

Decision No. 78180

ORIGINAL

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application
of CALIFORNIA-PACIFIC UTILITIES
COMPANY, a California corporation,
for authority to increase its
rates for electric service in its
Lassen Division.

Application No. 51804
(Filed April 2, 1970)

Orrick, Herrington, Rowley & Sutcliffe, by
James F. Crafts, Jr., and Robert J. Gloistein,
for applicant.
Wilfred H. Braunle, for Safeway Stores, Inc.,
protestant.
S. M. Boikan, Counsel, R. W. Beardslee, for the
Commission staff.

O P I N I O N

After due notice, public hearing in this matter was held before Examiner Coffey on September 30, 1970, at Susanville, California. The matter was submitted on October 19, 1970, upon the receipt of late-filed exhibits and the hearing transcript.

Applicant, a California corporation, seeks authority to increase its rates for electric service to about 5,900 customers in Susanville, Chester, Westwood, Herlong and adjacent rural areas in Lassen and Plumas counties. Applicant owns and operates public utility electric, gas, water and telephone systems in various parts of California; electric, gas and telephone systems in Oregon; electric, gas, water and telephone systems in Nevada; and electric systems in Utah and Arizona. Applicant is also engaged in the nonutility sale of butane-propane gas in California and Oregon.

Applicant presented the testimony of two witnesses and seven exhibits in support of its request. A financial examiner and two engineers presented the results of their field investigation of applicant's operations. A representative of Safeway Stores, Inc. presented testimony and two exhibits in support of its request for consideration of a load-factor type of rate schedule for commercial customers having high load factors. Protestants of the proposed increases argued that the proposed rates are inflationary, create an extra hardship for citizens on fixed income, and requested that the application for increased rates be denied. Three public witnesses complained of high voltage and one public witness protested high bills.

Rates

Applicant's approximately 5,900 domestic, commercial, industrial and agricultural electric service customers in Lassen County are served under 9 schedules set forth in the application. No rate increases are proposed for street and highway lighting and for outdoor area lighting service.

The following tabulation compares applicant's present and proposed rates for domestic service in single-family dwellings and in flats and apartments:

Domestic Service Rate Comparison

RATES

	<u>Per Meter</u>	<u>Per Month</u>
	<u>Present</u>	<u>Proposed</u>
Service Charge	\$0.75	\$0.80
Energy Charge (to be added to the Service Charge):		
First 40 kwhr, per kwhr	3.5¢	4.1¢
Next 60 kwhr, per kwhr	2.5¢	3.5¢
Next 100 kwhr, per kwhr	1.9¢	2.3¢
Next 700 kwhr, per kwhr	1.2¢	1.5¢
Over 900 kwhr, per kwhr	1.2¢	1.2¢

Minimum Charge: The service charge constitutes the minimum charge.

In response to Safeway's request for consideration of a load-factor type rate for commercial electric service, applicant and Safeway agreed that applicant should make a 12-month study of the effects of Safeway's proposal and file with the Commission the results of said study and applicant's rate recommendations resulting therefrom.

Results of Operations

The following tabulation compares the estimated summary of earnings for the test year 1970, under present and proposed rates prepared by the applicant and by the staff with the summary of operations adopted for the purposes of this proceeding:

SUMMARY OF EARNINGS
Year 1970 Estimated

<u>Item</u>	<u>Present Rates</u>		<u>Proposed Rates</u>		
	<u>Utility</u>	<u>Staff</u>	<u>Utility</u>	<u>Staff</u>	<u>Adopted</u>
Operating Revenues	\$1,651,700	\$1,681,000	\$1,877,400	\$1,911,600	\$1,869,300
<u>Operating Expenses</u>					
Operation and Maintenance	1,170,300	1,181,700	1,170,300	1,182,800	1,182,600
Admin. & Genl. & Misc.	91,000	79,500	91,000	79,500	79,500
Taxes Other Than on Income	120,000	121,300	120,000	124,200	123,700
Income Taxes	12,400	23,500	131,500	140,600	119,100
Depreciation	107,700	107,700	107,700	107,700	107,700
Total Oper. Exp.	1,501,400	1,513,700	1,620,500	1,634,800	1,612,600
Net Revenues	150,300	167,300	256,900	276,800	256,700
Depr. Rate Base	3,380,500	3,379,500	3,380,500	3,379,500	3,379,500
Rate of Return	4.45%	4.95%	7.60%	8.19%	7.60%

The only real and substantial issues between applicant and staff reflected in the above estimates of earnings are the reasonableness of estimated revenues and the amounts to be capitalized as construction overheads. Other differences between the estimates of applicant and staff are caused by the foregoing two issues.

Operating Revenues

The difference between the staff and the utility revenue estimates for 1970 amounts to \$29,300 or 1.7% at present rates, and to \$34,200 or 1.8% at proposed rates. These differences may be explained principally by the corresponding differences between the staff and the utility in their estimates of kilowatt-hour sales for 1970, and to a lesser extent, by the different spread of the average number of customers among residential and commercial service as estimated by the staff and the utility.

The staff estimates of the average number of customers and sales in 1970 reflect five years' least square trends, 1965 through 1969, by months of recorded data for each class of service. Applicant made customer and use-per-customer estimates on the basis of extending curves on a judgment basis that were plotted for the five-year recorded period 1965 through 1969, inclusive. Applicant argues that the staff estimate weights each year equally and that the plotted extension of recorded data can give more weight to the later years which will improve the accuracy of the estimate.

Review of the work papers of applicant and staff, Exhibits 9 and 10, discloses that the method used by applicant gives more weight to the experience of recent years than the method used by staff. The staff checked the reasonableness of its estimates by applying two additional approaches, each of which

supports staff results. A review of the annual fluctuation of residential and commercial sales in the period under study discloses that residential sales increased 2,436 kilowatt-hours in 1967 over those recorded in 1966 and commercial sales increased 3,188 kilowatt-hours in 1968 over those recorded in 1967. The 1970 increases in residential and commercial sales estimated by the staff are 1,914 and 1,649 kilowatt-hours, respectively. We find the staff method of estimating sales and revenues reasonable.

Construction Overheads

Applicant and staff differed on the percentage of administrative and general and miscellaneous expense to be capitalized as construction overheads. After a study in 1966, applicant determined that 6% of the amount of new plant constructed equated to the administrative and general expenses, office supplies and expense, employee pensions and benefits and rent related to construction and should be allocated thereto.

Applicant estimated for the test year the amounts to be allocated to construction overheads by applying 6% to the construction estimated in 1970. The staff rejected applicant's method since applicant's low construction budget for the test year results in relatively higher expenses in the test year. Applicant proposed that in 1970 about 27% of these expenses be capitalized. The staff witness testified that the comparable proportion of expenses capitalized was as follows for other years:

<u>Year</u>	<u>Expenses Capitalized</u>
1965	42.25%
1966	41.71
1967	42.40
1968	29.70
1969	28.86

The staff allocated 37% of these expenses to capital overhead as the average of expense during the past five years. We find the staff method reasonable. Applicant has not demonstrated that construction expenditures can reasonably be expected in the near future to remain at the low levels forecast for the test year.

Rate of Return

Both applicant and staff agree that a 7.6% rate of return on rate base is reasonable. Such a return will result in earnings on common equity of approximately 10%.

Service

Three customers complained of excessive voltage. Exhibit No. 12, late filed, sets forth the results of applicant's investigation, including voltage charts.

Widgren Complaint

Customer lives in Janesville, about 10 miles southeast of Susanville. He complained that voltage at his residence is excessive at night, reaching a voltage of 130 volts at 2:00 a.m. to 3:00 a.m. The voltage chart indicates the daytime voltage generally is between 123 and 127 volts and the voltage after midnight generally is 130 volts. The maximum and minimum voltages are 131 and 122 volts.

Complainant receives service from Janesville substation which is not locally regulated. As part of the approved 1970 construction budget, applicant will install a regulating transformer on the southeast side of Susanville where it will regulate the 60 kv. line serving Janesville.

Applicant states that the present voltage serving complainant is not excessively high, that it has received no

other complaints from persons living near complainant, and plans have been made to provide better regulation for Janesville and the surrounding area.

Kegg Complaint

Customer lives in Susanville. She complained that it takes too long to bake a cake and that bills had not been rendered since the service was connected in July.

Applicant indicates that due to the elevation of Susanville being 4,258 feet it may take longer to bake a cake than at sea level.^{1/} The voltage charts indicate that the service voltage to complainant generally is between 120 and 122 volts, with the high voltage being 124 volts and the low voltage being 117 volts.

The delay in rendering bills, due to a changeover in applicant's billing procedures, appears to have been corrected.

Castle Complaint

Complainant lives in Standish about twelve miles east of Susanville. She complained she had had a voltage of 168 volts at a previous residence on Honey Lake Thoroughbred Farm near Standish where light bulbs had burned out in 5 or 6 days, and that her dryer had burned out.

Applicant did not ascertain the location and time of the complaint, or whether the condition continues to exist. Applicant charted the voltage at complainant's present residence since complainant additionally stated that recently her dryer was overheating and her casserole had taken too long to cook. The charts indicate that service over seven days to complainant was generally

^{1/} The Commission recommends that applicant advise its customers on the effects of altitude on food preparation since applicant's answer appears overly simplified on this point.

123-125 volts, with the high voltage being 129 volts and the low voltage 120 volts. From this record it appears that the voltage of complainant's present service is satisfactory but the status of her previous service cannot be resolved from this record.

Service Discussion

Applicant in its filed tariffs holds itself out to supply electric energy normally to two- and three-wire single phase services typical of residential and small commercial installations at 120 or 120/240 volts. For these nominal voltages the operating voltages actually existing at various points and at various times on applicant's power system will be distributed over a range of voltages. The low and high points of this voltage range have not been established by applicant. However, the problem of voltage ratings for A-C systems and equipment has been the subject of a report of a joint committee of the Edison Electric Institute and the National Electrical Manufacturers Association. Subsequently, this report was approved by the U.S.A. Standards Institute. Briefly, and in general, this report recognizes the existence of the range of voltages referred to above and establishes three zones which cover this range.

1. Favorable Zone

This zone will contain a greater part of the existing voltages. For example, a 3-wire single phase system having a nominal voltage of 120/240 has a minimum voltage of 110/220 and a maximum of 125/250. Equipment will ordinarily be designed and rated so as to give fully adequate and efficient operation throughout this zone, although not necessarily with normal characteristics at all voltages.

2. Tolerable Zone

This zone for the same 3-wire single phase system contains voltages above and below the favorable zone; the minimum being 107/214 and the maximum 127/254. Equipment should, in general, be able to give fairly

satisfactory operation throughout this zone, although not necessarily with as good characteristics as are given throughout the "Favorable Zone".

3. Extreme Zone

This zone will include the relatively few extreme departures in voltage beyond the "Tolerable Zone". Ordinarily, such cases will be considered as temporary and subject to improvement. Two or three per cent of the normal voltage above and below the boundaries of the "Tolerable Zone" should cover all but the most extreme cases of this "Extreme Zone".

Although current voltage complaints appear to be, or presently will be, satisfactorily resolved, we note that applicant appears to consider as satisfactory voltages that fall in the above tolerable and extreme zones.

Voltages outside the favorable zone can result in substantial damage to customer equipment. For instance, the continuous application of a voltage to incandescent lamps that is 5% higher than the design voltage of the lamp causes the life of the lamp to be about one-half of that normally expected. If the applied voltage is increased to 9% higher than the lamp design voltage, the lamp-life will be decreased to about one-third of that expected.

It is reasonable that applicant reconsider its voltage service standards.

Findings and Conclusions

The Commission finds that:

1. Applicant is in need of additional revenues.
2. The adopted estimates, previously discussed herein, of operating revenues, operating expenses and rate base for the test year 1970 reasonably indicate the probable range of results of applicant's operations for the near future.

3. A rate of return of 7.6 percent on the adopted rate base for the test year is reasonable.

4. The increases in rates and charges authorized herein are justified; the rates and charges authorized herein are reasonable; and the present rates and charges, insofar as they differ from those prescribed herein, are for the future unjust and unreasonable.

5. Applicant has rendered electric service for substantial periods of time to some domestic customers in its Lassen Division at voltages outside the zone considered favorable by the United States of America Standards Institute.

The Commission concludes that the application should be granted in part, as provided by the following order, and that applicant should report to the Commission regarding the voltages at which it serves in the Lassen Division as hereafter ordered.

O R D E R

IT IS ORDERED that:

1. After the effective date of this order, California-Pacific Utilities Company, applicant, is authorized to file the revised rate schedules attached to this order as Appendix A. Such filing shall comply with General Order No. 96-A. The effective date of the revised schedules shall be four days after the date of filing. The revised schedules shall apply only to service rendered on and after the effective date thereof.


2. On or before April 1, 1970, applicant shall file with the Commission a report setting forth a summary of all voltage service complaints received in its Lassen Division since January 1, 1968, including the name and address of the complainant, the results of

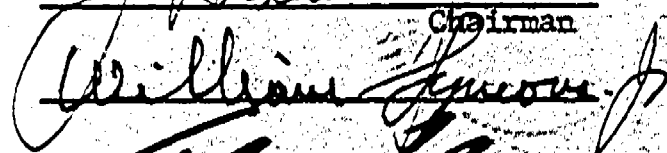
applicant's investigation of each complaint and any corrective action taken by applicant to satisfy each complaint. Said report will include a map on which the location of the complaints will be delineated, will include a summary of the findings of any distribution system voltage surveys conducted in the Lassen Division since January 1, 1966, and will include a statement of the procedure applicant follows to identify and correct abnormal voltage service conditions.


3. On or before June 1, 1971, applicant shall report in writing to the Commission the results of its study of the need and effects of a rate for commercial service which considers load factor, and applicant's recommendation resulting therefrom.

The effective date of this order shall be twenty days after the date hereof.

Dated at San Francisco, California, this 13th day of JANUARY, 1971.



Chairman




Commissioners

Commissioner Vernon L. Sturgeon, being necessarily absent, did not participate in the disposition of this proceeding.

APPENDIX A
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RATES - CALIFORNIA PACIFIC UTILITIES COMPANY

Applicant's rates, charges and conditions are changed to the level or extent set forth in this appendix.

Schedule No. A-3

Lassen Division

GENERAL SERVICE

RATES

	<u>Per Meter</u> <u>Per Month</u>
Single-Phase Service:	
Service Charge:	\$0.85
Energy Charge (to be added to Service Charge):	
First 200 kwhr, per kwhr	4.1¢
Next 800 kwhr, per kwhr	3.9¢
Next 2,000 kwhr, per kwhr	3.0¢
Next 3,000 kwhr, per kwhr	2.1¢
Next 14,000 kwhr, per kwhr	1.9¢
Over 20,000 kwhr, per kwhr	1.5¢

Minimum Charge: \$0.85 per month.

Polyphase Service:

Service Charge: The single-phase rate plus \$1.00 per meter per month.

Minimum Charge: \$1.85 per month, but not less than \$0.65 per month per horsepower of polyphase connected motor load.

Schedule No. C 3

Lassen Division

GENERAL HEATING AND COOKING SERVICE

RATES

	<u>Per Meter</u> <u>Per Month</u>
First 150 kwhr, per kwhr	4.0¢
All over 150 kwhr, per kwhr	2.0¢

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Schedule No. D-3

Lassen Division

DOMESTIC SERVICE

RATES

	<u>Per Meter Per Month</u>
Service Charge:	\$0.80
Energy Charge (to be added to the Service Charge):	
First 40 kwhr, per kwhr	4.0¢
Next 60 kwhr, per kwhr	3.0¢
Next 100 kwhr, per kwhr	2.2¢
Next 700 kwhr, per kwhr	1.4¢
Over 900 kwhr, per kwhr	1.3¢

Schedule No. OL-1

OUTDOOR AREA LIGHTING SERVICE

RATES

	<u>Per Lamp Per Month</u>
7,000 Lumen, Mercury-Vapor Lamp	\$4.10

Schedule No. P-7

Lassen Division

GENERAL POWER SERVICE: CONNECTED LOAD BASIS

RATES

H. P. Connected Load	Rate Per kwhr. for Monthly Consumption of			
	First 50 kwhr. per H.P.	Next 50 kwhr. per H.P.	Next 150 kwhr. per H.P.	All over 250 kwhr. per H.P.
2 - 9.9 hp.	4.7¢	2.4¢	1.4¢	1.1¢
10 - 24.9 hp.	4.2¢	2.3¢	1.3¢	1.1¢
25 hp. and over	3.7¢	2.2¢	1.2¢	1.0¢

APPENDIX A
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Schedule No. P-8

Lassen Division

GENERAL POWER SERVICE: MAXIMUM DEMAND BASIS

RATES

Energy Charge:

Billing Demand kw.	Rate per kwhr. for monthly consumption per kw. of the billing demand			
	First 67 kwhr. per kw.	Next 67 kwhr. per kw.	Next 200 kwhr. per kw.	All Over 334 kwhr. per kw.
0 - 18	3.95¢	2.35¢	1.35¢	1.15¢
19 - 37	3.45¢	2.15¢	1.25¢	1.05¢
38 - 74	3.05¢	1.95¢	1.25¢	.95¢
75 - 186	2.75¢	1.75¢	1.15¢	.85¢
187 - 1000	2.55¢	1.55¢	.95¢	.85¢
1001 - 2000	2.45¢	1.44¢	.94¢	.74¢
2001 - 4000	2.35¢	1.35¢	.85¢	.64¢
4001 and over	2.25¢	1.25¢	.85¢	.55¢