

Decision No. 33668

BEFORE THE RAILROAD COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of SOUTHERN CALIFORNIA GAS COMPANY, a corporation, and SOUTHERN COUNTIES GAS COMPANY OF CALIFORNIA, a corporation, under Section 50(a) of the Public Utilities Act of the State of California, as amended, for a certificate of public convenience and necessity for the construction and operation of a natural gas pipeline between a point on the boundary line of California near Blythe, California, and a point at or near the City of Los Angeles, California.

ORIGINAL

Application No. 27056

LeRoy M. Edwards and T. J. Reynolds, for applicant,
Southern California Gas Company.
LeRoy M. Edwards and Edward R. Young, for the
Southern Counties Gas Company.
Ralph W. DuVal and Robert Gerdes, for Pacific Gas
and Electric Company, as their interests may appear.
K. Charles Bean, Chief Engineer and General Manager,
and M. E. Gaider, Engineer, for Board of Public
Utilities and Transportation of the City of Los
Angeles, interested party.
W. R. MacKay and L. H. Stewart, for Smoot-Holman
Company, Inglewood.
L. M. Klauber, for San Diego Gas and Electric Company.

ROWELL AND ANDERSON, COMMISSIONERS

O P I N I O N

Southern California Gas Company and Southern Counties Gas Company of California seek a certificate of public convenience and necessity for the construction and operation of a natural gas pipe line from a point near Blythe, on the California-Arizona boundary line, to Santa Fe Springs near the City of Los Angeles. Applicants propose to purchase gas at Blythe from the El Paso Natural Gas Company, a corporation which plans to construct a line to that point for the transmission and sale of gas produced in western Texas and New Mexico.

Public hearings were held before this Commission at Los Angeles on December 17 to 20, inclusive, 1945. These Applicants, as well as El Paso Natural Gas Company, have filed applications with the Federal Power Commission for the issuance of certificates of public convenience and necessity as required by the Natural Gas Act.

Each of the Applicants is now engaged as a public utility in the sale and distribution of gas for domestic, commercial and industrial uses in the southern California area. Together, they have entered into an agreement with the El Paso Natural Gas Company for the purchase of gas at the state line, Southern California Gas Company having obligated itself to receive and pay for 75 per cent of the gas which El Paso Natural Gas Company agrees to deliver, and Southern Counties Gas Company to receive and pay for the remaining 25 per cent. Likewise, each Applicant intends to share in the same proportions the cost of constructing and operating the line within the State of California.

Applicants ask that the Commission issue a certificate of public convenience and necessity for the construction and operation of such gas line facilities as required by Section 50(a) of the Public Utilities Act. They have not yet applied for franchises from the counties traversed by the proposed line in this state, but, in accordance with the provisions of Section 50(c) of that Act, they ask for a preliminary certificate to exercise such franchises as may be required and obtained. No request is made at the present time for authority to issue securities for the financing of the project.

At the hearing Applicants presented evidence relative to the supply of gas now available to them from California sources, their need for an additional supply of gas, and the feasibility of obtaining an adequate supply of gas from out-of-state sources under the arrangements entered into with the El Paso Natural Gas Company.

Physical Features and Cost of the Project

As heretofore stated, the project embodied in this application is limited to the gas line and related facilities that Applicants propose to

construct within the State of California. They include a 26-inch high-pressure gas line extending in an easterly direction for approximately 214 miles from Santa Fe Springs near the City of Los Angeles to a point near Elythe in the southeastern part of the state.

It is proposed that actual construction will start not later than October 1, 1946, and that the line and facilities will be completed by June 1, 1947. With compressor facilities that will first be installed, the maximum delivery capacity during the first year will be 125 million cubic feet per day, and from the second to the fourth year will be 175 million cubic feet. Applicants have agreed to purchase from El Paso Natural Gas Company a minimum of 114 million cubic feet a day for the first year and 159.5 million cubic feet a day for the next four years, and have secured the right to increase the quantity to 305 million cubic feet maximum during the remainder of the thirty-year purchase agreement.

The gas is to be delivered to Applicants at a minimum pressure of 250 pounds (gauge), and the gas thus received will be recompressed by means of a compressor station with an initial capacity of 10,000 horsepower to be installed by them. When and if the demands are increased to 305 million cubic feet per day, they propose to augment their compressor capacity by another 15,000 horsepower.

It is estimated that the over-all capital cost to Applicants of the proposed initial features of the project will approximate \$12,140,000. The additional cost, at present price levels, to bring the project up to its ultimate deliverability of 305 million cubic feet per day is estimated at about \$3,000,000.

Nature of the Gas Supplied by the El Paso Natural Gas Company

El Paso Natural Gas Company will supply gas to Applicants at Elythe under a firm contract to continue for a period of thirty years. Testimony was presented relative to the extensive gas reserves and supply that are to be set aside and made available for the California project under that contract.

The El Paso Natural Gas Company, to insure deliveries of the gas above mentioned, has dedicated to the performance of said agreement all of the gas it will purchase under contracts of purchase made with certain producers in the west Texas and New Mexico fields, mainly, the Permian Basin, Panhandle and Hugoton fields. The purchase contracts so dedicated include those which El Paso Natural Gas Company has made with Phillips Petroleum Company, Shell Oil Corporation, Gulf Oil Corporation, and Warren Petroleum Corporation.

During the first five years, the major portion of the gas delivered by El Paso Natural Gas Company to the Applicants will be obtained from the Permian Basin fields. These are oil producing fields. It was indicated that the total current oil well production of gas from these fields exceeds 500 million cubic feet a day, and that as much as 48 per cent of this is being vented to the air. The gas reserves in these fields were estimated to be in excess of seven trillion cubic feet. It was also shown that from these fields 150 million cubic feet of raw and residue casinghead gas could be made available for the California project during the next five years. Thereafter, as the gas productive capacity of these fields declines, El Paso Natural Gas Company will obtain additional gas to satisfy its demands, including the California project, from the Panhandle and Hugoton and other dry gas fields. Under contracts made with Phillips Petroleum Company for gas to be supplied from the Panhandle Field it is estimated that over 4.5 trillion cubic feet will be devoted to the undertaking with Applicants. Counsel representing El Paso Natural Gas Company stated that upon obtaining the requisite federal certificate of public convenience and necessity for this project, it will have secured all legal authority to carry out its obligation to deliver gas to the Applicants in accordance with the agreement.

The contract contains provisions covering the quality and heating value of the natural gas to be supplied to Applicants. Gas which will be secured from the Permian Basin fields shall not contain hydrogen sulphide or other impurities beyond specified amounts. ⁽¹⁾ The heating value of this casinghead gas shall not

(1) In addition to specified limitations as to oxygen, free water, and carbon dioxide content, not more than 0.25 grains of hydrogen sulphide nor more than 5 grains of organic sulphur per 100 cubic feet are permitted.

be less than 1050 B.t.u. ⁽²⁾ (wet basis) for the first five years and not less than 985 B.t.u. for the remainder of the contract period. Gas secured from dry gas fields shall not be less than 950 B.t.u.

The price to be paid by Applicants for all gas delivered at Blythe for the first five years is based upon the following rate, and thereafter will be subject to possible adjustment upon renegotiation by the parties or upon the occurrence of certain events mentioned in the agreement. Such basic rate is as follows:

Demand Charge:

Per MCF of Maximum Contracted
Daily Demand: \$1.00 per month

Commodity Charge:

First 500,000 MCF (per month)	\$0.15 per MCF
Next 500,000 MCF (per month)	\$0.11 per MCF
Over 1,000,000 MCF (per month)	\$0.095 per MCF

The average cost of the delivered gas to Applicants at not less than 250 pounds pressure will vary as to volume and year of delivery. It is estimated that for the second year the average cost will be 13.68¢ per Mcf. (14.73 lb. base), and if Applicants' own costs be added, the final delivery costs at the Santa Fe Spring Station will approximate 17.52¢ (14.73 lb. base).

California Reserves

Evidence submitted in this proceeding, with respect to California's known gas reserves, was prepared by the staff of this Commission in cooperation with the Division of Oil and Gas of the Department of Natural Resources. The estimates made in 1941 and 1942 were restudied to give effect to interim changes and brought up to date as of July 1, 1945. Such gas reserve estimates, expressed in trillions of cubic feet are Casinghead gas reserves 7.081, Dry Gas reserves, exclusive of storage, 4.694, Dry Gas fields used as underground storage 0.050, Total 11.825.

(2) The gas heating value guaranty is secured by Applicants by means of a special agreement with the Phillips Petroleum Company whereby this company agrees not to change its present methods of gasoline plant operation during the initial five year period so as to reduce the heating value of the residue gas below 1050 B.t.u. Applicants have agreed to make certain payments annually directly to Phillips to compensate them for the operation of their plants in such a manner.

The evidence shows that withdrawals of gas from California reserves between January 1, 1942 and July 1, 1945, totalled in excess of 1.681 trillion cubic feet, an average of over 480 billion cubic feet annually. Withdrawals have been compensated in part by the discovery of new fields of relatively minor importance and new zones within existing fields. Opinions were expressed that in view of the most intensive exploration program pursued during recent years without the discovery of any important new reserves, it would not be safe to expect any material additions to the present gas supply. The largest gas reserve in the state, estimated to be 3.618 trillion cubic feet, is the Rio Vista dry gas field located northeast of San Francisco. This field supplies gas only to the central and northern California market. Average annual withdrawals therefrom during the past three and a half years have been 128 billion cubic feet, and recent withdrawals have been at a higher rate.

In southern California the gas requirements are supplied primarily from oil well gas fields. Applicants now obtain gas from fifty-six separate fields, approximately 3 per cent of their supply being derived from dry gas sources. They estimated the total oil well gas production in California for the year 1945 to be approximately 372 billion cubic feet, of which only 227.9 was available for utility purposes. The production figures given are exclusive of the gas reinjected under existing repressuring projects. Gas now reinjected by the oil producers approximates 81.2 billion a year and it is expected there will be an increase in the number of such projects in the near future, resulting in a still further reduction in the quantity of gas available to the utilities.

Applicants' Gas Requirements

Applicants supply natural gas for most of the domestic, commercial and industrial requirements of southern California, exclusive of the City of Long Beach, but including the City of San Diego and its environs, the coastal area as far north as San Luis Obispo County, and some parts of the San Joaquin Valley.

The population of Los Angeles County alone is estimated at 3,441,000, it having increased about 25 per cent since 1940. The number of active meters of these Applicants has increased from 930,600 in 1940 to an estimated 1,115,000

in 1945, or about 20 per cent, and the firm retail sales during this same period have increased from 71,891 to 113,033 millions of cubic feet, or approximately 57 per cent. Evidence points strongly to a continued growth in both population and gas sales.

Applicants' gas requirements, as determined by their customer demands, are made up of two principal classes of service, those classified as "firm", including sales to domestic, commercial and industrial, and those classified as "interruptible" or "surplus", which cover sales mostly to the larger commercial and industrial loads. In reference to the first class, Applicants must at all times meet their full demands throughout the year, while service to the second group is dependent upon gas availability after service to the first group and after satisfying underground storage requirements. Applicants' requirements vary sharply as between summer and winter periods and as between the different hours of the day. For example, the record shows that the firm gas requirements in the summer period may fall below 140 million per day, while under cold temperature conditions it may rise to five times that amount and the daily mean will approximate over twice the minimum. In addition, an interruptible load of approximately 20 per cent of the daily average firm requirements has been experienced.

The following tabulation taken from exhibits and testimony sets forth the daily estimated gas requirements of Applicants, with the available supply from state sources, and the estimated deficiencies.

Daily Average Basis (Millions Cubic Feet)

Year	Requirements			Supply	Deficiency		
	Firm	Interruptible	Total		Firm	Interruptible	Total
1944	296	254	564 ⁽³⁾	530	-	34	34
1945	309	250	565 ⁽³⁾	507	-	56	56
1947	273	248	521	356	-	165	165
1949	288	261	549	286	2 ⁽⁴⁾	261	263
1950	295	268	563	253	42 ⁽⁴⁾	268	310

(3) Includes 14 million cubic feet for net storage in 1944 and 6 million cubic feet for 1945.

(4) During time of protracted curtailment it is estimated approximately 28 million cubic feet per day will transfer to firm schedules. This transfer is not included here.

It will be observed that on the average daily basis a deficiency develops after the year 1947 in respect to the firm gas requirements, and the present deficiency to supply the interruptible requirements increases each year, while in 1949 there will be no gas at all for that service.

However, average day requirements fail to portray the actual day-to-day situation, inasmuch as there are comparatively long periods in the late fall, winter and spring seasons when actual customer demands are 1.5 to 1.75 times the average requirements. Under such conditions the deficiencies shown in the first tabulation will be greatly increased, and as a matter of fact, will occur before the 1947 period.

In the following table estimated peak day requirements are indicated, on the basis of experienced extremely low temperatures.

Peak Day Basis (Millions Cubic Feet)								
Year	Requirements			Supply	Deficiency			
	Firm	Interruptible	Total		Firm	Interruptible	Total	
1947	799	273	1072	652	147	273	420	
1949	865	281	1146	576	289	281	570	
1950	897	287	1184	541	356	287	643	

As the figures indicate, the gas supply of 652 million cubic feet is insufficient even to meet the estimated firm service requirements by 147 million cubic feet on a peak day basis in 1947. By 1950 it is estimated this deficiency in firm peak day requirements will be 356 million cubic feet out of a total firm demand of 897 million, or 40 per cent.

The evidence also shows that if the southern California supply is not augmented there will be insufficient gas, over firm requirements in the summer period, to replenish the underground storage. Such storage in 1949, for example, is estimated to provide as much as 47 per cent of the maximum peak day deliveries. If such deficiencies were permitted to develop, not only would there be a greatly increased inability to carry the firm loads over considerable periods, but there are indications that the largest of the underground storage reservoirs (La Coleta) would be permanently impaired through water encroachment,

It may also be observed that if the proposed undertaking to obtain gas from out-of-state sources is completed, the added supply will meet the average requirements for some years in the future, but under present conditions of underground storage the Applicants will still be unable to meet their maximum peak day firm demand. If the added supply from the new line becomes available in 1947, it is estimated the total supply available would fail to meet Applicants' firm peak day requirements by approximately 22 million cubic feet. In 1950 the firm peak day deficiency would be 181 million cubic feet. In this respect it was stated that every effort will be made to develop further subsurface storage in order that the gas supply may be utilized in the most efficient manner to assist in carrying the firm gas winter loads, and to otherwise utilize the out-of-state gas so that the most beneficial use will be realized for the essential users of the service.

Conclusions

It is clear, based both upon the facts of record and this Commission's own knowledge of the gas situation in California, that the state's declining gas supply must be conserved, and that the supply available to utilities serving the southern California territory must be augmented, not only to meet the growth in load but to maintain present customer service. The record justifies the conclusion that the proposed transmission line to be constructed by Applicants to connect with that of the El Paso Natural Gas Company is both economically and physically feasible and is in the public interest. Accordingly, a certificate of public convenience and necessity should be granted. The following order is recommended.

O R D E R

A public hearing having been held upon the applications of Southern California Gas Company and Southern Counties Gas Company of California, the matter considered, and it appearing to the Commission and it being found as a fact that public convenience and necessity so require, therefore

IT IS HEREBY ORDERED that Southern California Gas Company and Southern Counties Gas Company of California be and are hereby granted a certificate and are authorized to construct, operate and maintain that certain gas transmission line and appurtenances described in the above application, and

IT IS HEREBY FURTHER ORDERED that Southern California Gas Company and Southern Counties Gas Company of California will be granted a certificate or certificates to exercise such county franchises or permits as may be obtained by them for the construction and maintenance of said gas transmission line, upon making further application therefor.

IT IS HEREBY FURTHER ORDERED that copies of all executed agreements pertaining to the pipe line project shall be filed with this Commission and, in addition, within six months after the completion of the project, a detailed statement shall be submitted, setting forth the capital expenditures.

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.

The effective date of this order shall be the date hereof.

Dated at San Francisco, California, this 5th day of February

1946.

L. Harold Anderson
Justus F. Craven
Francis J. Brown
John W. Powell
Harold D. Hule
Commissioners