire amount charged to engineering and superintendence under the head of electric construction during the year 1913, amounts to 1.94 per cent of the entire capital expenditures for additions and betterments in that year, amounting to $7,969,891.23.

In making allowance for fire and casualty insurance, it must be borne in mind that the plant of the Pacific Gas and Electric Company was almost entirely constructed while the rates for casualty insurance were considerably less than they are at the present time. A demand for the allowance of present rates, while, as a matter of fact, Pacific Gas and Electric Company paid considerably less than present rates is, of course, unfair and unreasonable. The Commission will make an allowance based on the amounts which were paid by Pacific Gas and Electric Company for injuries and damages over a series of years, as shown by the evidence in this case.

J. G. White & Company made an allowance ranging from one half of 1% to 1½% for taxes during construction. The entire non-operating taxes paid by Pacific Gas and Electric Company during the year 1913 amounted to $13,078.38, or .132% on the net cost of additions and betterments during 1913, including real estate.

Contingencies is an item which is dependent more largely upon labor cost than upon material cost. While the defendant in this case has cited instances where the actual cost of different units of plant has exceeded the estimated reproduction cost, it has not called attention to instances where the appraised value is far in excess of the actual cost. As an example, I desire to draw attention to the

fact that the price allowed by J. G. White & Company on the Folsom development for labor was four and one half times its actual cost, as shown by the prison records. Likewise, in the Electra system, the evidence shows that the estimated reproduction cost greatly exceeds the original cost, and there is no reason to assume that the same condition will not hold good for other hydro-electric developments. In estimating the cost to reproduce transmission lines new, 10 per cent was added by J. G. White & Company to both labor and material unit prices before the application of the regular overhead percentages. Defendant urged that the 10 per cent added to labor covers an assumed loss in time, loss in boarding house operations and miscellaneous losses, and that the corresponding 10 per cent on material covers store room expenses, breakage and lost materials. In this connection it may be well to note that many of the items on which 10 per cent has been added, are not subject to loss or breakage. These items include approximately one half of the transmission line costs. There can be no question but what this miscellaneous 10 per cent is excessive and, in major portion, unwarranted as an allowance over and above the regular or proper overhead expense. Attention should also be drawn to the fact that it is one thing to estimate contingencies on a new job which is still to be performed and an entirely different matter to estimate them after the work has been entirely performed, when a large portion of the records of construction are available, and when engineers are presenting an estimate of reproduction value new. While accepting, for the purposes of this case, the estimated reproduction value of the physical items of the property as of December 31, 1911, as presented by J. G. White & Company, including the allowance of 10 per cent hereinbefore referred to, the Commission must necessarily allow a considerably less additional item for contingencies than that allowed by J. G. White & Company.

One of the most important overhead items is interest during construction. J. G. White & Company estimated this item on the theory that it would take at least a year to reconstruct all the properties

of Pacific Gas and Electric Company, and that as to certain portions of the hydro-electric properties the period would run up to three years. An allowance was made for interest at the rate of 6 per cent per annum on one half the construction time as to each different class of construction. While such an allowance might be correct on the theory followed by J. G. White & Company, it is entirely at variance with the facts. As already pointed out, by far the larger portion of the plant of Pacific Gas and Electric Company was constructed by that company as an operating company while already a going concern, and was constructed in relatively brief periods of time. The different units, as completed, have been placed in operation and have started earning revenue. It follows that it would not be fair, in making an allowance for interest during construction, to assume, entirely contrary to the fact, that the plant is all constructed as a single development and that no portion thereof is placed in operation and earns revenue in less than one year's time. The relatively small charges made by Pacific Gas and Electric Company on its books for interest during construction during the year 1913, during which year the expensive Spalding development was completed, show clearly that the amounts estimated by J. G. White & Company for interest during construction, while they may be logical enough under the theory adopted by that company, should not apply in a rate fixing inquiry.

The following table shows the maximum overhead charges for construction which I find could properly be made on construction during 1913, after making the necessary adjustments in the charges which Pacific Gas and Electric Company charged to operating expense instead of to construction:

Table No. IV.

Maximum Overhead Percentages

Applicable to Construction during 1913

	Total to Both Operation and Construction		Construction	Percent
Administration	$ 588,763.98	(1/3)	$ 196,254.66	1.98%
Legal	39,288.78	(1/2)	19,644.39	.20%
Engineering and Supervision	163,330.80	(3/4)	122,498.10	1.33%
Injuries and Damages	112,098.23	(a)	60,148.29	.65%
Non-operating Taxes	13,078.38		13,078.38	.13%
Total				4.29%
Interest (Estimated)				3.00%
Miscellaneous (Estimated Maximum Including Contingencies already contained in Construction Costs Shown and Organization)				4.71
T o t a l				12.00%

Note:

(a) Average for seven years.

The foregoing percentage is applicable to capital expenditure of over ten million dollars. This expenditure was incurred under conditions similar to those obtaining with reference to the expenditure of over thirty-eight million dollars of capital since the year 1906. In my opinion, this percentage is a reasonable percentage to be applied to the estimated reproduction value of the property as of December 31, 1911, as reported by J. G. White & Company, and this percentage will be used in this case.

4. DEPRECIATION ANNUITY.

An allowance will be made under the head of depreciation annuity sufficient to provide with a reasonable margin of safety for the replacement of the different portions of the property at the expiration of their useful life. If property replaced has a salvage or scrap value, such value must be deducted from the total cost of replacement before the actual loss occasioned thereby can be determined. The remainder or net cost of the replacement must be provided out of the depreciation reserve. The reserve will be established on the sinking fund basis, as hereinbefore explained, and it will be assumed that the moneys in the fund earn but 6 per cent interest, although we shall allow to the defendant a return on its property of 8 per cent. While the amount allowed is considerably less than that urged by Mr. Vincent, the defendant's expert engineer, it is evident that Mr. Vincent's allowances are entirely too high. In his estimate of the cost of energy delivered to substations he has provided a total depreciation annuity of $615,347.00, for the year 1913, which amount, although applied to less than one third of the entire system of Pacific Gas and Electric Company, is almost as large as the average normal and extraordinary repairs for the entire system from the years 1909 to 1913, inclusive, which average amounts to $669,997.56. This comparison is all the more striking when it is remembered that the properties as to which Mr. Vincent was making his

estimate are, as a whole, subject to far less deterioration or depreciation than any other portion of defendant's properties, and include also the larger portion of appreciation in values claimed by the defendant. It would be far wiser for the utilities of the State, instead of trying to establish excessive depreciation funds, to deal with the Commission with absolute frankness, and, after assisting the Commission to ascertain the real facts, to ask frankly for a margin in the rate of return which will enable them to earn a profit in excess of the actual necessary expenditures, including the cost of money.

5. RATE OF RETURN.

Defendant has filed in this case as Exhibit No. 60, an affidavit prepared by Mr. A. F. Hockenbeamer, its second vice-president and treasurer, which affidavit was filed by defendant in the case of Pacific Gas and Electric Company vs. City and County of San Francisco, now pending in the District Court of the United States, in and for the Northern District of California. In this affidavit, after referring to the financial condition of Pacific Gas and Electric Company and to certain issues of securities authorized by this Commission with respect to various public utilities, Mr. Hockenbeamer reaches the conclusion that it has cost Pacific Gas and Electric Company from 6.1 per cent to 10.75 per cent per annum to borrow money on secured obligations for capital expenditures and that unless Pacific Gas and Electric Company is able to derive profits from the operation of its business equivalent to at least 8½ per cent per annum upon the money invested or tobe invested in its enterprise, it will be unable to obtain the capital necessary to carry on its business. This affidavit is confidently relied upon by the defeddant in this proceeding and demands consideration.

I shall take the case of a public utility whose funds are derived in part from the sale of bonds and in part from the sale of stock. I shall assume, as a normal case, that in order to secure each $100 to be invested, the utility secures $75 from the sale of bonds and $25 from the sale of stock. If the utility's bonds bear

interest at the rate of five per cent, run for 30 years and are sold at 85 per cent of their face value, this being the condition which obtains with reference to Pacific Gas and Electric Company's present general and refudning bonds, the company would be paying for its money, considering both the interest and discount, at the rate of 6.1 per cent per annum. The $75 to be derived from the sale of bonds would accordingly cost the company each year $4.575. If an allowance of 8 per cent is made by the rate fixing authority, this would leave a difference of $3.425 to pay dividends on stock and to yield a net profit in excess of interest and dividend requirements. This sum of $3.425 would yield interest at the rate of 13.7 per cent per annum on the sum of $25 to be derived from the sale of stock. While it must be freely admitted that the stockholder, by reason of the fact that he takes the risk of the business and has no security, is entitled to a rate of return in excess of that to which the bondholder is entitled, no reasonable person will contend that it is necessary for a company such as the Pacific Gas and Electric Company to offer to its stockholders a rate of return of 13.7 per cent per annum in order to induce them to supply the necessary funds in addition to those derived from the sale of bonds. The conclusive answer to any such claim is that Pacific Gas and Electric Company is selling to its stockholders preferred stock bearing interest at the rate of 6 per cent per annum, which stock is being sold for 82.5 per cent of par. If an allowance of 8 per cent were made by the rate fixing authority on moneys derived from the sale of stock, the sum of $2.00 would be necessary on each $25 derived from this source. By adding this sum to the sum of $4.575 necessary in connection with the bonds, the total cost of the money derived from the issue of both stock and bonds would be $6.575, which sum falls short in the amount of $1.425 of the allowance which would be made to the company if a return of 8 per cent is granted. I desire to make it perfectly clear that this Commission, in permitting the Pacific Gas and Electric Company to earn a return of 8 per cent on the fair and reasonable value of its property, is allowing more than is necessary to secure all the

company's capital, both from the sale of stock and bonds, under proper financing, and that the amount so allowed in excess may well be said to amount to $1.425 on each $100 of value.

What has been said is based on the assumption that the utility does not have bonds outstanding in excess of the value of the property, as utilities frequently do, contrary to all other business experience, but that there is a normal relationship between the face value of the bonds and the value of the property and that the utility's funds have been secured in part from the sale of bonds and in part from the sale of stock.

Mr. Hockenbeamer, in his affidavit, also refers to the provisions of his company's general and refunding mortgage to the effect that no additional bonds can be issued at any time until the company's net profits during a given time, available for the payment of bond interest, have been at least one and one half times the amount of the interest on all the outstanding bonds of that issue. One and one half times $4.575 amounts to $6.8625, which is still considerably below the sum of $8.00 which will be allowed by this Commission. While the Commission does not feel bound, in establishing a rate of return, by such provisions as money lenders may insist on inserting in bond mortgages, I simply desire to draw attention to the fact that under the provisions of Pacific Gas and Electric Company's own mortgage, the allowance herein made is considerably more than sufficient to meet the requirements of the bond mortgage. I draw attention to these matters in order to show conclusively the invalidity of any claim which may be made to the effect that the rate of return herein established is not sufficient to enable the Pacific Gas and Electric Company to secure all the funds which the company needs for additions and betterments in this State.

The bonds which have heretofore been issued by Pacific Gas and Electric Company and by its predecessors, bear interest ranging from 6 per cent to 4 per cent. I do not have available the discounts

if any, at which these various bonds were sold, except with reference to the last two issues. Of the general and refunding 30-year 5 per cent bonds hereinbefore referred to, bonds of the face value of $24,986,000.00 have been sold at a discount of $4,410,223.01, so that the cost of the money thus secured, including both interest and discount, has been 6.1 per cent per annum. The next largest outstanding issue is that of the California Gas and Electric Corporation's unifying and refunding 30-year bonds, bearing interest at the rate of 5 per cent per annum. These bonds, amounting to a face value of $20,407,000.00, were sold at a discount of $2,147,962.05, so that the money thus secured cost the utility in the neighborhood of 5.6 per cent per annum. These two issues together represent considerably more than one half the entire outstanding bonded indebtedness of defendant and its predecessors, amounting to a total on December 31, 1913, of $75,485,800.00. The next largest issue, that of the San Francisco Gas and Electric Company, of which issue $7,237,000.00 are outstanding, bears interest at the rate of 4½ per cent per annum.

While Mr. Hockenbeamer draws attention to the fact that Pacific Gas and Electric Company, during the last year, sold seven million dollars of its 6 per cent one-year gold notes in such a way that it paid 10.75 per cent for its money, defendant must not expect this Commission to consider this transaction as in any way a normal one. The price paid is the highest paid for money by any public utility on any authorization for an issue of securities made by this Commission since the effective date of the Public Utilities Act. The money was borrowed at a time of recognized financial stringency and at a time when Pacific Gas and Electric Company was spending millions of money in foundation expenses which could not be expected to yield an appropriate return for at least a number of years to come. Pacific Gas and Electric Company was compelled to have this money in order to complete the construction work in which it was engaged, and it paid what it had to pay in view of the conditions prevailing.

It is not necessary to comment further on this transaction, but it will be clear that the price paid for money on this particular issue of notes cannot be controlling on this Commission in establishing a proper rate of return.

I find that a rate of return amounting to 8 per cent on the fair and reasonable value of the property of Pacific Gas and Electric Company, engaged in the public utility business herein referred to, is more than 1 per cent in excess of such return as is necessary to enable Pacific Gas and Electric Company to secure the money necessary for its development and that it is at least a fair and reasonable and liberal return on the company's investment.

The following table shows a fair and reasonable value, on the evidence in this case, to be assigned to Pacific Gas and Electric Company's hydro-electric properties and the amount which should be set aside each year for depreciation annuity:

Table No. V

Hydro Electric Plants

Capital and Depreciation Annuity

	Capital	Depreciation Annuity (Int. 6%)
Lands, Water Rights, etc.	$ 855,122.40	$ . .
Rights of Way	5,161.00	17.77
Roads, Bridges, etc.	544,251.60	96.53
Reservoirs	85,532.82	15.17
Dams	2,998,863.06	531.88
Ditches	2,867,328.91	508.55
Pipe Lines	147,736.74	508.85
Flumes	750,613.73	20,388.79
Tunnels	418,892.83	74.29
Forebays	408,171.46	72.39
Penstocks	1,324,768.16	4,562.89
Power Plant Buildings	627,850.92	2,162.50
General Structures	537,530.61	9,797.42
Turbines and Water Wheels	672,097.01	12,250.12
Electric Generators	530,627.61	9,671.60
Accessory Equipment	171,336.02	4,657.69
Misc. Power Plant Equipment	53,821.14	1,463.10
Tools and Appliances	28,933.94	2,195.16
Horses, Wagons and Harness	5,087.76	386.00
Automobiles, Motorcycles, etc.	1,300.22	230.65
Furniture and Fixtures	9,646.25	262.23
Undistributed Construction Expenditures	105,848.73	364.57
Total Hydro Electric Plants	$ 13,149,922.92	$ 70,218.15
General Capital (Prorated)	78,642.47	3,286.94
All Departments Non-Landed Capital (Prorated)	168,499.35	9,242.49
All Departments Landed Capital (Prorated)	164,601.23	-
Supply Department (Prorated)	16,397.29	133.63
Construction Capital	1,062,372.18	6,068.27
Working Capital	34,738.82	
Total Hydro Electric Capital	$ 14,675,174.26	$ 88,949.48

Investment per K.W. of Maximum Capacity $ 177.65

The item of "undistributed construction expenditures, $105,848,75," represents undistributed construction expenditures incurred during 1912 and 1913. The items "general capital", "all departments capital" and "supply department" are pro rated here, as elsewhere, on an investment basis. The item "construction capital" amounts to one half of the estimated expenditures for additions and betterments on hydro-electric plants during the ensuing year, based on the construction work in progress on December 31, 1913. The item for working capital amounts here, as elsewhere, to twice the sum of one month's expenditures for maintenance and operation, as herein established.

The following table shows the cost of producing electric energy at Pacific Gas and Electric Company's hydro-electric plants, together with the average energy cost per K.W.H. deliverable at substations:

Table No. VI.

Hydro Electric Plants

Cost of Service

Capital	$ 14,675,174.26
Fixed Charges	
Interest at 8%	1,174,013.18
Depreciation Annuity	88,949.48
Maintenance	67,220.42
Total	1,330,183.08
Operation Expense	
Operation	141,212.50
General Expense (Prorated)	90,416.71
Taxes	75,456.13
Total	307,085.34
Total Cost of Service	1,637,268.42

Energy Generated (Estimated for 1914)	398,852,635 K.W.H.
Net Station Output	396,459,519 "

Average Energy Cost per K.W.H. Deliverable at Substation .0048813

The amounts allowed for maintenance and operation are in excess of the expenditures actually incurred for these purposes in the year 1913. The additional amount has been added because of the completion of the Lake Spalding development and of the additional expense to be incurred for operation and maintenance in connection with this development. The general expenses have been pro rated on the investment basis. Taxes are taken on the basis of 4.6 per cent of gross revenue.

The following table shows the fair and reasonable value on the evidence in this case to be assigned to the steam plants of Pacific Gas and Electric Company, together with a proper allowance for depreciation annuity:

Table No. VII.

Steam Plants

Capital and Depreciation Annuity

	Capital	Depreciation Annuity (Int. 6%)
Lands	$ 373,809.00	
Power Plant Buildings	621,833.26	2,141.77
General Structures	37,640.03	686.05
Steam Producers, etc.	1,472,560.32	26,839.95
Steam Engines, etc.	1,917,194.17	34,944.16
Electric Genrators	276,499.00	5,039.67
Accessory Electric Equipment	233,968.73	6,360.34
Miscellaneous Power Plant Equipment	48,375.36	1,315.06
Fuel Oil Tanks	82,412.28	283.85
Tools and Miscellaneous	390.33	29.61
Furniture and Fixtures	3,079.90	83.73
Miscellaneous	3,024.00	10.42
Undistributed Construction Expenditures	15,495.68	53.37
Total Steam Plants	$ 5,086,282.06	77,787.98
General Capital(Prorated)	30,142.00	1,259.82
All Departments Non-landed Capital (Prorated)	64,582.25	3,542.45
All Departments Landed Capital (Prorated)	63,088.18	-
Supply Department (Prorated)	6,284.73	51.22
Construction Capital	100,000.00	1,529.00
Working Capital	104,902.94	
Total Steam Plant Capital	$ 5,455,282.16	84,170.47

The following table shows the cost of producing electric energy in defendant's steam plants:

Table No. VIII

Steam Plants

Cost of Service

Capital		$ 5,455,282.16
Fixed Charges		
Interest at 8%		436,422.57
Depreciation		84,170.47
Maintenance at 1.25%		64,841.14
Total		$ 585,434.18
Operation Expense		
Operation, 5¢ K.W.H.		564,576.50
General Expense (Prorated)		34,654.81
Taxes		58,420.37
Total		$ 657,651.68
Total Cost of Service		$ 1,243,085.86
Energy Generated (Estimated for 1914)		112,915,299 K.W.H.
Net Station Output (Estimated for 1914)		112,350,723 K.W.H.
Average Energy Cost per K.W.H. deliverable to Transmission Lines		$ .012482

The following table shows the fair and reasonable value on the evidence in this case, to be assigned to defendant's transmission lines:

Table No. IX.

Transmission Lines

Capital and Depreciation Annuity

	Capital	Depreciation Annuity (Int. 6%)
Lands and Rights of Way	$ 636,271.01	$ 1,442.86
General Structures	3,276.17	59.71
Substation Buildings	79,145.98	272.60
Substation Equipment	682,084.62	12,432.17
Poles and Fixtures	1,074,139.85	46,148.01
Towers and Fixtures	743,523.83	2,560.91
Wire and Insulators	2,363,106.55	8,139.22
Line Switches, etc.	38,229.45	1,642.44
Roads, Bridges, etc.	20,861.52	71.85
Tools and Appliances	3,224.64	244.65
Horses, Wagons and Harness	625.38	47.45
Automobiles, Motorcycles, etc.	3,302.31	585.82
Furniture and Fixtures	623.20	16.94
Total Transmission Lines	$ 5,648,414.51	$ 73,664.63
General Capital(Prorated)	31,861.52	1,331.68
All Departments Non-Landed Capital (Prorated)	68,266.49	3,744.54
All Departments Landed Capital (Prorated)	66,687.19	-
Supply Department (Prorated)	6,643.26	54.14
Construction Capital	70,000.00	912.80
Working Capital	38,656.13	-
Total Transmission Capital	$ 5,930,529.10	$ 79,707.79

The following table shows the cost of service in connection with the transmission of electric energy:

Table No. X.

Transmission Lines

Cost of Service

Capital		$ 5,930,529.10
Fixed Charges		
Interest at 8%		474,442.33
Depreciation Annuity		79,707.79
Maintenance 1.25%		71,936.82
Total		$ 626,086.94
Operation Expenses		
Operation		160,000.00
General Expense (Prorated)		36,631.78
Taxes		41,318.63
Total		$ 237,950.41
Total Cost of Service		$ 864,037.35
Energy Received by Transmission Lines (Estimated for 1914)		540,322,388 K. W. H.
Average Energy Cost per K.W.H. received by Transmission Lines		$ .0015991
Average Energy Cost per K.W.H. Deliverable to Substations		$ .0017767

The following table shows by way of general summary the cost of production and transmission of all energy purchased by Pacific Gas and Electric Company, also the cost of the energy to be purchased during next year, as estimated by defendant, and also the average cost of energy deliverable to substations as estimated for 1914, and the demand cost and energy cost for the same year:

Table No. XI.

General Summary

Cost of Production and Transmission

Item	Hydro-Electric Plants	Steam Plants	Total Production	Transmission	Total Cost to Substations
Capital	$ 14,675,174.26	$ 5,455,282.16	$20,130,456.42	$5,930,529.10	$26,060,985.52
Demand Cost					
Int. at 8%	1,174,013.18	436,422.57	1,610,435.75	474,442.33	2,084,878.08
Depreciation	88,949.48	84,170.47	173,119.95	79,707.79	252,827.74
Maintenance	67,220.42	64,841.14	132,061.56	71,936.82	203,998.38
Total Fixed	$ 1,330,183.08	$ 585,434.18	$ 1,915,617.26	$ 626,086.94	$ 2,541,704.20
Correction (a)	133,326.54		133,326.54		133,326.54
Balance Fixed	1,196,856.54		$ 1,782,290.72		$ 2,408,377.66
Energy Cost					
Operation Expense	$141,212.50	$ 564,576.50	$ 705,789.00	$ 160,000.00	$ 865,789.00
General Expense (Prorated)	90,416.71	34,654.81	125,071.52	36,631.78	161,703.30
Taxes	75,456.13	58,420.37	133,876.50	41,318.63	175,195.13
Total Operation	$307,085.34	$ 657,651.68	$ 964,737.02	$ 237,950.41	$ 1,202,687.43
Correction (b)	30,708.53		30,708.53		30,708.53
Balance	$ 276,376.81		$ 934,028.49		$ 1,171,978.90

(Purchased Energy)

Great Western Power Company	506,000.00
Northern California Power Company, Cons.	217,000.00
Snow Mt. Water and Power Company	101,000.00
Miscellaneous (Estimated)	200.00
Total Purchased	$ 824,200.00
Total Energy Cost	1,996,178.90
Grand Total (Corrected)	$ 4,404,556.56

Note: Corrections (a) and (b) are for distribution direct from hydro electric plants

Total Energy Deliverable to substations (Estimated for 1914) 602,360,837 K.W.H.
Maximum Simultaneous Demand of Substations (Estimated for 1914) 119,630 K.W.

Average total cost of Energy Deliverable to Substations $ .007312 per K.W.H.

Expressed as a "Two Part Rate" the Cost of Energy Deliverable to Substations is as follows based on the Maximum Simultaneous Demand of all Substations:

Demand Cost - - - $ 20.13 per K.W.
Energy Cost - - - $ .003314 per K.W.H.

In estimating the total energy deliverable at substations for the year 1914, it is assumed that there will be an increase in business amounting to 10 per cent. It will be noted that the average cost of energy deliverable to substations is $ .007312 per K.W.H., and that, expressed as a "two part rate," the cost of energy deliverable at substations is as follows, based on the maximum simultaneous demand of all substations:

Demand Cost	$20.13 per K.W.
Energy Cost	$ .003314 per K.W.H.

As the cost of the service is thus determined in the form of a demand cost and an energy cost, the various load factors of the different towns served by defendant will be automatically taken care of, so that it is not necessary to follow Mr. Vincent in his computations, in which he varies the cost of energy deliverable at substations according to load factor.

Having thus obtained the cost of delivering electric energy at the substation in Antioch, it now becomes necessary to ascertain the cost of distribution.

II.

COST OF DISTRIBUTION.

As already stated, the substation in Antioch, in addition to serving the residence and commercial customers in the city and the street lighting system, also serves the 11 K.V. rural line and the California Paper and Board Mills. It thus becomes necessary to make certain segregations so as to ascertain the proportion of the value of the substation and of the operation, maintenance and depreciation expenses thereof which are properly chargeable to the Antioch service. The following table shows the fair and reasonable value, on the evidence in this case, to be assigned to that portion of defendant's substation and distribution system which is chargeable to Antioch, excluding the California Paper and Board Mills, together with a proper depreciation annuity:

Table No. XII –

Capital and Depreciation Annuity

Town of Antioch
(Excepting California Paper and Board Mills)

		Capital	Depreciation Annuity (Int. .6%)
(a)	Real Estate	$ 750.00	-
(b)	Substation Building	943.00	17.19
(c)	Substation Equipment	14,436.00	263.12
(d)	Pittsburg Antioch Tie Line	2,361.00	64.18
	Poles and Fixtures	6,710.00	288.28
	Wire and Insulators, etc.	3,988.00	25.77
	Pole Transformers	2,329.00	42.45
	Municipal Street Lights	924.00	39.70
	Electric Services	1,781.00	76.52
	Electric Meters	4,393.00	119.43
	General Structures	1,556.00	28.36
	Tools and Appliances	375.00	28.45
	Testing Instruments, etc.	150.00	4.08
	Furniture and Fixtures	351.00	9.54
	Materials and Supplies	2,829.00	-
	General Capital (Prorated)	268.00	11.20
	All Departments Non-landed Capital (Prorated)	574.00	31.48
	All Departments Landed Capital (Prorated)	559.00	-
	Supply Department (Prorated)	60.00	.49
	Total Tangible Capital	$ 45,337.00	$ 1,050.24
	Construction Capital	1,177.95	
	Working Capital	1,004.92	
		$ 47,519.87	
	Correction in General Capital (prorated to California Paper and Board Mills)	132.24	2.24
		$ 47,387.63	$ 1,048.00

Note:

(a), (b), (c) and (d) only a portion chargeable to local distribution in Antioch, part chargeable to 11 Kv and California Paper and Board Mills.

The table annexed to defendant's brief herein does not make the proper segregations as between the service to the town of Antioch and the 11 K.V. line, and for that reason must be disregarded. The table also includes certain transmission capital which has been covered in the foregoing tables by the cost of service found at the Antioch substation. It also includes an excess of $2,000 for the cost of resetting meters, which cost should not be considered in this proceeding.

The difference between the value herein found and the estimate attached as Appendix "B" to the petition herein consists largely in the fact that defendant claims in its Appendix "B" an allowance of $6,764.59 for organization and development cost, while no allowance for this item has been made in the preceding tables. Defendant had available the actual development costs in connection with the Antioch plant. Notwithstanding this fact, defendant chose not to present the actual facts but rather relied on a highly theoretical estimate of what the organization and development costs might have been under a state of facts varying widely from those which actually surrounded the construction of this plant. Theoretical estimates of this kind will have very little weight with this Commission, particularly when the utility has in its possession the actual facts and fails to present them.

I find that the allowance hereinbefore made as the basis of return for the distributing system at Antioch is a fair and reasonable allowance and that no item should be added under the evidence in this case, for cost of developing the business or so-called "going concern value."

The following table shows the cost of service for distribution in Antioch, excepting again the California Paper and Board Mills:

Table No. XIII.

Local Cost of Service at Antioch

	Substation (a)	Street Lighting	Distribution	Service	Total
Investment	$ 21,889.70	$ 4,640.02	$ 12,832.93	$ 8,024.98	$ 47,387.63
Interest at 8%	$ 1,751.18	$ 371.20	$ 1,026.63	$ 642.00	$ 3,791.01
Depreciation	397.81	144.12	292.25	213.76	1,048.00
Maintenance	56.17	48.49	173.14	186.19	463.99
Total Fixed Cost	$ 2,205.16	$ 563.87	$ 1,492.02	$ 1,041.95	$ 5,303.00
Operation Expense	$ 1,409.86	$ 164.52	$ 1,561.71	$ 2,672.69	$ 5,808.78
General Expense (Incl. Insurance, Taxes, etc.)	443.14	82.91	325.05	373.45	1,224.55
Total Operation Cost	$ 1,853.00	$ 247.43	$ 1,886.76	$ 3,046.14	$ 7,033.33
Total Local Cost	$ 4,058.16	$ 811.30	$ 3,378.78	$ 4,088.09	$ 12,336.33

Note:

(a) Only a portion chargeable to local distribution

The operation and maintenance charges shown on the foregoing table are the actual charges as shown on the books of Pacific Gas and Electric Company in 1913, with the necessary segregations as between the different classes of business served out of the substation, together with the elimination of certain abnormal expenses, such as the warehouse expense and the reduction of certain clearly excessive expenditures, such as the fire insurance reserve.

Table No. XIII shows the entire local cost of the service to the town of Antioch and to the inhabitants thereof other than the California Paper and Board Mills. To obtain the complete cost of service it is necessary to add the cost of production and of transmission to the Antioch substation, with proper correction for the local transformer losses, the load factor and the diversity factor. Table No. XI shows that the demand cost for simultaneous demand of all substations on the transmission system is $20.13 per K.W., and that the energy cost is $ .003314 per K.W.H. delivered at substation. After proper corrections, as already noted, and further corrections for distribution losses and diversity factors between the different classes of service, it appears that the total average cost of service in Antioch, exclusive of the California Paper and Board Mills, based upon the present load factors and on the assumption that the business will increase 10 per cent, is 5.546¢ per K.W.H., delivered at consumers' meters, and 3.75¢ per K.W.H. for street lighting under present conditions.

Having thus determined the average cost of service, we are now in a position to establish the rates for the different classes of service to the inhabitants of the town and to the town itself for its street lighting. No request has been made that the Commission establish the rate to be paid by California Paper and Board Mills, and the existing rate charged to that company will be permitted to continue.

After a thorough and painstaking inquiry into the exhaustive evidence which has been presented in this case, I find that the rates shown in the following table are fair and reasonable rates to be charged for electric energy delivered by defendant in the town of Antioch:

Table No. XIV.

R A T E S

SCHEDULE "A"

General Lighting

Applicable to all lighting installations served from the local secondary distribution lines:

C.R.C. Classification: Service 1121; Rate 1111; Serial No. 140701-1

First 20 K.W.H. per month	7¢ per K.W.H.
Next 980 K.W.H. per month	4¢ per K.W.H.
Over 1000 K.W.H. per month	3¢ per K.W.H.

Minimum charge $1.00 per month per meter

SCHEDULE "B"

Municipal Street Lighting

Applicable to all street and other public outdoor lighting.

C.R.C. Classification: Service 5235; Rate 1617; Serial No. 140701-2

3 3/4¢ per K.W.H. deliverable into Street Lighting Circuits.

SCHEDULE "C"

Miscellaneous Commercial and Industrial Power

Applicable to all power installations served from the local secondary distribution lines.

C.R.C. Classification: Service 1161; Rate 1114; Serial No.140701-3

		Per K.W.H.
First 50 K.W.H. per H.P.per Month	Less than 1 H.P.	7¢
	1 H.P. and less than 3 H.P.	5¢
	3 H.P. and less than 9 H.P.	4¢
	9 H.P. and less than 27 H.P.	3¢
	27 H.P. and less than 81 H.P.	2 1/2¢
	81 H.P. and over	2¢
Next 50 K.W.H. per H.P. per Month		1 1/2¢
Over 100 K.W.H. per H.P. per Month		1¢

Minimum charge: First 10 H.P. $1.00 per H.P. per month
Over 10 H.P. 75¢ " " " "

I desire to draw attention to the more important changes which the rates herein established will cause in the existing rate schedule. The top rate for lighting is reduced from 8¢ per K.W.H. for the first 30 K.W.H. per month to 7¢ per K.W.H. for the first 20 K.W.H.. The steps have also been altered, so that whereas heretofore a consumption of over 30 K.W.H. per month entitled the consumer to a rate of 7¢ per K.W.H. for the next 70 K.W.H. per month, he will now be entitled, after consuming 20 K.W.H. per month, to a rate of 4¢ per K.W.H. for the next 980 K.W.H. per month. Whereas heretofore the lowest rate has been 3¢ per K.W.H. for commercial lighting over 1050 K.W.H. per month, the distinction between residence lighting and commercial lighting has been abolished, for the reason that the service is exactly the same in either case, and it has been provided that the rate of 3¢ per K.W.H. shall apply to all electric energy consumed for lighting purposes per month in excess of 1000 K.W.H.

With reference to municipal street lighting, the rate heretofore has been the flat xxxx sum of $128.00 per month. The rate herein established, being 3 3/4¢ per K.W.H. delivered into street lighting circuits, will result in a saving to the town of Antioch of about $570.00 per year.

The power rate schedule has been revised so as to be put on a more logical and scientific basis, but there will be no substantial change in the revenue to be derived from this class of business.

While the reductions herein established are amply justified by the evidence, and are less than could reasonably have been established, I desire to draw attention to the fact that redyctions in electric lighting rates in this State have generally been followed by increases in business, so that the reductions in revenue have generally been made up within relatively short periods of time. Mr. A. F. Hockenbeamer, Second Vice President and Treasurer of defendant, testified before this Commission only a few days ago that the reductions in lighting rates made by Pacific Gas and Electric Company in 1911 and the early part of 1912 were made up as far as the gross

revenue is concerned, by the end of the year 1912.

The following table shows the estimated annual revenue which will be derived by defendant from the sale of electric energy in the town of Antioch, except California Paper and Board Mills, at the rates herein established, on the assumption that the business shows a normal increase of only 10 per cent per annum:

Table No. XV

Estimated Annual Revenue.

Revenue from local lighting service.....	$ 9,439.10
Revenue from power service (exclusive of California Paper and Board Mills and 11 K.V. rural line).....	970.05
Revenue from street lighting.....	1,065.00
Total.....	$11,474.15

The total revenue of $11,474.15 will be more than sufficient to take care of every element of expense hereinbefore determined, including the return on the investment, in connection with the defendant's service of electric energy within the town of Antioch.

I submit herewith the following form of order:

O R D E R.

Public hearings having been held in the above entitled proceeding, and the case having been submitted and being now ready for decision,

THE RAILROAD COMMISSION HEREBY FINDS AS A FACT that the rates charged by PACIFIC GAS AND ELECTRIC COMPANY for electric energy, delivered to the town of Antioch and to the inhabitants thereof, except California Paper and Board Mills, are unjust and unreasonable in so far as they differ from the rates herein established, and that the rates herein established are fair, reasonable and liberal rates to be charged by Pacific Gas and Electric Company for the respective classes of

service to which they apply.

Basing its order on the foregoing finding of fact and on the further findings which are contained in the opinion which precedes this order,

IT IS HEREBY ORDERED that PACIFIC GAS AND ELECTRIC COMPANY be and the same is hereby directed to establish and to file with this Commission within twenty (20) days from the date of this order, the following rates to be charged for electric energy sold to the town of Antioch and to the inhabitants thereof, apart from the California Paper and Board Mills:

R A T E S

SCHEDULE "A"

General Lighting

Applicable to all lighting installations served from the local secondary distribution lines:

C.R.C. Classification: Service 1121: Rate 1111: Serial No.140701-1

First 20 K.W.H. per month	7¢ per K.W.H.
Next 980 K.W.H. per month	4¢ per K.W.H.
Over 1000 K.W.H. per month	3¢ per K.W.H.

Minimum charge $1.00 per month per meter

SCHEDULE "B"

Municipal Street Lighting

Applicable to all street and other outdoor lighting.

C.R.C.Classification: Service 5235: Rate 1617: Serial No.140701-2

3 3/4¢ per K.W.H.deliverable into Street Lighting Circuits.

SCHEDULE "C"

Miscellaneous Commercial and Industrial Power

Applicable to all power installations served from the local secondary distribution lines.

C.R.C. Classification: Service 1161; Rate 1114: Serial No.140701-3

		Per K.W.H.
First 50 K.W.H. per H.P. per month	Less than 1 H.P.	7¢
	1 H.P. and less than 3 H.P.	5¢
	3 H.P. and less than 9 H.P.	4¢
	9 H.P. and less than 27 H.P.	3¢
	27 H.P. and less than 81 H.P.	2 1/2¢
	81 H.P. and over	2¢
Next 50 K.W.H. per H.P. per month		1 1/2¢
Over 1000 K.W.H. per H.P. per month		1¢

Minimum charge: First 10 H.P. $1.00 per H.P. per month
Over 10 H.P. 75¢ per H.P. per month

The foregoing opinion and order are hereby approved and ordered filed as the opinion and order of the Railroad Commission of the State of California.

Dated at San Francisco, California, this 6th day of July, 1914.

John M. Eshleman
H. D. Loveland
Alex Gordon
Max Thelen

Commissioners.

The order approved and the opinion approved as modified in Concurring opinion

John M. Eshleman
H. D. Loveland
Alex Gordon
Edwin O. Edgerton

ESHLEMAN, Commissioner.

CONCURRING OPINION.

I concur in the conclusion reached by Mr. Commissioner Thelen generally in his comments on the important principles discussed in the opinion, but I do not feel that I am so entirely in accord with some of his announced theories that I should, because of my concurrence in his results, fail to comment on those matters with which I do not entirely agree. Particularly do I desire to point out what appears to me to be dangerous in his suggested doctrine of agency.

While I do not for a moment question the power of any governmental agency to impose conditions in advance on any business requiring governmental sanction to be carried on, on the acceptance of which conditions may depend the right of any person or corporation to conduct such business, yet I do not conclude that this power to impose conditions in advance necessarily implies the power to impose added conditions on a business already operating under governmental sanction after such business has assumed all the obligations required by law to be assumed at the time of the initiation of its enterprise. For example, I am very sure that a condition in a franchise to the effect that never shall the agency accepting such franchise capitalize it or claim value for it at more than its cost, or any value at all for that matter, would be good and enforceable against the agency accepting such franchise. Likewise do I believe that a condition in a franchise requiring the one accepting the same to account as agent to the authority granting such franchise would be equally valid. It would have simplified matters immeasurably, both for public utilities and public authority, had such public authority been far seeing enough to have attached conditions to all gifts, such as I here suggest, but failing to do so in advance, I very much doubt the power of the State to impose them now. I, of course, should

not be understood here as urging that the State lacks all power to impose conditions on corporations or persons engaged in any kind of business at a subsequent stage of the existence of such business, which it did not impose at the initial period. All agencies, of whatsoever character, embark on their enterprises in full legal contemplation of the power of the State, should the need arise, to exercise every governmental function which the State may at any time exercise and the subsequent necessity for the government to act in any particular way it may be called upon under its power to act, is as a condition subsequent accepted by all who live under government. The general authority of a state of this Union, under its police power, or the federal government under any of its delegated powers to impose conditions upon a business at any stage of its existence, is not that to which I here refer. All readily agree that such authority is a general condition imposed at the beginning and always existing. But unless referable to the police or other general power of the State of California, this State has no power to impose conditions on any enterprise which has lawfully acquired its property and initiatied its business except as a condition precedent imposed upon such enterprise in the beginning, unless the owners of such enterprise voluntarily accept such condition. In other words, the state has the right to say in advance upon what conditions a utility enterprise may initiate and conduct its business and may, as a part of the contract, impose conditions on the acceptance of which the agency so accepting becomes bound thereby, but failing to do so in advance the only conditions that may be imposed thereafter are those conditions authorized and justified by the police power. It is my belief, therefore, that the failure of the state to impose conditions in advance divests it thereafter of the power of imposing such conditions unless the police power authorizes such imposition.

I feel it best to meet this squarely rather than delude ourselves longer in the belief that we as a people may continue

safely to divest ourselves of things of value with no return until all the common store is exhausted, in the belief that our mistaken generosity will be reciprocated by those accepting our gifts. They will not reciprocate, and under the law they may not be forced to give back that which we have so foolishly and bounteously granted. Better that we be on our guard for the future than indulge ourselves in dreams of how to retake that which is already lost. Some of us fondly hoped and cogently, we thought, reasoned that our water rights given for nothing to our water companies could not by them be used as a basis to tax the consumer by reason of such gift. But the Supreme Court of the United States calmly, within the very recent months, dispels our illusions and holds that the public service water company owns these water rights and may charge its consumers therefor. It is the part of wisdom now, even though the day be late, to recognize that when we give something to a man it belongs to him and he will make us buy it back or pay for the use of it once we have parted with it; and it makes no difference if the donor be the state or the nation and the one receiving the gift be a public utility corporation. The only safe course is not to be so generous or so to condition the gift that we will be protected.

The main reason then why I do not accept the able reasoning of Mr. Thelen in this regard is that it will merely serve longer to keep us lulled to sleep until all our valuable public stores and privileges shall have been given away, when we shall awaken to the painful fact that they are no longer ours, just as we are now made to know that the waters of our rivers and streams, incalculable in value, are for nothing the prize of the alert private interest merely because public authority slept.

The authorities cited do not at all convince me that the Supreme Court will ever hold, when the matter is directly before it, that the owners of a public utility property hold such property as an agent at all. In fact that court has in several well considered cases definitely decided that such is not its view. Therefore, if

we are to escape excessive unearned increments and rates based upon the gift we have made, it must be on some other theory than that the owner of public utility property is in any proper sense, as to such property, an agent. And it behooves us to see to it that when in the future concessions are made of rights to water, for power or irrigation or other purposes, or when gifts are made of any sort, that the taker of such concessions or gifts takes them with the condition attached that we shall not be the more burdened by reason of our generosity. And by the imposition of conditions in advance, that the taker of any privilege, be it franchise, water right or anything else of value, takes the same as an agent or so conditioned that it may not base rates upon such gift.

There is in addition to this objection another reason why this theory cannot be accepted. If legal, as I am sure it is not, it works beautifully as to those agencies that are now subject to regulation, but it fails as to other agencies that shall hereafter engage in business which, but for this, would be subject to regulation. The recent case of the Del Mar Light, Water & Power Company against this Commission indicates the danger to regulation of urging this doctrine. A public utility business is no different from any other business except that it occupies such a position in society by reason of its monopolistic character that the state, under its police power, may regulate it both as to the price for which and those to whom it shall accord its service. It is abundantly established both on authority and reason alike that monopoly is at the bottom of regulation. Every business, therefore, which starts on its course starts with the prospect that ultimately it may occupy such a relation to its patrons that it may be regulated, and this is a general condition subsequent, such as has already been discussed, and a condition which exists independently of any affirmative act on the part of those in charge of such business and irrespective of any desire or agreement on their part whatsoever. On this condition all property of all owners

is held.

It is unnecessary here to discuss the distinction between the natural monopoly, so-called, which becomes the public utility and other monopolies. It is sufficient to have in mind the fact that public utility enterprises, such as the defendant here, are subject to regulation as to their rates and service because of their monopolistic character. If this be true, then it follows that the going into the business is all the affirmative act done by this agency which subjects it to regulation, and the reserve power of the State of California under its police power which authorizes it to regulate monopolies and the condition of society that of necessity constitutes an agency, such as this one, as to some of its patrons at least, a monopoly, do the rest; and except for these propositions of law and fact the Pacific Gas and Electric Company holds its property under no different tenure and performs its corporate function under no different warrant than a grocery store which sells, among other commodities, kerosene and so may be said to be in the lighting business.

I reiterate that this is true unless there are conditions imposed in the franchises, upon the permits and the rights accorded to this corporation which affect its title to any of the property held by it.

When, however, it is admitted, as here, that an agency may be denied the right to say to whom and for what price it shall sell its commodity or perform its service, it, of necessity, follows that although its property is private property held in ownership just as other private property, yet the same rules of value are inapplicable. I have made this statement in every case where I have discussed value, and in every case some utility representative becomes aggrieved and immediately asks "why". And "why" echoes from every superficial critic who views as an anarchist everyone who would sanely regulate and who would prefer to look at the problem squarely as it is rather than attempt to distort it into what he would like to have it be. My only answer is that economic necessity, not this Commission nor any other

governmental agency, has made it so. I agree that in every respect possible utility property should be viewed just as any other property, but it seems to me that everyone who thinks at all must realize that if you would permit a monopoly to get all from its patrons it desires to get, the property devoted to such business is worth more to its owners than if you compel such monopoly to accept a less amount. And just so soon as you make the earning power of a property dependent upon rates and rules imposed artificially, I might say, by outside authority instead of naturally by those in control of such business you have made the commercial value of such property dependent upon what such outside authority shall do. To fix rates we are told we must know the value. But the final beneficial value to the owner of such property cannot be known or even exist until after the rates are fixed. Therefore, of very necessity this first value which must be known before rates are fixed cannot mean the same as the resultant, and we must find it by other rules. The courts have called it "fair value", and, as Mr. Thelen points out, many elements enter to make it up. That the confusion existing with reference to the proper basis of determining this so-called value is due to the fact that it is misnamed, I have often heretofore pointed out. That it is not value at all, as commercially understood, is capable of demonstration. If we have two hydro-electirc enterprises fully developed, with an equally accessible market, with exactly equal capacity, we would be free to say that they were of equal value independent of cost or anything else, if we have regard to the ultimate meaning of value, for they "avail" the same. Value, in its ultimate analysis, is always comparative. In its commercial aspect, however, we have referred it to money and have made it dependent primarily upon the earning power of the property valued. Value as thus understood, and as blindly sought after in all these rate inquiries by the utilities and many commissions and courts, is something that cannot be of aid in the fixing of rates. The license to regulate arises from the fact that the state has a right to inquire, in the case of a monopoly, into equitable matters and has a right to

determine what rates, in view of all the facts in any case, ought to be accorded. And it is just because it is known that human nature will exact more than it should, if given the chance, and that in the case of a monopoly it usually has the chance, that intervention by the state in such cases is warranted under the police power.

What I have here said merely indicates that these problems cannot be solved by rules of general application. When we modify the usual rule of value which is the result of using the property to the highest advantage for the owner, by injecting the equitable elements and entrust the determination of such equitable elements to a public officer, then we have- as I suggested in the Monterey Gas case- put such property at the mercy finally of the state. If the first public officer fails in his duty perhaps another so empowered will prevent an abuse of discretion by the first; but in any event the determination of what ought to be accorded, when we have taken away the power from the owner to take what he <u>can</u> regardless of what he <u>ought</u>, is in the hands of some representative of the state, and whosoever this may finally be the fate of such regulated industry is in his hands. There is present always in the case of a monopoly but the alternative "take all you can" or "take only what you ought". Public policy, operating through the police power, lawfully and rightfully says to agencies such as the defendant here, "you shall not take all you can and the government will say what you ought to take", and on this command depends the value of this property.

I thoroughly agree with Mr. Thelen, as the Commission has often said before, that cost is the most important element. Justice dictates that the sacrifices of those who serve us should at least be rewarded, and hence what has been paid out by a utility should appeal strongly to us. Then too honest mistakes should have a large appeal to a tribunal alive to equitable consideration. Likewise the fact that the same state which empowers this Commission to act has by permission allowed securities to get into the hands of innocent pur-

chasers; if it plainly appears that such is the case, should have weight if this can be done without injury to other innocent parties. But to urge that every artificial device that can be thought of for enhancing the sum upon which an earning shall be demanded, to the end that the agency in question can justify rates as high or higher than could be exacted were no regulation imposed, is merely to urge that regulation is unnecessary and our work futile. It is my singular experience that in no case brought to my attention has the utility before the Commission failed as a result of the activity of its sworn experts to justify rates as high, and usually higher, than those it had voluntarily accorded. Certainly this is a tribute to the generosity of those in charge of utilities beyond the generosity of the rest of us, and a demonstration that all expense and time expended in the regulation of monopolies is worse than wasted.

It will be seen that although I reject Mr. Thelen's doctrine of agency, that I come to the same point in deciding that no one consideration shall be controlling in determining the fair amount upon which an earning shall be allowed, (erroneously called "value"), and that we are agreed that all of the facts which the history of the agency in question develops should be considered by a tribunal which is endeavoring to do justice both to the utility and the public. We cannot escape the conclusion that justice, as humanly possible, is not arithmetical but the result of a conscientious endeavor on the part of those for the time in authority to make "ought" and "must" synonymous, and I therefore conclude that it is impossible in advance to state rules of general application for determining the sum upon which a utility may be permitted to earn. But we should always have in mind two things, first, that under private ownership we must be so generous, and no more so, as is necessary to get our public utility work done and money invested in such enterprises; and, second, we must always have in mind the comparison between the conditions

that would exist if public ownership were resorted to and those that confront us under private ownership, and if it be found that the amounts exacted under private ownership in payment for doing the business are excessive in comparison with the amounts that could be reasonably expected to be exacted under public ownership, then the latter will inevitably result.

I, therefore, concur in the order and in the general conclusions reached by Mr. Thelen in his opinion, with the modifications I have here set out.

Dated at San Francisco, California, this 6th day of July, 1914.

John M. Eshleman

Edwin O. Edgerton

Commissioners.