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# ORIGINAL

Decision No. 3852

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

BEFORE THE RAILROAD COMMISSION  
OF THE STATE OF CALIFORNIA.

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In the Matter of the Application of )  
WESTERN STATES GAS AND ELECTRIC COM- )  
PANY for an order of the Railroad Com- )  
mission establishing the rates to be )  
charged by petitioner for gas and )  
electric energy sold in Humboldt County, )  
California. )

Application No. 1998.

ELIJAH FALK, Mayor of the City of Eureka, )  
DANIEL HALLARAN, G. H. SCHULZE, THOS. )  
LANGFORD, M. ENGLES and JOSEPH BREDSTEEN, )  
Members of the Council of the City of )  
Eureka, )

Complainants, )

vs. )

Case No. 906.

WESTERN STATES GAS AND ELECTRIC COMPANY, )  
Defendant. )

J. J. Cairns, City Attorney, for City of Eureka.  
William Kehoe and J. F. Quinn for Merchants  
Association of Eureka.  
William Kehoe, City Attorney, for City of Fortuna.  
John E. Burchard, City Attorney, for City of Arcata.  
Oliver B. Wyman for Central California Creameries.  
Chickering and Gregory, by Allen L. Chickering, and  
John E. Roemer for Western States Gas and  
Electric Company.

THELEN, Commissioner.

## O P I N I O N .

In these proceedings the Railroad Commission is asked to establish just and reasonable rates to be charged by Western States Gas and Electric Company for electric energy and gas sold by it in Humboldt County, California.

The petition in Application No. 1998 alleges, in effect, that Western States Gas and Electric Company, hereinafter called the Western States Company, operates its properties in Humboldt and Trinity counties, in what is known as petitioner's Eureka division, as a unit apart from petitioner's remaining properties; that petitioner generates and transmits hydro-electric energy in Trinity County, generates, transmits and distributes electric energy in Humboldt County to the cities of Eureka, Fortuna, Ferndale, Arcata and Blue Lake and the inhabitants thereof, manufactures and distributes gas in the City of Eureka and distributes electric energy in unincorporated territory in Humboldt County; that no other public utility supplies gas or electric energy in competition with petitioner; that the original cost of the various units of petitioner's property in the counties of Humboldt and Trinity is only partly available; and that certain general expenses of petitioner are segregated between its Eureka division and its Stockton and Richmond divisions. Petitioner asks that the Railroad Commission make its order establishing such rates, rules and regulations for petitioner in its Eureka division as may appear to the Railroad Commission to be just and reasonable.

The complaint in Case No. 906 was filed by the Mayor and the members of the Council of the City of Eureka. Complainants allege on information and belief that the Western States Company's rates, rules and regulations are unjust and unreasonable and ask that the Railroad Commission establish just and reasonable rates for gas and electric energy sold by petitioner in the City of Eureka.

Hearings in these proceedings were held in the City of Eureka on March 17 and June 6, 1916. By stipulation of all parties these two proceedings were consolidated for hearing and decision. Briefs have been submitted and these proceedings are now ready for decision.

It was stipulated herein that such documents as might be filed subsequent to the last hearing in these proceedings should be considered as evidence herein. The following documents were completed by the Railroad Commission's experts, copies were sent to the interested parties and these documents were filed herein, were given the exhibit numbers indicated and will be considered as being in evidence in these proceedings:

Railroad Commission's Exhibit No. 4 - Letter dated June 15, 1916, from Richard Sachse, Chief Engineer, containing estimate of depreciation annuity.

Railroad Commission's Exhibit No. 5 - Report of Assistant Engineer R. M. Vaughan on comparative cost of producing electric energy by the Western States Company's existing system and the substitutional steam plant located at Eureka.

Railroad Commission's Exhibit No. 6 - Letter dated June 29, 1916, from L. R. Reynolds, Auditor, in re maintenance expenses and depreciation, 1913, 1914 and 1915.

The subject matter of this opinion will now be considered under the following heads:

1. Western States Company - Incorporation and History.
2. Territory Served - Eureka Division.
3. Electric and Gas System - Eureka Division.
4. Original Cost to Date of Property.
5. Valuation - Engineering Estimates.
6. Depreciation Annuity.
7. Maintenance and Operating Expenses.
8. Present Rates.
9. Rates herein Established.

1. Western States Company - Incorporation and History.

Western States Company was incorporated under the laws of California on November 30, 1910.

On December 5, 1910, the Western States Company purchased the entire property of the following corporations:

Stockton Gas and Electric Corporation,  
American River Electric Company,  
Richmond Light and Power Corporation,  
Humboldt Gas and Electric Company.

The Western States Company has operated these properties and others subsequently purchased, in three separate units, respectively known as the Stockton Division, the Richmond Division and the Eureka Division.

The Western States Company assumed the payment of the floating indebtedness of each of the four corporations hereinabove named, took the property subject to the outstanding bonded indebtedness and, in addition thereto, issued, in payment for these properties, its preferred stock of the par value of \$1,500,000, its common stock of the par value of \$1,500,000 and its 6 per cent 3-year coupon notes of the face value of \$2,000,000.

Referring now particularly to the Eureka Division, Humboldt Gas and Electric Company was a consolidation of North Mountain Power Company, incorporated in June, 1905, and Eureka Lighting Company, consolidated on December 31, 1908.

Eureka Lighting Company sold gas and electric energy exclusively in the City of Eureka and was a consolidation of a number of smaller gas and electric properties, of which the first plants were installed something more than 30 years ago.

North Mountain Power Company erected a hydro-electric power plant at Junction City in Trinity County, completing the

same in or about March, 1905. The purpose of the promoters of this Company was to supply electric energy to the sawmills on Eureka Bay. It did not take them very long to find out that it was impossible for them to transmit electric energy from Trinity/<sup>County</sup> to Eureka Bay in competition with the sawdust and slabs of the sawmills.

The promoters then tried to sell electric energy to the street railroad in Eureka, but were unsuccessful in this effort. They then attempted to sell electric energy at wholesale to Eureka Lighting Company but were unable to do so. Having tried these various expedients, North Mountain Power Company then entered into competition with Eureka Lighting Company in the City of Eureka, and likewise sold electric energy at wholesale to distributing companies in Fortuna, Ferndale and Arcata.

After a period of severe competition, during which both companies lost heavily, they were finally consolidated into Humboldt Gas and Electric Company.

The testimony shows that there is considerable duplication in the properties in its Eureka Division now owned by the Western States Company, and that if at the present time an electric generating system were to be constructed to do the work which is being done by the existing system, the hydro-electric plant constructed by North Mountain Power Company in Trinity County would not be constructed.

After acquiring the property of Humboldt Gas and Electric Company, the Western States Company, on July 18, 1911, acquired additional properties in Humboldt County as follows:

Arcata Light and Power Company . . . .	\$50,000.00
Fortuna Lighting Company . . . . .	46,350.00
Ferndale Electric Light Corporation. .	<u>45,722.00</u>
Total. . . . .	\$142,078.00

The financial result of the operations of the Western States Company in its Eureka Division will hereinafter appear in greater detail.

2. Territory Served - Eureka Division.

Gas is sold by the Western States Company in its Eureka Division, solely in the City of Eureka.

Electric energy is sold by the Western States Company, in Humboldt County, in the City of Eureka and in a number of other cities and towns extending from Blue Lake in the north to Carlotta in the south, and including the towns or communities of Blue Lake, Arcata, Bayside, Freshwater, Fields Landing, Beatrice, Loleta, Singley's, Ferndale, Fortuna, Rohnerville, Alton, Hydesville and Carlotta.

The Western States Company has only one consumer of electric energy in Trinity County.

The electric energy sold by the Western States Company is used primarily for residence and commercial lighting. The Western States Company also sells power for commercial and industrial purposes. At the date of the hearings herein, the Western States Company had only one consumer of power for agricultural pumping. The Western States Company sells electric energy for municipal street lighting purposes to the cities or towns of Eureka, Arcata, Fortuna, Ferndale, Blue Lake and Loleta.

In December, 1915, the Western States Company served electric energy to 4,351 lighting consumers and 191 power consumers. In February, 1916, at which time a load survey was made by the Company, the connected lighting load was found to be 4,362 K.W. and the connected power load 3,189 K.W.

### 3. Electric and Gas System - Eureka Division.

The Western States Company secures its electric energy from three sources, namely, its hydro-electric plant located on the Trinity River in Trinity County at Junction City, with an installed capacity of 1,500 K.W., its Station B steam plant in Eureka, with an installed capacity of 1,700 K.W., and its Station C. steam plant in Eureka, with an installed capacity of 1,000 K.W. The transmission line from the hydro-electric plant in Trinity County is three phase, consisting of No. 4 copper wire on 35-foot native poles. The distribution system in Humboldt County distributes electric energy to the communities hereinbefore mentioned.

The Western States Company's gas plant is located in the City of Eureka.

### 4. Original Cost to Date of Property.

In Railroad Commission's Exhibit No. 1, the Railroad Commission's Auditing Department reports that the total book cost of the gas and electric properties of the Western States Company in its Eureka Division as of December 31, 1915, was the sum of \$1,481,266.03.

Table No. I shows the book cost of the combined property on various dates.

TABLE NO. I

Book Cost of Property of Western States Gas and Electric Company

Eureka Division, December 31, 1915

	Humboldt Gas and Electric Company at time of transfer to Western States Gas and Electric Company		Expended by Western States Gas and Electric Company Dec. 1, 1910.		Expended by Western States Gas and Electric Company Jan. 1, 1913.		TOTAL BOOK COST	
	Dec. 1, 1910		to Dec. 31, 1912		to Dec. 31, 1915		Dec. 31, 1915.	
	Electric	Gas	Electric	Gas	Electric	Gas	Electric	Gas
Production Hydro	159,729.73	-----	14,635.00	-----	499.59	-----	174,864.32	-----
Production Steam	219,303.90	100,920.70	93,330.15	7,598.85	4,987.26	176.22	317,621.31	108,695.77
Transmission	166,503.91	-----	51,161.93	-----	1,945.23	-----	219,611.07	-----
Distribution	206,953.13	48,723.46	#103,409.66	11,534.39	41,865.03	4,628.70	352,227.82	64,886.55
Real Estate	-----	-----	15,999.78	-----	-----	-----	15,999.78	-----
General	8,660.83	-----	-----	-----	-----	-----	8,660.83	-----
General pro rate Basis Totals	48,490.34	10,057.90	9,669.31	1,093.40	7,697.13	754.12	65,856.78	11,905.42
Development	7,365.22	-----	-----	-----	-----	-----	7,365.22	-----
Non Operating	133,571.16	-----	-----	-----	-----	-----	133,571.16	-----
<b>TOTAL --</b>	<b>950,578.22</b>	<b>159,702.06</b>	<b>288,205.83</b>	<b>20,226.64</b>	<b>56,994.24</b>	<b>5,559.04</b>	<b>1,295,778.29</b>	<b>185,487.74</b>
<b>Total both Departments</b>	<b>1,110,280.28</b>		<b>308,432.47</b>		<b>62,553.28</b>		<b>1,481,266.03</b>	

# Includes purchase of Arcata, Ferndale, Fortuna and Blue Lake properties. Includes also both original and secondary charge on all replaced or abandoned property. No replacement account kept, but charged to new construction.



Table No. II shows the book cost of the electric property in the Eureka Division, from the year ending December 1, 1910, to and including the year ending December 31, 1915, as reported by the Railroad Commission's Auditing Department in Railroad Commission's Exhibit No. 2.

TABLE NO. II.

Book Cost of Electric Property of  
Western States Gas and Electric Company,  
Eureka Division, Years Ending  
December 31, 1910 to December 31, 1916, Inclusive.

	<u>Dec. 1, 1910</u>	<u>Dec. 31, 1911</u>	<u>Dec. 31, 1912</u>	<u>Dec. 31, 1913</u>	<u>Dec. 31, 1914</u>	<u>Dec. 31, 1915.</u>
Production	\$379,033.63	\$406,377.67	\$466,998.78	\$491,561.84	\$492,058.72	\$492,485.63
Transmission	166,603.91	210,676.14	217,665.64	218,710.13	219,447.98	219,611.07
Distribution	206,953.13	281,366.90	310,362.79	326,351.23	344,435.29	352,227.82
General-pro rated to Electric and Gas	57,151.17	63,078.65	66,820.48	67,599.48	67,691.18	69,921.39
Development and Non Operating	140,936.38	140,936.38	140,936.38	140,936.38	140,936.38	140,936.38
Real Estate	-----	-----	15,999.78	15,999.78	15,999.78	15,999.78
General Structures	-----	-----	-----	647.21	4,556.00	4,596.22
Total Book Cost	\$950,578.22	\$1,102,635.94	\$1,238,784.05	\$1,262,026.05	\$1,265,125.33	\$1,295,778.29

Table No. III shows the book cost of the gas property of the Western States Company in its Eureka Division from the year ending December 1, 1910 to and including the year ending December 31, 1915, as reported by the Railroad Commission's Auditing Department in Railroad Commission's Exhibit No. 2.

TABLE NO. III.

BOOK COST, GAS PROPERTY OF WESTERN STATES GAS AND ELECTRIC COMPANY  
EUREKA DIVISION, YEARS ENDING DECEMBER 1, 1910 TO DECEMBER 31, 1916,  
INCLUSIVE.

	Dec. 1, 1910	Dec. 31, 1911	Dec. 31, 1912	Dec. 31, 1913	Dec. 31, 1914	Dec. 31, 1916
Production	100,920.70	107,775.66	107,801.02	107,972.95	107,977.24	107,977.24
Distribution	48,723.46	55,763.61	60,976.38	62,749.05	64,303.48	65,605.08
General pro rated Electric and Gas	10,057.90	10,617.81	11,151.30	11,296.78	11,604.65	11,905.42
Total Book Cost	159,702.06	174,157.08	179,928.70	182,018.78	183,885.37	185,487.74

## 5. Valuation - Engineering Estimates.

Estimates of the cost to reproduce the physical property of the Western States Company in its Eureka Division and also of the estimated reproduction cost less accrued depreciation were presented herein by the Western States Company and by the Railroad Commission's Engineering Department. The Western States Company presented, in its Exhibit No. 2, an estimate of the cost to reproduce the physical property new as of March 1, 1916, amounting to \$1,512,479.56. The estimated cost to reproduce new less depreciation on the same day was \$1,164,276.42. The cost to reproduce new consists of an estimate, on the historical basis, of the cost to reproduce the property new on July 31, 1913, with the actual cost of additions and betterments, less replacements, from July 31, 1913 to March 1, 1916. The engineers who prepared the inventory and appraisal of July 31, 1913, were not available. The Western States Company presented these valuation estimates for what they might be worth, with the statement that the Company did not rely on them as a basis on which it should be entitled to earn rates.

The Railroad Commission's Engineering Department presented, as Railroad Commission's Exhibit No. 1, a complete inventory and appraisal of both the gas and electric property of the Western States Company in its Eureka Division, as of March 31, 1916.

Table No. IV shows the Engineering Department's estimate of the reproduction cost, and of the reproduction cost less depreciation of the operative gas property of the Western States Company in its Eureka Division and, separately, the non-operative property, as of December 31, 1915.

TABLE IV..

GAS DEPARTMENT CAPITAL

WESTERN GAS AND ELECTRIC COMPANY - EUREKA DIVISION

	<u>Reproduction Cost</u>	<u>Less Depreciation</u>	<u>Non-Operative</u>
<u>Landed Capital:</u>			
Land Devoted to Gas Operations	\$ 11,850.00	\$ 11,850.00	\$
<u>Production Capital:</u>			
Gas Plant Bldgs. & Genl. Str.	10,605.00	7,748.00	1,963.00
Holdings	17,528.00	14,548.00	
Furnaces, Boilers & Accessories			974.00
Gas Generators	9,250.00	6,659.00	3,396.00
Purification Apparatus	3,170.00	2,569.00	5,854.00
Misc. Gas Plant Equip't.	4,130.00	2,684.00	
Accessory Equip't at Works	<u>11,109.00</u>	<u>8,209.00</u>	
Total Production Capital	\$ 55,792.00	\$ 42,417.00	\$ 12,187.00
<u>Distribution Capital:</u>			
Distribution Mains	\$ 42,624.00	\$ 23,626.00	\$
Gas Services	10,158.00	5,892.00	1,386.00
Gas Meters	6,962.00	4,177.00	
Gas Regulators	<u>328.00</u>	<u>213.10</u>	<u>103.00</u>
Total Distribution Capital	\$ 60,072.00	\$ 33,908.00	\$ 1,489.00
<u>General Capital:</u>			
General Structures	\$ 1,478.00	\$ 1,123.00	
General Equipment	<u>7,056.00</u>	<u>5,094.00</u>	
Total General Capital	\$ 8,534.00	\$ 6,217.00	
<u>Overhead Expenses:</u>	\$ <u>19,340.00</u>	\$ <u>12,830.00</u>	\$ <u>2,126.00</u>
 Sub-Total	 \$ 155,588.00	 \$ 107,222.00	 \$ 15,802.00
 <u>Materials &amp; Supplies:</u>	 \$ <u>5,050.00</u>	 \$ <u>5,050.00</u>	
 TOTAL CAPITAL GAS DEPARTMENT	 \$ 160,638.00	 \$ 112,272.00	 \$ 15,802.00

Table No. V gives the same information as Table No. IV with reference to the electric property of the Western States Company in its Eureka Division.

TABLE V.

ELECTRIC DEPARTMENT CAPITAL

WESTERN STATES GAS & ELECTRIC COMPANY - EUREKA DIVISION

<u>Landed Capital:</u>	<u>Reproduction Cost</u>	<u>Less Depreciation</u>	<u>Non-Operative</u>
Land Devoted to Elec.Op'ns.	\$ 74 018.00	\$ 74 018.00	\$ 37 176.00
<u>Production Capital:</u>			
Dams, Water Conduits & Penstocks	159 792.00	122 093.00	
Power Plt. Bldgs. & Genl. Str.	54 368.00	42 530.00	8 465.00
Hydraulic Power Plant Equip.	33 710.00	20 855.00	
Furnaces, Boilers & Acc.	130 401.00	101 943.00	20 652.00
Steam Power Plant Equip't.	108 177.00	78 038.00	12 685.00
Misc. Production Equip't.	4 424.00	1 928.00	
Total Production Capital	\$ 490 872.00	\$367 387.00	\$ 41 802.00
<u>Transmission Capital:</u>			
Poles and Fixtures	\$ 42 505.00	\$ 20 448.00	
Overhead System	68 437.00	51 702.00	
Total Transmission Capital	\$ 110 942.00	\$ 72 150.00	
<u>Distribution Capital:</u>			
Poles and Fixtures	\$ 59 179.00	\$ 32 092.00	\$
Overhead System	52 556.00	34 845.00	
Substa. Bldgs. & Genl. Str.	2 085.00	1 474.00	1 438.00
Substation Equipment	50 648.00	33 173.00	1 183.00
Miscellaneous Equipment	1 796.00	718.00	30 936.00
Line Transformers & Devices	37 791.00	28 343.00	
Electric Services	18 488.00	13 866.00	
Meters	45 744.00	30 650.00	
Municipal St. Lighting System	19 280.00	12 153.00	
Electric Motors, Etc.	1 430.00	858.00	
Total Distribution Capital	\$ 288 997.00	\$188 172.00	\$ 33 557.00
<u>General Capital:</u>			
General Structures	\$ 10 988.00	\$ 8 213.00	
General Equipment	16 861.00	12 879.00	\$ 2 991.00
Telephone Lines	7 215.00	2 937.00	
Roads, Trestles & Bridges	10 523.00	10 523.00	
Total General Capital	\$ 45 587.00	\$ 34 552.00	\$ 2 991.00
<u>Overhead Expense:</u>	\$ 177 085.00	\$125 243.00	\$ 14 816.00
 Sub-Total	 \$1 187 501.00	 \$861 522.00	 \$ 130 342.00
Materials and Supplies:	4 664.00	4 664.00	
 TOTAL CAPITAL ELECTRIC DEPARTMENT	 \$1 192 165.00	 \$866 186.00	 \$ 130 342.00



At the request of the City of Eureka, Mr. R. M. Vaughan, one of the Railroad Commission's Assistant Gas and Electrical Engineers, prepared Railroad Commission's Exhibit No. 5, containing an estimate of the cost of a substitutional steam plant to be located in the City of Eureka of a size sufficient, first, to supply merely the electric energy sold in the City of Eureka, and, second, of a size sufficient to supply electric energy to all the consumers of electric energy in the Western States Company's Eureka Division. Mr. Vaughan also submitted estimates of the cost of maintaining and operating such substitutional steam plants. By reason of the increase of the cost of oil delivered at Eureka, subsequent to the preparation of Mr. Vaughan's report, the cost of operation of a substitutional steam plant in Eureka would be considerably larger today than the cost reported by Mr. Vaughan as of June 23, 1916. The cost of constructing, maintaining and operating a substitutional electric plant is of considerable importance in this proceeding for the reason that, as frankly admitted by the Western States Company's witnesses, the present electric production and transmission system of the Western States Company in its Eureka Division is not an economical system and would not be duplicated if an electric production and transmission system were being constructed at the present time to serve the electric customers of the Western States Company in its Eureka Division.

#### 6. Depreciation Annuity.

In Railroad Commission's Exhibit No. 4, the Railroad Commission's Engineering Department reported that on the 4 per cent sinking fund basis the depreciation annuity for the gas property should be \$4,396.10 and for the electric property \$29,944.68, and that on the 5 per cent sinking fund basis the depreciation annuity for the gas property should be \$3,925.42 and for the

electric property \$26,583.19.

The Western States Company reports, in its Exhibit No. 2, that a proper depreciation annuity for both gas and electric properties, on the 6 per cent sinking fund basis, would be \$26,658.69.

The engineers for the Western States Company and for the Railroad Commission used almost identically the same assumed lives for the various units of the property.

7. Maintenance and Operating Expenses.

The Railroad Commission's Auditing Department reports, in Railroad Commission's Exhibit No. 2, that the gross earnings, total maintenance and operating expenses, gain before deducting depreciation and present gain on the investment without deducting depreciation, of both gas and electric properties are as shown in Table No. VI.

TABLE NO. VI.

Earnings and Expenses, Gas and Electric Properties  
Western States Gas and Electric Company, Bureka Division,  
Years Ending December 31, 1911 to December 31, 1915, Inclusive.

	<u>Electric Department</u>				
	<u>Dec. 31, 1911</u>	<u>Dec. 31, 1912</u>	<u>Dec. 31, 1913</u>	<u>Dec. 31, 1914</u>	<u>Dec. 31, 1915</u>
Earnings Year ending	\$155,655.96	\$173,163.36	\$188,847.59	\$166,395.72	\$164,447.60
Expenses (includes all Bylles- by Overhead Charges)	<u>71,476.01</u>	<u>76,420.73</u>	<u>92,974.16</u>	<u>95,839.41</u>	<u>95,550.39</u>
Gain before Depreciation Taken	84,379.95	96,742.63	95,873.43	90,556.31	88,897.41
Percent gain on Investment (without considering de- preciation)	.0765	.0781	.0759	.0704	.0679
	<u>Gas Department</u>				
Earnings Year ending	24,177.20	29,366.95	30,376.34	30,022.51	29,494.79
Expenses (includes all Bylles- by Overhead Charges)	<u>14,670.07</u>	<u>19,373.24</u>	<u>19,645.23</u>	<u>18,626.15</u>	<u>19,591.65</u>
Gain before Depreciation taken	9,507.13	9,993.71	10,731.11	11,394.36	9,903.14
Percent gain on Investment (without considering de- preciation)	.0546	.0555	.0569	.0619	.0534

It appears from Table No. VI that, with no separate allowance for depreciation annuity, the electric property of the Western States Company in its Eureka Division yielded a return during the year ending December 31, 1915, amounting to 6.79 per cent on the investment and the gas property, during the same period, a return of only 5.34 per cent on the investment. It should be said, however, that the maintenance expenses shown in Table No. VI include both original and secondary charges on replaced and abandoned property.

The Western States Company presented, in its Exhibit No. 2, a statement of total investment and earnings and expenses in connection with both the gas and electric properties during the calendar years 1908 to 1915, inclusive. This statement appears in Table No. VII.

TABLE No. VII

Investment, Earnings and Expenses, Gas and Electric Properties,  
Western States Gas and Electric Company, Eureka Division  
1908 to 1915, Inclusive.

	<u>1908</u>	<u>1909</u>	<u>1910</u>	<u>1911</u>	<u>1912</u>	<u>1913</u>	<u>1914</u>	<u>1915</u>
<u>Total Investment</u>								
Eureka Lighting Co.	468644.00	.						
North Mountain Power Co.	603399.92							
<u>Total</u>	<u>1072043.92</u>	1108274.00	1126282.94	1291332.40	1436318.92	1461651.00	1486616.87	1498872.20
Working Capital	14560.00	15800.00	10273.00	14350.00	15965.00	16770.00	19000.00	19190.00
<u>Total including Working Capital</u>	<u>1086603.92</u>	<u>1124074.00</u>	<u>1136555.94</u>	<u>1305682.40</u>	<u>1452283.92</u>	<u>1480421.00</u>	<u>1505616.87</u>	<u>1518062.20</u>
<u>Gross Earnings:-</u>								
Eureka Lighting Co.	63182.38							
North Mountain Power Co.	70441.70							
<u>Total</u>	<u>133624.08</u>	142951.44	153327.65	180033.16	202530.31	219223.93	216418.23	213942.59
<u>Operating Expenses:-</u>								
Eureka Lighting Co.	42269.80							
North Mountain Power Co.	45212.92							
<u>Total</u>	<u>87482.72</u>	94839.83	61639.33	86146.08	95793.97	112619.39	114467.56	115142.04
<u>Net Earnings:-</u>								
Eureka Lighting Co.	20912.58							
North Mountain Power Co.	25228.78							
<u>Total</u>	<u>46141.36</u>	48111.61	91688.32	93887.08	106735.34	106604.54	101950.67	98800.55
<u>Return on Investment:-</u>								
(Plus Deprec. 10%)	108660.39	112407.40	113655.59	130568.24	145228.39	148042.10	150561.68	151806.22
Annual Deficit:-	62519.03	64295.79	21967.27	36681.16	38492.05	41437.56	48611.01	53005.67
<u>Total Deficit:-</u>	<u>62519.03</u>	<u>126814.82</u>	<u>148782.09</u>	<u>185463.25</u>	<u>223955.30</u>	<u>265392.86</u>	<u>314003.87</u>	<u>367009.54</u>

NOTES:- An allowance has been made for Working Capital equal to Two Months Operating Expense.

Mr. F. E. Lane, the head of the department of examinations and reports of H. M. Byllesby and Company, testified, in referring to Table No. VII, that he had allowed a return of 8 per cent on the investment assumed by him each year and a depreciation annuity of 2 per cent annually. He testified that, after making allowance for depreciation annuity, the combined gas and electric properties of the Western States Company in the Eureka Division had yielded during the calendar year 1915 a return of only 5½ per cent on the money invested.

Railroad Commission's Exhibit No. 3, presented by Assistant Gas and Electrical Engineer R. M. Vaughan, clearly shows that one of the chief difficulties which Western States Company must overcome in its Eureka Division in order to be in a position to earn a fair return is the present excessive cost of production of its electric energy.

The Western States Company's hydro-electric plant in Trinity County is inadequate to supply the demands for electric energy in the Eureka Division. Consequently, it has been necessary for the Western States Company to generate in its steam plants at Eureka a large proportion of the electric energy distributed by it.

The water supply at the Western States Company's hydro-electric plant in Trinity County is so limited that there is a shortage of power at this plant during a considerable portion of each year.

The possibility of developing storage has been fully investigated. This solution of the problem is not feasible without a very large capital expenditure which expenditure would not be justified by the additional output capacity of the plant which would be thus obtained.

The fuel problem in Eureka, which has always been serious, is becoming more acute by reason of the rapid increase in the market price of fuel oil.

The Western States Company realizes these difficulties and is taking steps to increase the efficiency of its steam generating plants and to reduce its operating expenses. To this end, the Western States Company proposes to install new 60-cycle electric generators at its Junction City hydro-electric plant in place of the 25-cycle generators now in use, thus eliminating the necessity of the frequency changing station at Eureka or elsewhere.

The 500 K.W. steam turbine unit in Station C in Eureka will be removed and reinstalled in Station B, where a favorable contract for steam has been made with Bayside Lumber Company.

These changes, however, will only prove a temporary solution of the problem.

Mr. Vaughan investigated the possibility of connecting the lines of the Western States Company near Junction City in Trinity County with the lines of Northern California Power Company, Consolidated, as a possible solution of the problem of production costs. He reports that this arrangement would in all probability be the most feasible and the least expensive of the various plans which have been suggested, and that it would offer a practical and permanent solution of the difficulty.

The operating expenses of the Western States Company apart from the cost of production do not appear to be unreasonably high.

8. Present Rates.

Table No. VIII shows the gas and electric rates of the Western States Company, Eureka Division, on file with the Railroad Commission.



TABLE VIII.

Gas Rates

Western States Gas and Electric Company

CITY OF EUREKA

2,000 cubic feet per month or less, \$1.50 per thousand Cu.Ft.  
3,000 cubic feet per month, 1.00 per thousand Cu.Ft.  
3,000 cubic feet and over per month, 1.00 per thousand Cu.Ft.

Minimum Charge - \$1.00 per month per meter.

Electric Rates

Western States Gas and Electric Company

EUREKA DIVISION

COMMERCIAL AND RESIDENCE LIGHTING SERVICE

IN EUREKA AND FIELDS LANDING.

1	to	49	Kilowatt Hours	10¢	per Kilowatt Hour
50	"	99	Kilowatt Hours	9¢	per Kilowatt Hour
100	"	199	Kilowatt Hours	9¢	per Kilowatt Hour
200	"	399	Kilowatt Hours	8¢	per Kilowatt Hour
400	"	599	Kilowatt Hours	8¢	per Kilowatt Hour
600	"	799	Kilowatt Hours	7¢	per Kilowatt Hour
800	"	999	Kilowatt Hours	7¢	per Kilowatt Hour

1,000 Kilowatt Hours and upwards,  
6¢ per Kilowatt Hour.

Minimum Charge - \$1.00 per month per meter.

COMMERCIAL AND RESIDENCE LIGHTING SERVICE

Incorporated towns of Ferndale, Fortuna, Arcata,  
and Blue Lake, also to the villages of Lolita,  
Alton, Hydesville, Rohnerville, and Carlotta.

TABLE VIII. (Continued)

Electric Rates

COMMERCIAL AND RESIDENCE LIGHTING SERVICE (Cont'd.)

1	to	39	Kilowatt Hours	12¢	per Kilowatt Hour
40	"	59	Kilowatt Hours	11¢	per Kilowatt Hour
60	"	99	Kilowatt Hours	10¢	per Kilowatt Hour
100	"	149	Kilowatt Hours	9½¢	per Kilowatt Hour
150	"	199	Kilowatt Hours	9¢	per Kilowatt Hour
200	"	399	Kilowatt Hours	8½¢	per Kilowatt Hour
400	"	599	Kilowatt Hours	8¢	per Kilowatt Hour
600	"	799	Kilowatt Hours	7½¢	per Kilowatt Hour
800			Kilowatt Hours and upwards	7¢	per Kilowatt Hour.

Minimum Charge - \$1.00 per month per meter.

Prompt Payment Discounts: A discount of Two (2) Cents per Kilowatt Hour is allowed where the regular charge is twelve (12) cents, and a discount of One (1) Cent per Kilowatt Hour is allowed where the regular charge is eleven (11) cents, provided the bill is paid at the office of the Company on or before the 10th of the month for current used during the preceding month.

COMMERCIAL LIGHTING SERVICE

Applicable to the larger business houses and long burning installations.

6¢ per Kilowatt Hour Flat.

Minimum Charge - \$1.00 per month per meter.

COMMERCIAL AND INDUSTRIAL POWER SERVICE

First	100	Kilowatt Hours	@ 6¢	per Kilowatt Hour
Next	200	Kilowatt Hours	@ 5¢	per Kilowatt Hour
Next	200	Kilowatt Hours	@ 4¢	per Kilowatt Hour

TABLE VIII. (Continued)

Electric Rates

COMMERCIAL AND INDUSTRIAL POWER SERVICE (Cont'd.)

All over 500 Kilowatt Hours and up to  
10,000 Kilowatt Hours @ 3¢ per Kilowatt Hour,  
over 10,000 Kilowatt Hours @ 2½¢ per Kilowatt Hour.

These rates are not subject to discounts of  
any kind.

Minimum Charge

For installations up to 5 Horse-power 75¢ per Horse-power,  
For installations over 5 Horse-power 50¢ per Horse-power.

In addition to the above rates, four ampere  
Magnetite Arc Lamps are supplied in the City of Eureka  
for street lighting purposes on an all night schedule  
at Five Dollars (\$5.00) per month per lamp. In the Town  
of Arcata <sup>sixty</sup> 100/candle power incandescent lamps are supplied  
for street lighting purposes at the price of \$125.00 per  
month. In the Towns of Fortuna, Ferndale, Blue Lake,  
and Loleta, 75 watt incandescent lamps are supplied and  
maintained at the expense of the respective Towns at a  
meter rate of six (6) cents per Kilowatt Hour.

A number of special rates are in effect, the most  
important of which are as follows:

- (a) Central Creamery Company, creamery power  
service, 1-¾ cents per Kilowatt Hour,  
no minimum charge.
- (b) Hammon Construction Company, rock quarry  
power service, sliding rate varying from  
2 cents per Kilowatt Hour to 1-½ cents  
per Kilowatt Hour, no minimum charge.

- (c) Humboldt Brewing Company, brewery power service, 1-3/4 cents per Kilowatt Hour, Minimum Charge - \$50.00 per month.
- (d) Eureka Ice Company, industrial power service, 2-1/2 cents per Kilowatt Hour, no minimum charge.
- (e) City Water Works, power service, one (1) cent per one thousand (1,000) gallons pumped.

Other rates applicable to various classes of electric service are in effect, including a rate of four (4) cents per Kilowatt Hour for power and lighting service supplied to newspaper establishments; a rate of six (6) cents per Kilowatt Hour for sign lighting and a rate of six (6) cents per Kilowatt Hour for commercial lighting where the guaranteed revenue is Fifty Dollars (\$50.00) or over.

The testimony shows that there has been considerable discrimination in the rates charged by the Western States Company for electric energy sold in the City of Eureka, one person in a certain class of consumers receiving one rate and another person another rate for the same class of service. This situation is, very naturally, resulting in merited complaints. Such discriminations must all be eliminated.

#### 9. Rates Herein Established.

As hereinbefore appears, Western States Company, if a proper allowance is made for depreciation annuity, is not earning in excess of 6 per cent on its gas and electric properties in its Eureka Division. This statement is made without reference to possible duplication of property and of the greater efficiency of a substitutional production and transmission system.

The problem which the Western States Company is seeking to solve in its Eureka Division can not be solved by increasing its rates. Such increase could not be justified by the worth or value of the service to the consumer. Even if an increase were attempted, the probability is that instead of increasing the Company's gross revenue it would result in an actual decrease in gross revenue.

The Western States Company's situation in its Eureka Division must be solved by giving as attractive rates as possible to its customers and by reducing its electric production expenses.

This entire problem has been frankly discussed with representatives of the Western States Company and these representatives are in agreement with the Railroad Commission that instead of seeking to increase rates there should be a reduction in the rates for certain classes of service rendered in the Company's Eureka Division. In furtherance of this policy, the Western States

Company has submitted a revised schedule of rates for gas and electric energy, which the Company agrees, if authorized by the Railroad Commission, to place in effect in its Eureka Division without contest.

These proposed rates are set forth in the order herein.

A substantial reduction in the commercial and residence lighting rate will be effected. Prompt payment of bills will result in the reduction of the rate for the first 50 K.W.H. per month from 10 cents to 9 cents per K.W.H. in Eureka. The rate now in effect in the City of Eureka is 10 cents per K.W.H. per month, without any discount. The rates now in effect in the other cities and towns of Humboldt County are 12 cents and 11 cents per K.W.H. for the first 40 K.W.H. per month with discount for prompt payment, bringing the net rate paid down to 10 cents per K.W.H. The steps beyond the first step in the general lighting rate are reduced by the rates set forth in the order herein and the rate paid is also somewhat reduced.

The industrial and commercial rates will be the same as those heretofore in effect with the exception that the monthly minimum has been increased from 75 cents per horsepower for motors of less than 5 horsepower and from 50 cents per horsepower for motors of 5 horsepower and over, to \$1.00. This increase may result in an excessive burden on certain installations due to the fact that they were specially installed under the minimum heretofore in effect. It may be necessary hereafter to give further consideration to this matter.

Rates are also established in the order herein to take care of wholesale electric power consumers.

The gas rate at the present time is \$1.50 per thousand cubic feet for the first 2,000 cubic feet per month or less, and \$1.00 per thousand cubic feet for 3,000 cubic feet and over per month, with a minimum charge of \$1.00 per month per meter. The proposed gas rate is \$1.55 per thousand cubic feet for the first 1,000 cubic feet used per month, \$1.30 per thousand cubic feet for the next 1,000 cubic feet used per month and \$1.05 per thousand

cubic feet for all over 2,000 cubic feet used per month, with 5 per cent discount for payment within ten days of the date of the bill. The monthly minimum charge of \$1.00 per meter is retained. The proposed rate is a slight reduction, if bills are promptly paid, over the rate now in effect for the first 1,000 cubic feet per month and a substantial reduction for the second 1,000 cubic feet used per month.

After careful consideration of the evidence herein, I find that the rates proposed by the Western States Company are just and reasonable rates and should be made effective. It is to be hoped that the reductions thus secured to the consumers of gas and electric energy in Humboldt County will justify the expectations of the Company and of the Railroad Commission that increased business will result from the application of the modified rates.

Inasmuch as the establishment of the new rates will modify somewhat the conditions under which both gas and electric service will be supplied by the Western States Company in its Eureka Division, it is recommended that the Company prepare and submit to the Railroad Commission for its approval revised rules and regulations in conformity with the findings herein and with the rules established by the Railroad Commission in its decision No. 2879, made on <sup>November</sup> ~~July~~ 5, 1915, in Case No. 683 (Vol. 8, Opinions and Orders of the Railroad Commission of California, page 372).

I submit the following form of order:

O R D E R .

Public hearings having been held in the above entitled proceedings and said proceedings having been consolidated for hearing and decision, briefs having been filed and these proceedings being now ready for decision,

THE RAILROAD COMMISSION HEREBY FINDS AS A FACT that the rates of Western States Gas and Electric Company for gas and electric energy sold and distributed in its Eureka Division are unjust and unreasonable in so far as they differ from the rates herein established, and that the rates herein established are just and reasonable rates to be charged by Western States Gas and Electric Company for gas and electric energy sold in its Eureka Division.

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

IT IS HEREBY ORDERED as follows:

1. Western States Gas and Electric Company is hereby ordered to establish and file with the Railroad Commission, on or before November 20, 1916, the following rates applicable to the gas service supplied by said Western States Gas and Electric Company in and adjacent to the City of Eureka:

GAS RATES.

First	1000 cubic feet used per month	\$1.55 per thousand
Next	1000 cubic feet used per month	1.30 per thousand
All over	2000 cubic feet used per month	1.05 per thousand

Minimum monthly guarantee \$1.00 per meter.  
5 per cent discount for payment within  
10 days of date of bill.



2. Western States Gas and Electric Company is hereby ordered to establish and file with the Railroad Commission, on or before November 20, 1916, the following rates applicable to the electric service supplied by said Western States Gas and Electric Company in its Eureka Division:

SCHEDULE NO. 1.

General Lighting Rates

First	50 Kilowatt Hours per month at 10 cents,
Next	50 Kilowatt Hours per month at 9 cents,
Next	50 Kilowatt Hours per month at 8 cents,
Next	100 Kilowatt Hours per month at 7 cents,
Next	450 Kilowatt Hours per month at 6 cents,
Next	1800 Kilowatt Hours per month at 5 cents,
Excess	Kilowatt Hours per month 4 cents.

Discount: 10 per cent if paid within 10 days from date of bill.

Minimum Bill: \$1.00 per meter per month.

SCHEDULE NO. 2.

Sign Lighting

(When Controlled by Company)

6¢ per Kilowatt Hour of energy consumed.

SCHEDULE NO. 3.

Municipal Lighting

Same rates as at present under contract.

SCHEDULE NO. 4.

Retail Power Rate.

First	100 Kilowatt Hours used per month, 6¢	per Kilowatt Hour,
Next	200 Kilowatt Hours used per month, 5¢	per Kilowatt Hour,
Next	300 Kilowatt Hours used per month, 4¢	per Kilowatt Hour,
Next	400 Kilowatt Hours used per month, 3.5¢	per Kilowatt Hour,
Next	4000 Kilowatt Hours used per month, 3¢	per Kilowatt Hour,
Next	5000 Kilowatt Hours used per month, 2.5¢	per Kilowatt Hour,
Next	10000 Kilowatt Hours used per month, 2¢	per Kilowatt Hour,
All over	10000 Kilowatt Hours used per month, 1.5¢	per Kilowatt Hour.

Minimum monthly guarantee shall be \$1.00 per installed horsepower of connected load.

SCHEDULE NO. 5.

Wholesale Power Rate

- a. Installations of under 50 horsepower \$1.00 per horsepower per month of connected load, plus 1-1/2¢ per kilowatt hour of energy used.
- b. Installations of 50 horsepower and over \$1.00 per month of connected load, plus 1-1/4¢ per kilowatt hour of energy used.

NOTE: In connection with all power rates above mentioned, service to installations of 4 horsepower or under will be single phase and to installations of 5 horsepower and over, 3 phase.

3. Western States Gas and Electric Company is hereby ordered to establish and file with the Railroad Commission, on or before November 20, 1916, rules and regulations in accordance with the findings contained in the opinion which precedes this order, in conformity with the rules laid down by the Railroad Commission in its decision No. 2879, (Vol. 8, Opinions and Orders of the Railroad Commission of California, page 372), and in accordance with rules established with reference to contracts and other matters in Decision No. 3241, made and filed on April 6, 1916, in Application No. 1666, San Joaquin Light and Power Corporation.

4. The rates, rules, regulations and contracts herein established shall be applicable to the meter readings taken by Western States Gas and Electric Company during the month of November, 1916, and thereafter.

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 November, 1916.

Max Shelton  
H. Howard  
W. Gordon  
Edwin O. Edgeston  
Franz P. Decker

Commissioners.