

ORIGINAL

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Decision No. \_\_\_\_\_

BEFORE THE RAILROAD COMMISSION  
OF THE STATE OF CALIFORNIA.

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VISALIA ELECTRIC RAILROAD COMPANY,	)
	)
Complainant,	)
	)
-vs-	)
	)
MT. WHITNEY POWER & ELECTRIC COM- PANY,	)
	)
Defendant.	)

CASE NO. 1078

Power and McPadzean for the  
Visalia Electric Railroad Company.

Farnsworth and McClure for  
Mt. Whitney Power & Elec-  
tric Company.

THELEN, Commissioner.

O P I N I O N

The rate to be paid for electric energy by the  
Visalia Electric Railroad Company, hereinafter referred to  
as the Railroad Company, to the Mt. Whitney Power and Elec-  
tric Company, hereinafter referred to as the Power Company,  
is the issue in this proceeding.

The complaint... herein alleges in effect that the

Railroad Company is engaged in the business of a common carrier of passengers and freight in Tulare County; that the Railroad Company purchases electric energy from the Power Company solely for the purposes of its railroad business; that the application of a certain rate schedule entitled "Schedule No. 10" as established by this Commission in its decision No. 3278, effective May 1st, 1916, has resulted in a material increase in the charges made by the Power Company to the Railroad Company for electric energy as compared with the charges which the Railroad Company would have been required to pay for said service in accordance with the provisions of the contract which was in existence between the parties prior to the effective date of said decision No. 3278; that since May 1st, 1916, payments have been made to the Power Company just as though the old contract were still in effect and the amounts claimed by the Power Company in accordance with the said Schedule No. 10 which are in excess of the former contract have been deposited with the Railroad Commission; that as a public carrier the Railroad Company is not permitted to charge rates in excess of those authorized by law; that on account of the nature of the Railroad Company's business it is compelled to use on occasions and for very short periods, amounts of electric energy largely in excess of the average amount required under ordinary circumstances, as for example, during the movement of crowds of passengers on public holidays, and at times of extraordinarily large shipments of freight which are thrown upon the Railroad Company

by connecting roads, and which require immediate movement; that on account of the diversity between the Railroad Company loads and the demands of other consumers of the Power Company it is not necessary for the Power Company to maintain any excess capacity on account of the abnormal peaks created by the Railroad Company; that the Railroad Company's business and the income derived therefrom do not and will not justify the payment by it of the rates prescribed in said Schedule No. 10; that said rates are unfair and discriminatory inasmuch as they are applicable to the Railroad Company which is not able to control at all times its peak capacity and are equally applicable to other industrial power users who are able to so control their peaks; that the Railroad Company has a large investment in its properties upon which it will be unable to pay a fair return if required to purchase its electric energy at said rates. The Railroad Company asks that the Commission find that the rates provided under said Schedule No. 10 are unjust, unreasonable and excessive as applied to its business and that the Commission establish as a just and reasonable rate some other and lesser rate, and further asks that the Railroad Company's service be included under some different classification than that described in this schedule.

The answer calls attention to the outstanding account of the Railroad Company and denies that all of the charges claimed by the Power Company in excess of the old contract rate have been deposited with the Railroad Commission, and sets forth a statement of this account which indicates that during the period from May 1st, 1916 to May

21st, 1917, the amounts paid by the Railroad Company to the Power Company aggregated \$10,889.63 and that the total amount claimed for the same period by the Power Company in accordance with Schedule No. 10 is \$19,272.95, and that the Railroad Company has deposited with the Railroad Commission only \$2,522.32 in accordance with Rule 6 of Decision No. 2879 of the Commission (Vol. 3 , Opinions and Orders of the Railroad Commission of California, P. 372) leaving a balance due of \$5,861.00. The answer further denies that the Power Company does not have to maintain any excess capacity on account of the Railroad Company's peak demands and alleges that the Railroad Company's greatest demand does frequently occur at the same time as the Power Company's maximum peak load, and that it did so occur at one or more times during each of the months of October, November and December, 1916, and January, February and April, 1917. The Power Company does not deny the existence of some diversity between the Railroad Company's peaks and those of its other consumers but alleges that such diversity as exists was taken into account by the Commission in establishing Schedule No. 10. The Power Company further alleges that many other factors affect the business and earnings of the Railroad Company so that the cost of electric energy is but slightly significant in relation thereto. The Power Company denies that the rates provided in said Schedule No. 10 are unjust and unreasonable as applied to the business of the Railroad Company and asks that the Railroad Company's prayer be denied and that it be ordered to pay the balance of \$5,861.00 still due to the Power Company for service rendered prior to May 21st, 1917 and further asks that the \$2,522.32 on deposit with the Rail-

road Commission be paid to the Power Company.

A public hearing was held in San Francisco on September 4th, 1917, at which time the matter was submitted for decision.

This complaint was taken up informally by the Railroad Company prior to the filing of its formal complaint and it was stipulated at the hearing that data contained in the Commission's informal file No. 024-175 relative thereto as well as any other pertinent data now on file with the Commission, might be considered as evidence herein.

It appears that the Railroad Company receives electric energy directly from the high tension transmission lines of the Power Company at a certain point in Exeter, Tulare County, and transmits said energy over a short line of its own to its substation in that city, where the Power Company's meters are located and where the energy is transformed for delivery to the Railroad Company's trolley and for distribution by it to its various substations along its line of track.

Prior to the issuance of its decision in what is commonly known as the "Mt. Whitney Rate Case" (Vol. 9 Opinions and Orders of the Railroad Commission of California, p. 628 ) the Commission made a thorough investigation of the investment, earnings, expenses and operating statistics of the Power Company. The Railroad Company made no appearance at the public hearings which were held at Tulare and elsewhere in connection with said rate case, nor did it in any way draw the Commission's attention to the alleged special conditions which affect it as a consumer of energy from the Power Company's system.

Since the Railroad Company receives its energy directly from the Power Company's high tension transmission lines, it falls naturally into the classification which the

Commission designated as "Transmission Service", the rate provided therefor being as follows:

SCHEDULE NUMBER 10

TRANSMISSION SERVICE RATE

METERED SERVICE

Applicable to large consumers receiving energy directly from the Company's transmission lines at the transmission line voltage.

\$2.50 per month per kilowatt of measured maximum demand, to which charge shall be added an energy charge of two-tenths (2 mills) cent per kilowatt hour for all electric energy supplied.

The portion of this rate which depends upon the maximum demand is based upon the average maximum demand over a period of fifteen minutes during each and every month in which service is furnished by the Power Company. The evidence submitted in the matter herein includes printometer records which indicate the Railroad Company's load for each fifteen minute period from August 1st, 1916, at which time the meter was first installed, to August 31st, 1917, with the exception of several periods of short duration when the meter was out of order, and of the month of March/<sup>1917</sup> when the printometer record was lost in the mails.

A careful analysis of these records establishes the fact that the Railroad Company's daily peak frequently does occur at the same time as the Power Company's daily maximum load and that on the days when this is not the case the effect is practically the same inasmuch as the daily load curve of the Power Company is very flat, so that to all intents and purposes it may be said that the Power Com-

pany's peak is practically continuous throughout the day.

It is also true that the highest peaks of the Railroad Company occur in the winter months between October and January at a time when the Power Company's seasonal load is the lightest. The demands created by the Railroad Company during the summer months, however, are of material proportions not incommensurate with the diversity which was taken into account by the Commission in fixing this rate in the aforesaid Mt. Whitney Rate Case.

One significant feature of the Railroad Company's load, however, which should be noted at this time is that the peaks are in general of but very short duration so that the temporary overload capacity of the Power Company's generating and transmission equipment should be able to carry that portion of the Railroad Company's load which is above the average for a somewhat longer time than the fifteen minute period as provided in the present rate. It is possible, therefore, that as applied to such a load as this of the Railroad Company, it would be more equitable to base the demand charges on the greatest average hourly demand rather than the greatest average fifteen minute demand. As the Commission pointed out in deciding the matter of a similar complaint of the Fresno Traction Company vs. the San Joaquin Light and Power Corporation, Case No. 1038, Decision No. 4272, decided April 26th, 1917, it is very difficult to determine the criteria for establishing a proper interval over which the demand of a consumer should be intergrated on account of the very important but uncertain relation of the overload capacity of generators and transformers to the effect of intermittent, varying and constant loads. It is

obvious, however, that a logical basis for power rates must take into account the demand factor as well as the amount of energy supplied.

Table No. I herein shows a comparison between the greatest average fifteen minute demand and the greatest average hourly demand for each month for the period from May, 1916, to August, 1917, inclusive, together with the kilowatt hour consumption and the charges on each basis computed in accordance with Schedule No. 10.



TABLE I

COMPARISON OF DEMANDS AND COSTS ON  
BASIS OF HOURLY AND 15 MINUTE PERIODS

<u>Month</u>	<u>Average 15 min. Peak</u>	<u>Average Hourly Peak</u>	<u>Demand Charge on 15 minute basis</u>	<u>Demand Charge on hourly basis</u>	<u>KWH Consump- tion</u>	<u>Energy cost at 2 mills per K.W.H.</u>
<u>1916</u>						
May	*440.14 K.W.	*315.38 K.W.	\$1100.35	\$788.45	96 910	193.82
June	*440.14 " "	*315.38 " "	1100.35	788.45	110 210	220.42
July	*440.14 " "	*315.38 " "	1100.35	788.45	111 400	222.80
Aug.	544 " "	410 " "	1360.00	1025.00	109 620	219.24
Sept.	424 " "	346 " "	1060.00	865.00	107 580	215.16
Oct.	672 " "	472 " "	1680.00	1180.00	113 570	227.34
Nov.	672 " "	488 " "	1680.00	1220.00	123 740	247.48
Dec.	720 " "	496 " "	1800.00	1240.00	140 960	281.92
<u>1917</u>						
Jan.	696 " "	482 " "	1740.00	1205.00	116 260	232.52
Feb.	632 " "	472 " "	1580.00	1180.00	110 000	220.00
March	416 " "	§ 298 " "	1040.00	745.00	98 830	197.66
April	568 " "	400 " "	1420.00	1000.00	96 780	193.56
May	480 " "	368 " "	1200.00	920.00	96 470	192.94
June	456 " "	362 " "	1140.00	905.00	97 920	195.84
July	400 " "	200 " "	1000.00	500.00	98 480	196.96
Aug.	432 " "	302 " "	1080.00	765.00	82 660	165.32

\* Estimated on account no meter in service

§ Printometer Record lost in mails, hourly demand estimated on basis of demand used by Mt. Whitney Company for billing

These statistics indicate that the average effect throughout this entire period of a change from the fifteen minute to the hourly basis would result in a reduction of the demand charges of about 28% and the cost of power to the Railroad Company would then average 1.08¢ per kilowatt hour.

The contract which was in effect between the parties hereto prior to May, 1916, provided for a rate of .9¢ per kilowatt hour for the first 100,000 kilowatt hours used per month; .8¢ per kilowatt hour for the next 100,000 kilowatt hours used per month and .765¢ per kilowatt hour for all over 200,000 kilowatt hours used per month. The minimum charge was \$1.00 per month per kilowatt of installed capacity, and in no event was to be less than \$900.00 per month.

Table No. II shows a comparative statement of the charges under the old contract and under Schedule No. 10, computed both on the basis of a fifteen minute demand and a one hour demand period for each month from May, 1916, to May, 1917, inclusive.

TABLE II

COMPARISON OF CHARGES UNDER SCHEDULE TEN  
AND UNDER FORMER CONTRACT

<u>Month</u>	<u>Demand Chg.</u> <u>Hourly</u> <u>Basis</u>	<u>Demand Chg.</u> <u>15 minute</u> <u>Basis</u>	<u>Energy</u> <u>Charge</u>	<u>Total Chg.</u> <u>Hourly</u> <u>Basis</u>	<u>Total Chg.</u> <u>15 minute</u> <u>Basis</u>	<u>Total Chg.</u> <u>as per former</u> <u>Contract</u>
1916						
May	\$ 788.45	\$1 100.35	\$193.82	\$ 982.27	\$1 294.17	\$ 900.00
June	788.45	1 100.35	220.42	1 008.67	1 320.77	981.68
July	788.45	1 100.35	222.80	1 011.25	1 323.15	991.20
Aug.	1 025.00	1 350.00	219.24	1 244.24	1 579.24	976.96
Sept.	865.00	1 060.00	215.16	1 080.16	1 275.16	960.64
Oct.	1 180.00	1 680.00	227.34	1 407.34	1 907.34	1 009.36
Nov.	1 220.00	1 680.00	247.48	1 467.48	1 927.48	1 069.92
Dec.	1 240.00	1 800.00	281.92	1 521.92	2 081.92	1 227.68
1917						
Jan.	1 205.00	1 740.00	232.52	1 437.52	1 972.52	1 030.08
Feb.	1 180.00	1 580.00	220.00	1 400.00	1 800.00	980.00
March	745.00	1 040.00	197.66	942.66	1 237.66	900.00
April	1 000.00	1 420.00	193.56	1 193.56	1 613.56	900.00
May	920.00	1 200.00	192.94	1 112.94	1 392.94	900.00
June	905.00	1 140.00	195.84	1 100.84	1 335.84	900.00
July	500.00	1 000.00	196.96	696.96	1 196.96	900.00
Aug.	755.00	1 080.00	165.32	920.32	1 245.32	900.00
<b>TOTAL</b>	<b>\$15 105.35</b>	<b>\$21 081.05</b>	<b>\$3 422.98</b>	<b>\$18 528.33</b>	<b>\$24 504.03</b>	<b>\$15 547.52</b>
<b>Average per K.W.H.</b>				<b>\$.01082</b>	<b>\$.01431</b>	<b>\$.00908</b>

No evidence was introduced to substantiate the Railroad Company's claim that their business would not warrant an increase in their power rates.

The allegation of the Railroad Company that the transmission rate as applied to its business is discriminatory because it is unable to control its peaks while others enjoying this rate are not so handicapped, need not be considered at the present time inasmuch as the Railroad Company is the only consumer being served under this schedule.

After a careful analysis of all of the evidence submitted herein I find that the fifteen minute demand period should be extended to a period of one hour.

It was stipulated that the decision herein should apply to all power delivered since May, 1916.

I therefore recommend that the Railroad Company's account with the Power Company be adjusted on the basis of the hourly demands as set forth in Table No. 1, applying the rates as provided in the aforesaid Schedule No. 10, and that on this basis the Commission dispose of the money heretofore deposited with it in accordance with Rule 6, Decision 2879, in connection with the complaint herein.

I recommend the following form of order:

ORDER

The above entitled proceeding having been submitted

and being ready for decision, and the Commission finding that Schedule No. 10 "Transmission Service Rate", as established in its decision No. 3278, will be a just and reasonable rate for the Mt. Whitney Power and Electric Company to charge for electric energy delivered to the Visalia Electric Railroad Company, provided the demand charge thereof be based on the greatest average hourly demand per month rather than the greatest average fifteen minute demand, and the Commission finding further that the hourly peaks shown in Table No. I in the opinion preceding this order, are the correct demands upon which to base said charges for the period from May, 1916 to August, 1917, inclusive, and basing its order on the above finding of fact and the findings of fact as set forth in the opinion preceding this order,

IT IS HEREBY ORDERED that

(1) The account of the Visalia Electric Railroad Company with the Mt. Whitney Power and Electric Company shall be adjusted in accordance with the demand and energy charges provided in Schedule No. 10, Decision No. 3278, of the Railroad Commission of the State of California, as applied to the hourly demands indicated in the aforesaid Table No. I in the opinion preceding this order, and the actual consumption in kilowatt hours.

(2) Within ten days from the date of this order Mt. Whitney Power and Electric Company shall refile with the

Railroad Commission said Schedule No. 10 so as to provide that when applied to service rendered to an electric railway the demand charges shall be based upon the maximum average hourly demand for each and every month during which the service is rendered.

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 29th day of September, 1917.

Max Heeler

H. D. Rowland

Alfred Gordon

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Commissioners.