It is of record that Applicant is now and has been serving customers in Eureka with a manufactured oil gas, generated in its own plant, since 1927 (and its predecessor prior to that period), and it proposes in the pending proceeding to secure the necessary authority in order to serve natural gas rather than manufactured gas in the Eureka area.

Evidence shows that natural gas was discovered by The Texas Company in the year 1937 approximately 14 miles southeast of Eureka, in what has been designated as the Tompkins Hill gas field, and that at the present time there are three developed gas wells capable of producing a dry gas of a heat content of approximately 1040 British thermal units per cubic foot. The testimony of Applicant's witnesses further shows that the quality, pressures and probable extent of the gas reserves are such as to justify the Applicant to make the expenditures proposed herein in order that said gas supply may be made available for distribution in Applicant's system in Eureka.

In order to carry out the program, Applicant proposes to construct, operate and maintain, in addition to the present gas facilities in Eureka, a high pressure transmission gas line extending from the Tompkins Hill gas field to the City of Eureka. Said line is to be approximately 14 miles in length and 4 inches in diameter. Applicant proposes to lay said line, in part, on private right of way and, in part, on public highways, streets, roads and places in the City of Eureka and in the County of Humboldt. It is of record that Applicant now holds the necessary franchises, both in the City of Eureka and in the County of Humboldt, and has a certificate as to the former granted by this Commission's Decision No. 33368, under date of July 30, 1940.

While the proposed rates are identical per unit volume of gas, actually however all consumers using the minimum or more will realize very material savings because of the greatly increased heat content of the natural gas as compared to the present manufactured gas. As heretofore stated, the natural gas has a heat content of 1040 heat units as compared to approximately 540 for the artificial gas. The savings to customers will range from approximately 12 per cent for a usage of 300 feet to between 30 and 40 per cent for the average consumer.

Under revised Rule and Ragulation No. 2 - Character of Service (Exhibit "B" attached to the application), Applicant proposes to maintain the heating value of the gas served in the Humboldt Division between the limits of 950 and 1050 B.t.u. dry basis. (1)

Applicant's witnesses presented evidence as to earnings realized on its gas operation in Eureka by years from 1927 through 1939. There likewise was presented an estimate as to what the company expected during the first three years of natural gas operation. These figures indicate that the earnings have been disappointing and unsatisfactory inasmuch as there has been a continual decline and for the year 1939

⁽¹⁾ In the North Bay Division of Applicant's gas territory, where natural gas produced is at approximately the same 1040 B.t.u. heat content, Rule and Regulation No. 2 provides for a service range of from 1000 to 1100 B.t.u. Applicant points out that because there is but one known source of natural gas in the Humboldt Division and with no pipe line connections to other divisions, it would be meaningless to set such a high upper limit when the actual heat content of the gas was but 1040 B.t.u. It was further pointed out that in the North Bay Division, through interconnections, higher heating value gas could be supplied, thus justifying the higher range.

Applicant not only failed to carn anything for depreciation and return but suffered a deficit before these two items of \$2,942. The gross revenue from gas operations in Eureka for the same period was \$99,711 and the investment in facilities is shown as in excess of \$600,000. The operation under natural gas, as disclosed by the record, does not show an improvement; in fact, at the end of the third year a deficit, on the same basis as above, is estimated at some \$6,000.

Analysis of the record seems to indicate rather clearly that this unsatisfactory showing in the past has been due to the relatively few customers taking service and the high investment per customer, accompanied by the relatively high cost to the consumers for the gas sold. Under natural gas operations the estimate provides for a material increase in customers served, which will lessen the capital burden per customer. However, the cost of gas to Applicant appears high at an initial rate of 13½ conts per M.c.f. in the field and under Applicant's proposal of maintaining the present gas plant as standby, the over-all cost of gas delivered to the distribution system offers but little adventage in cost over manufactured gas operations. In coalition, the heretofore mentioned extraordinary initial expenses due to cut-over must be met.

Such a situation, from the carming viewpoint, can hardly be said to justify the new expenditures. However, it appears to me that more favorable results than shown may well be possible through cost control, the manner of handling fixed capital charges and, further, the future may hold forth greater load growth than now contemplated.

A.23773 Under the circumsturces, inasmuch as the matters prayed for appear clearly to be in the interest of Applicant's customers in the Humboldt Division, to which this application is limited, and Applicant is willing to undertake the risks involved, it is my opinion that the application should be grunted. At the public hearing on this matter, heretofore mentioned, no one appeared to oppose or protest the granting of the application and I recommend the following findings end form of Order. ORDER A public hearing having been had in the above entitled application, the matter naving been fully considered, and It appearing, and being found as a fact that public convenience and necessity so require, Pacific Cas and Electric Company is hereby granted a certificate to exercise the rights and privileges granted it by the County of Humboldt under Ordinance No. 204, adopted November 15, 1940, to the extent that Pacific Gas and Electric Company may exercise said rights and privileges within such parts or portions of said County as ere now served or in this Order authorized to be served by it. or as hereafter may be served by it through extensions of its existing system made in the ordinary course of business as contemplated by Saction 50 (a) of the Public Utilities Act; provided, however, that this certificate shall be subject to the condition that the Railroad Commission may hereafter by appropriate -7and filed as the Opinion and Order of the Railroad Commission of the State of California.

Dated, San Francisco, California, December 3,