

Decision No. 76596

ORIGINAL

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of
SOUTHERN CALIFORNIA GAS COMPANY for
an increase in gas rates to offset
higher costs occasioned by an increase
in the rates of its supplier El Paso
Natural Gas Company, to utilize certain
gas cost reductions, and for other
revisions in its tariffs.

}
} Application No. 50713
} (Filed November 29, 1968)
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(Appearances are listed in Appendix A)

OPINION ON REQUEST FOR THERMAL UNIT RATES

In the Phase II portion of the above entitled application Southern California Gas Company seeks authority to provide thermal unit rates for natural gas service and authority to change the rate design of its rate schedules in order to relate revenues more closely to cost under various temperature conditions.

This application and Applications Nos. 50714 and 50715 filed concurrently by applicant's affiliates, Southern Counties Gas Company of California (SoCounties) and Pacific Lighting Service Company (PLSC), have been consolidated for purposes of hearing and companion decisions in each of the two phases under which authorizations are sought. After public hearing held earlier this year in Phase I, the Commission issued Decisions Nos. 75428, 75429, 75489, 75802 and 75803 in these applications.

Public hearing in Phase II of these applications was held in Los Angeles before Examiner Main on October 8, 28, 30 and 31, 1969. With respect to Phase II of Application No. 50713, evidence

was taken on applicant's proposal for thermal unit rates and not on its proposal for rate design related to temperature conditions. The latter matter has been deferred and any future hearing thereon preferably should be undertaken pursuant to a new application. This decision deals only with applicant's proposal for thermal unit rates and related matters.

Background

In view of the heat energy use to which natural gas is put and because its heat content varies, it is desirable that the basis of billing customers be as closely related to the heat content of the gas delivered to them as can be accomplished economically.

Supplies of natural gas for the Pacific Lighting Utilities System (System), i.e., the combined utility system of applicant, SoCounties and PLSC, come from numerous and varying sources within California and out-of-state and encompass a wide and varying range of heating values. The rates charged applicant and its affiliates for such supplies are on a measured volume basis independent of heat contents above 1000 Btu per cubic foot. Adjustments for heating values at other levels depend on contractual provisions with the suppliers.

A downward trend in heating value is being experienced: The System weighted average heating value declined from 1084 Btu in 1961 to 1076 Btu in 1968 and is estimated at 1070 Btu for 1969 and 1064 Btu for 1970. The lower heating value of new supplies of gas coming from the Delaware Basin and extraction of the heavier hydrocarbons from some supplies are causing the deterioration. The El Paso - Blythe source gas and the Transwestern source

gas thus are showing substantial declines in heating value. Consistent with this Commission's objective of the gas utilities under its jurisdiction obtaining adequate supplies of natural gas at the lowest reasonable rates, it is the continuing obligation of applicant and its affiliates to put forth at all times their best efforts to have their suppliers maintain or increase the heating value of the gas delivered. The deterioration in heating value of course affects gas costs adversely not only at the supply level but also at the transmission level.

Under the physical facts of applicant's gas supply and distribution system, gas from different sources may flow and the heating value will vary even within a given Btu district. Btu districts are patterned according to gas supply characteristics and used to relate heating value to gas service within the districts. The cost of measuring the heating value of the gas delivered to each individual customer would be prohibitive. However, for the retail interruptible customers, who are billed on therm or million Btu rates, the heat content is measured at each delivery point, the cost of such measurements being small in relation to the volumes delivered.

Several utilities under our jurisdiction including Pacific Gas and Electric Company now render gas service under therm rates to all customer classes. In the application of these rates, gas volumes delivered at standard delivery pressure are adjusted for altitude.

Present Tariffs

Applicant's tariffs include rate schedules for firm natural gas service, gas engine service, regular interruptible service, steam electric plant interruptible service, cement plant interruptible service and resale service.

In the rate schedules for firm natural gas service and gas engine service and for regular interruptible service in part (Schedules Nos. G-50, G-52 and G-53) 1100-Btu base rates and effective rates are set forth in either cents per Ccf or cents per Mcf. The effective rates are determined according to a 25-Btu step procedure for heat content variations, where each 25-Btu step represents a $2\frac{1}{2}$ percent change in rates from the 1100-Btu base rate level. These rate level steps provide for adjustment upward or downward when the average Btu for a district varies by 16 Btu or more from the currently effective level for two consecutive months. Under this adjustment provision, Rule 2 (i) of applicant's tariffs, the same average Btu can be delivered in two districts while two different rates are being charged because of prior Btu differences. Gas volumes delivered at standard delivery pressure are not adjusted for altitude.

In the rate schedules for steam electric and cement plant service except inactive rate Schedule No. G-54 and in regular interruptible Schedules Nos. G-50-T, G-52-T and G-53-T, rates are expressed in either cents per therm or cents per million Btu. Although relatively few in number, the customers billed on the thermal basis account for approximately 40 percent of applicant's total sales volume.

In rate Schedule No. G-60, Resale Natural Gas Service, the monthly demand charge is expressed in dollars per Mcf of daily contract demand and the commodity charge in cents per Mcf. Rates are independent of the heating value of the gas delivered unless such heating value falls below 950 Btu. The City of Long Beach is applicant's only resale customer and accounts for less than 4 percent of applicant's total gas sales volume.

Applicant's Proposal

To further the objective of providing a closer relationship between heating value and rates for gas service, applicant proposes that thermal unit rates replace the 25-Btu step volumetric rates. Under this proposal the present system of 1100 Btu base rates and numerous effective rates would be replaced by a single set of rates for each schedule expressed in cents per thermal unit.

A thermal unit is nominally 100,000 Btu. For billing, the determination of the number of thermal units depends on the metered Ccf, the average heating value of deliveries to the Btu district (Btu factor), and the altitude zone in the case of gas deliveries at standard delivery pressure (factor for altitude and metering pressure). More specifically, the number of thermal units to be billed would be the product of the metered Ccf times the billing factor, where the billing factor equals the Btu factor times the factor for altitude and metering pressure. Proposed Rule No. 2(1), Conversion of Metered Volumes to Thermal Units, so provides and is set forth in Phase II Exhibit No. SoGal-1.

The Btu factors cover a range of heating values from 905 Btu to 1204 Btu in 10 Btu steps. The factors range from

0.910 for the 905 - 914 Btu step to 1.000 or unity for the 995 - 1004 Btu step to 1.060 for 1055 - 1064 Btu step and to 1.200 for 1195 - 1204 Btu step. The Btu factor for each Btu district will be determined monthly and a rate level overlap between various Btu bands is thus prevented. Such overlap occurs under the present 25-Btu step procedure as brought out above.

The factor for altitude and metering pressure covers an altitude range, in intervals of 1000 feet, from below 1000 feet, Altitude Zone A -- Factor 1.000, to 8999 feet, Altitude Zone I -- Factor .755. Nearly 15 percent of the 2.0 million firm natural gas service customers are located in areas which fall in altitude zones other than A.

By using the projected System average heating value for 1970 of 1064 Btu, which as the upper limit of the 1055 - 1064 Btu step calls for a 1.060 Btu factor, the thermal unit rates have been designed to produce the same revenue for each class of service as the 25-Btu step volumetric rates. The design retains approximately the same relationships between rate schedules, rate blocks and block rate levels as the 25-Btu step volumetric rates.

If for 1970 the System average heating value were to exceed 1064 Btu, the thermal unit rate design used would produce revenues in excess of the 25-Btu step volumetric rates. A tariff provision has been proposed, however, to provide an adjustment to assure the revenue equivalence sought. It provides that in converting metered volumes to thermal units under proposed Rule No. 2(i) the average heating value of deliveries, as determined

monthly for each Btu district, shall first be reduced by the number of Btu by which the weighted average heating value of the gas supply of Southern California Gas Company and Southern Counties Gas Company of California, for the same period upon which the heating values for individual Btu districts have been determined, exceeds 1064 Btu.

The thermal unit rates, as set forth in Phase II.

Exhibit No. SoCal-1, actually relate to rate levels made effective on March 20, 1969 pursuant to Decision No. 75429 in Application No. 50713 rather than present rate levels which include increases, in part provisional, authorized by Decision No. 76068 dated August 26, 1969 in Application No. 51055. The changeover to thermal unit rates to be authorized hereinafter will be based on present rate levels and will be consistent with Decision No. 76068 and the introductory portion of said exhibit.

In going to thermal unit rates there would be some changes in charges between individual customers. For example, under the schedules for firm natural gas service a slight increase in charges to customers served in areas below 1000 feet in elevation will result but is offset by the decrease to customers served at the higher elevations. This and other changes in charges which may occur are in the aggregate directed toward achieving the closer relationship sought between the heating value of the gas served and the rates charged.

It is the applicant's view that 10-Btu steps reflect the narrowest band of measurement consistent with the physical facts of its gas supply and distribution system. An ultimate goal of a 1-Btu step or actual therm rate does not appear reachable until

such time as the average heating value in each Btu district nearly coincides with the average heating value of gas delivered to each customer within the Btu district.

The Commission staff and the City of Los Angeles recommend that the 25-Btu step volumetric rates be replaced by thermal unit rates as proposed. None of the parties to the proceeding oppose the proposal, but the City of Long Beach, as will be taken up next, is concerned over the downward trend in heating value in light of the heating value adjustment provision, mentioned earlier, in applicant's Schedule No. G-60.

Resale Service

The City of Long Beach took the position that there should be made available under applicant's Schedule No. G-60 heating value adjustments comparable in effect to those used for other classes of service. In view of the large gas deliveries to this customer, this position has the effect of raising the question of whether volumetric rates in Schedule No. G-60 should be replaced by therm rates.

At this time, applicant opposes any change in the heating value consideration now provided in its Schedule No. G-60. The San Diego Gas & Electric Company also opposes any such change if it would be carried over to SoCounties' Schedule No. G-60 in the interest of tariff uniformity. In applicant's view, concurred in by San Diego Gas & Electric Company as a wholesale customer of SoCounties, a change of this nature is properly a matter of negotiation under the gas service agreement between customer and supplier.

Resale Service

The Commission staff did not have an opportunity to review in depth a possible changeover from volumetric to thermal rates for resale service. We do not consider that the matter has been developed on this record adequately for us to strike a proper balance between the revenue and cost considerations involved. It appears evident, however, that this matter should be thoroughly explored through negotiations between applicant and the City of Long Beach and between SoCounties and San Diego Gas & Electric Company.

In any event, an adequate record should be developed on the matter in any subsequent rate proceeding. Surely, an appropriate basis can evolve so that gas service to all customer classes, including resale or wholesale, may be placed on a thermal billing basis, thus removing the anomaly of one class of service being served under volumetric rates.

Findings

The Commission finds that:

1. In view of the heat energy uses of natural gas and because of the variations in its heat content, thermal billing units provide a more functional measure of natural gas service than volumetric units.
2. In applicant's thermal unit rate proposal, as set forth in Phase II Exhibit Nos. SoCal-1 and SoCal-8, several significant improvements are seen over the 25-3tu step volumetric rates presently used: In each rate schedule numerous effective rates are replaced by a single set of rates expressed in cents per thermal

unit, where a thermal unit is nominally 100,000 Btu; 10-Btu steps replace 25-Btu steps; rate level overlaps in Btu bands are eliminated; gas volumes delivered to customers at standard delivery pressure are adjusted for altitude and metering pressure according to altitude zones.

3. The illustrative thermal unit rates in Phase II Exhibit No. SoCal-1 relate to rate levels made effective March 20, 1969 pursuant to Decision No. 75429 in Application No. 50713. For the changeover to thermal unit rates, such rates will be based on present rate levels and will be subject to further provisional increases consistent with Decision No. 76068 dated August 26, 1969 in Application No. 51055.

4. For year 1970 the thermal unit rates will produce substantially the same revenue for each class of service as would result under the 25-Btu step volumetric rates, if the adjustment of Btu district monthly average heating values is made as provided for in Phase II Exhibit No. SoCal-8.

5. The design of the thermal unit rates retains approximately the same relationships between rate schedules, rate blocks and block rate levels as the 25-Btu step volumetric rates.

6. Some changes in charges between individual customers will result in going to thermal unit rates. The changes reflect both increases and decreases. In the aggregate they are directed toward achieving a closer relationship between the heating value of the gas served and the rates charged.

7. Applicant's thermal unit rate proposal is reasonable. The increases or decreases 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 herein prescribed are for the future unjust and unreasonable.

8. The record herein fails to provide an adequate basis upon which to determine such revisions as may be needed in applicant's Schedule No. G-60, Resale Service. It is clearly desirable, however, that applicant and the City of Long Beach undertake, as a part of negotiations under their gas service agreement, the task of developing an appropriate basis for converting said schedule to term rates. That agreement is at all times subject to such changes or modifications as the Commission may, from time to time, direct in the exercise of its jurisdiction.

Based upon the foregoing findings the Commission concludes that the Phase II portion of Application No. 50713 as it relates to thermal unit rates should be granted.

O R D E R

IT IS ORDERED that Southern California Gas Company is authorized to file with this Commission on or after the effective date of this order revised tariff Schedules Nos. G-1 through G-9 -- Firm Natural Gas Service, revised tariff Schedules Nos. G-45 and G-47 -- Gas Engine Natural Gas Service, revised tariff Schedules Nos. G-50 and G-52 -- Interruptible Natural Gas Service, revised tariff Schedule No. G-53 -- Limited Interruptible Natural Gas Service, revised tariff Rule No. 1, revised tariff Rule No. 2, parts (h), (i), and (j), and revised tariff List of Contracts and Deviations, consistent with Phase II Exhibit Nos. SoCal-1 and SoCal-8 and Finding No. 3 above. Such filing shall comply with General Order No. 96-A. The effective date of the tariff sheets thus revised shall be the first day of the month immediately following the month in which the filing is made. The revised schedules shall apply only to meter readings on and after the effective date thereof.

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

Dated at San Francisco, California, this 23rd
 day of DECEMBER, 1969.

William S. Guss
 President

[Signature]

[Signature]

[Signature]
 Commissioners

APPENDIX A

LIST OF APPEARANCES IN PHASE II

FOR APPLICANT

K. R. Edsall and P. Dennis Keenan.

FOR INTERESTED PARTIES

R. E. Woodbury, Harry W. Sturges, Jr., and William E. May, for Southern California Edison Company; Roger Arnebergh, City Attorney, by Charles E. Mattson, Deputy City Attorney; Chickering & Gregory by Sherman Chickering, C. Hayden Ames and Donald J. Richardson, Jr., for San Diego Gas & Electric Company; Stanley Jewell, for San Diego Gas & Electric Company; Brobeck, Phleger & Harrison by Gordon E. Davis and Robert N. Lowry, for California Manufacturers Association; John O. Russell, for Los Angeles Department of Water & Power; William L. Knecht, for California Farm Bureau Federation; Roy A. Wehe and Edward C. Wright, for City of Long Beach; Captain James R. Pleyte, for Department of Defense; Robert W. Russell and Manuel Kroman, for Department of Public Utilities and Transportation, City of Los Angeles; Harold A. Lingle and Leslie E. Still, Jr., Deputy City Attorneys, for City of Long Beach; Louis Possner, Bureau of Franchises and Public Utilities, for City of Long Beach.

FOR THE COMMISSION STAFF

Sergius M. Boikan, Counsel, and Harold T. Sipe.