

Decision No. 6550

ORIGINAL

BEFORE THE RAILROAD COMMISSION
OF THE STATE OF CALIFORNIA

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ENGELS COPPER MINING COMPANY,

Complainant,

- vs -

GREAT WESTERN POWER COMPANY,

Defendant.

Case No. 1271

I. J. Truman, Jr., for Complainant.
Guy C. Earl and Chaffee E. Hall,
for Defendant.

DEVLIN, Commissioner.

O P I N I O N

This is a complaint brought by Engels Copper Mining Company against the service and rates for electricity charged it by Great Western Power Company.

In accordance with the order of this Commission in Decision No. 5518 in Application 3460, effective July 10th, 1918, Great Western Power Company was required to

cancel the special contract rate of complainant and thereafter charge it in accordance with Schedule No. 541 for power service in Plumas County, which schedule is characterized by defendant as an unduly high rate for the service. Complainant further protests against the amount of the present emergency surcharge to its bills, authorized in this Commission's order in Decision No. 5518, supra. Complainant seeks relief from the numerous interruptions in service to which it has been subject for a period of several years. It asks that the most favorable schedule in force on defendant's system be applied to it, and alleges in this connection that the character and extent of its load entitles it to at least as low a rate as any other power consumer.

Hearings were held in San Francisco during the latter part of March and the early part of April, 1919. Both parties submitted voluminous evidence, which has been reviewed, and the matter now awaits decision.

Complainant is engaged in the mining and milling of copper ore in Plumas County, California, and states that it has invested in its properties in excess of \$2,000,000, to which further enlargements are proposed. The present owners of the Mining Company acquired these properties in 1914, since which time they have been working two mines, employing between 400 and 600 men, and have built and operate mills with daily capacity of 1100 tons. In addition to their development of the mining properties they bore the major portion of the cost of the Indian Valley Railroad, extending from Engels to Paxton, connecting with the Western Pacific Railroad.

The average production of copper is about 900,000 pounds per month. In its mining, milling and incidental operations complainant uses large quantities of electric power, which has averaged during the year 1918 in excess of 1,000,000 k.w.h. per month, with a demand approximating 1900 kilowatts. It has been supplied with electricity by defendant beginning September 1915, since which date its consumption of electric power has steadily increased.

Prior to July 10th, 1918, the rates charged complainant by defendant were based upon two successive contracts, the rates of both differing from the filed schedule of rates generally applicable to power service in Plumas County. Complainant alleges that not only is the present schedule rate excessive, but that the second contract rate to which it at one time agreed, is likewise excessive, but that it acquiesced in this contract rate only in order to obtain a supply of power. Complainant's exception to the present schedule rate is based both upon resulting cost of power to it and to the form of the rate, which involves a readiness-to-serve charge based upon connected load, and an energy charge in addition thereto. Its protest against the emergency surcharge is not to the form or principle thereof, but to the amount, which it deems excessive.

Engels Copper Mining Company is one of the largest consumers supplied by defendant herein, during the year 1918 its power bills amounting to \$172,324.44. During the three and one-half years from September 1915, at which date service was first rendered, to and including February 1919, defendant's revenue from this one consumer at the contract

and schedule rates and surcharges in effect during this period was the sum of \$311,594.84.

The testimony of complainant shows that while the copper industry in general has been temporarily affected by the low price of copper which prevailed since November 1918, its own operations have not been curtailed, and that it has large quantities of ore blocked out, and untouched ore reserves for at least 10 years future operation; that it is now contemplating substantial improvements and investments in its properties, which, insofar as defendant is concerned, will mean increased use of electric power in the future. The Copper Company's costs of operations have steadily mounted by reason of the increased cost of labor and material and its profits have been substantially reduced by both increased costs of operation and the limitation in the price of copper established by the government during the war period. The cost of electric power to it is a substantial part of its expense of operation.

From September 1915 to November 1917 defendant supplied the Mining Company with power generated at its Butt Creek power house. During the year 1917 Great Western Power Company built a 44,000 volt transmission line 60 miles in length from its plant at Las Plumas on the Big Bend of the Feather River, to Veramont, at which point it is connected through transformers to the 22,000 volt line from Butt Creek and to a 22,000 volt line extending 10 miles further to the Engels mine. Energy is now delivered to the Mining Company and metered at 22,000 volts, thence reduced through transformers of 2100 kilo-

watts capacity owned by the Mining Company. Service is also supplied from Veramont substation to two other mines and several small communities in this vicinity.

The first contract entered into between the parties herein on July 1st, 1915 became effective in September 1915 with the first delivery of electricity. This continued until February 1st, 1918, at which time another rate became effective in accordance with the terms of a subsequent contract dated January 25th, 1917, when the Mining Company's load exceeded 2000 horsepower, as provided for in this second agreement. From February 1st, 1918 to July 10th, 1918 this second contract rate was in effect, and on July 10th, 1918 the consumer was placed upon Schedule No. 541 of defendant, in accordance with which it was thereafter charged together with the addition of the surcharge of 2 mills per kilowatt hour authorized by the Railroad Commission.

The matters presented to the Commission are clearly divisible into two parts: - First, as to the character of service rendered; and, second, as to the rates charged. Evidence presented by both parties is clearly indicative of frequent and lengthy interruptions, both partial and total, in the supply of current, which are costly to complainant by reason of the enforced shutdown of its flotation tanks, mills, compressors, and other apparatus, involving the loss and curtailment of its output.

During the early period of service, when power was supplied exclusively from the Butt Creek plant, failures of power supply occurred on account of the freezing of the power plant flumes, and line interruptions due to

stormy weather. Since the construction of the new transmission line from Las Plumas to Veramont, interruptions have also occurred, both on this line and on the distribution line to the mine, particularly during periods of stormy weather, which interruptions have been particularly costly to complainant by reason of the larger extent of its operations.

The causes of the more recent interruptions have been found to be due largely to the falling of trees upon the power lines. The Las Plumas-Veramont power line and the Veramont-Engels power line both pass through heavily timbered sections and portions thereof are at a high altitude and subject, therefore, to the falling of trees and to the extreme weather conditions which prevail at certain seasons in this territory. Defendant maintained that it had exercised all reasonable engineering skill and prudence in the construction of its line as regards the clearing of trees from its right of way; that it used a heavy type of line construction as protection against the elements, and has continued to maintain engineering skill and diligence in the operation of this line, showing that it has from time to time removed trees that jeopardized the line. In spite of this it appears that frequent interruptions continued to occur.

Both parties were at variance in their ideas of the proper clearing of the timbered portions of the line and it was agreed that a joint inspection be made by representatives of both parties hereto with an engineer of the Railroad Commission. This survey was carried out during the course of the hearings herein and a report

dealing with the hazardous elements of the lines was submitted on behalf of the Railroad Commission, which was concurred in by the representatives of both parties. Great Western Power Company thereupon stipulated and agreed to carry out fully the recommendations of this inspection party as to the removal of imminently dangerous trees and to clear other hazardous portions of the line, and to hereafter exercise greater care in its operation and maintenance of these lines.

In addition to difficulties resulting from interruptions of service, the Engels Copper Mining Company calls attention to the reduced voltage of defendant's supply, which, in several instances, has resulted in the burning out of motors and other sources of trouble to complainant's apparatus.

From the testimony of defendant's engineer, this reduction in voltage is caused by the insufficient capacity of the power line from Veramont to the mine, which he states was designed for 1000 kilowatts and is now forced to carry nearly double this amount, with an attendant excessive voltage drop and other undesirable operating conditions. The main line from Las Plumas to Veramont on the other hand has ample capacity.

In view of the fact that the line from Veramont to Engels is operated at nearly double its normal capacity, and further, noting complainant's expressed intention to substantially increase the size of its plant by the installation of more motors, it would appear highly desirable, and in fact necessary, for defendant to make such changes and improvements in this line as will enable

it to adequately supply this consumer's present and future power requirements. I propose that the order herein shall provide for such improvement.

The rate charged in accordance with Schedule No. 541 differs by a very small percentage from the contract rate formerly in effect. The rate now paid by the Mining Company is shown by it to be nearly double the rates charged for similar service by other power companies operating in the northern and central portions of California, and to this extent the Mining Company alleges that it is handicapped in its competition with other copper producers of the state.

Complainant questions the validity of Schedule No. 541 on account of the manner and circumstances of its filing and acceptance by the Railroad Commission. At the time this schedule was filed and accepted, its rate did not apply to the Engels Mining Company by reason of the existence of the second contract rate previously referred to - in fact, but two consumers were supplied under this schedule from the time of its filing to July 10th, 1918. An investigation of the circumstances under which Schedule No. 541 was filed with, and accepted and approved by, the Railroad Commission, indicates that the procedure was entirely regular and that said Schedule No. 541 became a valid rate from and after its filing.

Complainant's objection to Schedule No. 541 is based not only upon the amount of the total charge result-

ing from the application of this schedule to its use, but also to the form of the charge itself, and in this connection it claims that the so-called "readiness-to-serve" part of the rate is improperly based upon connected load rather than upon actual maximum demand it imposes upon the Power Company. Complainant is required to have installed in motors a capacity much in excess of its simultaneous power demand, and shows that the capacity of the transformers through which it receives its entire power supply is substantially less than the installed capacity of its power consuming apparatus. Complainant further shows from its graphic recording meters that its actual demand is even less than the rated capacity of its receiving transformers. I am in agreement with complainant's contention that for installations of the size and character of that of the Mining Company that the so-called "readiness-to-serve" charge is more properly based upon the actual demand made upon the Power Company rather than upon the connected load of the consumer.

Great Western Power Company, in defense of its rate schedule No. 541 and the contract rate formerly in effect, which have been pointed out to differ but slightly in their total charges, admits that these rates are high in comparison with other schedules in effect upon its own system and in comparison with the rates charged by other electric utilities for similar service, but very clearly points out in this connection that its business in Plumas County involves a very much higher hazard and

risk than does the business in other portions of its territory to which its lesser rates apply, and it claims that it should receive a higher rate to compensate for the additional hazard.

The Power Company undertook to serve the Mining Company and has continued to serve them, investing from time to time substantial sums of money in its lines, substations and other facilities in a territory very sparsely settled, and which, without the existence of such a load as that taken by the Engels Copper Mining Company, would have been clearly impossible.

The load supplied by defendant in Plumas County is confined to a limited area about its Veramont station, to which power is delivered over a line 60 miles long running through rugged and undeveloped territory and along which there is neither business now connected nor is there any prospect of any future business developing; in fact it is only the large consumption of electricity by the Engels Copper Mining Company that in any way justifies this 60 miles of transmission line through this territory. In this connection it may be well to note that the business of the Mining Company for the last four years has averaged 88 per cent of the total business of defendant in Plumas County.

Having once entered this territory with a very substantial investment in transmission and distribution lines, the primary purpose of which was to supply the Mining Company, and having inaugurated service to a few other

small mining companies and several of the communities in this section, it is faced with the proposition of having dedicated its service to the public and would be unable to withdraw from this field in the event that the Engels Mining Company should cease operations. This, in substance, is the risk and hazard to which the Power Company claims its service in Plumas County is subject. The Mining Company on the other hand maintains that it is in every sense a going concern and past the experimental stage; that its growing development and output for the past four or five years, accompanied by large investments in its properties, and its ore reserves and other future prospects, fully entitle it to consideration as a permanent business; it contends that present conditions affecting the copper market are largely temporary, and that with the normal resumption of construction activities in this country and in Europe, sufficient improvement should occur in the copper market to enable it to profitably continue its operations, and that the element of risk on the part of defendant is entirely absent insofar as the business of the Mining Company is concerned.

There is merit in defendant's contention that it is entitled to compensation for the risk involved in its business of supplying electricity to Plumas County and to complainant in particular. While no definite proven figures as to its investment are available, it would be safe to estimate defendant's investment in distribution lines and facilities in this territory to be in the neighborhood of \$400,000, of which \$350,000 would be a fair pro-

rata used in supplying the Mining Company. On the other hand, the risk and hazard assumed in this service by Great Western Power Company cannot be held to continue indefinitely into the future. Although this service has been established for nearly four years, the major portion of the investment involved has been in use less than two years, and the returns from this territory in this brief period of time cannot be deemed to have absorbed any considerable part of the risk or hazard involved. If the complainant's business herein shall continue to the same extent as, or to a greater extent than, occurred in the year 1918, it is entirely probable that within a few years defendant's investment in this service will have showed sufficient return to warrant the conclusion that it has been entirely repaid for the risk assumed. It will be seen at once that the elimination of this factor of hazard through returns to defendant in the course of years in the future is bound up with the question of rates charged for the service, for it is the rates which will determine the income which in turn is available for the reduction of the element of risk.

While the Engels Mining Company is a substantial and going concern and has every promise of a future, I am not of the opinion that the returns from Plumas County to date have been sufficient in total to have absorbed the element of risk in supplying it. To the extent that this hazard shall continue in the future, it would appear proper that the rates charged in this territory should be in excess of those charged in other territories supplied by

defendant where the element of risk is lacking because of the more stable and uniform conditions of supplying power which prevail in developed and established territory.

Great Western Power Company submits a statement purporting to show its investment in distribution lines in Plumas County and a prorata of its production and transmission capital to this section. The figures thus submitted are derived from a valuation of the properties of defendant already submitted to the Commission, but not as yet passed upon in any form, and that cannot serve as a prima facie basis for measuring the return to which defendant is entitled for service to Engels Copper Mining Company or to Plumas County as a whole. Defendant also presents a statement of the cost of service in Plumas County and the return derived therefrom from September 1915 to February 1919, inclusive, which, considering the fact that this period involves the development of the territory in general and of the growth of the Mining Company in particular, shows such wide variations in both expense and income as to be hardly useful as a means of gauging the return from this business. In the absence of any definite figures of valuation and of normal revenue and expense, it is a matter of some difficulty to establish from defendant's records any reasonable cost attributable to this service.

Another factor to which consideration must be directed is the value of the service to the consumer aside from the risk incurred by the utility in supplying this service, and the evidence herein is fairly conclu-

sive of the fact that the rate now charged by defendant to complainant is an excessive one, both from an absolute and from a comparative standpoint. In making comparisons, however, between this rate and other rates for similar service, I have not overlooked the difference in conditions incidental to this service as compared with the conditions under which other rates are being charged.

In establishing a rate for this service I shall have in mind both the value of the service to the consumer, the reasonable cost of supplying such service and the risk involved in this particular instance, and shall recommend that the Commission make a rate which will reflect these factors. In fixing a rate that will reimburse defendant for the risk and hazard of this particular service, it will take into account a gradual reimbursement over a period of years rather than to recompense the defendant within a short period of time. If the present rate were to be continued, it is probable that the risk would be absorbed within a very few years. The consumer's mining business is, in my judgment, sufficiently stable to encourage the belief in its future permanency, and to this extent that portion of the rate to be charged it to offset the risk should be reduced, so that, in effect, the period during which the hazard is being absorbed will be lengthened.

Complainant prays that Schedule No. 500-D should be extended to include Plumas County. If applied to the Engels mine, it would give it the benefit of the lowest available rate for such service on the Great Western Power

Company's system. This schedule contemplates the sale and delivery of electricity under entirely different conditions than exist in the service of complainant, and the rates named therein, being extremely low, would not adequately compensate defendant if applied in Plumas County on account of the risk and hazard of this particular territory as contrasted with the remaining developed and permanent territory supplied under Schedule No. 500-D. At such a time as defendant shall have been reimbursed for the risk out of revenues from proportionately higher rates in Plumas County, and other development in Plumas County so warrants, it may be reasonably proper to apply Schedule No. 500-D thereafter.

In establishing a rate for this service I shall recommend that the same be based in part upon the actual demand of the consumer's load on the utility, rather than upon any other basis, such as connected load. The other portion of the charge will be based upon the quantity of energy used, and when combined with the demand charge will produce a total charge that will provide for both a reasonable cost of service and the gradual absorption of the risk.

The interruptions to service which have occurred in the past and which have resulted in considerable monetary loss to the complainant, suggest to it the desirability of a penalty clause in a rate so that the consumer will be compensated for his loss due to interruptions through the fault of the utility. Such a provision is generally believed to encourage the utility to exercise more care in the maintenance and operation of its lines and service. Complainant asks that this be given consideration by the Commission in establishing a rate.

This, if done, would be an attempt to assess in advance the amount of liquidated damages to be paid to a consumer by a utility for an interruption of service. It is within our province to afford relief to a consumer if the consumer shall bring action against the utility subsequent to an actual failure of service. It is to the interest of the utility, both from the standpoint of income and of service, to maintain its lines and facilities to the highest degree, and the utilities have themselves constantly improved standards of service to the extent that interruptions are very infrequent. It is only under the unusual and difficult conditions, such as exist in Plumas County, that extensive failures occur. In the particular service herein considered, defendant has bound itself to exercise every reasonable means within its power to insure uninterrupted delivery of current, and under the topographic and climatic conditions in the territory through which its lines pass, it can hardly be held accountable for the interruptions due to natural causes in no way connected with the ordinary operation of its system.

The complaint asks that if the rate now charged be found improper, any adjustment thereof by the Commission be made retroactive to the extent that past excess charges it has paid defendant may be restored to it. There would be merit in this request if complainant were being charged at an excessive rate under normal conditions of service, which did not involve the risk and hazard found to be present in this instance. To make such rate adjustment retroactive would only serve to reduce defendant's revenues from this service and to

thus longer postpone the time when the risk will have been fully absorbed.

To the extent that Schedule No. 541 of defendant applies to other consumers in Plumas County, under conditions in many respects similar to the Engels Mining Company, they are likewise being charged at more than a proper rate for their service. The order herein will, therefore, provide for the withdrawal of Schedule No. 541 and substitute therefor a rate which will meet the conditions above set forth.

I recommend the following form of order:

O R D E R

Engels Copper Mining Company having filed a complaint against the rates and service of Great Western Power Company, hearings having been held, the matter being submitted and now ready for decision,

The Railroad Commission of the State of California hereby finds as a fact that the present line used by Great Western Power Company to transmit electricity from its Vermont substation to the Engels Copper Mining Company is inadequate to supply the load of said Mining Company; that the rates and charges for electricity set forth in Schedule No. 541 of Great Western Power Company for power service in Plumas County, are not just, fair

or reasonable rates, and that the rates established in the order herein are, under present conditions, just, fair and reasonable rates for said service.

Basing its order on the foregoing findings of fact and upon the other findings of fact contained in the opinion which precedes this order,

IT IS HEREBY ORDERED that Great Western Power Company shall, within 10 days of the date of this order, withdraw and cancel its Schedule No. 541 for power service in Plumas County, and in lieu of the rates named in said Schedule No. 541 shall hereafter charge and collect for power service in Plumas County, under the terms and conditions of said schedule other than the rate thereof, the following rate:

Demand Charge:

\$1.50 per kilowatt for the first 200 k.w. of
measured maximum demand per month.
\$1.25 per kilowatt for the next 800 k.w. of
measured maximum demand per month.
\$1.00 per kilowatt for all over 1,000 k.w. of
measured maximum demand per month.

plus

Energy Charge:

1.0¢ per kilowatt hour for the first 100,000 k.w.h.
per month.
0.9¢ per kilowatt hour for the next 400,000 k.w.h.
per month.
0.7¢ per kilowatt hour for all over 500,000 k.w.h.
per month.

Minimum Charge:

The Monthly Minimum Charge shall be the highest
monthly demand charge billed during the pre-
ceding 12 months, but in no event less than
\$50.00 per month.

Maximum Demand:

The Measured Maximum Demand shall be the highest
average demand in kilowatts recorded during
any 15 minute period of the month.

IT IS HEREBY FURTHER ORDERED that Great Western
Power Company shall, within 10 days of the date of this
order, file with the Railroad Commission a schedule of
the rates herein established, which rates shall become
effective for all regular meter readings taken on and
after the 22nd day of August, 1919.

IT IS HEREBY FURTHER ORDERED that Great Western
Power Company be and is hereby authorized to charge and
collect, in addition to the rates established in the pre-
ceding paragraphs of this order, such emergency surcharges

as this Commission shall have duly authorized from time to time for such service.

IT IS HEREBY FURTHER ORDERED that Great Western Power Company shall proceed at once with, and complete within 90 days from the date of this order, the construction of such additional facilities between its Veramont substation and the Engels Copper Mine, subject to the approval of the Railroad Commission, as shall thereby provide adequate line capacity for the transmission of electricity to Engels Copper Mining Company.

IT IS HEREBY FURTHER ORDERED that in all other respects the complaint be and the same is hereby dismissed.

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
12th day of August, 1919.

Edwin O. Edgerton
H. D. Howard
Francis R. Berlin
Irving Martin

Commissioners.