Decision No. _____

Decision No. 3241-

BEFORE THE RAILROAD COMMISSION OF THE STATE OF CALIFORNIA

EAST BAKERSFIELD IMPROVEMENT ASSOCIATION, Complainant, vs. SAN JOAQUIN LIGHT AND POWER CORPORATION and BAKERSFIELD GAS AND ELECTRIC CORPORATION, Defendants.	Case No. 618
PERKINS BROTHERS COMPANY, et al., Complainants, vs. SAN JOAQUIN LIGHT AND POWER CORPORATION, Defendant.	Case No. 655
H. J. BEAL, et al., Complainants, vs. SAN JOAQUIN LIGHT AND POWER CORPORATION, Defendant.	Case No. 732
MRS. S. McMASTERS, et al., Complainants, vs. SAN JOAQUIN LIGHT AND POWER CORPORATION, Defendant.	Case No. 800
In the matter of the Application of SAN JOAQUIN LIGHT AND POWER CORPORATION for an order ascertaining and establishing just and reasonable rates to be charged for electric energy.	Application No. 1666.

ORIGINAL

E. J. Emmons for East Bakersfield Improvement Association.
Geo. H. Woodruff and C. L. Russell for complainants in Case No. 655.
A. L. Sayre for complainants in Case No. 732.
R. H. Cross and F. W. Henderson for complainants in Case No. 800.
M. F. McCormick and W. F. Chandler for Merchants Association of Fresno.
Sanborn & Roehl for Rosenberg Brothers & Co., Guggenhime & Company and Castle Brothers.
M. F. McCormick, District Attorney, for Fresno County.
F. W. Henderson, City Attorney, for City of Merced.
R. W. Hayes for City of Clovis.
Short & Sutherland and Jared How for San Joaquin Light and Power Corporation.

THELEN, Commissioner.

O P I N I O N

The above entitled proceedings place in issue all the rates, rules, regulations, contracts and practices of San Joaquin Light and Power Corporation in connection with its electric business. By consent of all parties, these proceedings were consolidated for hearing and decision.

The complaint in Case No. 618, alleges, in effect, that complainant is a civic organization of the City of Bakersfield, with a membership of more than 100 persons who consume electric energy in Bakersfield; that defendants are engaged in the business of selling electric energy to the residents of the City of Bakersfield; that the rates charged by defendants for electric energy are unjust, unreasonable and discriminatory; that defendants compel intending consumers to make deposits before defendants will serve them; that the minimum charge of defendants is unreasonable and discriminatory; that defendants arbitrarily refuse to make connections and furnish electric energy to residents of Bakersfield; and that defendants are compelling consumers of electric energy in Bakersfield to reconstruct meter boxes at an expense of from $6.00 to $8.00 each, paid by the consumer, for the alleged purpose of protecting defendants' meters. Complainant asks that this Commission investigate the rates, rules and regulations of defendants and thereafter prescribe just and reasonable rates, rules and regulations. The answer denies that any of the rates, rules or regulations of defendants are unjust, unreasonable or discriminatory.

The complaint in Case No. 655 is signed by more than 25 persons and corporations who own agricultural lands in or about McFarland and Wasco, in Kern County, and who are purchasing

electric energy from defendant for the purpose of pumping water for irrigation. The complainants complain of the following matters:

1. The 5-year term of defendant's standard agricultural power contract.

2. The flat rate of $50.00 per horse power per year, which is defendant's most frequently used agricultural power rate.

3. The reasonableness of defendant's flat and meter rates.

4. The time and manner of making measurements to determine the amount of electric energy to be paid for by consumers of electric energy for agricultural purposes.

5. The provisions of defendant's contracts by which the consumers waive certain claims for damages.

6. The inability of the consumers under the agricultural power contracts to use electric energy for any purpose other than the pumping of water for irrigation.

7. The provisions of defendant's contracts under which the consumer of electric energy for agricultural pumping purposes must pay for the installation and maintenance of transformers.

Complainants ask this Commission-

1. To establish just and reasonable rates to be charged by defendant.

2. To establish just and reasonable rules and regulations to be observed by defendant.

3. To abolish the flat rate of $50.00 per horse power per year and to establish a lower and more reasonable flat rate in lieu thereof.

4. To order defendant to take a measurement of the amount of electric energy being supplied, at any time, upon demand, and at the expense of the consumer, such measurement to be the basis of future charges until a subsequent measurement shows

a different result.

5. To limit the time during which defendant's service may be discontinued during any one month without the necessity of compensating the consumer, to not exceed 40 hours, in the aggregate, in any one month.

6. To direct defendant to permit its consumers of electric energy for agricultural pumping purposes to use such energy for other additional purposes.

7. To direct defendant to install and maintain all transformers for consumers of agricultural power, at defendant's own expense.

The answer denies that any of the rates, rules, regulations or practices of defendant referred to in the complaint are in any way unjust or unreasonable.

The complaint in Case No. 732 is signed by about 150 of defendant's consumers of electric energy for agricultural pumping, residing principally in Fairmead, Berenda and Madera, in Madera County. The complaint in this case is in substantially the same form as the complaint in Case No. 655, except that the complainants make additional complaint against the provisions of defendant's agricultural power contracts, under which the amount of electrical energy for which payment must be made shall in no event be less than 75 per cent of the manufacturer's rated capacity of the motor. The prayer of the complaint is also substantially the same as the prayer of the complaint in Case No. 655, with the exception that the complainants in Case No. 732 make the additional request that this Commission require the defendant to construct lines for the transmission of electric energy for power purposes, at defendant's own expense, provided that the point of consumption is within a reasonable distance from defendant's existing power lines. The answer denies the material allegations of the complaint.

The complaint in Case No. 800 is signed by 26 farmers residing in or about Le Grand, in Merced County. The complaint is directed solely against the charge of $50.00 per horse power per annum charged by defendant under its most frequently used agricultural power contract. The complainants ask that a just and reasonable rate for this service be established by this Commission. The answer denies that the existing rate is unjust or unreasonable.

The petition in Application No. 1666 was filed with this Commission subsequent to the filing of the complaints in Cases No. 618, 655, 732 and 800. The petition alleges that San Joaquin Light and Power Corporation is a public utility engaged in the business of producing, transmitting and distributing electric energy for consumption in the counties of Fresno, Kern, Kings, Madera, Merced, Stanislaus and Tulare, and that said corporation desires this Commission to establish just and reasonable rates to be charged and collected by petitioner for electric energy sold throughout the entire territory supplied by petitioner. The following parties were permitted to intervene in this application: County of Fresno and Merchants' Association of Fresno; City of Merced; City of Clovis; and Rosenberg Brothers & Company, Guggenhime & Company and Castle Brothers. Public hearings in the above entitled proceedings were held in Bakersfield, Tulare, Madera, Fresno and San Francisco. These proceedings were submitted on December 17, 1915, on briefs, which have now been filed.

At the time these proceedings were submitted, the following exhibits had been filed by the respective parties:

1. Complainants in Case No. 618- exhibits numbers 1 to 4, inclusive.
2. Complainants in Case No. 655,- exhibits numbers 1 to 6, inclusive.
3. Complainants in Case No. 732,- exhibits numbers 1 to 5, inclusive.
4. Le Grand protestants,- exhibit number 1.
5. Merchants' Association of Fresno,- exhibits numbers 1 to 3, inclusive.
6. San Joaquin Light and Power Corporation,- exhibits numbers 1 to 36, inclusive, and one exhibit in connection with the Mt. Whitney Power and Electric Company contract.
7. Railroad Commission,- exhibits numbers 1 to 5, inclusive.

It was stipulated that the following documents should be considered as being in evidence without the assignment of a formal exhibit number: all rates, rules and regulations of San Joaquin Light and Power Corporation on file with the Railroad Commission, including all deviations; J. G. White & Company's inventory and appraisal of the electric properties of San Joaquin Light and Power Corporation, filed in Application No. 992; the file in the matter of the informal complaint of C. F. Murray, filed in September, 1915; the complete file of "Rate Research;" the last Federal census report and the reports of the State Board of Equalization and of the State Board of Agriculture, in so far as they relate to the growth of the territory served by the utility herein; and all documents filed with this Commission referring to Tulare County Power Company.

It was further stipulated that such documents as might be filed by the parties subsequent to the last hearing in these proceedings should be considered as evidence in these proceedings.

The following documents have been filed by San Joaquin Light and Power Corporation, have been given the exhibit numbers indicated, and will be considered as being in evidence in these proceedings:

Exhibit Number of San Joaquin Light and Power Corporation.	Subject Matter of Exhibits
No. 37	Minimum charge data.
No. 38	General data.
No. 39	Development cost.
No. 40	Cost of developing business.
No. 41	Explanation of distribution of administrative expense.
No. 42	Casualty insurance account.
No. 43	Proper minimum monthly bill for rural lighting consumers.
No. 44	Cost of money and rate of return for all departments.
No. 45	Comparison of operating expenses with other companies.
No. 46	Load factor of citrus and alfalfa growers' plants.
No. 47	Additional data on proposed additions and betterments.
No. 48	Probable increases and decreases in operating expenses for 1916 as against 1915.
No. 49	Comparison of flat irrigation charges of San Joaquin Light and Power Corporation with similar charges of other electric utilities.
No. 50	Proposed rate schedule.
No. 51	Substation data.
No. 52	Analysis of consumption of commercial lighting consumers for March, 1915.
No. 53	Alfalfa hay prices submitted by Schmitz.
No. 54	Letter from San Joaquin Light and Power Corporation, dated Nov. 15, 1915, referring to certain Fresno complaints.

Exhibit Number of San Joaquin Light and Power Corporation (Cont'd)	Subject Matter of Exhibits.
No. 55	Letter from San Joaquin Light and Power Corporation, dated Nov. 29, 1915, referring to account of Mr. O.B.Wulbern.
No. 56	Letter from San Joaquin Light and Power Corporation, dated Feb.28,1916, containing data with reference to commercial lighting consumers for March, 1915.
No. 57	Letter from San Joaquin Light and Power Corporation, dated March 1,1916, with new consumers' tag and forms of bills.
No. 58	Final water power permit from United States Department of Agriculture covering lands in Sequoia National Forest.
No. 59	Power agreement with United States Department of Agriculture covering Crane Valley Dam and Reservoir and other developments in Sierra.National Forest.
No. 60	Contract dated June 14, 1909, between Miller & Lux, Incorporated, and San Joaquin Light and Power Company.
No. 61	Details of Exhibit No.27-cost of service.
No. 62	Letter from San Joaquin Light and Power Corporation, dated March 4,1916, enclosing tabulation of evaporation losses for Crane Valley Reservoir.
No. 63	Letter from San Joaquin Light and Power Corporation, dated September 30,1915, enclosing map showing location of hydroelectric properties on North Fork of San Joaquin River.
No. 64	Data on Power Consumers, 1915.
No. 65	Cost of money secured from sale of bonds.
No. 66	Analysis of Railroad Commission and other expenses.

The San Joaquin Corporation's Annual Report for the year ending December 31, 1915, has been filed and will also be considered as being in evidence herein.

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

I. San Joaquin Light and Power Corporation and its predecessors.

II. Territory and consumers served.

III. Stocks, bonds and notes.

IV. Financial Statement.

V. Electric properties.

VI. Contracts.

1. Propriety of.
2. Liens on land.
3. Waiver of damages.
4. Purposes for which electric energy may be used.
5. Rights of way.
6. The maximum demand system.
7. Transformers.

VII. Service.

1. Quality of.
2. Meter boxes.

VIII. Extensions.

IX. Rates.

1. Existing rates.
2. Value of property.
   (a) Investment.
   (b) Estimated reproduction cost new.
   (c) Estimated cost of reproduction new less depreciation.
   (d) Franchises.
   (e) Going concern value.
   (f) Water rights.
   (g) Fair return.
3. Operating expenses.
4. Depreciation annuity.
5. Cost of service.
6. Discriminations.
7. Agricultural power.
8. Oil well power.
9. Mining power.
10. Industrial power.
11. Commercial lighting.
12. Residence lighting.
13. Street lighting.
14. Contract with Mt. Whitney Light and Power Co.

X. Rules and regulations.

I.

SAN JOAQUIN LIGHT AND POWER CORPORATION AND ITS PREDECESSORS.

The San Joaquin Light and Power Corporation was incorporated under the laws of California on July 19, 1910, and is the successor of a number of public utility corporations theretofore operating in the San Joaquin Valley. The first in time of these

utilities was San Joaquin Electric Company, which was incorporaon March 30, 1895. The business of this corporation was conducted from August, 1899 to December, 1902, by John J. Seymour, as receiver. In December, 1902, the property was purchased by San Joaquin Power Company. San Joaquin Power Company in 1903 purchased the steam plant and distributing system of Fresno Gas and Electric Company. In 1905, San Joaquin Power Company was reorganized under the name of San Joaquin Light and Power Company. This company acquired by purchase the property of the following utilities: in 1907, Selma Light and Water Company; in 1909, Lemoore Light and Power Company and Sanger Light and Power Company.

In 1910, San Joaquin Light and Power Company was taken over by San Joaquin Light and Power Corporation, the present utility. During the same year, San Joaquin Light and Power Corporation also acquired control of Merced Falls Gas and Electric Company and Power Transit and Light Company. By the purchase of Power Transit and Light Company, San Joaquin Light and Power Corporation also secured control of Power Development Company, Bakersfield Gas and Electric Light Company and Bakersfield and Kern Electric Railway Company.

II.

TERRITORY AND CONSUMERS SERVED.

The San Joaquin Light and Power Corporation, hereinafter referred to as the San Joaquin Corporation, sells electric energy in all or a portion of the counties of Merced, Mariposa, Fresno, Madera, Tulare, Kings and Kern, in the San Joaquin Valley. Electric energy is sold in the cities or towns of Bakersfield, Clovis, Corcoran, Dinuba, Firebaugh, Kingsburg, Fowler, Fresno, Lemoore,

Los Banos, Madera, Maricopa, Merced, McKittrick, Reedley, Sanger, Selma and Taft, and in the territory embraced within the general area in which these cities or towns are located. During the year ending December 31, 1915, the San Joaquin Corporation sold electric energy to 12,934 residence lighting consumers, 4,892 commercial lighting consumers, 179 municipal lighting consumers, 1,591 industrial power consumers, 857 agricultural power consumers and 27 other power consumers. To these customers, the San Joaquin Corporation sold electric energy in the following amounts: for residence lighting, 2,927,796 K.W.H.; for commercial lighting, 6,924,745 K.W.H.: for municipal lighting, 1,577,133 K.W.H.: for industrial power, 26,121,522 K.W.H.: for agricultural power, 18,767,408 K.W.H.: and for all other power, 22,500,096 K.W.H.

The San Joaquin Corporation sells gas in and about Bakersfield, Merced and Selma. Natural gas is sold in and about Bakersfield, and artificial gas in and about Selma and Merced. During the year ending December 31, 1915, the San Joaquin Corporation had 3,861 consumers of gas in and about Bakersfield; 552 in and about Merced; and 525 in and about Selma.

The San Joaquin Corporation sells water in and about Madera and Selma, and also owns and operates the electric street railway in Bakersfield.

The present proceedings involve only the electric business of the San Joaquin Corporation.

III.

STOCKS, BONDS AND NOTES.

The articles of incorporation of the San Joaquin Corporation provide for an issue of common stock of the par value of fifteen million dollars and preferred stock of the par value of ten million dollars. Of the stock so authorized, common stock of the par value of eleven million dollars and preferred stock of the par value of six million five hundred thousand dollars

are now outstanding.

This Commission's auditing department reports that on December 31, 1915, there were outstanding in the hands of the public as obligations against the San Joaquin Corporation, bonds of the San Joaquin Corporation and predecessor corporations of the total face value of $8,830,000.00. These bonds bear interest partly at the rate of 5% and partly at the rate of 6% per annum.

On December 31, 1915, the San Joaquin Corporation had outstanding notes payable of the face value of $331,376.17. On the same day the corporation had other current liabilities amounting to $403,423.56. Various reserve accounts on the same day amounted to $1,165,736.19.

IV.

FINANCIAL STATEMENT.

This Commission's Auditing Department reports book assets and liabilities of San Joaquin Corporation on December 31, 1915, including all departments of the Corporation's business, as follows:

TABLE NO. I.

ASSETS AND LIABILITIES OF
SAN JOAQUIN LIGHT AND POWER CORPORATION -
DECEMBER 31, 1915.

ASSETS.

FIXED ASSETS		
Electric Plant	$ 9,667,911.25	
Gas Plant	540,990.19	
Water Plant	109,904.04	
Total Fixed Assets		$10,318,805.48
INTANGIBLE ASSETS		
Rights and Franchises	13,770,298.75	

Bond Discount & Expense	441,944.72	
Stock Discount	1,250,000.00	
Plant Appreciations	1,546,883.28	
Total Intangible Assets		17,009,126.75

CURRENT ASSETS

Cash	215,529.21	
Notes Receivable	315,020.36	
Accounts Receivable	339,844.06	
Materials and Supplies	305,901.41	
Sinking Funds	127,649.47	
Prepayments	1,218.52	
Treasury securities	145,690.47	
Suspense (Mostly undistributed disbursements)	122,425.17	
Bakersfield & Kern Railway Stock	250,000.00	
" " Account	354,227.56	
Total Current Assets		2,177,506.23
TOTAL ASSETS.		$29,505,438.46

LIABILITIES

CAPITAL LIABILITIES

Common Stock	$11,000,000.00	
Preferred	6,500,000.00	
Bonds	8,880,000.00	
Total Capital Liabilities		$26,380,000.00

CURRENT LIABILITIES

Taxes and Insurance Account	3,654.75	
Bond Interest Account	153,250.01	
Other " "	9,419.83	
Sinking Fund "	68,041.50	
Deposits	44,779.92	
Prepayments	23,756.99	
Notes Payable	331,376.17	
Accounts Payable	70,098.17	
Payrolls Payable	30,422.39	
Total Current Liabilities		734,799.73

RESERVE ACCOUNTS

Depreciation	1,136,947.87	
Casualty	4,660.03	
Insurance	4,900.00	
Bad Debts	7,491.00	
Sinking Fund Accretions	11,739.29	
Total Reserve Accounts		1,165,738.19

Surplus Capital	321,259.98	
Corporate	903,640.56	
		1,224,900.54
TOTAL LIABILITIES.		$29,505,438.46

The Auditing Department reports income recapitulation and adjustment of the San Joaquin Corporation's entire business for the year ending December 31, 1915, as follows:

TABLE NO. II.

INCOME RECAPITULATION AND ADJUSTMENT OF

SAN JOAQUIN LIGHT AND POWER CORPORATION - 1915.

Net Revenue Electric	$310,363.34	
Gas	59,820.47	
Water	811.42	$370,995.23
ADD		
Jobbing and Merchandise Revenue	3,224.68	
Interest received	6,560.60	
Miscellaneous Earnings	2,576.97	
		12,362.25
		$383,357.48
DEDUCT		
Depreciation General Capital	250.00	
" Horses, Wagons, etc.	1,856.13	
" Autos, etc.	3,209.52	
Teamings	2,344.58	
Bad Debts and Other Reserves	4,800.00	
		12,460.23
NET EARNINGS, Year 1915		$370,897.25

The Auditing Department reports revenues and expenses of the San Joaquin Corporation's electric business for the year ending December 31, 1915, as follows:

TABLE NO. III

ELECTRIC REVENUES AND EXPENSES

SAN JOAQUIN LIGHT AND POWER CORPORATION - 1915.

REVENUES		
Municipal Lighting	$ 69,692.42	
Commercial and Residence Lighting	594,791.68	
Power	874,113.54	
Charged to Bakersfield & Kern Railway	27,867.89	
		$1,566,465.53
EXPENSES		
Operation	145,214.20	
Maintenance	54,275.09	
General & Adminstration Expenses	227,654.80	
License Taxes and Insurance	97,063.24	524,207.33
Net earnings from operation		$1,042,258.20
Depreciation	220,205.19	
Interest on Bonds	401,709.80	
" Floating Debt	81,006.95	
Amortization of Bond Discount and Expense	28,972.92	731,894.86
Net Revenue Electric		$ 310,363.34

The gross revenue from the sale of electric energy in the year 1915 was $12,017.65 in excess of the revenue for the year 1914, notwithstanding the falling off of the oil pumping business.

V

ELECTRIC PROPERTIES.

The present electric production system of the San Joaquin Corporation consists of hydro-electric developments on the San Joaquin river (in Madera county), on the Tule river (in Tulare county) and on the Kern river (in Kern county) and an auxiliary and stand-by steam generating plant in Bakersfield. In January, 1916, the small hydro-electric plant at Merced Falls, which plant was washed out by a flood in January, 1911, was again placed in operation. However, inasmuch as any necessity which exists for the Merced Falls plant is of a more or less temporary nature, and because the reconstruction of the plant was probably influenced more by the desire of the San Joaquin Corporation to protect its water rights at this point than by any urgent necessity, it need not be considered in connection with the permanent production system.

The present San Joaquin river development consists of a storage reservoir in Crane Valley on the North Fork of the San Joaquin river, Power House No. 3, with a rated capacity of 2000 K.W., also on the North Fork, and San Joaquin Power House, also known as Power House No. 1, having a capacity of 16,000 K.W. at unity factor, located on the main river below the junction of the North Fork. Crane Valley reservoir has an apparent maximum capacity of 51,000 acre feet, and an actual capacity of approximately 40,000 acre-feet of water impounded by a combination earth and rock fill dam measuring 1,860 feet in length at the top and having a maximum height of 150 feet.

The water from Crane Valley reservoir passes through the outlet tower, where the outflow is regulated, into a horizontal tunnel under the dam and into a concrete basin fitted with an outflow weir. From this point the water enters the conduit system, consisting of a series of canals, tunnels and flumes, having a capacity of 100 cubic feet per second, and is conveyed for a distance of about 4½ miles, to the regulating reservoir of Power House No. 3, where a fall of 401 feet is available. From the regulating reservoir the water flows through a tunnel and steel pipe line of 60 to 52 inches in diameter for a distance of 3111 feet, terminating at the power house, where the water is utilized to drive four overhung Doble tangential water wheels direct connected to two 1,000 K.W. generators. After being discharged from Power House No. 3, the water is allowed to pass down the canyon of the North Fork to a point near the junction of that stream and the South Fork, where a small diversion weir serves to form a pond, from which water from both the North Fork and the South Fork is supplied to the conduit system serving San Joaquin Power House No. 1. This conduit system, consisting of approximately 4.5 miles of tunnels, canals and flumes, terminates in an eight-acre regulating reservoir having a capacity of about 35 acre-feet. San Joaquin Power House No. 1 is supplied from this reservoir through two pipe lines which vary in diameter from 44 inches at the top to 34 inches at the bottom and have a total length of some 4,300 feet. The hydraulic head at this point is about 1425 feet. The generating equipment of San Joaquin Power House No. 1, consists of four 4,000 K.V.A. 2,300 volt units direct connected to single impulse wheels operated with two needle nozzles. The discharge from this power house is directly into the main San Joaquin river. At this point it may be well to call attention to the fact that the present San Joaquin Power House No. 1, completed in 1911, was constructed on the site occupied by the old San Joaquin Power House which was constructed about 1896 and was

CORRECTION

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HAS BEEN REPHOTOGRAPHED

TO ASSURE LEGIBILITY

The water from Crane Valley reservoir passes through the outlet tower, where the outflow is regulated, into a horizontal tunnel under the dam and into a concrete basin fitted with an outflow weir. From this point the water enters the conduit system, consisting of a series of canals, tunnels and flumes, having a capacity of 100 cubic feet per second, and is conveyed for a distance of about 4½ miles, to the regulating reservoir of Power House No. 3, where a fall of 401 feet is available. From the regulating reservoir the water flows through a tunnel and steel pipe line of 60 to 52 inches in diameter for a distance of 3111 feet, terminating at the power house, where the water is utilized to drive four overhung Doble tangential water wheels direct connected to two 1,000 K.W. generators. After being discharged from Power House No. 3, the water is allowed to pass down the canyon of the North Fork to a point near the junction of that stream and the South Fork, where a small diversion weir serves to form a pond, from which water from both the North Fork and the South Fork is supplied to the conduit system serving San Joaquin Power House No. 1. This conduit system, consisting of approximately 4.5 miles of tunnels, canals and flumes, terminates in an eight-acre regulating reservoir having a capacity of about 35 acre-feet. San Joaquin Power House No. 1 is supplied from this reservoir through two pipe lines which vary in diameter from 44 inches at the top to 34 inches at the bottom and have a total length of some 4,300 feet. The hydraulic head at this point is about 1425 feet. The generating equipment of San Joaquin Power House No. 1. consists of four 4,000 K.V.A. 2,300 volt units direct connected to single impulse wheels operated with two needle nozzles. The discharge from this power house is directly into the main San Joaquin river. At this point it may be well to call attention to the fact that the present San Joaquin Power House No. 1, completed in 1911, was constructed on the site occupied by the old San Joaquin Power House which was constructed about 1896 and was

operated until displaced by the new plant. The power house building of the old plant is being used at the present time as a store room, and the old pipe line from the same regulating reservoir and apparently still in good condition, is not used for any purpose in connection with the present operations of the company.

The Tule river development, although construction work was started in 1903, was not placed in operation until some time in the spring of 1914. This development consists of a single hydro-electric plant known as Tule Power House operated under a static head of 1535 feet without storage. Water is diverted from the Doyle Branch of the Tule river at a point known locally as Doyle's Ranch, from which place it is taken directly into the conduit line, consisting entirely of tunnels and covered concrete ditch, for a distance of 17,115 feet to a concrete surge tank at the head of the pressure pipe line. From this point the water is carried to the power house, located on the Doyle Branch a short distance above its confluence with the Nelson Branch of the Tule river, through a steel pipe line approximately 3600 feet in length and varying in diameter from 36 inches at the top to 30 inches at the bottom. In the power house are located two main generating units each having a rated capacity of 3,000 K.V.A. and directly connected to 3600 horse power impulse water wheels. This power plant is connected to the main 60,000 volt system at Strathmore, Tulare county.

The oldest of the hydro-electric developments owned by the San Joaquin Corporation is located on the Kern river and is known as the Kern Canyon Power Plant. This plant was constructed by the Power Development Company in 1895. Although the flume which originally conducted the water from the point of diversion to the head of the penstock has since been entirely replaced by a tunnel, the plant is now operating as originally built, except for changes made in the original water wheels prior to 1901 and a few minor

replacements and additions. Water is diverted from the Kern river about two miles above the mouth of the canyon by a natural dam, through 8,500 feet of concrete lined tunnel and is delivered directly into a pressure pipe line 66 inches in diameter and 660 feet long. The total drop at this point is 212 feet and the water is utilized to operate three 450 K.W. generators. Power from the Kern Canyon Plant is transmitted a distance of 15 miles, over two 10,000 volt circuits, to Bakersfield, where connection is made with the company's main system.

The Bakersfield steam plant is used both as an auxiliary and as a stand-by station. The first permanent unit, a 2,500 K.V.A turbo-generator, was installed during the spring of 1911; a second turbine unit, rated at 6,250 K.V.A. with 5,000 K.W. steam end, was placed in operation in November, 1911; and the third turbine unit, identical with the second unit but rated at 7,800 K.V.A. with 6,250 K.W. steam end, began operating during the latter part of 1913. While the present aggregate rated capacity of the three turbo-generators is 16,550 K.V.A. this entire capacity is probably not available at the present time owing to the limitations imposed by boiler capacity. At the present time there are installed in the Bakersfield plant 6,048 boiler horse power water tube boilers, four of the boilers being rated at 304 horse power and the other eight at 604 horsepower each. This plant is connected through ample transformer capacity to the company's main 60,000 volt transmission system as well as to the 11,000 volt system.

In addition to the production plants above referred to, the San Joaquin Corporation maintains at Fresno in the old steam plant building, a 750 horsepower horizontal cross-compound engine, belt connected through an arrangement of clutches between two motor generator sets. Ample boiler capacity is maintained for this unit and under certain conditions it could be considered as a

reserve unit insofar as the local street railway load is concerned, although I question the reasonableness and necessity of any such standby, considering the large amount of money invested in duplicate and interconnected production and transmission facilities.

Power House No. 3 is connected to San Joaquin Power House No. 1 by a single 30,000 volt circuit. From Power House No. 1, two 60,000 volt circuits lead to the Coppermine Substation and at this point branch out and form what is known as the "East Loop" and the "West Loop" of the main transmission system. The East Loop of the 60,000 volt system extends in a general southerly direction from Coppermine substation, along the foothills on the east side of the valley through Tulare and Kern counties to Bakersfield. The West Loop of the main transmission system extends from Coppermine substation to the north and west of Fresno, thence in a general southerly direction to Henrietta substation where a branch line is taken off westerly to Coalinga, thence continuing south and passing to the west of Tulare Lake and through the Lost Hills, Midway and Sunset oil fields, finally reaching Bakersfield from the south.

The 30,000 volt transmission system also radiates from Coppermine substation, one line serving Madera, Merced, Merced Falls, and a portion of Mariposa county, and a branch extending due west from a point south of Madera known as Sayres Corners, serving Mendota, Los Banos and intervening territory on the west side of the San Joaquin river. Two 30,000 volt lines extend from Coppermine to the City of Fresno. From Fresno one circuit extends in a southerly direction along the Santa Fe railroad through Hanford and Corcoran, finally terminating at the Stoil substation. At Hanford, a cross tie extends westerly through Lemoore to the Henrietta substation where connection is made with the 60,000 volt West Loop.

VI.

C O N T R A C T S.

1. Propriety of.

The San Joaquin Corporation's rate shcedule, on file with this Commission, contains the following provision with reference to the signing of contracts by its customers:

> "No contract is required in the event the customer requires only lighting service. If power service is involved, a written contract, such as would be applicable to the schedule selected, must be executed."

In other words, the San Joaquin Corporation requires the signing of a contract as a condition precedent to the service of agricultural power, oil well power, mining power, industrial power and street lighting.

The general rule with reference to a requirement by a utility that an intending customer must sign a contract before he can secure service was stated by this Commission in its Decision No. 2689, rendered on August 12, 1915, in Case No. 683. (Volume 7, Opinions and Orders of the Railroad Commission of California, p. 830.) In this case, the presiding Commissioner said:

> "Water, gas, electric and telephone utilities frequently demand that an applicant sign a contract before service will be delivered. I do not now refer to extensions in unincorporated territory, where unusual conditions frequently obtain. Under the rules herein prescribed, the necessity for such contracts is not apparent. The consumer is bound by the utility's lawful rates, rules and regulations on file with this Commission. No contract is necessary to insure their applicability to him. The utility will secure ample protection under the rules herein established in the matter of payment for its service and for the cost of disconnections and reconnections. The initial installation is added to capital account and is considered when rates are established. It is difficult to find any other reason for compelling an applicant for service to sign such contract other than to hold him for a term beyond that for which he would desire to be held if he were a free agent--a motive to which this Commission can not give its sanction.
>
> "Accordingly I recommend that henceforth an applicant for service from a water, gas, electric or telephone utility be not required to sign a contract as a condition precedent to service; provided that it is not intended

herein to pass on the question of contracts in connection with extensions in unincorporated territory, which matter is left open for consideration in subsequent proceedings. Utilities of these classes shall continue to have the right to require applicants to sign reasonable applications for service, so that their records may contain the necessary data with reference to all consumers."

In accordance with this declaration, this Commission adopted the following rule with reference to the execution of contracts for service by intending customers of water, gas, electric and telephone utilities:

"Rule 12. Except in the case of extensions in unincorporated territory, which matter is left open for consideration in subsequent proceedings, and of extensions in incorporated territory in cases in which the Commission may hereafter authorize the signing of contracts for service, a water, gas, electric or telephone utility may not require that an applicant sign a contract for service as a condition precedent to service; provided that such utility may require that reasonable written application for ~~xxxx~~ service be made."

Hence, except in cases in which special and unusual conditions exist, an electric utility does not have the right to require the signing of a contract as a condition precedent to service. As all the terms and conditions of a contract which properly enter into a rate are ordinarily contained in the rates, rules and regulations of the utility on file with the Railroad Commission, the only real purpose in compelling an intending customer to sign a contract for service must be to bind him to pay for service for a definite period, even though he might desire to discontinue the service before the expiration of that period. Consequently, the only justification for requiring the signing of such a contract is some unusual condition, such as an abnormally large investment on the part of the utility, which would make it unfair to the utility to leave the customer in such a position that he can discontinue service without further payment, whenever he desires to do so.

Referring now particularly to the agricultural power business of the San Joaquin Corporation, it appears that large tracts of territory served by the San Joaquin Corporation with

power for pumping purposes are as yet sparsely settled and that unusually heavy investments must be made by the San Joaquin Corporation, on the average, to construct transmission and distribution lines to serve this class of consumers. Hence, at the present time and under the present conditions, it seems entirely reasonable that the San Joaquin Corporation should require the signing of a contract in the first instance by an intending consumer of agricultural power, unless the consumer can in some other way adequately protect the utility against loss from an early discontinuance of the service. It will also be clear that, when a consumer selects an annual or seasonal rate which is payable in equal monthly installments, a contract should be permitted covering the period for which the particular rate chosen is applicable.

The rates herein established will contain a form of non-contract agricultural power rate, under which rate the utility will be adequately protected. This rate will be an optional rate which can be used by such customers as do not desire to sign a contract, but will necessarily be slightly higher than the contract rates.

One of the chief complaints which arise in connection with the requirement of certain utilities that contracts be signed by intending consumers, is that the consumers signing such contracts generally do not know that redress lies by appeal to the Railroad Commission, in case the terms of such contracts should prove unjust or unreasonable. In order to remove this source of complaint, the San Joaquin Corporation should insert in all its contracts, whether for agricultural power or any other class of service, the following words:

> "It is understood by and between the parties hereto that this agreement is merely in the nature of a regulation and is subject at all times, after proceedings duly had, to change or abolition by the

Railroad Commission of the State of California."

Similar language has for a number of years been inserted in all the contracts of Mt. Whitney Power and Electric Company, in accordance with this Commission's Decision No. 247, rendered on October 1, 1912, in Application No. 209 (Vol. 1, Opinions and Orders of the Railroad Commission of California, p. 646).

Considerable complaint was directed toward the term of the San Joaquin Corporation's agricultural power contracts, which term has been five years, with an additional two year term under the so-called "colonization contracts." While a five year term may have been reasonable during the early agricultural developments of the San Joaquin Corporation, I am convinced from a careful study of the average investment in distributing system to serve agricultural power consumers and of the average revenues from such service that in the present state of development of the corporation's business a term of three years is sufficient.

Complaint was also made of the requirement of the San Joaquin Corporation that upon the

expiration of the first five year period heretofore in effect under the agricultural power contracts, the consumer has been compelled to sign a new contract for a second five year term. It was urged herein that the necessity for the existence of the contract relationship must be presumed to have ceased at the end of the first term. I am of the opinion that this contention is well founded. The order herein will provide that after service has been received during three years under the agricultural power contracts, service will thereafter be continued from year to year, under the same terms and conditions except the term, as theretofore, unless notice to discontinue at the end of the original term or of any subsequent year be given, without the signing of a new contract. The language to be inserted in the contract shall be similar to that heretofore adopted by the Mt. Whitney Power and Electric Company, Seaman v. Mt. Whitney Power and Electric Company (Vol. 4, Opinions and Orders of the Railroad Commission of California, p. 1362). As hereinbefore indicated, contracts may continue to be required for flat rate agricultural power service for twelve months or less, except in the cases referred to in the preceding sentence. The mere fact that the particular consumer using the installation has changed will not be sufficient to justify the San Joaquin Corporation in requiring the signing of a contract running beyond the first three year term.

The evidence in these proceedings revealed a number of instances in which hardship has resulted from the continuing obligation to pay for agricultural power when the consumer could no longer advantageously use it. On complaint of such hardship, the Railroad Commission reserves the right to authorize the cancellation of the contract upon just and equitable terms, under which the utility will secure the protection to which it is entitled in connection with the investment made to serve the dis-

continuing consumer.

No complaint was made with reference to the signing of contracts in connection with the oil well and the mining power business. Both these classes of business are more or less uncertain and hazardous. Considerable investment to take care of the business is frequently required from the utility. Until the further order of the Commission, the San Joaquin Corporation may require the signature of reasonable contracts as conditions precedent to these classes of service.

I have been able to find no good reason for the continuance of the practice of requiring the signing of contracts in connection with the service of industrial power. A number of the existing contracts seem clearly to be discriminatory as to the rates named therein. These discriminations must all be eliminated by terminating the practice of compelling the signing of contracts and by bringing all cases of this class of service within the uniform rates, rules and regulations herein prescribed.

No complaint was made with reference to the signing by municipalities of contracts for street lighting. To serve this class of business, the utility must make relatively large investments which cannot be utilized for other classes of business. It has always been the practice in this state to require municipalities to sign contracts for this class of business. At the present time, I am not satisfied that this practice is unreasonable.

2. Liens on land.

The various forms of agricultural power contracts of the San Joaquin Corporation all contain a provision to the effect that the sums due for the electrical energy supplied under the contract shall be a lien on the consumer's property. This provision reads as follows:

"It is expressly covenanted and agreed that the

> electrical energy herein agreed to be furnished is furnished for the benefit of the land, and all sums herein stipulated to be paid by said purchaser to said company shall be a lien on all that certain piece of land (describing the consumer's land), together with all the tenements, hereditaments and appurtenances thereto belonging, and that said company may enforce the same, and in event of a suit thereon, to enforce the payment of any of said sums, said purchaser shall pay all expenses, including a reasonable attorney's fee, to be fixed by the court and included as a part of any of said sums, and of the judgment in such action."

This provision is a survival of the period in the history of this state during which the consumer had no public authority to whom he could look for redress and during which he was compelled to take whatever the utility offered him, whether he considered it fair and reasonable or not. During this period, the contracts presented by utilities to intending consumers for their signature, were frequently drawn in such a way as to accord the utility every possible protection which occurred to the imagination of able counsel, while but little regard was paid to the consumer.

With the exception of but two other utilities, the contracts of which contain a similar provision in a modified form, no electrical utility in California other than the San Joaquin Corporation undertakes at the present time to make its bills a lien on the consumer's land. Furthermore, even the San Joaquin Corporation confines this provision to the purchasers of agricultural power. The farmers in the territory served by the San Joaquin Corporation seem clearly to be discriminated against, in that their bills are made a lien on their land, while no similar provision exists with reference to oil well power, mining power, industrial power, commercial lighting, residence lighting or street lighting.

The San Joaquin Corporation urges that if the provisions with reference to liens on land are eliminated from the agricultural power contracts, it will be necessary fo r the

Corporation, in order to protect itself, to require the payment of flat rate bills monthly in advance. Other electric utilities in California selling electric energy for pumping purposes to the farmers of this state have been able to collect their bills without monthly prepayments in advance and without undue losses. I am satisfied that the San Joaquin Corporation can do likewise.

The provision in the agricultural power contracts of the San Joaquin Corporation providing for a lien on the consumer's land to secure the payment of the corporation's bills shall be eliminated.

3. Waiver of damages.

The agricultural power contracts of the San Joaquin Corporation contain a number of provisions by which the consumer is compelled to waive such claims as he may have for damages against the corporation by reason of interruption or failure of service or the energizing of its lines by the corporation following such interruptions, and also in connection with loss or damage resulting from the electric energy supplied to the consumer, whether such loss or damage accrues to the person or property of the consumer or to any other person. Such provisions are not properly a part of the rules and regulations of a public utility, nor should they be made a part of any contract of service. The parties should be left to the usual rules of law applicable to such circumstances and the utility should not undertake to make the consumer, as a condition of service to him, waive such rights as the law would otherwise give him.

All provisions with reference to waiver of damages shall be eliminated from the San Joaquin Corporation's contracts.

4. Purposes for which electric energy may be used.

Considerable complaint was made that consumers taking

electric energy for agricultural power purposes under the San Joaquin Corporation's various forms of contracts are not permitted to use the electric energy for any purpose other than for the pumping of water for irrigation, even though the consumer may not, at the time, use the electric energy for this purpose. A number of complainants testified that at times when they are not pumping water for irrigation, they would like to use the electric energy to cut alfalfa or other feed, grind corn, operate a cream separator, pump water for domestic purposes or for stock, or to light the premises. The evidence also shows that in a number of instances the San Joaquin Corporation has permitted consumers who made complaint, to install a double throw switch and to use electric energy for a number of these purposes, at times when not used for the pumping of water for irrigation. It is the uniform practice of Mt. Whitney Power and Electric Company to permit its agricultural power consumers to install a double switch and to use the electric energy for which they are paying, during such times as the motor used in pumping water for irrigation is not being operated, for the purpose of illuminating the residence and grounds.

It is difficult to understand why a farmer who pays a flat rate under which he is entitled the continuous use of a certain maximum amount of power to operate his motor for pumping purposes during the entire year or during certain specified portions of the year, should not have the right to utilize for other purposes the electric energy to which he is entitled, when he does not desire to operate his motor for pumping. The mere fact that an occasional consumer bridges over his switch or in any other manner secures more electric energy than that for which he is paying is, in my opinion, no conclusive argument against the justice or reasonableness of the general practice. The utility has a right to prosecute a consumer who steals its

electric energy just as much as anyone else has the right to prosecute any other kind of thief, and all good citizens will uphold a utility in whatever reasonable action it takes in the premises.

A consumer should in my opinion have the privilege of using the full amount of power for which he is paying irrespective of the aggregate amount of his connected load when the maximum demand is controlled by the instrumentality of a double throw switch or other approved demand limiting device and the rates herein established for agricultural power service contemplate the use by the consumer of power for the purpose hereinbefore specified at times when the power is not required for pumping water for irrigation. The Commission will entertain such suggestions as to rules or regulations as the San Joaquin Corporation may offer to protect itself from abuse of this privilege.

5. Rights of way.

The various forms of agricultural power contracts used by the San Joaquin Corporation all contain clauses with reference to the grant of rights of way through the premises of the consumer, reading as follows:

> "Said purchaser hereby grants to said company the right of way through the premises of said purchaser, without expense, for the erection and maintenance of poles and wire lines, through, over and across said premises, but along the most direct route that the purchaser may select, together with the right of ingress and egress, and with the privilege of a continuance thereof at the option of said company after the expiration of this agreement, and the privilege of removing the same therefrom on the termination of this agreement. It is expressly agreed that the company shall use all reasonable diligence and care to avoid damage to the property of said purchaser resulting from the maintenance of these lines to the point of delivery of such electricity, but shall not be in any manner responsible beyond such point of delivery."

Considerable complaint was made against this provision, particularly in so far as the consumer is compelled to grant a right of way through his premises beyond his own pumping installa-

tion to other lands. Such a provision does not seem a reasonable condition precedent to service and, as far as I know, is contained in the contracts of only two or three other electric utilities in this state. Whether the utility shall have the right to construct its distributing lines on the lands of a customer beyond the customer's pumping installation, is a matter which should be left to unfettered bargaining between the customer and the utility. I am satisfied that in most cases a farmer will be entirely reasonable if a neighbor desires service through an extension of the distributing line from the existing installation. In any event, a utility should not have the right to insist on this provision as a condition precedent to service, any more than it should have the right to insist on securing any other advantage which is not properly connected with the service to the particular consumer.

The provision in the agricultural power contracts of the San Joaquin Corporation with reference to rights of way beyond the consumer's installation shall be eliminated.

6. The maximum demand system.

The rates charged by the San Joaquin Corporation for metered lighting service and for both metered and flat rate power service are all based, both as to the unit price at which the energy or service is supplied and as to the minimum charge, on the measured annual maximum demand, except in the case of certain metered power service supplied in connection with the development of oil wells, so-called metered "colonization" agricultural power service, and certain flat rate lighting and metered cooking and heating service. In the excepted cases the basis used is the rated capacity of the installations connected to the company's lines.

A considerable number of the complaints herein were based on the uncertainty and the alleged unfairness to the consumers of the maximum demand system as applied by the San Joaquin Corporation. The agricultural power consumers drew attention to the varying maximum demands of the same pumping installation, depending on the season of the year when the demands are taken, and the commercial lighting consumers complained of largely varying bills paid under this system by consumers who used practically identical amounts of energy.

The method of ascertaining the consumer's maximum demand is set forth in the San Joaquin Corporation's filed rate schedules for metered lighting and metered power service as follows:

> "The maximum demand is ascertained and determined by taking watt-meter readings from time to time as the Company may elect and for periods of five minutes duration, and the highest amount ascertained at any of such times shall be the maximum demand. No attempt, however, is made to take readings to determine the maximum demand on strictly residence consumers, all the current being charged at the maximum rate * * *. Such highest amount so ascertained and determined shall continue until the customer has made a material change in his installation and has demanded that a new maximum demand reading be taken."

The measurement of the maximum demand of flat rate power installations other than that of agricultural consumers is described by the San Joaquin Corporation as follows:

"The current supplied is measured with either an integrating watt-hour meter, a printometer watt-hour meter, a graphic recording watt-hour meter, or a maximeter, as the company may elect, depending upon the character of the load."

The method of measuring the maximum demand of flat rate agricultural power service is set forth in the San Joaquin Corporation's filed schedules as follows:

"The electrical energy supplied is measured with an integrating watt-hour meter. The amount of electrical energy to be paid for each calendar month shall be ascertained and determined by measurements taken for a period of five minutes duration, at such time or times during each year of the contract as the company may elect. The first measurements shall be taken within thirty (30) days after the company shall commence to supply electrical energy, and such measurements shall determine the amount of electrical energy to be paid for * * * unless * * * the use of a greater amount shall be ascertained and determined * * *."

It will be noted that the first measured maximum demand in any year is used as the basis for all subsequent charges unless a higher demand is later ascertained, in which event the higher demand governs. It is also important to note that the demand is measured at such intervals as may be convenient or desirable to the San Joaquin Corporation and that the period for which the demand is taken is in each instance five minutes.

Inasmuch as the method employed by the San Joaquin Corporation, in connection with the determination of maximum demands for rate purposes, has been made the subject of severe criticism on the part of a large number of its patrons and because of the importance of the subject, I desire to call attention briefly to the theory of the demand system of charging

for electric service and to point out the inequitable results of the system as applied by the San Joaquin Corporation. We may assume, at least for convenience in considering the general problem, that the cost of furnishing electric service to any consumer or class of consumers consists first, of the service or consumer cost which may be independent of any demand upon either the out-put or the peak load capacity of the utility's service facilities; second, the demand or readiness-to-serve cost which is independent of the extent to which the service is utilized; and, third, the energy cost which in turn is independent of the demand created by the operation of the consumer's utilization equipment. Of the three principal elements of cost referred to, the demand cost under conditions prevailing in the San Joaquin Valley, is by far the most important and hence under any system of charges such as that established by the San Joaquin Corporation the method used in determining the consumer's maximum demand is a matter of paramount importance.

The present method used by the San Joaquin Corporation to acertain the individual maximum demands of its consumer's lighting and power equipment is not only a relic of former years which has long since been discarded by practically every other large operating company but is also unreasonably expensive to maintain. There may have been, and probably was, ample justification for the adoption of this method of demand determination when the number of consumers was small and their operating characteristics were practically unknown. However, at the present time and under existing conditions, any necessity which may have existed heretofore for the adoption of such a temporary expedient has entirely disappeared.

The operating characteristics of ordinary agricultural and other power installations are well known and can be provided for, readily and equitably, by rates based on the connected load.

This system will be provided in the rates herein established. If individual cases of hardship arise under this altered method they may be drawn to the Commission's attention.

Residence and other small lighting installations can be made to yield the proper amount of revenue through the establishment of simple block schedules as herein provided.

Larger power and lighting consumers whose operating conditions are or may be subject to greater variation, both as to maximum demand and the amount of energy consumed, will yield sufficient revenue to justify the installation of one of the several types of demand indicating and integrating watt-hour meters which are now on the market.

In general, while recognizing the fact that there are exceptions which will require special consideration, I am convinced that no system of electric rates based wholly or largely upon the consumers maximum demand, as distinguished from his connected load, can be equitably applied except in cases where the maximum demand over a period of not less than fifteen minutes is regularly and constantly measured by some fixed instrument located at the point of delivery of the service. When the maximum demand is so measured, the charge should be for the period for which the bill is normally rendered, in the same manner in which the actual consumption is charged and collected for. A single maximum demand reading should not govern an entire year's bills.

If abuse with reference to the manufacturer's rating of the motor should develop, means for testing such motors and stopping such abuse will be provided.

The rates herein established contemplate the method of charging hereinabove described. The San Joaquin Corporation can accordingly discontinue its present practice of installing meters on strictly flat rate installations and thus effect a very material saving.

7. Transformers.

The San Joaquin Corporation requires its consumers

to supply transformers in the following classes of cases:

(1) Under all irrigating pumping contracts.

(2) In all cases where isolated lighting consumers are to be served, unless it is apparent that more business can be taken on in the near future.

(3) For all motors and lights used at the oil wells, or by the oil pumping consumers on the regular pumping rates.

A large number of complaints were made in these proceedings against the practice of the San Joaquin Corporation of compelling certain classes of its consumers to supply the transformers. Why consumers of agricultural power or oil well power or certain lighting consumers should be required to supply their own transformers, while consumers of mining power or industrial power or commercial lighting, and most residence lighting consumers, secure their transformer at the expense of the utility, is not clear. That discrimination results from this difference in treatment, cannot reasonably be denied.

A transformer is an instrumentality necessary to the service rendered by the utility, just as much as its hydro-electric plants, its steam plants, its transmission lines and its distributing system. As a general rule, no good reason appears why the utility should compel the consumer to supply the transformer, while the utility supplies the production and transmission system and the distribution lines. With the exception of a few of the smaller electric utilities in this state, practically all the electric utilities supply the transformers, except in isolated cases in which the utility is of the opinion that the revenue to be derived from the customer does not justify the utility in supplying the transformer. Even in such cases, however, the proper course would seem to be to ask the consumer to pay such rate or make such guarantee as will protect the utility, without

compelling the consumer to pay for one of the instrumentalities needed by the utility to render its service.

Henceforth, the San Joaquin Corporation will be expected to supply and maintain, at its own expense, all transformers necessary in its business. If, in special cases, the investment necessary to serve an intending consumer seems unduly high, application for relief may be made to this Commission, whereupon the Commission will then make an equitable adjustment of the matter.

The rates herein prescribed are established on the assumption that the San Joaquin Corporation will take over, under equitable conditions, all transformers now on its system and heretofore paid for by its consumers. If the utility does not desire to pursue this course, it will be necessary to reduce accordingly the rates herein established.

It is suggested that payment for the existing transformers may be made under uniform rules and regulations by crediting the consumers with a fixed percentage of the fair value of the transformers on the consumer's bills, month by month, until the transformers are fully paid for.

VII

S E R V I C E

1. QUALITY OF

A large number of patrons of the San Joaquin Corporation testified that the corporation's service, particularly prior to 1914, had not been satisfactory. The principal source of complaint was the frequent interruptions of agricultural power service. These interruptions caused considerable annoyance, losses due to the stoppage of motors, and material additional expense due to the more careful and constant attention necessary. While it must be recognized that only a small percentage of the total number of the San Joaquin Corporation's consumers testified in these proceedings, it is also obvious that each interruption of the nature referred to must have affected the service supplied to a considerable number of the corporation's patrons.

Although any interruption of service supplied under the conditions prevailing in the rural territory served by the San Joaquin Corporation is most annoying and to a certain extent undoubtedly deprives a consumer, receiving service under flat rates, of the benefits of the continuous service for which he is paying, the frequency of these interruptions has undoubtedly decreased during the past year, and I feel that at this time there is little cause for complaint in this regard.

The only other serious complaint against the service supplied by the San Joaquin Corporation was directed against the difference between the voltage maintained upon the corporation's supply circuits in East Bakersfield and in Bakersfield. This condition should be rectified at once. The rates herein established contemplate that a uniform standard voltage, phase and frequency will be maintained for each class of service in each community, larger unit or over the entire system.

2. Meter boxes.

Considerable complaint was made, particularly from Bakersfield and Fresno, with reference to a rule or regulation adopted by the San Joaquin Corporation in the early part of 1914, applicable whenever an electric lighting service is discontinued, and compelling the owner of the premises, before service will be resumed, to remove the meter box at his own expense from screened porches and other more or less inaccessible places, to some place accessible to the utility's meter readers. The testimony shows that the average cost of such removal is between $6.00 and $8.00. The testimony further shows that up to the early part of 1914 the San Joaquin Corporation installed its meters in the original locations without any protest whatsoever on its part. In view of this fact, it seems only reasonable that if the San Joaquin Corporation desires to have the meters installed prior to 1914 relocated, it should pay the expense of such relocation. On the other hand, it is entirely reasonable to require that meters installed in the future shall be installed in a location accessible to the corporation's meter readers. The consumer, however, should not be compelled to install the meter box on the outside of his building in such a manner as to mar the building, if any other accessible location is available.

The rates herein established have been determined on the assumption that the San Joaquin Corporation will repay the moneys heretofore reasonably expended by the corporation's consumers in relocating meters under the rule or regulation adopted in 1914. In case of such relocations hereafter, the expense shall be borne by the San Joaquin Corporation.

VIII.

EXTENSIONS.

Considerable complaint was made to this Commission with reference to a requirement of the San Joaquin Corporation

compelling its intending consumers to advance the funds necessary to construct extensions. Beginning in April, 1913, and continuing to a time subsequent to the first hearings in these proceedings, the San Joaquin Corporation consistently told intending consumers whose service would require an extension, that the corporation was without funds and that the extension would not be made unless the intending consumer advanced the cost thereof. Six per cent. interest was paid on the moneys thus advanced. The officials of the San Joaquin Corporation testified in these proceedings that this policy was from the beginning regarded by the corporation merely as a temporary expedient to tide over a period of financial stringency. This stringency was caused principally by the necessity of doing certain expensive construction work within a designated time on the Crane Valley project. Funds which otherwise would have been used to construct extensions to secure increased business were devoted to the Crane Valley project.

Prior to the submission of these proceedings, the San Joaquin Corporation again reverted to its original policy of making all reasonable extensions at its own expense, and the officials of the corporation testified that they hoped that they would now be able to adhere uninterruptedly to this policy.

The general rules applicable to extensions by electric utilities outside of municipalities were established by this Commission in its Decision No. 2689, in Case No. 683, supra. Referring to this question, the Commission said:

> "It is not feasible at this time to establish a general rule defining free limits for extensions outside of municipalities. The Commission naturally desires the utility to be as liberal as possible in the construction of extensions, but regard must also be had to the utility's financial condition and the rights of existing consumers. If the parties can not agree, they may submit the matter informally to the Commission or formally as provided by section 36 of the Public Utilities Act.
>
> "The Commission has frequently drawn attention to the fact that it is unreasonable for utilities to urge that

each extension constructed at their cost must be profitable in itself. Such a policy would lead to grave results in thwarting the development of this State and can not be permitted by this Commission. The Commission's attention has recently been drawn to a number of cases in which utilities which have a monopoly in certain territory have refused to make extensions in cases in which they would have made them had there been competition and under circumstances under which they actually do make extensions in other territory in which competition exists. If this attitude persists, it will become the matter of very serious consideration from the Commission. If a utility adopts such a policy in any part of the territory served by it, it must expect this fact to be taken into consideration if another utility of like kind asks authority to enter the territory under consideration or any other portion of the territory served by the existing utility."

The Commission thereupon adopted its Rule 16, in Case No. 683, which rule will apply to the San Joaquin Corporation. This rule reads as follows:

"Rule 16. A water, gas, electric or telephone utility shall make such reasonable extensions in unincorporated territory at its own expense, as it can agree upon with the applicant for service; provided, that in any case in which the construction of an extension at the utility's sole expense will in its opinion work an undue hardship upon the utility or its existing consumers, the matter may be submitted to the Commission as provided by section 36 of the Public Utilities Act, unless satisfactorily adjusted by an informal application to the Commission."

The question of extensions within incorporated territory is fully covered by Rule 15 in said Decision, reading as follows:

"Rule 15. A water, gas, electric or telephone utility which operates under a general franchise authorizing the occupancy of all the streets of a municipality shall make, at its own expense, such street extensions as may be necessary to serve applicants; provided, that in any case in which the construction of an extension at the utility's sole cost will in its opinion work an undue hardship upon the utility or its existing consumers, the matter may be submitted to the Commission as provided by section 36 of the Public Utilities Act, unless satisfactorily adjusted by an informal application to the Commission."

In view of the fact that the San Joaquin Corporation has now reverted to its original policy of making all reasonable extensions at its own expense, it is not necessary to pursue this subject further at this time.

IX.

R A T E S

1. Existing Rates

The existing rates of the San Joaquin Corporation for each class of service will be stated and considered, in so far

as necessary, under the discussions of the various classes of service which will hereinafter be found. Although all the electric rates of the San Joaquin Corporation are at issue herein, complaint was made particularly of the agricultural power rates, the commercial lighting rates and the residence lighting rates.

2. Value of property.

(a) Investment.

This Commission's auditing department and the San Joaquin Corporation both made extensive and detailed audits of the books of the San Joaquin Corporation and its predecessor corporations, for the purpose of determining the amount of money which has actually been invested in the electric business of the San Joaquin Corporation.

Mr. T. G. Hughes, one of this Commission's assistant auditors, reported that the total sum invested by the San Joaquin Corporation and its predecessors in the corporation's electric business as of December 31, 1914, was the sum of $9,096,270.75. The following table shows the total investment in the electric business at the end of each year from 1895 to 1914, inclusive, as reported by Mr. Hughes:

TABLE NO. IV.

INVESTMENT IN ELECTRIC PROPERTY OF SAN JOAQUIN LIGHT AND POWER CORPORATION AND ITS PREDECESSORS ON DECEMBER 31, OF EACH YEAR.

Year	Investment on December 31.
1895	$ 72,199.65
1896	407,196.36
1897	460,941.44
1898	485,663.58
1899	568,510.49
1900	715,026.52
1901	876,059.59
1902	937,832.04
1903	1,023,702.28
1904	1,177,579.86
1905	1,480,986.45
1906	2,013,685.46
1907	2,163,221.25

Year	Investment on December 31.
1908	$2,264,435.14
1909	2,466,838.72
1910	2,865,533.69
1911	5,911,721.15
1912	7,031,119.76
1913	8,233,891.04
1914	9,096,270.75

The following table shows the investment as of June 1, 1915, secured by adding to the investment as of December 31, 1914, the additions and betterments between December 31, 1914 and June 1, 1915, with overhead applicable thereto, together with working capital and stores and supplies:

TABLE NO. V.

INVESTMENT OF SAN JOAQUIN LIGHT AND POWER CORPORATION IN ELECTRIC PROPERTY AS OF JUNE 1, 1915, BASED ON INVESTMENT ON DECEMBER 31, 1914, AS REPORTED BY MR. HUGHES.

Investment on December 31, 1914, as reported by Mr. Hughes	$9,096,270.75
Additions and betterments to June 1, 1915, ...	347,302.15
Overhead added to additions and betterments ...	5,180.44
Working capital	121,000.00
Stores and supplies	282,338.50
Total investment on June 1, 1915, ...	$9,852,091.84

It appears from the San Joaquin Corporation's Exhibit No. 3-L that a considerable portion of the additions and betterments between December 31, 1914, and June 1, 1915, are as yet non-operative.

The San Joaquin Corporation reports in its Exhibit No. 3-L a total investment for its electric properties as of December 31, 1914, amounting to $9,055,170.03. This invest-

ment is $41,100.72 less than the investment reported as of December 31, 1914, by Mr. Hughes. Mr. Hughes testified that the difference is principally due to the fact that he included the investment in the Kern Canyon Flume of the Power Development Company, while the San Joaquin Corporation wrote off this investment for the reason that it is no longer useful and has been abandoned.

The following table shows the investment of the San Joaquin Corporation in its electric properties as of June 1, 1915, as reported by the San Joaquin Corporation in its Exhibit No.3-L:

Table No. VI.

INVESTMENT OF SAN JOAQUIN LIGHT AND POWER CORPORATION IN ELECTRIC PROPERTY AS OF JUNE 1, 1915, AS REPORTED BY CORPORATION.

Total Operative capital investment to December 31, 1914, ...		$9,055,170.03
Total jobs closed January 1 to June 1,1915,		34,187.59
Total open jobs and estimates--operative property		97,832.23
Total operative property		9,187,189.85
Total open jobs,-estimates--non-operative property,	$207,025.00	
Total developments--non-operative property,	19,631.98	
Purchase of Fresno Gas & Electric Co.,	16,797.23	
Total non-operative property		243,454.21
Total capital investment, operative and non-operative, June 1, 1915, ...		$9,430,644.06

By adding to the foregoing total the sums allowed by this Commission's gas and electric department for working capital and stores and supplies, a total of $9,833,982.56 is se-

cured, as representing the investment in the San Joaquin Corporation's electric properties, operative and non-operative, on June 1, 1915.

(b) Estimated reproduction cost new.

The San Joaquin Corporation presented an estimate of the cost of reproducing new the corporation's tangible electric properties as of June 1, 1915. This estimate was prepared on the historical method. To the estimate of J. G. White & Company as of May 31, 1912, totalling $7,122,807.00, there were added the actual expenditures for additions and betterments from May 31, 1912, to June 1, 1915, amounting to $2,865,914.01, making a total as of June 1, 1915, of $9,988,721.01.

This Commission's gas and electrical department likewise presented an estimate of the cost to reproduce the San Joaquin Corporation's tangible electric properties as of June 1, 1915. This estimate, which did not include the corporation's lands, amounted to $9,484,096.09. By adding to this sum $256,287.00, being the estimate of Mr. W. M. Wells, this Commission's real estate expert, of the present value of the corporation's lands and other real property as of June 1, 1915, as shown by Railroad Commission's Exhibit No. 3, and the sum of $121,000.00, for working capital, a total of $9,861,383.09 is secured. The two chief differences in the estimates as presented by the San Joaquin Corporation and by Mr. R. M. Vaughan of this Commission's gas and electrical department, are found in different allowances for overhead percentages and for stores and supplies. The corporation used an allowance ~~of~~

of 16.8% for overhead, while Mr. Vaughan used 15.394%. The corporation also claims an allowance of $100,000.00 for stores and supplies in excess of the sum used by Mr. Vaughan.

Mr. Arthur F. Bridge, of this Commission's gas and electrical department, testified that in his opinion the allowance used by the San Joaquin Corporation and by Mr. Vaughan for overhead percentages to cover the item of administration and superintendence, being 5.266%, is too high. Testifying from the experience of the San Joaquin Corporation itself and of similar utilities in other sections of the state, he stated than an allowance of 2.5% is sufficient for this item. He accordingly prepared an historical reproduction estimate based on an allowance of 2.5% for the item of administration and superintendence. Mr. Bridge's total, comparable with the corporation's total of $9,988,721.01 and Mr. Vaughan's total of $9,861,383.09, is the sum of $9,601,119.94.

The estimates of reproduction cost new thus far referred to herein are all estimates applicable solely to the San Joaquin Corporation's tangible electric properties. The corporation's claims for additions under the head of intangible values will be discussed hereinafter.

(c) Estimated cost of reproduction new less depreciation.

The San Joaquin Corporation presented no estimate of the cost to reproduce new less depreciation.

Mr. Vaughan reported that the estimated depreciated reproduction value of the San Joaquin Corporation's

tanbible electric properties as of June 1, 1915, is the sum of $7,608,993.36.

Mr. Bridge reported that on the basis of the lives of the property testified to by Mr. J. M. Buswell, of the San Joaquin Corporation, which lives assumed the effects of obsolescence and inadequacy, the depreciated reproduction cost of the property plus the appreciation in land values reported by Mr. Wells, is $8,099,212.00, and that based on the lives of the property used by J. G. White & Company, the estimated depreciated reproduction cost is $8,174,303.00. These estimates are based on the straight line method of depreciation frequently used by engineers.

The testimony shows that, with the exceptions hereinbefore indicated, the electric properties of the San Joaquin Corporation are being efficiently maintained and operated.

(d) Franchises.

Mr. Wells, in Railroad Commission's Exhibit No. 3, reported that the San Joaquin Corporation and its predecessors paid for the corporation's franchises the total sum of $4,761.60. The following table shows the totals of the amounts expended:

TABLE NO. VII.

PAYMENTS BY SAN JOAQUIN LIGHT AND POWER CORPORATION AND ITS PREDECESSORS FOR THEIR FRANCHISES WITH INCIDENTAL EXPENSES.

	Payments to Counties	Incidental Expenses	Total Cost
Kern County - San Joaquin Light & Power Corporation	$2,000	$ 68.20	$2,068.20
Kings " - Paid to H. G. Lacey	1,500	-----	1,500.00
Madera County	100	62.25	162.25
Merced County	150	133.75	283.75
Tulare County	200	60.50	260.50
	3,950	324.70#	4,274.70

#Incidental Expenses= 8.2% of Payments to Counties.

Fresno County - Franchise purchased with other property. Cost estimated (By Kenny)	300	24.60#	324.60
Kern County - Franchise purchased with other property West Side Elec. Co. Cost est'd by Kenny	150	12.30#	162.30
Totals . . .	$4,400	361.60#	4,761.60

Exhibit No. 16 of the San Joaquin Corporation shows costs identical with those reported by Mr. Wells.

The San Joaquin Corporation does not in these proceedings claim any allowance for franchises in excess of the cost and incidental expenses thereof, as reported by the corporation and Mr. Wells.

(e) Going concern value.

In its Exhibit No. 19, the San Joaquin Corporation claims a minimum of $1,651,021.00 as representing the corporation's going concern value. This conclusion is reached on the assumption that the corporation has a going concern value at least equivalent to the cost of developing its business. In preparing this exhibit, the San Joaquin Corporation based its conclusions on the history of eight of the corporation's districts for the sale of electric energy. In each of these districts, the corporation allowed an 8% return on the investment, together with the operating expenses actually shown on the corporation's books and an item for depreciation based upon the 4% sinking fund method. Each year the accumulated deficits of preceding years were added to the investment until all the deficits were wiped out. No allowance was made for the surplus of later years to counterbalance the deficits of earlier years. The accumulated deficits of each of the eight districts up to the time the district showed a surplus were added together and were assumed to represent the cost of developing the business in these districts as of that time. The development cost thus ascertained for the number of consumers, the connected load, and the investment as of that time was then applied to the corpora-

tion's present number of consumers, present connected load and present investment, to ascertain what it cost the corporation, on these bases, to develop its present business. The figure thus secured, being $1,651,021.00, is urged by the corporation to represent its minimum going concern value.

The following two tables show the development of the business of the San Joaquin Corporation and its predecessors, on the theory hereinbefore set forth, from 1896 to December 31, 1914, as reported by San Joaquin Corporation in its Exhibit No. 19:

TABLE NO. VIII

GENERAL SUMMARY

DEVELOPMENT OF ELECTRIC BUSINESS

Of

SAN JOAQUIN LIGHT AND POWER CORPORATION AND PREDECESSORS

FROM 1896 TO DECEMBER 31, 1905

(Table on Page 6 of Corporation's Exhibit No. 19)

Districts	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905
Bakersfield	$ 4 996.76	$ 22 852.71	$ 29 646.21	$ 13 697.20	$ 8 495.81	$ 15 958.08	$ 19 883.90	$ 17 444.60	$ 13 800.60	$ 18 007.84
Copper Mine										875.29
Corcoran										
Crane Valley										
Fresno	8 115.25	14 274.76	19 753.70	6 871.85	7 769.13	505.19	25 735.10	36 316.05	53 496.11	50 060.40
Kings River										
Lemoore										
Los Banos										
Madera										
McFarland										
Merced										
Midway										
Reedley										835.71
Selma										
Wholesale Power										
Total, Districts Under Development	13 112.01	37 127.47	49 399.91	20 569.05	7 769.13					
Total, Districts Developed					8 495.81	16 463.27	45 619.00	53 760.65	67 296.71	69 779.24
Balance	$ 13 112.01	37 127.47	49 399.91	20 569.05	726.68	16 463.27	45 619.00	53 760.65	67 296.71	69 779.24

TABLE NO. IX

GENERAL SUMMARY

DEVELOPMENT OF ELECTRIC BUSINESS
Of
SAN JOAQUIN LIGHT AND POWER CORPORATION AND PREDECESSORS

FROM 1906 to DECEMBER 31, 1914

(Table on Page 7 of Corporation's Exhibit No. 19)

Districts	1906	1907	1908	1909	1910	1911	1912	1913	1914	Grand Total
Bakersfield	$ 19 881.86	$ 29 046.29	$ 44 778.16	$ 46 663.85	$ 84 609.08	$ 29 261.20	$ 2 625.36	$ 27 735.15	$ 25 009.47	$ 221 268.41
Copper Mine	1 108.11	8.01	1 253.92	2 109.30	808.16	715.96	2 867.64	2 320.95	1 181.15	922.91
Corcoran	3 216.44	4 221.28	3 607.38	2 307.46	6 948.26	9 393.86	15 026.15	16 777.69	14 146.66	75 645.18
Crane Valley				3.57	14 545.60	1 434.86	10 196.98	13 274.40	130.88	39 317.39
Fresno	65 462.07	40 667.89	61 979.75	81 888.78	96 361.54	76 828.61	50 757.53	35 475.77	72 161.30	690 911.40
Kerman		2 339.88	2 084.32	2 335.04	2 215.02	3 572.25	4 910.00	5 115.44	5 404.41	27 976.36
Kings River						435.42	1 170.54	997.74	2 428.22	1 820.00
Lemoore				1 450.36	1 852.54	110.36	555.40	1 171.68	658.53	808.93
Los Banos						156.13	21 909.41	28 118.72	29 352.17	79 224.17
Madera	1 287.67	1 866.63	3 954.29	6 999.45	8 008.03	3 836.61	1 124.40	822.88	7 904.00	31 909.40
McFarland							2 512.24	4 382.73	3 710.87	3 184.10
Merced	6 290.13	6 955.87	10 097.45	5 670.69	364.39	11 616.74	12 711.72	16 165.62	14 556.31	84 428.92
Midway		Incomplete				4 322.02	1 569.53	15 885.75	36 888.63	58 675.93
Reedley	7 475.19	8 245.86	4 365.32	4 559.61	3 587.07	11 933.63	13 180.21	10 138.46	2 244.01	65 729.36
Selma	1 388.18	468.81	2 982.08	5 020.28	6 381.49	665.12	4 542.34	8 288.54	2 215.84	1 364.71
Wholesale Power						8 253.90	13 074.57	23 048.04	35 456.82	79 833.33
Total Districts Under Development	16 981.76	21 762.89	20 154.47	14 876.37	13 114.74	38 007.92	81 962.87	122 035.60	97 327.65	554 201.84
Total Districts Developed	89 127.89	72 057.63	114 948.20	144 132.02	212 566.44	124 538.75	76 769.15	87 683.96	156 121.62	1 339 360.34
NET BALANCE	$ 72 146.13	$ 50 294.74	$ 94 795.73	$129 255.65	$199 451.70	$ 86 530.83	$ 5 193.72	$ 34 351.64	$ 58 793.97	$ 785 158.50

It appears from the foregoing two tables that the San Joaquin Corporation and its predecessors, up to December 31, 1914, earned $785,158.50 in excess of operating expenses, an adequate allowance for depreciation and an 8% return on all moneys invested and also on all accumulated deficits.

The following table shows the conclusions of the San Joaquin Corporation with reference to the cost of developing its business, on the theory hereinbefore indicated, with reference to the eight districts which it used for the purpose of its computations:

TABLE X

COST OF DEVELOPING ELECTRIC BUSINESS OF

SAN JOAQUIN LIGHT AND POWER CORPORATION IN EIGHT DISTRICTS

(Table on Page 5 of San Joaquin Corporation's Exhibit No.19)

District	Development Period Began Year	Development Period Ended Year	Development Cost	Investment End of Development Period	Number Consumers End of Development Period	Connected Load - K.W. End of Development Period	Gross Earnings During Development Period	Unit Cost Per Consumer	Unit Cost Per K.W.	Percent of Investment	Percent of Gross Earnings
Bakersfield	1897	1899	$ 71 192.88	$ 68 888.03	473	950.00	$ 48 098.45	$ 150.51	$ 74.94	103.34	148.01
Corcoran	1906	Not Completed	75 645.18	153 622.32	374	1 658.70	142 435.03	202.26	45.60	49.24	53.10
Fresno	1896	1900	56 784.69	95 774.67	1187	1 026.82	202 469.71	47.84	55.30	59.29	28.04
Kerman	1907	Not Completed	27 976.36	13 676.51	76	336.30	28 965.25	368.11	83.18	204.55	96.58
Los Banos	1911	Not Completed	79 224.17	153, 941.40	646	1 053.00	90 628.22	122.64	75.23	51.46	87.42
McFarland	1912	1913	6 894.97	31 970.49	265	1 338.34	20 216.85	26.02	5.15	21.56	34.15
Merced	1906	Not Completed	84 428.92	239 699.15	1196	2 236.18	372 405.48	70.59	37.75	35.22	2267
Reedley	1906	Not Completed	65 729.36	199 780.14	1421	2 652.32	358 725.31	46.25	24.78	32.90	18.32
TOTAL			$ 467 876.53	$ 957 352.91	5638	11 251.66	$ 1 263 944.30	$ 82.98	$ 41.58	48.87	37.01

It will be observed from the foregoing table that the corporation reports that the cost of developing its business has been $82.98 per consumer, $41.58 per K. W. of connected load and 48.87% of the investment in distributing system. The corporation applies these figures to its business on December 31, 1914, with the following results:

19,623 consumers @ $82.98	$1,628,317.00
44,194.14 K.W. connected load @ $41.58	1,837,592.00
$3,042,080.53, investment in distributing system @ 48.87%	1,487,153.00
Average,	1,651,021.00

In its Exhibit No. 39, the San Joaquin Corporation presented a somewhat similar statement based on the largest deficit in any year of the operations of the Bakersfield companies, the San Joaquin Electric Company and the Merced Falls Gas and Electric Company. The corporation reports that the greatest accumulative deficit of the Bakersfield companies occurred in 1899, and amounted to $37,989.22; that the greatest accumulative deficit of the San Joaquin Electric Company occurred in 1901, and amounted to $70,061.74; and that the greatest accumulative deficit of Merced Falls Gas and Electric Company occurred in 1910, and amounted to $79,549.11. By adding these sums, the corporation reports, on the greatest accumulative deficit theory, a development cost by companies of $187,600.07.

Mr. A. F. Bridge, of this Commission's gas and electrical department, analyzed these exhibits and criticised them on the ground that the rate of return used by the corporation, being 8%, was in excess of the cost of money, which was shown to be 6.12%; that the rate of interest used in computing the depreciation annuity, being 4%, was too small; that the losses in the individual districts should be amortized out of subsequent surplus earnings; that the abandoned equipment should not all have been amortized over a

single five-year period; that the amounts charged to depreciation annuity during the first x x years of operation should not have exceeded the cost of actual replacements; and that the item of amortization of bond discount should properly be included in the rate of return and not separately considered in addition to the return of 8% per annum.

I do not consider it necessary at this time to pass upon any of these objections, other than the fact that the corporation has made no allowance for the surplus of later years as amortizing the deficits of earlier years. Table No. IX shows, accepting the corporation's own figures, that the electric properties of the San Joaquin Corporation and its predecessors have paid all operating expenses, earned adequate depreciation annuities, amortized a considerable amount of equipment in the short period of five years, earned 8% per annum on every dollar invested and also on every dollar of accumulative deficit, completely wiped out every cent of early deficits, and, in addition to all these sums, have earned for the corporation a surplus of $785,158.50.

This situation squarely raises the question whether, when the earnings of later years have entirely wiped out the deficits of earlier years, the utility may claim, in a rate case, any allowance for going concern value to be added to the allowances properly to be made for its tangible properties.

If consideration is given primarily to the actual investment in the property as the basis on which a rate of return is calculated, there is, of course, no ground whatsoever for any allowance in such a case, for the reason that the utility has earned a return on every dollar invested and has wiped out every dollar of deficit. On the other hand, if consideration is given primarily to the reproduction cost new theory, this would appear to be another case in which this theory produces results most unfair and unjust to the public. If the rate payers have paid to the utility a

revenue sufficient to wipe out all the deficits incurred during the early years of operation, in addition to a return of 8% on all accumulated deficits as well as on the money actually invested, what reason is there in logic or in equity why the utility should demand a return in excess of the amount properly allowable for its tangible properties? If the utilities are successful in such claims, they will compel the rate payer to pay twice under the same head, first to wipe out the deficit of the early years and then to continue paying a return on the amounts represented by such deficits before they were wiped out. This would be a heavy price to pay to vindicate the reproduction cost new theory.

In the Minnesota Rate case, 230 U.S. 352, the Supreme Court of the United States drew attention to the absurdity and injustice of the reproduction cost new theory as applied to the lands of railroad companies.

In Des Moines Gas Company vs. City of Des Moines, 238 U. S. 153, the same august tribunal drew attention to the absurdity and injustice of this theory as applied to the question of pavement over mains.

In the same case, as I shall now show, the Supreme Court likewise discredited the reproduction cost new theory as applied to going concern value. Hence this theory, so ardently championed by many utilities, has recently been thrice discredited by the Supreme Court.

In the Des Moines Gas Case, the Gas Company filed a bill in the District Court of the United States for the Southern District of Iowa to enjoin an ordinance of the City of Des Moines, establishing a rate of 90¢ per 1000 cubic feet to be charged for gas in Des Moines. The bill was dismissed without prejudice (199 Fed. 204). On appeal to the Supreme Court of the United States, one of the two main questions at issue was whether the master below had made a sufficient allowance for "going concern value". Mr. Justice Day found that the master had been inclined to make an allowance of $300,000 for "going value" but that on reading the decision of the Supreme Court in Cedar Rapids Gas Light Company vs. Cedar Rapids, 223 U.S. 655, he had eliminated this item. The master, however, valued the plant as one "in successful operation", which words he may be assumed to have used as distinguished from the mere salvage value of the separate units of the plant.

In sustaining this valuation, Mr. Justice Day said:

> "Included in going value as usually reckoned is the investment necessary to organizing and establishing the business which is not embraced in the value of its actual physical property. In this case, what may be called the inception cost of the enterprise entering into the establishing of a going concern had long since been incurred. The present company and its predecessors had long carried on business in the city of Des Moines, under other ordinances, and at higher rates than the ordinance in question established. For aught that appears in this record, these expenses may have been already compensated in rates charged and collected under former ordinances. As we have said, every presumption is in favor of the legitimate exercise of the rate-making power, and it is not to be presumed, without proof, that a company is under the necessity of making up losses and expenditures incidental to the experimental stage of its business."

I desire to draw attention particularly to the sentence reading:

> "For aught that appears in this record, these expenses may have been already compensated in rates charged and collected under former ordinances."

In these words, the Supreme Court clearly intimates that if the expense of organizing and establishing the business has already been made good to the utility out of later rates, no additional

allowance for "going concern value" may properly be made in a rate case.

Continuing on the same subject, Mr. Justice Day said:

> "As pointed out in the Cedar Rapids Case, if return is to be regarded beyond that compensation which a public service corporation is entitled to earn upon the fair value of its property, the right to regulate is of no moment, and income to which the corporation is not entitled would become the basis of valuation in determining the rights of the public. When, as here, a long established and successful plant of this character is valued for rate-making purposes, and the value of the property fixed as the master certifies upon the basis of a plant in successful operation, and overhead charges have been allowed for the items and in the sums already stated, it can not be said, in view of the facts in this case, that the element of going value has not been given the consideration it deserves, and the appellant's contention in this behalf is not sustained."

I construe this decision to mean that if a plant has been valued as "in successful operation", as distinguished from a valuation of the scrap value of its component parts, and if rates have been sufficient to reimburse the utility for the cost of organizing and establishing the business, no additional allowance need be made for "going concern value".

In view of this conclusive expression by the tribunal which alone can finally decide questions of confiscation of property arising under the Federal Constitution, I deem it sufficient merely to refer to decisions of other courts establishing the same principle in rate cases.

> Cumberland Telephone and Telegraph Company vs. City of Louisville, 187 Fed. 637, 646;
> Spring Valley Waterworks vs. City and County of San Francisco, 192 Fed. 137, 167;
> Montana, Wyoming and Southern Railroad Company vs. Board of Railroad Commissioners of Montana, 198 Fed. 991;
> Contra Costa Water Company vs. City of Oakland, 159 Cal. 523, 115 Pac. 568;
> Kings County Lighting Company vs. Willcox, 210 N.Y. 479, 489.

Among the decisions of state railroad and public service commissions to the same effect are: Municipal League of Phoenix vs. Pacific Gas and Electric Company, (Arizona Corporation Commission), 21 A.T. & T. Co. Com. L. 699; Application of Macon Rail-

way and Light Company (Georgia Railroad Commission), 29 A.T. & T. Co. Com. L. 1072; Union City vs. Union Heat, Light and Power Company, (Indiana Public Service Commission), 5 Rate Research 69; Commercial Club vs. Missouri Public Utilities Company (Missouri Public Service Commission), P.U.R. 1915 C, 1017; City of Ely vs. Ely Light and Power Company, (Nevada Public Service Commission), 24 A.T. & T. Co. Com. L. 578; Petitions of Grafton County Electric Light and Power Company, (New Hampshire Public Service Commission), 4 N.H.P.S.Com.Rep. 171; Mayhew vs. Kings County Lighting Co., (New York Public Service Commission, First District), 2 P.S.C.Rep., 1st D. (N.Y.) 659; Queens Borough Gas and Electric Rates, (New York Public Service Commission, First District), 2 P.S.C.Rep., 1st D., (N.Y.), 544; Fuhrmann vs. Cataract Power and Conduit Company,(New York Public Service Commission, Second District) 3 P.S.C. Rep., 2nd D. (N.Y.) 656; Fuhrmann vs. Buffalo General Electric Company, (New York Public Service Commission, Second District), 18 A.T. & T. Co. Com. L. 1094.

Decisions by the New Jersey commission and courts and possibly some others, apparently taking a contrary view, are contrary to the overwhelming weight of authority and must be disregarded.

In view of the fact that the rate payers have already paid to San Joaquin Corporation and its predecessors revenues sufficient to pay all operating expenses, an adequate depreciation fund, and an 8 per cent return on the investment and on all accumulated deficits, in addition to wiping out entirely all deficits, no allowance will be made herein for going concern value in addition to the fair value of the corporation's tangible property. The tangible property, however, is being valued as property in successful operation by a going and successful utility.

It must not be understood from this decision that where a utility's deficits have not been wiped out, the amount

of such deficits must necessarily be added as "going value" or otherwise to the amount reasonably allowable for the tangible property. Otherwise, the most poorly operated property might be the most valuable in a rate case. All such cases will be disposed of on their respective facts as they arise.

(f) Water rights.

The San Joaquin Corporation claims in these proceedings the ownership of the following water rights:

(1) The right to withhold in the corporation's reservoir in Crane Valley the waters of the North Fork of the San Joaquin River to the extent of about 51,000 acre feet, and to divert this water from the reservoir, together with the natural flow of said North Fork and its tributaries for the purpose of generating power at three power houses, the water being returned to the San Joaquin River after being so used.

(2) The right to divert and use 50 cubic feet of water from the two upper branches of the Tule River, this water being returned to the Tule River at the junction of said branches with the main Tule River in Tulare County.

(3) The right to divert from the Kern River water sufficient to generate at the present time 1350 K.W. of electric energy and to increase said diversion sufficiently to generate 7500 K.W. of electric energy, this water being returned to the Kern River after being used in the corporation's power house.

(4) The right to divert from the Merced River immediately above Merced Falls a sufficient quantity of water to generate approximately 1000 K.W. of electric energy, this water being returned to the Merced River immediately below the power house.

The San Joaquin Corporation now has installed on the North Fork of the San Joaquin River two power houses, known as Power House No. 1 (San Joaquin Power House) and Power House No. 3,

having an alleged combined capacity of 18,000 K.W. at unity power factor. The corporation has done preliminary work in the construction of an additional power house, to be known as Power House No. 2, which will have a capacity of 2000 K.W. The installed capacity on the Tule River is approximately 6000 K.W. The installed capacity on the Kern River is approximately 1350 K.W. The San Joaquin Corporation claims that it will hereafter increase this installation to a 7500 K.W. plant. The installed capacity at Merced Falls is about 500 K.W. The corporation states that it will hereafter increase this capacity to about 1000 K.W.

The original cost of all of said water rights, as shown by the books of the San Joaquin Corporation and its predecessors, is reported by Mr. Wells in Railroad Commission's Exhibit No. 3, to have been not to exceed the sum of $50,075.78. The total sum charged on the books of the San Joaquin Corporation and its predecessors for "rights of way, water rights and franchises" is the sum of $67,034.17. By subtracting from this amount the sum of $12,683.69, being the cost of rights of way as estimated by E. B. Walthall, assistant general manager of the San Joaquin Corporation, and the sum of $4,274.70, being the agreed expenditure on account of franchises, there remains the sum of $50,075.78 hereinbefore stated. Mr. Wells reports that the total identified cost of water rights alone and of water rights with land is about $7,570.00. His report shows that the sum of $50,075.78 includes payments for water rights, payments for water rights with land, costs of easements and legal and traveling expenses in connection with the acquisition and protection of the corporation's water rights. All expenditures in connection with water rights are included in the total of $9,096,270.75, reported by Mr. Hughes as being the total investment in the SanJoaquin Corporation's electric properties on December 31, 1914.

The San Joaquin Corporation has presented claims for water right values on two distinct theories. With reference to the rights on the North Fork of the San Joaquin River, the corporation has presented claims based on a comparison of the cost of generating electric energy by hydro-electric power and by steam power. With reference to the rights on the North Fork of the San Joaquin River, the corporation has also presented a claim based on the assumed detriment to lower riparian lands on the San Joaquin River down to its confluence with the Merced River, caused by the storage of water in the Crane Valley Dam at seasons of the year during which the water would otherwise flow down the San Joaquin River and be available for the irrigation of riparian lands. Each of these claims will be separately considered.

Comparison with cost of generation by steam.

Mr. C. E. Grunsky presented as San Joaquin Corporation's Exhibit No. 25, an estimate of the cost of generating electric energy by means of the corporation's present hydro-electric production system as compared with the cost of generating an equivalent amount of electric energy in an assumed main plant and auxiliary plant operated by steam generated from oil.

Referring to the hydro-electric system, Mr. Grunsky assumed the installation of Power House No. 2, which is to be located on the North Fork of the San Joaquin River with a capacity of 2000 K.W. Adding this capacity to the present installed capacity of the San Joaquin Corporation's hydro-electric system, Mr. Grunsky reached a total of 27,350 K.W. installed capacity, which he used in his computations with reference to the corporation's hydro-electric system. The output capacity of Mr. Grunsky's substitutional all-steam plant was taken to be 31,500 K.W., of which 26,500 K.W. would be installed at Bakersfield, where oil can be had at a low cost, and 5000 K.W. at Fresno, as a standby.

Mr. Grunsky's conclusion is that with oil at 53.2¢ per barrel at Bakersfield, the total annual cost of operation plus interest and depreciation for the substitutional all-steam plant would be $578,736.00, while the total annual cost of operation plus interest and depreciation for an equivalent amount of electric energy generated by the San Joaquin Corporation's present hydro-electric system, assuming that proposed Power House No. 2 has been completed and is in service, would be $637,912.00. It thus appears on Mr. Grunsky's own figures that the annual expense in connection with the San Joaquin Corporation's hydro-electric system would be $59,176.00 in excess of the expense of the assumed substitutional all-steam plant. If this sum is capitalized at 8%, it will thus appear that the San Joaquin Corporation's hydro-electric system, when Power House No. 2 on the North Fork of the San Joaquin River has been completed and is in operation, will have a negative value of $739,700.00 when oil costs 53.2¢ per barrel at Bakersfield. The prevailing price of oil at Bakersfield has been approximately 50¢ per barrel. Mr. Grunsky estimates that the annual cost of operating his subsitutional all-steam plant, with auxiliary, will increase $5,667.00 for each one cent increase in the price per barrel of oil at Bakersfield. He reaches the following conclusion with reference to the relative cost of operating the San Joaquin Corporation's hydro-electric system and the assumed substitutional all-steam systems, with oil at varying prices per barrel at Bakersfield:

TABLE NO. XI.

RELATIVE COST OF OPERATING HYDRO-ELECTRIC SYSTEM AND SUBSTITUTIONAL STEAM SYSTEM WITH VARYING PRICES OF OIL AT BAKERSFIELD, AS COMPUTED BY C.E.GRUNSKY.

Price of oil at Bakersfield	Operating cost plus 8% interest and depreciation.			
	Hydro-Elec. Plant		All-steam Plant	
	Total annual	per K.W.Hr.	Total annual	per K.W.Hr.
Oil @ 50¢ pr. bbl	$633,624	$.00560	$560,602	$.00495
" "53.20¢ "	637,912	.00562	578,736	.00510
" " 55¢ "	640,324	.00565	588,937	.00519
" " 60¢ "	647,024	.00571	617,272	.00544
" " 65¢ "	653,724	.00576	645,607	.00569
" " 67¢ "		.00578		.00579
" " 70¢ "	660,424	.00582	673,942	.00594
" " 75¢ "	667,124	.00588	702,277	.00619

Mr. Grunsky concludes that with each advance of one cent per barrel in the price of oil at Bakersfield above 67¢, there would be an advantage in favor of the hydro-electric plant of $4,327.00 per annum. In making his comparison, Mr. Grunsky confined himself to production costs and did not consider transmission costs, for the reason that he concluded that transmission costs would be substantially the same whether the power be generated by water in the mountains or by an all-steam plant at Bakersfield, with an auxiliary at Fresno.

Mr. Grunsky concludes that the negative value of the San Joaquin Corporation's hydro-electric system at prevailing prices for oil at Bakersfield should not be taken as reflecting upon the business judgment of those who have initiated and carried forward the enterprise of developing the water powers of the San Joaquin, Kern and Tule rivers. He is of the opinion that no deduction should be made from the value of the San Joaquin Corporation's physical properties, by reason of the fact that under existing conditions the corporation's hydro-electric system shows a negative value as contrasted with the possibility of generating an equivalent amount of electric energy by steam.

Mr. G. R. Kenny, statistician of the San Joaquin Corporation, presented as corporation's Exhibit No. 26, an estimate of the value of two of the corporation's water rights, singly and consolidated, on the comparative steam plant theory but on assumptions different from those used by Mr. Grunsky. Mr. Kenny confined his computations to the water rights in connection with the North Fork of the San Joaquin River and the Kern River, leaving out of consideration the Tule River and the Merced Falls developments. He differed further from Mr. Grunsky in that he assumed an installation of 7500 K.W. on the Kern River, whereas the present installation, used by Mr. Grunsky, is only 1350 K.W. Mr. Kenny assumed a substitutional steam plant with a capacity of 25,000 K.W., located at Bakersfield, with a reserve steam plant of 5000 K.W. located at Fresno. Mr. Kenny's conclusions with reference to the value of these two water rights of the San Joaquin Corporation, singly and combined, on the bases used by him, appear in the following table:

TABLE NO. XII.

WATER RIGHT VALUES OF NORTH FORK AND KERN CANYON DEVELOPMENTS AT VARYING PRICES OF OIL AT BAKERSFIELD, COMPUTED BY MR.G.R.KENNY.

Price of Oil	North Fork	Kern Canyon	T o t a l	Combination
$ .50	$ 5,689.75	$1,057,210.37	$1,062,900.12	$1,067,335.25
.55	180,663.50	1,170,909.12	1,351,572.62	1,374,216.25
.60	355,637.25	1,284,607.87	1,640,245.12	1,681,097.25
.65	530,611.00	1,398,306.62	1,928,917.62	1,987,978.25
.70	705,584.75	1,512,005.37	2,217,590.12	2,294,859.25
.75	880,558.50	1,625,704.12	2,506,262.62	2,601,740.25

It will be observed that Mr. Grunsky and Mr. Kenny both used the substitutional steam plant method, but that one engineer, using this method, reports a large affirmative value for the corporation's water rights, while the other, using the same method, reports a large negative value. As going to the reliability of this method of ascertaining the value of water rights

for the generation of hydro-electric energy, the following table will be interesting. The deficits shown in Mr. Grunsky's report are capitalized at 8% per annum, in order to make his conclusions comparable with those of Mr. Kenny:

TABLE NO. XIII.

COMPARATIVE CONCLUSIONS OF GRUNSKY AND KENNY WITH REFERENCE TO VALUE OF WATER RIGHTS OF SAN JOAQUIN CORPORATION, ON COMPARATIVE STEAM METHOD.

Price of Oil per barrel	Kenny	Grunsky	Difference
	Combined Developments		
$ .50	+ $1,067,335.25	- $912,775.00	$1,980,110.25
.55	+ 1,374,216.25	- 642,337.50	2,016,553.75
.60	+ 1,681,097.25	- 371,900.00	2,052,997.25
.65	+ 1,987,978.25	- 101,462.50	2,089,440.75
.70	+ 2,294,859.25	+ 168,978.00	2,125,884.25
.75	+ 2,601,740.25	+ 439,412.50	2,162,327.75

In the foregoing computation the sign + means affirmative value and the sign - means negative value.

It will be unnecessary for me to say that any theory which produces such strikingly dissimilar results, is open to the most serious question. If it were necessary to do so, attention might also be drawn to the unreliability of a theory which results in such varying water right values, shifting month by month and year by year with the varying prices of fuel oil and making the continuance of a stable rate base impossible.

Attention should here be drawn to the fact that the cost of production of hydro-electric energy assumed by Mr. Kenny in the foregoing computations is far less than the cost of producing hydro-electric energy assumed by the corporation in its cost of service computations as the basis for the establishment of rates in these proceedings. If it is fair to use a far lower cost of service in determining so-called water right values where the comparative plant theory is used, it would seem unfair to charge the public with any greater cost of producing power, when the cost of service computations on which rates are to be based are made. Mr. Kenny's estimate of the annual cost of production and transmission from the combined North Fork and Kern developments is $646,036.44. On the other hand, the utility claims that the actual cost of service for the comparable items, to be used by this Commission in establishing rates, is $882,102.41. The following table shows a comparison of the cost of service estimates as presented by the San Joaquin Corporation in its Exhibit No. 27, and in its water right and comparative steam plant computations shown in its Exhibit No. 26:

TABLE NO. XIV

COMPARATIVE COSTS OF SERVICE CLAIMED BY SAN JOAQUIN LIGHT AND POWER CORPORATION AS BETWEEN COST OF SERVICE FOR ESTABLISHING RATES AND COST OF SERVICE FOR ESTABLISHING WATER RIGHT VALUES.

Estimated production and transmission cost, under present conditions, as shown by corporation's Exhibit No. 27	$882,102.41
Estimated cost of combined hydro-electric developments, as shown by corporation's Exhibit No. 26	646,036.44
Comparative substitutional steam plant cost, as shown by corporation's Exhibit No. 26	731,423.26
Excessive present cost over steam cost	150,679.15
Excessive present cost over combination hydro-electric cost	236,065.97

The foregoing estimates of cost are based upon the present demand and output and can therefore be considered as directly comparable. From the foregoing table it appears that the present cost of service claimed by the corporation in its Exhibit No. 27 as the basis for establishing rates in these proceedings is $150,679.15 in excess of the substitutional steam plant referred to in the corporation's Exhibit No. 26, and $236,065.97 in excess of the combined hydro-electric plants likewise referred to in the corporation's Exhibit No. 26. In other words, comparing Exhibit No. 26 of San Joaquin Light and Power Corporation with Exhibit No. 27, it would appear that the present installation of the corporation is extremely uneconomical. Capitalizing the excess cost, as claimed, of the present system over the cost of a substitutional steam plant at 8%, it would appear that the present system has a negative value of $1,883,489.00 when the cost of fuel at Bakersfield is 50¢ per barrel. This

value will remain negative, on this basis, even if the price of oil should be increased to 75¢ per barrel.

As already indicated, Mr. Kenny assumed the construction and operation of two hydro-electric plants which are not now in existence, one a 2000 K.W. plant, to be located on the North Fork of the San Joaquin River, and the other a 7500 K.W. plant, to be installed on the Kern River in lieu of the present 1350 K.W. plant. The importance of this one element in the problem is shown by the fact that with oil at 50¢ per barrel at Bakersfield, the present development on the Kern River Canyon would show, under Mr. Kenny's figures, a value for water rights of only $151,191.50 as contrasted with the figure of $1,057,210.37 appearing in Table No. XII and based on an assumed development of 7500 K.W. This 7500 K.W. plant is not in existence and there is no definite evidence in the record as to when it will be built. I assume that it will be quite generally agreed that in determining the value of the water rights of the San Joaquin Corporation, consideration should be given only to the present development or to such additional development as can be confidently counted on for the near future.

Mr. Kenny, as already pointed out, has considered only the developments on the North Fork of the San Joaquin River and on the Kern River, which developments the San Joaquin Corporation apparently assumed might show an affirmative value. The corporation has entirely left out of its computations the Tule River development and the Merced Falls development, which developments, under the corporations own theory, admittedly show a negative value. It is obviously improper when seeking to ascertain the value of a utility's water rights for the generation of hydro-electric energy, to consider only those portions of the utility's hydro-electric development which seem to show an affirmative value and to leave out of consideration entirely those developments

which would show a negative value. The value of a utility's water rights should be ascertained only from a consideration of the utility's entire water system used and useful in its business. For these reasons, the computations presented by Mr. Grunsky are entitled to greater consideration herein than those presented by the San Joaquin Corporation's own employees.

In order to ascertain the result of the comparative steam plant method when properly applied to the facts of these proceedings, the Commission has made an independent computation. The following table shows the cost of generating hydro-electric energy in the San Joaquin Corporation's present system, based on the electric energy sold in the year 1914, not including general and administrative expenses and taxes:

TABLE NO. XV.

WATER RIGHT VALUATION-- SAN JOAQUIN LIGHT AND POWER CORPORATION'S PRESENT SYSTEM

CAPITAL		
PRODUCTION CAPITAL		
Crane Valley Reservoir	$1,177,044.56	
Power plants	3,389,538.70	
Total		$4,566,583.26
Proportion of transmission capital		
Production Plant Substation Equipment	202,337.79	
Transmission Lines	202,068.82	404,406.61
Total Production and Transmission		$4,970,989.87
ESTIMATED RETURN.		
Interest at 8%		$ 397,679.18
Depreciation:		
Production	92,430.36	
Transmission 22.965%	14,454.00	106,884.36
Expenses:		
Production	132,977.58	
Transmission 22.965%	8,208.13	141,185.71
Total Return, not including General, Administrative, etc. and Taxes		645,749.26

In the foregoing table, the production capital and the estimated allowance for interest and depreciation have been taken from Mr. Kenny's report of the cost of service for the production system, as shown by Exhibit No. 27 of the San Joaquin Corporation. To the production capital has been added the estimated cost of power plant substation equipment and the cost of the transmission lines connecting the power plants with the main transmission lines, as shown in Railroad Commission's Exhibit No. 2. The transmission operating expenses and depreciation as reported by Mr. Kenny for 1914 have been pro rated to this capital on the basis of relative investment. No general expenses or taxes have been included for comparative purposes. The Kenny values have been used in so far as possible.

The following table shows the cost of producing electric energy in two substitutional steam plants, one of which, with an installed capacity of 25,000 K.W., is assumed to be located at Bakersfield, while the other, with an installed capacity of 5,000 K.W., to act as an auxiliary, is assumed to be located at Fresno:

TABLE NO. XVI.

COMPARATIVE STEAM PLANTS AT BAKERSFIELD AND FRESNO
COST OF PRODUCTION BY STEAM

MAIN PLANT
25,000 K.W. at Bakersfield

Investment		
25,000 K.W. at $50.00	$1,250,000.00	
Overhead 17-1/2%	218,750.00	
	$1,468,750.00	
Substation Equipment	146,750.00	
Total	$1,615,500.00	
Estimated Return		
Interest at 8%		$129,240.00
Depreciation:		
Steam Plant at 3.17%	$ 46,559.37	
Substation at 3.62%	5,313.00	51,872.37
Operation (Running Expense)		
Steam plant expense other than oil and supplies	41,418.44	
Supplies	3,373.74	
Substation expense	2,979.00	
Fuel oil 481,421 Bbl. at 50¢	240,710.50	288,481.68
Total Main Plant		$ 469,594.05

AUXILIARY PLANT

5,000 K.W. at Fresno

Investment		
5,000 K.W. at $50.00	$250,000.00	
Overhead 17-1/2%	43,750.00	
	$293,750.00	
Substation Equipment	29,350.00	
Total	$323,100.00	
Estimated Return		
Interest at 8%		$25,848.00
Depreciation		
Steam Plant	$ 9,311.87	
Substation	1,062.00	
		10,373.87
Operating Expense		
Steam Plant Expense other than oil	$ 9,000.00	
Substation Expense	595.00	
Oil	13,500.00	
		23,095.00
Total Auxiliary Plant		$ 59,316.87
Total Steam Production (Not including General Expense or Taxes.)		$528,910.92.

It will be observed from the foregoing tables that while the cost of production in the comparative steam plants, not including general expense or taxes, would be $528,910.92, the cost of production in the San Joaquin Corporation's present hydro-electric production system, is, on Mr. Kenny's computations with the necessary modifications, $645,749.26, with oil at 50¢ per barrel at Bakersfield.

The total cost of fuel oil under the present system of the San Joaquin Corporation, taking an average of 1913 and 1914, was $71,367.72. The cost of fuel oil in the comparative plant used in the Commission's computations, assuming 50¢ per barrel at Bakersfield and 75¢ per barrel at the auxiliary plant at Fresno, would be $254,210.50, or $182,842.78 in excess of the actual consumption of the present system during 1913 and 1914. At 50¢ per barrel for oil at Bakersfield, the comparative plant would use 356,696 barrels of oil annually in excess of the existing plant. Hence it follows that for each 5¢ increased cost of oil at Bakersfield, the increase of the cost for the comparative steam plant would be $17,834.70.

The following table shows the value of the water rights of the San Joaquin Corporation, on the Commission's computations, with fuel oil at varying prices at Bakersfield. The results are all negative:

Table No. XVII

VALUE OF WATER RIGHTS OF SAN JOAQUIN LIGHT AND POWER CORPORATION ON COMMISSION'S COMPUTATIONS ON COMPARATIVE STEAM PLANT THEORY.

Price of oil at Bakersfield	Net Saving Over steam	Capitalized at 8% Water Right Value
50¢ per bbl.	-$116,838.34	- $1,450,479.00
55¢ " "	- 99,003.54	- 1,237,544.00
60¢ " "	- 81,168.74	- 1,014,609.00
65¢ " "	- 63,333.94	- 791,674.00
70¢ " "	- 45,499.14	- 568,739.00
75¢ " "	- 27,664.34	- 345,804.00

The sign - means a negative result.

As shown by the computations of Mr. Grunsky and of the Railroad Commission, the result of the application of the comparative steam method, reasonably applied, is to show that the water rights of San Joaquin Corporation have at present a large negative value and that they will continue to have a negative value until the price of oil at Bakersfield has risen approximately 50% in excess of its present price. Hence, it is unnecessary in these proceedings to pass upon the question whether, in case the result of the reasonable application of the comparative steam plant method should show an affirmative value for a utility's water rights, the entire benefit of such value belongs to the utility. I shall content myself at the present time with pointing out that such conclusion might lead to unjust results, in that it would deprive the consuming public of California of all the fruits of the advantages which should come to them by reason of the fact that they live in a state to which nature has given lofty mountains down which great streams of wonderful power dash in their race to the sea. When the proper time comes, the Commission will give consideration to the question whether the benefit of

these natural resources of California should accrue entirely to the utility which happens to post and record certain notices of appropriation, or whether the people of California are xxx entitled to some share in these advantages.

Detriment to lower riparian owners.

The San Joaquin Corporation also presented a claim to the value of its water rights on the North Fork of the San Joaquin River, based on a capitalization at 8% per annum of the alleged detriment suffered by the owners of riparian lands on the San Joaquin River down to its confluence with the Merced River, caused by the withholding of water by the San Joaquin Corporation in the Crane Valley Reservoir during March and April of each year.

The argument, in effect, is that during the months of March and April, the Crane Valley Reservoir withholds a small portion of the waters which otherwise would be available for the irrigation of riparian lands on the San Joaquin River, and that thereby an ascertainable damage is done to such riparian lands. The San Joaquin Corporation assumes on the cost of reproduction theory, that its water rights on the North Fork of the San Joaquin River are worth what it would cost to acquire them in case the corporation did not own them and that the cost of acquisition would be measured by the detriment assumed to be caused to the lower riparian lands by the withholding of certain waters in March and April of each year. The corporation capitalizes the assumed detriment and reaches the conclusion that on this theory, its water rights on the North Fork of the San Joaquin River are worth somewhere between $650,000 and $1,000,000.

In support of this claim, the San Joaquin Corporation presented data to show the extent to which the Crane Valley Reservoir interferes with the normal flow of the San Joaquin River. This data was compiled by Mr. C. E. Grunsky, and appears in Exhibit No. 23 of

the San Joaquin Corporation. The following table shows the average effect of the operation of the Crane Valley Reservoir upon the flow of the San Joaquin River, as computed by Mr. Grunsky from the records of 1910 to 1914, inclusive:

TABLE NO. XVIII

EFFECT OF OPERATION OF
CRANE VALLEY RESERVOIR
ON FLOW OF SAN JOAQUIN RIVER.

The flow of the river in October	was	increased	by	51.7 sec. ft.
" " " " " " November	"	"	"	37.7 " "
" " " " " " December	"	"	"	31.2 " "
" " " " " " January	"	decreased	"	94.7 " "
" " " " " " February	"	"	"	35.8 " "
" " " " " " March	"	"	"	87.4 " "
" " " " " " April	"	"	"	73.9 " "
" " " " " " May	"	"	"	67.2 " "
" " " " " " June	"	"	"	19.3 " "
" " " " " " July	"	increased	"	34.0 " "
" " " " " " August	"	"	"	46.5 " "
" " " " " " September	"	"	"	47.7 " "

It will be observed that although the flow of the river is decreased from January to June, inclusive, it is increased from July to December, inclusive. This increase is due to the fact that water held in storage in the Crane Valley Reservoir is let down during the latter half of the year for the purpose of generating power, and thus increases what otherwise would be the normal flow of the river during this period of the year. The irrigating season in this vicinity generally commences in March or April and usually ends in October. The period when water is most needed for irriga-

tion is during June, July and the subsequent months.

The following table shows the effect in percentages of the storage of water in the Crane Valley Reservoir on the flow of the San Joaquin River above 1500 second feet, during the first six months of the year:

TABLE NO. XIX

EFFECT IN PERCENTAGES OF STORAGE OF WATER IN CRANE VALLEY RESERVOIR UPON FLOW IN SAN JOAQUIN RIVER ABOVE 1500 SECOND FEET.

Month	1910	1911	1912	1913	1914	Average 1910-15
	%	%	%	%	%	Per Cent.
January	-9.2			-8.5		-16.1
February	+1.4			-13.0		-14.6
March	-6.1			- 2.8	-16.4	- 8.1
April	-1.2		-11.2	- 0.6	- 4.0	- 2.6
May	0	-3.4	- 0.5	- 0.3	- 3.4	- 1.2
June	+0.1	-0.8	+.0.8	0	- 0.5	- 0.2

There is no claim herein that any injury whatsoever is caused to lower riparian owners by storing water in the Crane Valley Reservoir in the months of January and February. The San Joaquin Corporation's claim is limited to detriment supposed to be caused in the month of March, during which month the operations of the Crane Valley Reservoir have diminished the normal flow of the San Joaquin River on an average of 8.1% and in the month of April, during which month the operations of the Crane Valley Reservoir have diminished the normal flow of the San Joaquin River 2.6%. It will be observed that the interference with the normal flow of the San Joaquin River during the months of March and April is ~~xxxx~~ slight in any event.

The San Joaquin Corporation introduced evidence to show that 209,223 acres of land are riparian to the San Joaquin River down to its confluence with the Merced River. Of this acreage, 40,000 acres are irrigated by the first 1500 second feet of the San Joaquin River. The San Joaquin Corporation does not claim any right to store water in the Crane Valley Reservoir if the flow of the river is below 1500 second feet. Hence, the acreage of riparian lands which are assumed to be affected by the storage of water in the Crane Valley Reservoir amounts to 169,223 acres. The San Joaquin Corporation introduced evidence to show that if the waters of the San Joaquin River were entirely withheld, the damage to riparian lands would amount to an average of between $65.00 and $75.00 per acre. On this basis, as pointed out in the San Joaquin Corporation's brief, the detriment to 170,000 acres of riparian lands would amount to $11,050,000. The San Joaquin Corporation, however, admits that it would be necessary to construct nineteen or twenty other reservoirs, each having the same effect as the Crane Valley Reservoir, in order completely to deprive the lower riparian lands of water. The San Joaquin Corporation assumes that only between 5% and 7% of the normal flow of the San Joaquin River above 1500 second

feet is withheld in the months of March and April, and hence concludes that the assumed damage to the lower riparian lands is 6% of $11,050,000, "or a valuation somewhat in excess of $650,000." I may draw attention in passing to the fact that Mr. Grunsky's report shows that although 8.1% of the normal flow of the San Joaquin River is withheld by the Crane Valley Reservoir in the month of March, only 2.6% is withheld in the month of April, during which month irrigation in this territory to a considerable extent commences.

Having now stated the corporation's theory, I shall proceed to a consideration of its merits.

Attention should be drawn at the outset to the fact that no witness testified that the withholding by the Crane Valley Reservoir of 8.1% of the normal flow of the San Joaquin River in the month of March and 2.6% in the month of April will do any measurable damage or any damage at all to the lower riparian lands. The only basis for this claim is the statement of counsel of the San Joaquin Corporation in their brief. For all that appears in the evidence, the withholding of this comparatively small amount of water would do no measurable damage to any owner of riparian lands on any portion of the San Joaquin River. As bearing on the question whether any real damage would be occasioned, I shall shortly refer to the contract dated June 14, 1909, between Miller & Lux, Incorporated, the principal riparian owners on the San Joaquin River to its confluence with the Merced River, and San Joaquin Light & Power Company. Even if damages had been shown, there is no evidence in these proceedings worthy of serious consideration as to the amount of such damages. The mere statement that riparian lands would be damaged to the extent of $65.00 to $75.00 per acre if nineteen or twenty more Crane Valley Reservoirs were constructed, so that the flow of the river would be entirely withheld during certain months from the lower riparian owners, is of

no assistance in determining what damages, if any, have actually been caused by a reservoir which withholds only 8.1% of the normal flow of the San Joaquin River during the month of March and 2.6% in the month of April. Furthermore, such a claim entirely leaves out of consideration the very great advantage which would ensue to lower riparian lands if they could secure largely added amounts of water in the months of July, August, September and October, which waters would be let down during these months through the power houses connected with the nineteen or twenty assumed Crane Valley Reservoirs.

This matter brings me to a consideration of the question whether the lower riparian lands have, as a matter of fact, suffered any injury whatsoever by reason of the operation of the Crane Valley Reservoir.

Subsequent to the submission of these proceedings, the presiding Commissioner accidentally learned of the existence of the Miller & Lux contract, which contract was not offered in evidence by the San Joaquin Corporation and was in no way referred to by name or in any way to direct attention thereto, in the evidence or in the brief of counsel. The San Joaquin Corporation was thereupon requested to file a copy of the contract, and did so. Under the stipulation to the effect that all documents filed by the San Joaquin Corporation subsequent to the submission of these proceedings would be considered in evidence herein, this contract is a part of the record in these proceedings.

The contract is dated June 14, 1909, and is an agreement between Miller & Lux, Incorporated, Las Animas and San Joaquin Land Company, Incorporated, and California Pastoral and Agricultural Company, Limited, parties of the first part, and San Joaquin Light & Power Company, party of the second part. The contract recites, in part, that the Miller & Lux corporations are the owners of a large acreage of land in the counties of Fresno, Madera, Merced and Stanislaus, the larger portion of which border on the main

channels and the branches and sloughs of the San Joaquin River; that the Miller & Lux corporations have diverted and appropriated from the San Joaquin River large quantities of water for irrigation, domestic and other beneficial purposes and that part of the water used for irrigation has been used upon lands riparian to the San Joaquin River and part upon other lands; and that the flow of the water in the San Joaquin River is irregular, so that during certain months of the year there is a large flow and during other months insufficient to supply the lands of the Miller & Lux corporations with water for irrigation purposes as well as for stock and domestic uses. The agreement then proceeds as follows:

> "Whereas, it will be for the interest of the parties of the first part hereto to have reservoirs constructed upon the North Fork of the San Joaquin River, a tributary of said San Joaquin River, provided such reservoirs can be filled with water by retaining therein a portion of the water flowing in said North Fork, or in its branches or tributaries at periods of the year when there is a large volume of water flowing down the main channel of the said San Joaquin River and through and over the lands and to the canals and ditches of the parties of the first part; and provided further, that such water after being so reservoired can be regularly returned to the channel of said North Fork or to the channel of said San Joaquin River, at seasons of the year when there is a small volume of water flowing in said river, so as to supply the lands, and to the canals and ditches of the parties of the first part, a more regular flow, and a greater amount of water, than naturally flows down said river, during the periods of each year when the water becomes low in said river."

I desire to draw attention particularly to the fact that the lower riparian owners here agree that it will be to their interest to have reservoirs constructed upon the North Fork of the San Joaquin River, for the reason that the storage of water in such reservoirs and the subsequent use of such water for the generation of hydro-electric energy will result in putting into the San Joaquin River for the irrigation of riparian lands large amounts of water during the periods of each year when the water becomes low in the river, meaning thereby the months of July, August, September and October. Thus, instead of being a detriment to the lower riparian owners, the construction of the Crane Valley Reservoir

is here solemnly declared to be a benefit to these owners.

In a subsequent recital, the San Joaquin Light & Power Company, which is the immediate predecessor of the San Joaquin Light and Power Corporation and was controlled by the same people, agrees that it will return to the natural channel of the North Fork of the San Joaquin River all the water which it may reservoir in Crane Valley Reservoir "so that it shall flow down to the lands and canals of the parties of the first part, each and every year, at period or periods of time when there is only a small volume of water naturally flowing in said river, and when an increased flow will be of great benefit to said parties of the first part."

The San Joaquin Light & Power Company agrees that it will commence construction of the Crane Valley Reservoir within six months from the date of the agreement, and that within two years thereafter it will complete its dams and reservoirs to the capacity of at least 30,000 acre feet and will thereafter maintain and operate the same at least to that capacity. In order to show the interest of the Miller & Lux corporations in having this agreement performed and in having the waters of Crane Valley Reservoir withheld during certain months and let out during later months, the agreement provides that if any one should commence an action to interfere with the construction by the San Joaquin Light & Power Company of its works, the latter company will "with all reasonable diligence take such proceedings as may be necessary to prevent the granting of any such restraining order or injunction, and to have the same dissolved if granted." The San Joaquin Light & Power Company further agrees that if any one should be successful in securing an injunction, the San Joaquin Light & Power Company will at once take all necessary steps to condemn the rights and interests of such person and to prosecute such action to final determination

with all reasonable diligence.

It seems too clear for argument, from this contract, that the Miller & Lux corporations were of the opinion that the construction of the Crane Valley Reservoir and the impounding of water therein, with the letting out of this water during the summer and autumn months, would be a very great benefit to them as the owners of riparian lands on the San Joaquin River. Any person familiar with the conditions on the San Joaquin River would naturally expect that the riparian owners would take this position. Exhibit No. 21 of the San Joaquin Corporation shows that out of a total of 209,223 acres riparian to the San Joaquin River in Fresno, Madera and Merced counties, Miller & Lux, Incorporated, own 142,906.29 acres. The record does not show the extent to which the other two affiliated corporations mentioned in the contract of June 14, 1909, as parties of the first part, also own riparian lands on the San Joaquin River. There is no reason, however, to doubt that the position of Miller & Lux as the owners of over two-thirds of the riparian lands in the territory here under consideration, would not be the position taken by every other riparian owner.

The contract of June 14, 1909, entered into between the principal riparian owners and the immediate predecessor of the San Joaquin Corporation absolutely disproves and refutes the claim of San Joaquin Light and Power Corporation to a value for its water rights on the North Fork of the San Joaquin River, based upon an alleged and assumed detriment to the lower riparian owners resulting from the operation of the Crane Valley Reservoir.

As already indicated, this contract was not drawn to the Commission's attention by the San Joaquin Corporation, and it was only through mere chance that the presiding Commissioner became aware of its existence. To say that this corporation has not dealt fairly with the Railroad Commission in suppressing this contract is to put the matter mildly. Those officials or such

counsel of the San Joaquin Light and Power Corporation as are responsible for the failure to present this contract in evidence deserve severe censure from this Commission. This matter is particularly unfortunate in that most of the officials and counsel of the San Joaquin Corporation have dealt with absolute fairness and candor with the Commission in these proceedings.

I am now brought to a consideration of the question whether, under any theory, a water right value can be allowed by this Commission in connection with the San Joaquin Corporation's Crane Valley development. While there were some references in the course of the hearings to the fact that this reservoir was built and a portion of the lands in its basin were flooded under a Federal permit, no copy of such permit was introduced in evidence. After the submission of these proceedings, the Commission called upon the San Joaquin Corporation and received from it a copy of the agreement with the Department of Agriculture under which the Crane Valley reservoir was constructed. This agreement is dated July 27, 1912. It appears from this agreement and from map showing location of the San Joaquin Corporation's hydro-electric properties on the North Fork of the San Joaquin River, which has been marked Exhibit No. 63 of the San Joaquin Corporation, that the structure of the Crane Valley dam has been built partly, if not entirely, on land in the Sierra National Forest belonging to the Government of the United States and that approximately 227 acres of the area flooded by the dam is likewise National Forest land. In other words, without a permit from the National Government, the Crane Valley Reservoir could not have been constructed, and the land in the lower portion of the reservoir adjacent to the dam could not have been flooded.

The power agreement provides that the rights granted thereby shall be void upon the expiration of fifty years from

October 12, 1909, but that the permit may thereafter be renewed by the duly authorized officer or agent of the United States upon such conditions as he may in his discretion establish. The agreement reads in part as follows:

> "The permittee (San Joaquin Light and Power Corporation) does hereby, in consideration for the permit hereby applied for, promise and agree for itself and its successors to comply with all regulations and instructions of the Department of Agriculture governing national forests."

Article XXIX of the regulations of the Secretary of Agriculture and instructions to forest officers relating to water power, effective February 24, 1913, reads as follows:

> "That in respect to the regulation by any competent public authority of the service to be rendered by the permittee or the price to be charged therefor and in respect to any purchase or taking over of the properties or business of the permittee or any part thereof by the United States, or by any State within which the works are situated or business carried on in whole or in part, or by any municipal corporations in such State, no value whatsoever shall at any time be assigned to or claimed for the permit, or for the occupancy or use of national forest lands granted thereunder, nor shall the permit or such occupancy and use ever be estimated or considered as property upon which the permittee shall be entitled to earn or receive any return, income, price, or compensation whatsoever."

In view of the fact that the permit from the Federal Government is a condition sine qua non to the exercise of any rights in connection with the Crane Valley Reservoir, I assume that it would be admitted that if this regulation of the Federal Government had been in effect when the San Joaquin Corporation secured its permit, the corporation could not claim any water right value in connection with the Crane Valley development. I have searched for a similar rule or regulation in effect on July 27, 1912, at which time the power agreement affecting the Crane Valley development was signed, but have been unable to find such regulation then in effect.

Section 52 of the Public Utilities Act provides as follows:

> "The commission shall have no power to authorize the capitalization of the right to be a corporation,

> or to authorize the capitalization of any franchise or permit whatsoever or the right to own, operate or enjoy any such franchise or permit, in excess of the amount (exclusive of any tax or annual charge) actually paid to the state or to a political subdivision thereof as the consideration for the grant of such franchise, permit or right."

If the word "state" be considered broad enough to include the Federal Government, it would seem to be clear that under this provision of the Public Utilities Act the Railroad Commission would have no authority to capitalize any permit such as the one under which the San Joaquin Corporation holds its Crane Valley rights from the Federal Government. If this Commission is without authority to allow the capitalization of such a permit, it would seem equally clear that it can not allow a value for such permit in a rate case.

Even if Section 52 of the Public Utilities Act should be held inapplicable, for the reason that this permit was granted by the Federal Government and not by a state government, the case, nevertheless, seems to fall within the general rule as to which authorities are cited in the Mt. Whitney Power and Electric Company cases, this day being decided, to the effect that in a rate case no allowance should be made for governmental franchises or permits in excess of the amounts actually paid to the granting public authority.

It is, of course, elemental that if a utility claims a value for water rights, it must sustain the burden of demonstrating such value. For the reason that the San Joaquin Corporation has not proved any value to its water rights in these proceedings, no allowance is being made herein for water right values in excess of the moneys actually expended by the San Joaquin Corporation and its predecessors in connection therewith. All rentals and other payments in connection with the water rights of the San Joaquin Corporation are being allowed as operating expenses.

(g) Fair return.

The following table shows the fair value of the property of the San Joaquin Corporation, used and useful in the corporation's electric business as of January 1, 1916, for the purpose of this proceeding, together with a reasonable depreciation annuity:

TABLE XX

FAIR VALUE OF PROPERTY OF

SAN JOAQUIN LIGHT AND POWER CORPORATION

USED AND USEFUL IN ELECTRIC BUSINESS

As of January 1st, 1916

Acct. No.	Account	Fixed Capital	Depreciation Annuity
	INTANGIBLE CAPITAL:		
C - 1	Organization	$ 32 399	$
C - 2	Electric Franchise	4 762	16
C - 4	Other Intangible Capital	48 910	
	TOTAL INTANGIBLE CAPITAL	$ 86 071	$ 16
	TANGIBLE CAPITAL:		
	Landed Capital:		
C - 5	Land Devoted to Electric Operations:		
	a. Land Devoted to Production Operations	$ 123 782	
	b. Land Devoted to Transmission Operations	2 200	
	c. Rights of Way Devoted to Transmission Operations	12 684	
	d. Land Devoted to Distribution Operations	12 907	
	e. Land Devoted to Other Operations	63 170	
	Total Land Devoted to Electric Operations	$ 214 743	
	Production Capital:		
C - 6	Dams, Water Conduits and Penstocks	$ 2 590 676	$ 5 415
C - 7	Power Plant Buildings & General Structures	348 442	1 699
C - 8	Hydraulic Power Plant Equipt.	366 125	5 951
C - 9	Furnaces, Boilers & Accessories	254 653	4 951
C -10	Steam Power Plant Equipment	313 166	4 569
C -13	Miscellaneous Production Equipment	16 026	298
	Total Production Capital	$ 3 889 088	$ 22 863

TABLE XX. (Cont'd)

FAIR VALUE OF PROPERTY OF

SAN JOAQUIN LIGHT AND POWER CORPORATION

USED AND USEFUL IN ELECTRIC BUSINESS

As of January 1st, 1916

Acct. No.	Account	Fixed Capital	Depreciation Annuity
	Transmission & Distribution Capital:		
C -14	Poles and Fixtures		
	a. Transmission	$ 540 045	$ 14 681
	b. Distribution	798 443	21 706
C -15	Overhead System		
	a. Transmission	799 765	7 177
	b. Distribution	916 100	8 221
C -16	Underground Conduits		
	b. Distribution	1 887	34
C -17	Substation Buildings & General Structures		
	a. Transmission	28 508	520
	b. Distribution	52 036	949
C -18	Substation Equipment		
	a. Transmission (at Power House)	183 763	3 349
	Transmission (at Stations)	131 339	2 394
	b. Distribution	290 420	5 293
C -19	Miscellaneous Equipment		
	b. Distribution	1 141	31
C -20	Line Transformers & Devices		
	a. Transmission	4 909	133
	b. Distribution	508 925	13 835
C -21	Electric Services	109 141	4 689
C -22	Meters	323 048	13 879
C -23	Municipal Street Lighting System	49 713	2 136
C -24	Commercial Lamps & Lamp Equip't.	1 214	52
C -26	Installations on Consumers Premises	30 968	842
	Total Transmission and Distribution Capital	$ 4 771 365	$ 99 921

TABLE XX (Cont'd.)

FAIR VALUE OF PROPERTY OF

SAN JOAQUIN LIGHT AND POWER CORPORATION

USED AND USEFUL IN ELECTRIC BUSINESS

As of January 1st, 1916.

Acct. No.	Account	Fixed Capital	Depreciation Annuity
	General Capital:		
C -27	General Structures	$ 68 704	$ 869
C -28	General Equipment	155 530	11 800
C -29	Telephone Lines	131 469	4 254
C -30	Roads, Trestles & Bridges		
	a. Production	98 830	332
	b. Transmission	1 316	5
	Total General Capital	$ 455 849	$ 17 260
	TOTAL TANGIBLE CAPITAL	$ 9 331 045	$ 140 044
	Material & Supplies	328 624	
	Working Capital	133 500	
	Construction Capital	175 300	4 475
	GRAND TOTAL	$10 054 540	$ 144 535

The values shown in the foregoing table are ascertained by taking the value of the property on January 1, 1915, as shown by the evidence in these proceedings, and by adding thereto the additions and betterments for the year 1915, and by making necessary deductions and additions. In the total property value as of January 1, 1916, are included the estimated cost of acquiring all the transformers on the system of the San Joaquin Corporation, now privately owned, and also the proper charges to capital account in connection with the reconstruction of the San Joaquin Corporation's transmission and distribution lines in accordance with the provisions of Chapter 499 of the Laws of 1911 and Chapter 600 of the Laws of 1915. As will be observed, the property values as of January 1, 1916, include $328,624.00 for material and supplies and $133,500.00 for working capital.

Exhibit No. 54 of the San Joaquin Corporation shows that the average annual cost of bond money to the San Joaquin Corporation and its predecessors, with amortization on the straight line basis, has been 6.18% and that with amortization on the sinking fund basis the annual cost of bond money has been 6.01%. While the cost of money to the San Joaquin Corporation and its predecessors through the sale of bonds has thus been only slightly in excess of 6%, I recommend that in these proceedings, in the present state of development of the business of San Joaquin Corporation, the Commission allow a return of 8% on the fair value of the property. This return is being allowed notwithstanding the fact that extensive transmission and distribution lines have been constructed apparently largely for the purpose of holding the territory as against a competitor.

The San Joaquin Corporation is as yet, to a considerable extent, in a development period, and it will be necessary for the corporation to secure large additional sums of money in order to develop the territory xxx served by it. The return herein allowed is, in view of the cost of bond money, a generous return and will be sufficient to induce the necessary additional capital to invest in the business of the San Joaquin Corporation. In my opinion, it is far wiser and more straightforward to ask for a generous return than to try to secure an inflated valuation.

I find as a fact that the sum of $804,363.20 is a fair, just and reasonable sum to be received by the San Joaquin Corporation as an annual return, under existing conditions, on the fair value of the corporation's property.

3. Operating Expenses.

The following table shows the operating expenses of the San Joaquin Corporation as shown in the corporation's annual reports for the years ending December 31, 1913, 1914 and 1915 and reasonable operating expenses, including a depreciation annuity, as determined from an analysis of the evidence in these proceedings:

TABLE XXI.

OPERATING EXPENSES

OF SAN JOAQUIN LIGHT AND POWER CORPORATION

FOR THE YEARS ENDING DECEMBER 31st, 1913, 1914 AND 1915

AND REASONABLE OPERATING EXPENSES HEREIN DETERMINED.

Acct. No.	Account	1913	1914	1915	Operating Expenses Used in Rate Determination
	PRODUCTION EXPENSES:				
E - 1	Superintendence	$ 1 318.80	$ 2 666.30	$ 3 981.74	$ 3 982.00
E - 2	Water Collection Labor and Expense	7 604.36	7 700.02	7 388.25	7 544.00
E - 4	Steam Generation Labor	12 746.73	5 766.00	6 213.90	8 242.00
E - 5	Fuel	119 450.52	11 545.51	6 146.21	34 174.00
E - 6	Steam Generator Supplies	2 349.88	730.43	935.79	1 335.00
E -12	Electric Plant Labor	13 599.99	15 882.84	15 732.96	17 827.00
E -13	Electric Plant Supplies	815.20	869.72	740.35	925.00
E -14	Purchased Power	54 273.25	344.93		
E -15	General Labor & Supplies	3 963.06	3 528.22	3 709.98	3 883.00
	Total Prod.-Operating Exp.	$ 216 121.79	$ 49 033.97	$ 44 849.18	$ 77 912.00
E -16	Repairs to Dams, Water Conduits & Penstocks	$ 7 022.06	$ 1 911.63	$ 2 250.14	$ 2 340.00
E -17	Repairs to Pr.-Plt.-Bldgs.	1 669.96	2 003.72	1 511.12	1 779.00
E -18	Repairs to Hydro.-Equipt.	4 293.40	4 219.39	3 541.43	3 980.00
E -19	Repairs to Boilers	2 511.10	1 307.35	1 240.94	1 686.00
E -20	Repairs to Steam Power Plant Equipment	2 444.38	2 924.81	534.25	1 968.00
E -23	Repairs Misc.-Prod.-Equipt.	755.10	429.81	479.52	597.00
	Total Prod.-Maintenance Exp.	$ 18 696.00	$ 12 796.71	$ 9 557.40	$ 12 350.00
	TOTAL PRODUCTION EXPENSE	$ 234 817.79	$ 61 830.68	$ 54 406.58	$ 90 262.00
	TRANSMISSION EXPENSE:				
E -24	Superintendence	$ 150.76	$ 203.56	$ 518.71	$ 519.00
E -25	Inspecting & Patrolling	3 745.95	5 474.59	6 140.12	6 140.00
E -26	Substation Labor	2 781.09	3 574.81	3 510.23	3 543.00
E -27	Substation Supplies & Exp.	520.39	724.13	840.87	841.00
E -28	General Labor & Supplies	2 512.61	6 329.02	7 418.77	7 000.00
	Total Trans.-Operating Exp.	$ 9 710.80	$ 16 306.11	$ 18 428.70	$ 18 043.00
E -29	Repairs Overhead Trans.-Sys.	$ 7 282.78	$ 9 514.73	$ 5 069.68	$ 7 292.00
E -31	Repairs Sub.-Bldg.-&Gen.-Str.	1 875.37	340.51	62.71	800.00
E -32	Repairs Substa.-Equipt.	1 262.75	4 277.69	1 657.41	2 968.00
E -33	Repairs Misc.-Trans.-Equipt.	770.08	623.76	537.25	658.00
	Total Trans.-Maintenance Exp.	$ 11 190.98	$ 14 756.69	$ 7 327.05	$ 11 718.00
	TOTAL TRANSMISSION EXPENSES	$ 20 901.78	$ 31 062.80	$ 25 755.75	$ 29 761.00

TABLE XXI.

OPERATING EXPENSES

OF SAN JOAQUIN LIGHT AND POWER CORPORATION

FOR THE YEARS ENDING DECEMBER 31ST, 1913, 1914 AND 1915

AND REASONABLE OPERATING EXPENSES HEREIN DETERMINED

Acct. No.	Account	1913	1914	1915	Operating Expenses Used in Rate Determination
	DISTRIBUTION EXPENSES:				
E -34	Superintendence	$ 4 371.73	$ 7 015.29	$ 7 693.89	$ 7 700.00
E -35	Substation Labor	6 542.95	8 347.61	11 778.37	11 780.00
E -36	Substation Supplies & Exp.	2 590.44	4 430.36	3 541.80	3 986.00
E -37	Storage Battery Labor	21.32			
E -38	Storage Battery Supplies & Exp.	20.04			
E -39	Setting & Removing Trans. and Meters	5 883.18	10 146.13	11 751.68	12 000.00
E -40	Inspecting & Patrolling	3 113.70	3 455.75	2 792.68	2 800.00
E -41	Electric Meter Operations	9 783.82	12 773.82	11 414.12	11 414.00
E -42	Commercial Arc Labor	507.90	490.40	471.00	471.00
E -43	Coml.Arc Supplies & Repairs	208.00	139.15	32.16	32.00
E -44	Coml.Incan.Lamp Installation and Renewals	99.60	56.70	118.92	120.00
E -45	Inspection & Repairs of Consumers' Installations	15 095.52	30 449.19	19 282.25	19 282.00
E -46	Municipal Street Arc Labor	3 039.32	2 926.69	2 651.28	2 789.00
E -47	Municipal Street Arc Supplies	1 242.61	1 285.92	1 911.32	1 911.00
E -48	General Labor & Supplies	2 034.74	4 678.57	5 768.96	5 769.00
	Total Operating Expense	$ 54 560.87	$ 86 195.58	$ 79 208.43	$ 80 054.00
E -49	Repairs Sub.Bldgs.&Genl.Str.	$ 300.57	$ 751.28	$ 385.93	$ 480.00
E -50	Repairs Substa.Equipment	7 553.56	6 399.71	3 459.16	5 810.00
E -51	Repairs Overhead Distri.Sys.	15 269.05	15 717.13	12 521.67	25 067.00
E -52	Repairs Underground Dist.Sys.				10.00
E -53	Repairs Line Trans.& Devices	7 284.22	5 796.94	5 360.57	7 881.00
E -54	Repairs Electric Services	2 133.70	2 298.78	2 395.28	2 867.00
E -55	Repairs Electric Meters	653.67	3 352.32	2 544.14	2 593.00
E -56	Repairs Municipal Street Lighting System	1 623.69	2 653.87	2 351.34	2 210.00
E -57	Repairs Coml.Arc Lamps		22.02	8.87	10.00
E -58	Repairs Installations on Consumers' Premises	4 767.08	232.04	1 176.41	2 059.00
E -59	Repairs Misc.Distri.Equipt.	1 103.62	956.30	1 185.95	1 116.00
	Total Distribution Maintenance Expense	$ 40 689.16	$ 38 180.39	$ 31 389.82	$ 50 093.00
	TOTAL DISTRIBUTION EXPENSES	$ 95 250.03	$124 375.97	$110 597.75	$130 147.00

TABLE XXI

OPERATING EXPENSES

OF SAN JOAQUIN LIGHT AND POWER CORPORATION

FOR THE YEARS ENDING DECEMBER 31st, 1913, 1914 and 1915,

AND REASONABLE OPERATING EXPENSES HEREIN DETERMINED

Acct. No.	Account	1913	1914	1915	Operating Expenses Used in Rate Determination
	COMMERCIAL EXPENSES:				
E-60.	New Business Expenses	$ 37 935.92	$ 32 175.42	$ 32 009.89	$ 14 310.00
E-61.	Free Installation Expenses	923.69	347.94	2 118.65	2 119.00
E-62.	Commercial Dept. Salaries and Expenses	19 215.10	17 678.61	17 294.78	30 993.00
E-63.	Commercial Dept. Indexing	8 651.24	9 566.30	8 869.02	6 303.00
E-64.	Com'l. Dept. Collections	13 732.14	17 807.82	17 978.12	17 978.00
E-65.	Misc. Com'l. Expenses		2 680.67	4 104.50	1 000.00
	Total - Commercial Expenses	$ 80 458.09	$ 80 256.76	$ 82 374.96	$ 73 003.00
	GEN'L AND MISC. EXPENSES:				
E-66.	Salaries of Gen'l Officers	$ 56 155.34	$ 40 232.88	$ 35 079.51	$ 35 000.00
E-67.	Salaries of Gen'l Office Clerks	28 727.46	29 520.88	24 319.36	32 820.00
E-68.	Misc. Gen'l Office Supplies and Expenses	52 102.84	49 967.16	51 657.53	50 800.00
E-69.	Law Expenses - General	4 340.40	8 914.26	10 070.28	4 340.00
E-70.	Railroad Commission Expenses	20.40	65.00	21 270.67	1 000.00
E-71.	Injuries and Damages	4 999.92	12 313.27	11 868.71	12 000.00
E-74.	Other General Expenses	4 088.32	2 920.78	2 882.49	2 900.00
E-75.	Insurance	3 213.42	3 704.12	3 624.08	3 660.00
	Total Gen'l Operating Exp.	153 648.10	147 638.35	160 772.63	$ 142 520.00
E-76.	Repairs to Gen'l Structures	$ 381.38	$ 260.27	$ 119.11	$ 300.00
E-77. to E-81.	Repairs to Gen'l Equipment	674.94	739.38	737.96	700.00
E-82.	Repairs to Telephone Lines	5 153.92	4 204.24	3 572.84	4 567.00
E-83.	Repairs to Roads, Trestles and Bridges	790.52	977.30	295.41	
E-84.	Electric Exp. Transferred-Cr.	410.50	176.05	106.90	
E-86.	Undistributed Adjustments - Balances		5 483.23	1 522.07	
E-87.	Extraordinary Repairs		11 417.32	4 384.20	
E-88.	Repairs Charged to Reserve - Cr.	7 811.89	11 417.32	4 384.20	
	Total Gen'l Maintenance Exp.	1 121.63	11 488.37	6 140.49	$ 5 567.00
	TOTAL-GENERAL AND MISC. EXPENSES	$152 526.47	$159 126.72	$166 913.12	$ 148 087.00

TABLE XXI

OPERATING EXPENSES

OF SAN JOAQUIN LIGHT AND POWER CORPORATION

FOR THE YEARS ENDING DECEMBER 31st, 1913, 1914 and 1915,

AND REASONABLE OPERATING EXPENSES HEREIN DETERMINED

Acct. No.	Account	1913	1914	1915	Operating Expenses Used in Rate Determination
	TAXES:				
E-91.	Taxes	$ 45 093.89	$ 67 789.31	$ 81 361.91	$ 76 704.00
	GEN'L AMORTIZATION OF CAP.				
E-92.	Amortization of Franchises and Patents				16.00
E-93.	Depreciation of Plant and Equipment				144 519.00
	A. Deproc. Produc. Capital	42 722.10	33 872.08	27 420.05	
	B. Deproc. Trans. Capital	32 622.03	25 806.01	22 147.67	
	C. Deprec. Distri. Capital	50 899.74	46 953.71	41 421.19	
	D. Deproc. Gen'l Capital	933.68	1 321.99	2 518.39	
	Total-General Amortization of Capital	$125 309.99	$107 953.79	$ 93 507.30	$ 144 535.00
	RECAPITULATION OF EXPENSES:				
	Production Expenses	$250 431.95	65 695.12	58 436.87	90 262.00
	Transmission Expenses	20 901.78	31 062.80	25 755.75	29 761.00
	Distribution Expenses	92 250.03	124 375.97	110 597.75	130 147.00
	Commercial Expenses	80 458.09	80 256.76	82 374.96	73 003.00
	Gen'l & Misc. Expenses	152 526.47	159 126.72	166 913.12	137 458.00
	Taxes	45 093.89	67 789.31	81 361.91	78 569.00
	Gen'l Amortization of Cap.	125 309.99	107 953.79	93 507.30	144 535.00
	Total - Operating Expenses	$769 808.97	$636 053.91	$618 947.66	$ 683 735.00
E-103.	Uncollectible Bills	4 595.75	4 868.85	4 800.00	8 458.00
	GRAND TOTAL EXPENSES	$774 394.72	$640 922.76	$623 747.66	$ 692 193.00

There are a number of matters in connection with the operating expenses herein determined to which it will be well to draw attention. The operating expenses heretofore obtaining have been increased by reason of the order herein requiring the San Joaquin Corporation to maintain all the transformers on its system and also to enable the corporation to take care of additional steam generator expenditures which it will be necessary to incur in connection with the additional electric energy herein assumed to be sold. The operating expenses have been decreased over the normal operating expenses heretofore incurred, by reason of the decrease in meter expense, due to the abolition of the maximum demand system in so far as agricultural power consumers are concerned. Substantial reductions have also been made in the expense hitherto charged to the account of "Railroad Commission expense", for the reason that the expense shown for the year 1915 is abnormally high. A reduction has also been made in the item of new business expenses, for the reason that the new business expenses of San Joaquin Corporation have been unduly high in comparison with the amount of new business secured by the corporation and to be anticipated in the near future. On the other hand the commercial department salaries and expenses have been increased to a more normal amount.

Provision is also made under the head of "Operating Expenses" for amounts properly chargeable to maintenance in connection with the reconstruction of transmission and distribution lines in accordance with the provisions of Chapter 499 of the Laws of 1911 and Chapter 600 of the Laws of 1915.

4. Depreciation Annuity.

The amount reasonably to be allowed as a depreciation annuity is shown in Table No. XX .

The annuity is computed on the 6% sinking fund basis. The testimony shows that the depreciation reserve of the San Joaquin Corporation is regularly invested in plant, on which plant a return of 8% is herein being allowed. In view of the return thus allowed on this fund, the contention of the San Joaquin Corporation that a return of only 4% shall be assumed on the depreciation fund does not seem reasonable.

5. Cost of service.

The following table shows the cost of service of the San Joaquin Corporation's electric business, as shown by the evidence in these proceedings:

TABLE XXII.

COST OF SERVICE

SAN JOAQUIN LIGHT AND POWER CORPORATION

	General	Production	Transmission	Sub-Stations	Distribution	Street Lighting	Miscellaneous	Service	Working Capital	Total
Capital	$ 784 658	$ 4 160 610	$ 1 704 629	$ 355 298	$ 2 367 070	$ 49 713	$ 32 182	$ 466 980	$ 133 500	$ 10 054 540
Interest at 6%	47 079	249 637	102 272	21 318	142 024	2 983	1 928	28 019	10 680**	548 181
Depreciation	16 939	23 195	28 269	6 242	46 806	2 136	894	20 064		127 596
Maintenance	5 567	12 350	11 718	6 290	34 064	2 210	2 069	5 460		74 161
General Capital Costs		31 688	12 982	2 706	18 028	379	245	3 657		69 585*
Sub-Total	$ 69 585*	$ 316 870	$ 155 231	$ 36 556	$ 240 922	$ 7 708	$ 5 136	$ 57 100		$ 819 523
Operating Expenses		77 912	18 043	15 766	47 551	4 700	623	84 417		249 012
General & Miscellaneous Expense		44 608	10 330	9 027	27 225	2 691	357	48 333		142 571**
Sub-Total		$ 122 520	$ 28 373	$ 24 793	$ 74 776	$ 7 391	$ 980	$ 132 750		$ 391 583
Total Cost of Service Less Taxes & Uncollectible Bills		$ 439 390	$ 183 604	$ 61 349	$ 315 698	$ 15 099	$ 6 116	$ 189 850		$ 1 211 106
Uncollectible Bills										7 267
Taxes at 5-1/4%										67 509
TOTAL COST OF SERVICE										$ 1 285 882
Profit at 2%	$ 15 693	$ 83 212	$ 34 090	$ 7 106	$ 47 341	$ 994	$ 644	$ 9 340		$ 182 727
Adjustment Cost of Gen'l Capital										15 693
Uncollectible Bills-Adjustment										1 191
Sub-Total										$ 199 611
Taxes 5-1/4% on Profit										11 060
Sub-Total Including Taxes										$ 210 671
TOTAL COST PLUS PROFIT										$ 1 496 493

NOTE: (*) General Capital Costs prorated over other capital.
(**) Interest on Working Cash Capital included in General & Miscellaneous Expense.

6. Discriminations.

The evidence herein shows that discrimination has existed to a considerable extent as to the rates charged to individual consumers in the same general class, particularly industrial power and commercial lighting consumers. These discriminations have been largely due to special contracts and to deviations from published rates. The rates herein established will be of uniform application and will eliminate all such discriminations.

The discriminations resulting from the varying applications of the maximum demand system of rating as applied to agricultural power consumers, will be eliminated by the substitution of the connected load rating system herein established.

7. Agricultural power.

I shall now discuss the various classes of service rendered by the San Joaquin Corporation with a brief reference, where necessary, to the existing rates and a statement of the rates herein established.

By far the largest number of complaints in these proceedings have been directed to the San Joaquin Corporation's agricultural power rates. These complaints were directed to the corporation's contracts for this class of service, the maximum demand system and the method of its application, and the rates under the San Joaquin Corporation's various types of agricultural power contracts. The complaints with reference to the provisions of the San Joaquin Corporation's contracts, and also with reference to the maximum demand system, have already been considered herein.

The following table shows, in summary form, the agricultural power rates of the San Joaquin Corporation, segregated into the standard flat rates and the colonization rates:

TABLE NO. XXIII

PRESENT AGRICULTURAL POWER RATES OF SAN JOAQUIN LIGHT AND POWER CORPORATION- STANDARD FLAT RATES AND COLONIZATION RATES.

STANDARD FLAT RATES

(a) Continuous use each month of the year: Service delivered at primary voltage of 11,000, 4,000 or 2,200, at company's option.

$4.16-2/3 per month per h.p. of minimum demand.

Installations operated each month of the year, but restricted to certain hours of use, $3.00 per month per h.p. of maximum demand.

(b) Seasonal Service: Restricted to certain months' use. Service delivered at 11,000, 4,000 or 2,200 volts at the company's option.

Period of Year	Daily Period Of Operation	Rate per H.P. Per Calendar Month.
Feb. 1 to July 31 (6 Mo.)	24 hrs.	$5.20
Mar. 1 to July 31 (5 Mo.)	24 "	5.55
Apr. 1 to July 31 (4 Mo.)	24 "	6.25
May 1 to July 31 (3 Mo.)	24 "	7.50
June 1 to July 31 (2 Mo.)	24 "	11.25
July 1 to July 31 (1 Mo.)	24 "	22.50
Feb. 1 to July 31 (6 Mo.)	Daylight Hrs.	3.75
Mar. 1 to July 31 (5 Mo.)	Daylight Hrs.	4.00
Apr. 1 to July 31 (4 Mo.)	Daylight Hrs.	4.50
May 1 to July 31 (3 Mo.)	Daylight Hrs.	5.50
June 1 to July 31 (2 Mo.)	Daylight Hrs.	8.25
July 1 to July 31 (1 Mo.)	Daylight Hrs.	16.50

(c) Seasonal Service: Restricted to certain months' use. Service delivered at 11,000, 4,000 or 2,200 volts at company's option.

Feb. 1 to Sept. 30 (8 Mo.)	24 Hrs.	$5.46
Mar. 1 to Sept. 30 (7 Mo.)	24 "	5.75
Apr. 1 to Sept. 30 (6 Mo.)	24 "	6.25
May 1 to Sept. 30 (5 Mo.)	24 "	6.25
June 1 to Sept. 30 (4 Mo.)	24 "	6.25
July 1 to Sept. 30 (3 Mo.)	24 "	7.50
Aug. 1 to Sept. 30 (2 Mo.)	24 "	11.25
Sept 1 to Sept. 30 (1 Mo.)	24 "	22.50
Feb. 1 to Sept. 30 (8 Mo.)	Daylight Hrs.	3.94
Mar. 1 to Sept. 30 (7 Mo.)	Daylight Hrs.	4.14
Apr. 1 to Sept. 30 (6 Mo.)	Daylight Hrs.	4.50
May 1 to Sept. 30 (5 Mo.)	Daylight Hrs.	4.50
June 1 to Sept. 30 (4 Mo.)	Daylight Hrs.	4.50
July 1 to Sept. 30 (3 Mo.)	Daylight Hrs.	5.50
Aug. 1 to Sept. 30 (2 Mo.)	Daylight Hrs.	8.25
Sept 1 to Sept. 30 (1 Mo.)	Daylight Hrs.	16.50

Minimum Guarantee: The consumer shall pay for at least 75% of the manufacturer's rated capacity of motors installed.

COLONIZATION RATES

(1) Continuous Use Each Month of the Year:
Delivered at primary voltage of 11,000, 4,000 or 2,000 volts at company's option.

Installations under 20 h.p. two cents per kilowatt hour used monthly.

Installations over 20 h.p. 1-1/2 cents per k.w.h. used monthly.

Minimum Charge: $1.00 per month, per h.p. installed.

Minimum Monthly Bill: $1.50

Minimum Term: The consumer must sign a five year contract. The above rate, however, only continues for two years, at the end of which time the consumer is placed on the company's regular annual flat rate agricultural schedule.

(2) Seasonal Service: Restricted to certain hours of use. Delivered at 11,000, 4,000 or 2,000 volts at company's option. Installations under 25 h.p., 2-1/2 cents per k.w.h. used monthly.

Installations over 25 h.p., 2 cents per k.w.h. used monthly.

Minimum Guarantee: eight, nine, ten or eleven months' use, $1.50 per h.p. per month; seven Months' use $1.75 per h.p. per month; six months' use, or less, $2.00 per h.p. per month.

Minimum Term: The consumer must sign a five year contract. The above rate, however, only continues two years. For the remaining three years of his contract the consumer is placed on the company's regular annual flat rate schedule. Under this schedule the consumer is restricted to the following hours of use for the first two years of his contract:

January	From	12:01	A.M.	to 4.40	P.M.
February	"	12:01	"	to 5:25	"
March	Continuously				
April	"				
May	"				
June	"				
July	"				
August	"				
September	"				
October	From	12:01	A.M.	to 5:00	P.M.
November	"	12:01	"	to 4:30	"
December	"	12:01	"	to 4:20	"

A large number of farmers in these proceedings complained of the San Joaquin Corporation's agricultural power rates. These complainants insisted that with the prevailing prices of alfalfa it is impossible for them to make a profit under the existing rates for power. The evidence shows that in the year 1914, the price of alfalfa was lower than it had been for many years, but that during the year 1915 the price recovered somewhat. The evidence further shows that there are a large number of gas engines in the territory served by the San Joaquin Corporation and that these engines are a very strong competitor of the San Joaquin Corporation. A number of farmers testified that if it were not for the five-year contracts which they had signed with the San Joaquin Corporation, they would take out their electric motors and install gasoline engines. The San Joaquin Corporation, in its brief, frankly admits the effectiveness of this competition and states that it does not desire any increase in its agricultural power rates, although the corporation claims that the present rates for agricultural power service are below the cost of service. It should be said, at this point, that the claim of the San Joaquin Corporation that it has an average investment of $1400.00 in distributing system for each agricultural power consumer and that its agricultural power rates are below the cost of service is not borne out by the evidence herein.

I have given very careful consideration to the question whether the $50 per horse power annual flat rate could be reduced with justice to the San Joaquin Corporation, and have reached the conclusion, after a detailed examination of the evidence herein, that a fair and reasonable rate for this service would be $42.30 per horse power of connected load per annum.

I desire, however, to draw specific attention to the fact that by far the largest number of agricultural power consumers under this system do not need continuous service during the full twelve months and that they ordinarily do not use electric energy for a term in excess of from seven to nine months. I am of the opinion that nearly all the agricultural power consumers under this system would effect a substantial saving by taking a seasonal contract, permitting them to use power for from seven to nine months. Although, if the San Joaquin Corporation must stand ready to deliver electric energy for pumping purposes during each day of the year, the rate for such service must necessarily be relatively high, the needs of the farmer can, with entire justice to the San Joaquin Corporation be taken care of by the much cheaper seven to nine months seasonal rate. Just and reasonable seasonal rates for agricultural power service, sufficiently flexible so that they can be used advantageously by the farmer, will be established herein.

Any farmer who at the present time is taking service under the annual $50 per horse power flat rate may change over to one of the seasonal rates herein established, if he so desires.

The following rates are hereby found to be just and reasonable rates to be charged by San Joaquin Corporation for agricultural power service:

TABLE XXIV

AGRICULTURAL SERVICE

CONTRACT FLAT RATES

Applicable to all agricultural or rural power and other service limited only by the demand upon the Company's system. Service will normally be supplied at 110 or 220 volts

One Month's Service	$7.00	per H.P.
Two Month's Service	12.15	" "
Three Month's Service	16.45	" "
Four Month's Service	20.25	" "
Five Month's Service	23.65	" "
Six Month's Service	26.80	" "
Seven Month's Service	29.75	" "
Eight Month's Service	32.50	" "
Nine Month's Service	35.10	" "
Ten Month's Service	37.60	" "
Eleven Month's Service	40.00	" "
Twelve Month's Service	42.30	" "

The above flat rates are based upon the connected load in motors or other utilization equipment which can be connected at any one time to the Company's supply system. Under normal conditions motors will not be installed by the Company on strictly flat rate business but at the consumer's request demand indicating and watt-hour meters will be supplied at a charge of $7.50 per year or fraction thereof and the flat rate charges per horsepower of connected load will be readjusted on the basis of 94% demand factor.

The minimum bill under these rates will be the flat rate for one horsepower.

TABLE XXIV

AGRICULTURAL SERVICE

NON-CONTRACT FLAT RATES

Applicable to all agricultural or rural power and other service limited only by the demand upon the Company's system. Service will normally be supplied at 110 or 220 volts.

1st Month's Service	$7.00	per H.P.
2nd Month's Service	5.15	" "
3rd Month's Service	4.30	" "
4th Month's Service	3.80	" "
5th Month's Service	3.40	" "
6th Month's Service	3.15	" "
7th Month's Service	2.95	" "
8th Month's Service	2.75	" "
9th Month's Service	2.60	" "
10th Month's Service	2.50	" "
11th Month's Service	2.40	" "
12th Month's Service	2.30	" "

The consumer taking service under these rates will be required to pay for the cost of the initial service connection and also the cost of any subsequent disconnections and reconnections made at his request.

The above flat rates are based upon the connected load in motors or other utilization equipment which can be connected at any one time to the Company's supply system. Under normal conditions meters will not be installed by the Company on strictly flat rate business but at the consumer's request demand indicating and watt-hour meters will be supplied at a charge of $7.50 per year or fraction thereof and the flat rate charges per horsepower of connected load will be readjusted on the basis of 94% demand factor.

The minimum bill under these rates will be the flat rate for one horsepower.

TABLE XXIV

AGRICULTURAL SERVICE

METER RATES

Applicable to all agricultural or rural power and other service limited only by the demand upon the Company's system. Service will normally be supplied at 110 or 220 volts.

CONTRACT BASIS

Demand Charge For One Month's Service	$ 4.50	per H.P.
" " " Two " "	7.50	" "
" " " Three " "	9.80	" "
" " " Four " "	11.75	" "
" " " Five " "	13.45	" "
" " " Six " "	15.00	" "
" " " Seven " "	16.40	" "
" " " Eight " "	17.70	" "
" " " Nine " "	18.90	" "
" " " Ten " "	20.00	" "
" " " Eleven " "	21.05	" "
" " " Twelve " "	22.05	" "

To the demand charge, which is payable in equal monthly installments, shall be added the following energy charge:

ENERGY CHARGE, $.005 per Kilowatt-hour

NON-CONTRACT BASIS

Demand Charge for	1st	Month's	Service			$4.50	per	H.P.
" " "	2nd	"	"			3.00	"	"
" " "	3rd	"	"			2.30	"	"
" " "	4th	"	"			1.95	"	"
" " "	5th	"	"			1.70	"	"
" " "	6th	"	"			1.55	"	"
" " "	7th	"	"			1.40	"	"
" " "	8th	"	"			1.30	"	"
" " "	9th	"	"			1.20	"	"
" " "	10th	"	"			1.10	"	"
" " "	11th	"	"			1.05	"	"
" " "	12th	"	"			1.00	"	"

To the demand charge shall be added the following energy charge:

ENERGY CHARGE, $.005 per Kilowatt-hour.

The consumer taking service under Non-Contract rates will be required to pay for the cost of the initial service connection and also the cost of any subsequent disconnections or reconnections made at his request.

The demand charges under this schedule are based on the connected load in motors or other utilization equipment which can be connected at any one time to the Company's supply system, and the meters regularly supplied are of the recording watt-hour type. At the consumer's request, however, the Company will furnish and install demand indicating instruments at a rate of $3.00 per year or fraction thereof, and base the demand charge upon the measured monthly maximum demand, in which case the demand charges will be readjusted on the basis of 94% demand factor.

The minimum bill will be the demand charge for one horse power.

8. Oil well power.

No complaint was made in these proceedings with reference to San Joaquin Corporation's oil well power rates.

I find that the following rates are just and reasonable rates to be charged by the San Joaquin Corporation for oil well power service:

TABLE XXV

SPECIAL OIL FIELDS RATE

METERED SERVICE

Applicable to all power service supplied for or in connection with the development and operation of oil wells or oil production equipment.

Service will be furnished either at 220 or 440 volts.

$2.75 per month per kilowatt of maximum demand to which charge shall be added an energy charge of one-half (1/2) cent per kilowatt hour for all electric energy supplied.

Under this rate demand indicators and watt hour meters will in all cases be installed and maintained by the Company at the point of delivery.

9. Mining power.

No complaint was made in these proceedings with reference to the San Joaquin Corporation's mining power rates.

The industrial power rates herein established will be applicable to the mining power business, so that it is unnecessary to establish a special mining power rate.

10. Industrial power.

No complaint was made with reference to the industrial power rates of the San Joaquin Corporation. An examination of these rates, particularly of the special contracts and deviations from published rates, however, shows that considerable discrimination exists with reference to the rates for this class of service as between individual consumers. These discriminations will be eliminated by the rates herein established.

I find that the following rates are just and reasonable rates to be charged by the San Joaquin Corporation for industrial power service:

TABLE XXVI

GENERAL POWER RATE

Metered Service

Applicable to all industrial, commercial and other power installations of not more than twenty (20) horsepower installed capacity receiving energy at 110 or 220 volts at the consumer's option. Single phase or three phase service at option of company.

4¢ per kilowatt hour for first 200 kilowatt hours consumed during any month.

2¢ per kilowatt hour for all energy used during any month in excess of 200 kilowatt hours.

Minimum monthly charge $1.00 per horsepower.

Minimum monthly bill $1.00

TABLE XXVI

INDUSTRIAL POWER RATES

METERED SERVICE

Applicable to all classes of power installations not otherwise specifically provided for in separate schedules.

INSTALLATIONS OF LESS THAN 20 H.P.

$1.50 per month per horse power connected to which charge shall be added an energy charge of one half (1/2) cent per kilowatt-hour for all electric energy supplied.

Minimum monthly bill, $5.00.

INSTALLATIONS IN EXCESS OF 20 H.P.

$2.50 per month per kilowatt of measured maximum demand, to which charge shall be added an energy charge of four-tenths of one cent ($.004) per kilowatt-hour for all energy supplied.

Minimum monthly bill, $20.00.

On small installations where the demand charge is based on the connected load ordinary recording watt-hour meters are regularly supplied by the Company. At the consumer's request, however, demand indicating instruments will be supplied at an additional charge of 25 cents per month and in which case the rate will be based on the measured monthly maximum demand and the demand charge will be readjusted on the basis of 79% demand factor.

11. Commercial lighting.

Considerable complaint was made against the San Joaquin Corporation's commercial lighting rates. These complaints were directed both against the reasonableness of the rates now in effect and the method of determining the maximum demand.

Provision for the elimination of the complaints with reference to the maximum demand system has already been made. As hereinbefore provided, the maximum demand must be a demand for the period for which bills are normally paid and not for the entire year. Provision has already been made that the maximum demand in this class of service must be taken by continuous readings of at least fifteen minutes.

A careful study of the cost of service shows that the rates heretofore in effect for this class of service have been too high and that the rates should be reduced. The rates at present charged for commercial lighting service appear in the same schedule of the San Joaquin Corporation which applies also to residential lighting service. These rates appear in Table No. XXVII under the head of Residence Lighting.

The rates to be charged by the San Joaquin Light and Power Corporation for commercial lighting service will appear in Table No. XXVIII, showing lighting rates herein established.

12. Residence Lighting.

Some complaint was also made with reference to the reasonableness of the residence lighting rates of the San Joaquin Corporation. The Commission's attention was further drawn to the fact that under the San Joaquin Corporation's rate schedules on file with this Commission, the residence lighting rates should be determined in accordance with the maximum demand system. The San Joaquin Corporation, however, testified that in actual practice it did not apply the maximum demand system to its residence lighting service.

I find that there is no justification for the maximum demand system in connection with the residence lighting business of the San Joaquin Corporation and that a proper schedule of residence lighting rates to be charged by the San Joaquin Corporation should be based on a block system of charges.

The following table shows the lighting rates of San Joaquin Corporation now in effect:

TABLE NO. XXVII

PRESENT LIGHTING RATES OF SAN JOAQUIN LIGHT AND POWER CORPORATION.

Based on the amount of energy consumed each month per kilowatt of maximum demand, except in the case of domestic consumers, where the maximum rate in each schedule is charged.

Oil Districts of Western Kern County

First	60 K.W.Hs.	10 cents per K.W.H.	
Next	150 K.W.Hs.	5 cents per K.W.H.	(Schedule No.1)
Over	210 K.W.Hs.	3 cents per K.W.H.	

Mariposa District

First	45 K.W.Hs.	9 cents per K.W.H.	
Next	150 K.W.Hs.	4 cents per K.W.H.	(Schedule No.4)
Over	195 K.W.Hs.	2 cents per K.W.H.	

Balance of Territory

First	60 K.W.Hs.	8 cents per K.W.H.	
Next	150 K.W.Hs.	4 cents per K.W.H.	(Schedule No.5)
Over	210 K.W.Hs.	2 cents per K.W.H.	

Discounts: The following discounts allowed on monthly bills.

$ 50.00 to	$100.00	(inclusive)	10% discount
100.01 to	200.00	"	15% "
200.01 to	300.00	"	20% "
O v e r	300.00	- - - - - -	25% "

Note: No discounts allowed for service supplied in connection with the development of oil wells, but optional flat rate of 40¢ per 60 watt lamp connected is offered. (Schedules Nos.2 & 3)

Minimum charge all districts $1.00 per meter per month.

Term: Contracts required only in cases where service extensions are necessary.

Electric sign lighting: (Schedules Nos.6,7 and 8) The above energy rates apply to electric sign lighting in the district named. Installations in excess of 325 watts must be on separate meters. Minimum charge: $6.00 per kilowatt of maximum demand.

The Merchants Association of Fresno drew attention to the minimum of $1.00 per month charged by the San Joaquin Corporation in connection with its residence lighting service. After careful examination of the evidence herein, I have reached the conclusion that a reasonable minimum for residence lighting service charged by San Joaquin Corporation is 75 cents per meter per month.

I find that the following rates are just and reasonable rates to be charged by San Joaquin Corporation for lighting service:

TABLE XVIII

GENERAL DOMESTIC LIGHTING RATE

Metered Service

Applicable to domestic and small commercial lighting, heating and power installations of less than five kilowatt capacity.

First 20 kilowatt hours per Mo. 8¢ per K.W.H.
Over 20 kilowatt hours per Mo. 4¢ per K.W.H.

Minimum Monthly Charge $.75 per Meter.

GENERAL COMMERCIAL LIGHTING RATE

Metered Service

Applicable to all commercial, industrial, sign outline and other lighting installations and to small power and appliances used in connection with lighting service.

$2.25 per Mo. per kilowatt of measured maximum demand, to which charge shall be added an energy charge of one (1) cent per metered kilowatt hour for all electric energy consumed.

Minimum Monthly Bill - $2.50

Watt demand indicators and watt hour meters will in all cases be installed and maintained by the Company at its own expense under this rate.

/

13. Street lighting.

No complaint was made in these proceedings with reference to municipal street lighting rates, but the Commission's attention was directed to the rate charged in connection with public lighting in the County Court House Park in Fresno. It was shown that the public lighting service in connection with the Court House Park is being paid for at a much higher rate than public lighting in the streets of the various municipalities served by the San Joaquin Corporation. This discrimination will be eliminated by the reduction in the rate charged to the county of Fresno in connection with the Court House Park.

I find that the following rates are just and reasonable rates to be charged by San Joaquin Corporation for public out of door lighting service:

TABLE XXIX

PUBLIC OUTDOOR LIGHTING SERVICE

This schedule of rates applies to all street, highway and other public outdoor lighting coming under the following classes of service and includes installation and all maintenance and operation and lamp renewals necessary for such service.

1. LUMINOUS ARCS: RATE

   $33.00 per lamp per year plus 45¢ per 100 lamp hours; Payable monthly.

2. INCLOSED CARBON ARCS: RATE

   $31.80 per lamp per year plus 45¢ per 100 lamp hours.

3. SERIES OR MULTIPLE 100 WATT TUNGSTEN INCANDESCENT LAMPS

   $16.20 per lamp per year plus 15¢ per 100 lamp hours; Payable monthly.

4. SERIES OR MULTIPLE 60 WATT TUNGSTEN INCANDESCENT LAMPS

   $13.40 per lamp per year plus 10¢ per lamp hour; Payable monthly.

In addition to the rates hereinbefore established, the order herein will establish additional rates for special substation service and for special transmission service.

14. Contract with Mt. Whitney Power and Electric Company.

The Commission's attention was drawn by the Mt. Whitney Power and Electric Company to a contract dated March 5, 1912 between San Joaquin Light and Power Corporation and Tulare County Power Company and to a supplemental agreement dated April 7, 1915 between the same parties. When the Mt. Whitney Company acquired the properties of Tulare County Power Company, it assumed this contract.

The agreement of March 5, 1912 provided that the Tulare County Power Company should receive such electrical energy as it might require, not to exceed 1500 K.W. and pay for the same at the rate of $3.33-1/3 per calendar month for each horse power furnished, with a minimum payment of $3,333.33 per month in any event.

The Mt. Whitney Company contends that this is an unreasonable and unnecessary contract from its point of view, and draws attention to the fact that its production system is at the present time sufficient to take care of its entire load during the entire year. Although the Mt. Whitney Company would pay for the electric energy supplied under this contract, under ideal conditions, approximately $ .0069 per K.W.H., the Mt. Whitney Company draws attention to the fact that it can generate additional electric energy in its Kaweah Plant #3 at the additional cost of only the tax paid to the Federal Government, amounting to 1/2 mill per K.W.H., while in the summer time additional electric energy can be generated in the Mt. Whitney Company's steam plants.

Exhibit No. 1, in re Tulare County Power Contract, presented by the San Joaquin Corporation, shows that the revenue derived from the San Joaquin Corporation under this contract, under the most ideal conditions, would be only

$478.98 in excess of the cost of service and that under ordinary conditions the revenue would be materially less than the cost of service. It follows that this contract is of advantage neither to the San Joaquin Corporation nor to the Mt. Whitney Company.

In my opinion, this contract should be abrogated and should be replaced by a contract providing for reciprocal service to be rendered by each of the parties to the other party in times of shortage of electric energy on the part of either party. The Commission will not pursue this particular subject further at the present time, but reserves the right to go into the matter further if it should become necessary.

Attention should be directed to the fact that in computing the revenue to be derived by the San Joaquin Corporation from the rates herein established, the Tulare County Power Company contract is assumed to be non-existent.

X.

RULES AND REGULATIONS

In view of the rates herein established it will be necessary for the San Joaquin Corporation to recast all its present rules and regulations particularly with reference to contracts, waiver of damages, transformers and other matters relating to the terms and conditions under which electric service shall be supplied.

The San Joaquin Corporation shall accordingly submit to the Commission revised terms and conditions in conformity with the findings herein and with the rules laid down by the Commission in its Decision No. 2879. The following rules and regulations, however, have been considered in connection with the establishment of the rates herein prescribed, and shall be incorporated by the San Joaquin Corporation in the rules and regulations which are to be submitted to the Commission as hereinbefore provided.

I find as a fact that the following rules and regulations are just and reasonable rules and regulations to be established and enforced by the San Joaquin Corporation in connection with electric service to be supplied by it under the rates herein established:

TABLE

RULES AND REGULATIONS.

1. Application for Service: The Company will require each prospective consumer to make application in writing for the service desired, such application setting forth the location of the premises to be served, the purpose for which the service is to be used, a description of the electrical equipment installed, the name and address of the person responsible for the payment of the bills and whether applicant is the owner, agent or tenant of the premises upon which the service is to be used.

2. Contracts: Contracts for a period of three years will be required in the first instance for agricultural service under conditions which require a material investment by the company in service facilities.

3. Rates: The rates to be charged by and paid to the Company for electric energy and service shall be the rates legally in effect and on file with the Railroad Commission. Complete schedules of all rates legally in effect will be kept at all times in each of the company's local offices where they will be available for public inspection. Where there are two or more rates or schedules applicable to any class of service the consumer at the time he makes application to the company for service, must designate which rate or schedule he desires, and the rate or schedule so designated shall remain in effect until changed by thirty days written notice by the consumer specifying which new rate or schedule is desired. The rates and minimum charges set forth in the effective rate schedules are based upon the load connected to the company's supply system through one meter. Where sub-meters or secondary meters are desired by the consumer such meters will be charged for separately on the monthly rental basis.

4. Limitation of Demand: Double throw switches or other approved demand limiting devices will be permitted to limit the demand which can be created at any one time on the company's supply system through the operation of the consumer's electrical equipment.

TABLE (Cont'd.)

RULES AND REGULATIONS.

5. Meters: All meters will be furnished and installed by the company at its own expense without any additional charge from the rates set forth in its effective rate schedules, except in cases where special metering facilities are desired by the consumer. All meters will be tested at the time of their installation and no meter will be placed in service or allowed to remain in service which has an error of registration in excess of two per cent under the conditions of normal operation. Upon giving the company at least five days notice, the consumer shall have the right at any time to require the company to test his service meter in his presence, or, if he so desires, in the presence of an expert or other representative appointed by him, provided, however, that if special tests are required by the consumer more often than once in six months, a reasonable charge shall be made for such additional tests.

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 submitted and being now ready for decision,

The RAILROAD COMMISSION hereby makes the following findings of fact:

(1) The Railroad Commission finds that the rates, rules, regulations, contracts and practices of the San Joaquin Light and Power Corporation are unjust and unreasonable in so far as they differ from the rates, rules, regulations, contracts and practices herein established.

(2) The Railroad Commission hereby finds that the rates, rules, regulations, contracts and practices herein established are just and reasonable rates, rules, regulations, contracts and practices.

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

IT IS HEREBY ORDERED AS FOLLOWS:

1. San Joaquin Light and Power Corporation is hereby ordered to establish and file with the Railroad Commission on or before April 20, 1916, the following rates for the respective classes of service specified, which rates are found to be just and reasonable rates:

SCHEDULE No. 1.

GENERAL DOMESTIC LIGHTING RATE

Metered Service

Applicable to domestic and small commercial lighting, heating and power installations of less than five kilowatt capacity.

First 20 kilowatt hours per Mo. 8¢ per K.W.H.
Over 20 kilowatt hours per Mo. 4¢ per K.W.H.

Minimum Monthly Charge $.75 per Meter

SCHEDULE No. 2.

GENERAL COMMERCIAL LIGHTING RATE

Metered Service

Applicable to all commercial, industrial, sign outline and other lighting installations and to small power and appliances used in connection with lighting service.

$2.25 per Mo. per kilowatt of measured maximum demand, to which charge shall be added an energy charge of one (1) cent per metered kilowatt hour for all electric energy consumed.

Minimum Monthly Bill - $2.50

Watt demand indicators and watt hour meters will in all cases be installed and maintained by the Company at its own expense under this rate.

SCHEDULE No. 3.

PUBLIC OUTDOOR LIGHTING SERVICE

This schedule of rates applies to all street, highway and other public outdoor lighting coming under the following classes of service and includes installation and all maintenance and operation and lamp renewals necessary for such service.

1. LUMINOUS ARCS: RATE

$33.00 per lamp per year plus 45¢ per 100 lamp hours; Payable monthly.

2. INCLOSED CARBON ARCS: RATE

$31.80 per lamp per year plus 45¢ per 100 lamp hours.

3. SERIES OR MULTIPLE 100 WATT TUNGSTEN INCANDESCENT LAMPS.

$16.20 per lamp per year plus 15¢ per 100 lamp hours; Payable monthly.

4. SERIES OR MULTIPLE 60 WATT TUNGSTEN INCANDESCENT LAMPS

$13.40 per lamp per year plus 10¢ per lamp hour; Payable monthly.

SCHEDULE NO. 4

AGRICULTURAL SERVICE

CONTRACT FLAT RATES

Applicable to all agricultural or rural power and other service limited only by the demand upon the Company's system. Service will normally be supplied at 110 or 220 volts

One Month's Service	$ 7.00	per H.P.
Two Month's Service	12.15	" "
Three Month's Service	16.45	" "
Four Month's Service	20.25	" "
Five Month's Service	23.65	" "
Six Month's Service	26.80	" "
Seven Month's Service	29.75	" "
Eight Month's Service	32.50	" "
Nine Month's Service	35.10	" "
Ten Month's Service	37.60	" "
Eleven Month's Service	40.00	" "
Twelve Month's Service	42.30	" "

The above flat rates are based upon the connected load in motors or other utilization equipment which can be connected at any one time to the Company's supply system. Under normal conditions motors will not be installed by the Company on strictly flat rate business but at the consumer's request demand indicating and watt-hour meters will be supplied at a charge of $7.50 per year or fraction thereof and the flat rate charges per horsepower of connected load will be readjusted on the basis of 94% demand factor.

The minimum bill under these rates will be the flat rate for one horsepower.

SCHEDULE NO. 5

AGRICULTURAL SERVICE

NON-CONTRACT FLAT RATES

Applicable to all agricultural or rural power and other service limited only by the demand upon the Company's system. Service will normally be supplied at 110 or 220 volts

1st Month's Service	$7.00	per H.P.
2nd Month's Service	5.15	" "
3rd Month's Service	4.30	" "
4th Month's Service	3.80	" "
5th Month's Service	3.40	" "
6th Month's Service	3.15	" "
7th Month's Service	2.95	" "
8th Month's Service	2.75	" "
9th Month's Service	2.60	" "
10th Month's Service	2.50	" "
11th Month's Service	2.40	" "
12th Month's Service	2.30	" "

The consumer taking service under these rates will be required to pay for the cost of the initial service connection and also the cost of any subsequent disconnections or reconnections made at his request.

The above flat rates are based upon the connected load in motors or other utilization equipment which can be connected at any one time to the Company's supply system. Under normal conditions motors will not be installed by the Company on strictly flat rate business but at the consumer's request demand indicating and watt-hour meters will be supplied at a charge of $7.50 per year or fraction thereof and the flat rate charges per horsepower of connected load will be readjusted on the basis of 94% demand factor.
The minimum bill under these rates will be the flat rate for one horsepower.

SCHEDULE NO. 6

AGRICULTURAL SERVICE

METER RATES

Applicable to all agricultural or rural power and other service limited only by the demand upon the Company's system. Service will normally be supplied at 110 or 220 volts.

CONTRACT BASIS

Demand Charge	For	One	Month's	Service	$ 4.50 per H.P.
"	"	" Two	"	"	7.50 " "
"	"	" Three	"	"	9.80 " "
"	"	" Four	"	"	11.75 " "
"	"	" Five	"	"	13.45 " "
"	"	" Six	"	"	15.00 " "
"	"	" Seven	"	"	16.40 " "
"	"	" Eight	"	"	17.70 " "
"	"	" Nine	"	"	18.90 " "
"	"	" Ten	"	"	20.00 " "
"	"	" Eleven	"	"	21.05 " "
"	"	" Twelve	"	"	22.05 " "

To the demand charge, which is payable in equal monthly installments, shall be added the following energy charges:

ENERGY CHARGE, $.005 per Kilowatt-hour.

NON-CONTRACT BASIS

Demand Charge For	1st	Month's	Service			$4.50	per	H.P.
" " "	2nd	"	"			3.00	"	"
" " "	3rd	"	"			2.30	"	"
" " "	4th	"	"			1.95	"	"
" " "	5th	"	"			1.70	"	"
" " "	6th	"	"			1.55	"	"
" " "	7th	"	"			1.40	"	"
" " "	8th	"	"			1.30	"	"
" " "	9th	"	"			1.20	"	"
" " "	10th	"	"			1.10	"	"
" " "	11th	"	"			1.05	"	"
" " "	12th	"	"			1.00	"	"

To the demand charge shall be added the following energy charge:

ENERGY CHARGE, $.005 per kilowatt-hour.

The Consumer taking service under Non-Contract rates will be required to pay for the cost of the initial service connection and also the cost of any subsequent disconnections or reconnections made at his request.

The demand charges under this schedule are based on the connected load in motors or other utilization equipment which can be connected at any one time to the Company's supply system, and the motors regularly supplied are of the recording watt-hour type. At the consumer's request, however, the company will furnish and install demand indicating instruments at a rate of $3.00 per year or fraction thereof, and base the demand charge upon the measured monthly maximum demand, in which case the demand charges will be readjusted on the basis of 94% demand factor.

The minimum bill will be the demand charge for one horsepower.

SCHEDULE No. 7.

SPECIAL OIL FIELDS RATE

METERED SERVICE

Applicable to all power service supplied for or in connection with the development and operation of oil wells or oil production equipment.

Service will be furnished either at 220 or 440 volts.

$2.75 per month per kilowatt of maximum demand to which charge shall be added an energy charge of one-half (1/2) cent per kilowatt hour for all electric energy supplied.

Under this rate demand indicators and watt hour meters will in all cases be installed and maintained by the Company at the point of delivery.

SCHEDULE No. 8

GENERAL POWER RATE

Metered Service

Applicable to all industrial, commercial and other power installations of not more than twenty(20) horsepower installed capacity receiving energy at 110 or 220 volts at the consumer's option. Single phase or three phase service at option of company.

4¢ per kilowatt hour for first 200 kilowatt hours consumed during any month.

2¢ per kilowatt hour for all energy used during any month in excess of 200 kilowatt hours.

Minimum monthly charge $1.00 per horsepower.

Minimum monthly bill $1.00

SCHEDULE 9

INDUSTRIAL POWER RATES

METERED SERVICE

Applicable to all classes of power installations not otherwise specifically provided for in separate schedules.

INSTALLATIONS OF LESS THAN 20 H.P.

$1.50 per month per horsepower connected to which charge shall be added an energy charge of one half (1/2) cent per kilowatt hour for all electric energy supplied.

Minimum monthly bill, $5.00.

INSTALLATIONS IN EXCESS OF 20 H.P.

$2.50 per month per kilowatt of measured maximum demand, to which charge shall be added an energy charge of four-tenths of one cent ($.004) per kilowatt hour for all energy supplied.

Minimum monthly bill, $20.00.

On small installations where the demand charge is based on the connected load ordinary recording watt-hour meters are regularly supplied by the Company. At the consumer's request, however, demand indicating instruments will be supplied at an additional charge of $.25 per month in which case the rate will be based on the measured monthly maximum demand and the demand charge will be readjusted on the basis of 79% demand factor.

SCHEDULE No. 10

SUBSTATION SERVICE RATE

.Metered Service

Applicable to large consumers receiving energy directly from the Company's sub-stations.

$2.70 per month per kilowatt of measured maximum demand to which charge should be added an energy charge of one-quarter (1/4) cent per kilowatt hour for all electric energy supplied.

Monthly minimum charge - $50.00
Under this rate, watt demand indicators, graphic recording meters, or other demand indicating or recording instruments and watt hour meters will in all cases be installed and maintained by the Company at the point of delivery.

SCHEDULE No. 11

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 (2/10) cent per kilowatt hour for all electric energy supplied.

Monthly minimum charge - $1.00
Under this rate watt demand indicators, graphic recording meters or other demand indicating or recording instruments and watt hour meters will in all cases be installed and maintained by the Company at the point of delivery.

2. San Joaquin Light and Power Corporation is hereby directed to prepare and file with the Railroad Commission on or before April 20, 1916, revised forms of agricultural power contracts complying with the directions contained in the opinion which precedes this order.

3. San Joaquin Light and Power Corporation is hereby ordered to establish and file with the Railroad Commission on or before April 20, 1916, rules and regulations in accordance with the directions contained in the opinion which precedes this order.

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 April, 1916.

Max Thelen

H. D. Loveland

Alex Gordon

Edwin O. Edgerton

Frank R. Devlin

Commissioners.