

Decision No. 21846

BEFORE THE RAILROAD COMMISSION OF THE STATE OF CALIFORNIA

ORIGINAL

In the Matter of the Application of)
PACIFIC GAS AND ELECTRIC COMPANY, a)
corporation, for an order of the)
Railroad Commission of the State of)
California authorizing applicant to)
enter into an agreement with UNION)
OIL COMPANY in words and figures)
contained in form therefor which is)
hereunto annexed marked Exhibit "A")
of Exhibit No. 1 thereof, etc.)

Application No. 21846

R. W. DuVal, for Applicant
L. S. Ready for Water Project Authority
of the State of California.

WAKEFIELD, COMMISSIONER:

O P I N I O N

Pacific Gas and Electric Company has applied for an order authorizing said applicant to enter into a proposed written agreement with Union Oil Company, a copy of which is attached to and made a part of the application. This proposed agreement, for the term of twenty years subject to modifications therein expressed, between Pacific Gas and Electric Company, sometimes hereinafter referred to as Pacific, and Union Oil Company, as Union, makes provision, among other things, for (1) the sale and delivery of electric energy and steam to Union by Pacific; (2) the construction and operation of a steam-electric generating plant by Pacific on property adjacent to refinery of Union at Oleum, in the County of Contra Costa, State of California; (3) the delivery of feed water at said steam plant by Union; and, (4) the purchase of fuel oil by Pacific from Union for use in said steam plant, all subject

to and upon the terms and conditions in said proposed agreement set forth. A public hearing on the application was held on May 10, 1938, and the matter was submitted.

Union has been supplied electric service at its Oleum plant by Pacific for many years and is presently supplied under the latter's filed Schedule P-30, pursuant to a five year agreement dated January 23, 1936. The amount of electric energy so purchased during the year 1937 was 10,478,400 kilowatt-hours, with a load factor of 73 per cent and a power factor ranging from 86 to 92 per cent. According to evidence adduced by applicant's witness, Union has been increasing and will, from time to time, increase its electric power and steam requirements and therefore proposes to install and operate its own steam-electric generating plant to fulfill its entire requirements unless a rate can be secured for electric power lower than that available to it under Schedule P-30, which, at present, affords the lowest filed rate for service furnished to this consumer.

Union requires substantial amounts of steam for its oil refining processes, which needs are now generated in its own boiler plant, while electric power requirements, as heretofore stated, are at present supplied by Pacific. The steam thus required can be made in conjunction with the generation of electric energy more economically in a single plant producing and using high pressure steam, than by present production of steam and electricity in separate plants. For the dual purpose of generating steam and electric energy in a single plant Pacific, in accordance with the provisions of the agreement, will have refinery waste fuels in the form of sludge, tars, waxes, gases and petroleum coke available, which can be utilized under boilers to the advantage of both Union and Pacific.

To retain Union Oil Company's business without detrimental effect to existing consumers of Pacific, the latter must secure to itself all of the possible economies inherent in supplying power developed from process steam. To accomplish this purpose requires the construction and operation of a steam-electric plant adjacent to Union's oil refinery. Pacific proposes to construct a high pressure steam-electric plant to consist of a single turbo-generator unit of 44,000 K.v.a. capacity and three boilers to operate at a pressure of 1,500 pounds per square inch, with accessories, at a capital cost of \$5,000,000. In addition to serving Union, said plant will provide additional necessary generating capacity for Pacific's electric system operations.

The following rate for the sale by Pacific and purchase by Union of electric energy and steam are provided by the proposed agreement:

ELECTRIC RATES:

- (a) From January 1, 1938, to April 30, 1938, inclusive, in accordance with Pacific's Schedule P-30, a true copy of which is attached to the application and made a part thereof; and
- (b) From May 1, 1938, until said steam plant shall be placed in operation, four and one-half (4½) mills per kilowatt-hour; and
- (c) For the remainder of the term of this agreement:

Demand Charge: (which shall be in accordance with Schedule A hereof until such time as Union shall request that Schedule B hereof be substituted therefor, whereupon ~~beginning with the first~~ ^{beginning with the first} regular date thereafter for reading of meters at said refinery and continuing during the remainder of the term hereof Schedule B shall apply)

Schedule A:

First 3000 kilowatts or less of monthly maximum demand.....	\$4000 per month
Next 3000 kilowatts of monthly maximum demand.....	\$1.03 per K.w. per Mo.
All over 5000 kilowatts of monthly maximum demand.....	\$1.20 " " " "

See Sec 30909
changed to 1.3%
JMM

Schedule B:

First 5000 kilowatts or less of
monthly maximum demand..... \$6250 per month
All over 5000 kilowatts of monthly
maximum demand..... \$1.20 per K.w. per Mo.

The maximum demand in any month will be the average kilowatt delivery of the thirty minute interval in which such delivery shall be greater than in any other thirty minute interval in that month.

Quantity Charge - Per Kilowatt-hour: (in addition to Demand Charge.)

1/2 mill, and in addition thereto Union shall deliver to Pacific at said steam plant 0.0021 barrels of fuel oil or the equivalent quantity of substitute fuel, and Pacific shall accept substitute fuel when offered by Union in lieu of fuel oil.

STEAM RATE:

Demand Charge:

For monthly maximum demand of
275,000 pounds or less..... \$2,000 per month

The maximum demand will be the average steam delivery of the 60 minute interval in which such delivery is greater than in any other 60 minute interval in that month.

Quantity Charge: (In addition to Demand Charge)

First 125,000 pounds per month....\$0.02 per 1000 lbs.
All over 125,000 pounds per month.... 0.015 " " "

And in addition to payment of the foregoing rates, Union will deliver to Pacific at said steam plant for each 1,000 pounds of steam delivered 0.265 barrels of fuel oil or the equivalent quantity of substitute fuel when offered by Union in lieu of fuel oil.

In addition to the rates provided in the proposed agreement for the sale and purchase of electric energy and steam, and the delivery of fuel to Pacific by Union in exchange for electric energy and steam, the more important features of the proposed agreement are:

1. Obligations of Union:

- (a) To take all electric energy requirements from Pacific up to a maximum demand of 15,000 Kilowatts in excess of such electric energy as Union shall generate by its existing generating equipment installed at said refinery.
- (b) To maintain and operate its electric energy consuming equipment so that the delivery of energy under the agreement shall be at a power factor of at least 85 per cent at said steam plant.
- (c) To take from Pacific all steam necessary in the operation of said refinery, at a pressure of 160 pounds per square inch with 60 degrees F. of superheat, provided Union shall have the right to generate and use steam up to a maximum rate of 20,000 pounds per hour if such steam shall be generated from waste heat sources only at the refinery, and further provided Pacific shall not be required to deliver steam at a rate in excess of 275,000 pounds per hour, and Union shall be entitled to obtain steam above that rate of delivery from sources other than Pacific.
- (d) To deliver quantity of feed water without charge to Pacific which will equal the pounds of steam delivered by Pacific.
- (e) To reimburse Pacific for installation of equipment necessary to be added to plant for purposes of using petroleum coke.

2. Obligations of Pacific:

- (a) To endeavor to construct said steam plant ready for operations not later than July 1, 1940.
- (b) To accept substitute fuel in lieu of fuel oil when offered by Union in payment for electric energy and steam.

- (c) To purchase at least 375,000 barrels of fuel oil within each three-year period for the operation of said plant, which fuel oil shall be over and above such fuel oil or substitute fuel as Pacific may receive in payment for electric energy and steam, or to pay Union 12 cents per barrel for deficiencies below the minimum quantity stated herein.
- (d) To install furnaces under boilers at its expense, suitable to burn petroleum coke when said boilers are equipped with pulverized fuel burners.

The length of the term of the proposed contract assures Pacific of the consumer business for a long period of time to the benefit of both parties, which appears necessary to the economic success of the project in view of the substantial amount of the investment required and the life expectancy of the equipment involved.

Evidence was offered by applicant through its witness to show that the relation of system load during the year 1940 and the dry year generating capability of its plants will be such that additional generating capacity will be required to afford a reasonable and safe margin of excess capacity. The plant is intended to fulfill, in part, the system demand for additional generating capacity, in addition to the purposes heretofore described.

It appears reasonably clear that the rates offered by the contract for the electric and steam service, approval of which is sought, are necessary to meet the competitive condition and to retain the business of the oil company. The electric and steam service to be performed at the rates provided in the proposed agreement must be viewed as an electric service only, and the total revenue therefrom should be considered as electric revenue of this utility.

It further appears reasonably clear that the construction and operation of the steam electric plant and the retention of the business of the Union Oil Company at the proposed contract rates and under the other contract provisions will not constitute a burden upon other consumers, but will tend to the benefit of such other consumers. We are of the opinion, therefore, that an order should be made authorizing applicant to enter into the proposed agreement filed in this proceeding as Exhibit "A." I recommend the following form of order.

O R D E R

The Pacific Gas and Electric Company having filed the above titled application for an order approving that certain agreement described in the foregoing opinion; public hearing having been held on said application, and good cause appearing therefor,

IT IS HEREBY ORDERED that the Pacific Gas and Electric Company be and it is hereby authorized to execute an agreement with the Union Oil Company containing the same terms and provisions as the proposed agreement filed in this proceeding as Exhibit "A," and it is hereby further authorized to charge the rates set forth in said agreement for electric energy and steam supplied to Union Oil Company at its refinery at Oleum, Contra Costa County, California. The Pacific Gas and Electric Company shall file a copy of the executed agreement with the Commission within thirty (30) days after its execution.

IT IS HEREBY FURTHER ORDERED that the Pacific Gas and Electric Company, until otherwise directed by the Railroad Commission, shall, on its records and in its reports to the

Railroad Commission, record the revenues, both electric and steam, derived under said agreement under the appropriate electric operating revenue accounts.

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 16th day of May, 1938.

Nathaniel M. ...
Leon ...
James R. ...
Ray ...
Ray ...
Commissioners