RETURN TO ENERGY BRANCH
ROOM 3102

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

COMMISSION ADVISORY
AND COMPLIANCE DIVISION
Energy Branch

RESOLUTION G-2891***
December 20, 1989

R E S O L U T I O N

RESOLUTION G-2891. SOUTHERN CALIFORNIA GAS COMPANY DENIED APPROVAL OF CONTRACT WITH MOBIL NATURAL GAS, INC. FOR TRANSMISSION SERVICE FOR USE IN ENHANCED OIL RECOVERY FACILITIES.

By Advice No. 1879, filed June 15, 1989.

SUMMARY

1. By Advice No. 1879, Southern California Gas Company (SoCal) submitted for approval a ten year Gas Transmission Service Contract (Contract) with Mobil Natural Gas, Inc. (Mobil) in accordance with Decision (D.)86-12-009 and Rate Schedule GT-40, Transportation of Customer-Owned Natural Gas for Enhanced Oil Recovery Service.

2. Approval of the Contract is denied because ratepayer benefits are not shown. As well, SoCal has not established the credibility of Mobil's threat of near term bypass to crude oil.

BACKGROUND

1. SoCal Rate Schedule GT-40 is applicable to long-term transportation of customer-owned natural gas for use in Enhanced Oil Recovery (EOR) facilities as provided by D.86-12-009. GT-40 also applies to the transportation of gas used for combined EOR and cogeneration facilities. Transportation service under this schedule is limited to volumes equal to or in excess of 250,000 therms per year to each customer's premises. Mobil's volume exceeds 91,250,000 therms per year.

2. The GT-40 contract rate schedule provides that the Utility and customer shall negotiate a Transmission Charge, a Customer Charge and an appropriate escalation factor to be stated in the Contract. The negotiated Transmission Charge shall be set neither below the floor rate (short run

marginal cost) nor above the ceiling, default rate (long run marginal cost).

3. In D.86-12-009 the Commission declared its policy toward EOR gas transmission rates in the event new pipeline capacity becomes available:

> "After the point at which capacity additions are projected to be necessary, the floor transmission rate should be <u>long-run</u> marginal cost. This is simply good business judgment and sound economic policy. We will not allow core customers to subsidize EOR service, and we fully expect to allocate to noncore customers their fair share of the cost of future capacity additions." (mimeo, page 68)

4. SoCal's showing in this proceeding is contained in Advice No. 1879, filed June 15, 1989; additional "Information Requirements" filed October 30, 1989; and a December 5, 1989 response to a Commission Advisory and Compliance Division (CACD) data request.

5. Public notification of this filing has been made by mailing copies of this Advice Letter to other utilities, governmental agencies, and to all interested parties who have previously requested them.

<u>SUMMARY OF CONTRACT TERMS</u>

1. This Contract is submitted by SoCal for approval under the terms of the GT-40 schedule as provided by D.86-12-009.

2. The Contract contains rates and charges which are summarized as:

a. Customer Charge: The customer shall pay a Monthly Customer Charge of five hundred dollars ($500.00) per premises.

b. Transmission Charges: There is a two tier Transmission Charge. The customer shall pay a Transmission Charge of 3.7¢ for each therm of gas for Tier I and 3.0¢ per therm for Tier II accepted at SoCal's points of delivery. The Tier I rate applies to volumes up to 50% of the monthly allocated capacity. Any excess is billed at Tier II rates.

c. Escalation: The Transmission Charge under the Contract will be escalated annually on the anniversary of the initial delivery. The escalation factor will be equal to the change in SoCal's total authorized margin from the prior year. The annual rate adjustment may not exceed 5%.

3. Service Term: The initial term of the Contract is ten (10) years as requested by Mobil, and may be extended for up to five (5) years by mutual agreement of the parties. General provisions for Contract termination or modification are given in SoCal's tariff, Rule 30, Paragraph G. Paragraph 5.05 of the Contract permits termination by either party on sixty (60) days prior written notice if the California Public Utilites Commission (Commission) modifies any Contract provision.

4. Minimum Transmission Obligation: There is no fixed minimum transmission obligation. However, Mobil is required to transport, and/or to pay for, a minimum of 50% of its annualized contract quantity. Make-up of underdelivery is allowed in the two-year period following the underdelivery. The right to make-up for the last year extends for only one year after contract termination.

5. The rate will also include any applicable taxes, fees, regulatory surcharges, intra- or interstate pipeline charges imposed as a result of transporting gas under the schedule. If the customer delivers more or less gas into the SoCal system than it accepts on redelivery, SoCal's Rule 30 specifically provides for such imbalances.

6. To renew the terms of service under the Contract, notice from the customer is required at least fifteen days prior to the expiration of the existing Contract. Renewal is subject to available capacity on the system as determined by the utility. At the end of the initial term, the original rate will be revised to an appropriate rate negotiated at the time of renewal.

7. Customers may receive service under schedule GT-40 (a) separately, or (b) in combination with an otherwise applicable sales rate schedule. Where service is rendered under (b), separate charges will be applicable for service under that schedule. If service is rendered under (a), the customer must still meet the terms and conditions of the customer's otherwise applicable sales rate schedule.

8. The volumes to be transported for Mobil under this Contract will be a maximum of 500,000 therms per day in Contract Year 1 for combined EOR and cogeneration use. This can increase to between 700,000 and 1,500,000 therms per day by Contract Years 6-10.

9. The Contract contains a provision for negotiating a possible (future) Priority Charge (Paragraph 1.05).

PROTESTS

1. The Southern California Utility Power Pool (SCUPP), Imperial Irrigation District (IID) and Southern California Edison Company (Edison) filed protests on July 5, 1989. SoCal's response was filed on July 17, 1989.

2. The Division of Ratepayer Advocates (DRA) also filed a protest on July 5, 1989. The SoCal response to DRA was filed the same day July 5.

3. Protestants SCUPP, IID and Edison are electric utility generation (UEG) customers protesting the Contract for long-term gas transmission because of repeated capacity curtailments of existing non-core customers.

4. SoCal's response to the UEG protests is that the same curtailment provisions apply to all Priority P5 interruptible gas transportation service for non-core customers.

5. The DRA protest asked the Commission to reject the filing on the following grounds:

a. SoCal offers no "justification" for the Contract.

b. Mobil can elect on a month-to-month basis to discontinue the Contract if the cost of burning crude oil to fuel EOR production is less than the Contract cost.

c. SoCal has a capacity shortage.

d. SoCal ratepayers take all risks under this Contract. In a previous proceeding, Resolution G-2876, dated May 10, 1989, the Commission approved a gas transportation contract between Pacific Gas and Electric Company (PG&E) and Mojave Cogeneration Company (Mojave) for a 15 year term. The rate, for Priority 3A service, would be the lower of either PG&E Schedule G-COG (currently 7.884 cents/therm) or SoCal Schedule GT-50 (currently 9.345 cents/therm). That contract was approved with the condition that PG&E shareholders would be at risk for future contract revenues if the contract rates fell below PG&E's adopted long run marginal costs of gas transportation. That condition was removed by D. 89-10-034, dated October 12, 1989, and the Mojave contract was approved unconditionally.

e. SoCal plans new pipeline capacity and its long run marginal cost may exceed these Contract rates. Existing ratepayers should not be made to bear the cost of this subsidy to transportation rates.

f. The Contract price of 3.35 average cents/therm for transportation services to be charged Mobil by SoCal is far below the average transportation rate of 9.220 cents/therm rate.

g. The present Contract rate is also well below Socal's fully allocated embedded cost of 9.345 cents/therm.

6. SoCal responded to each element of DRA's protest as follows:

a. The Commission found that it was in the best interests of utilities and the ratepayers of California to encourage long-term gas utility transportation agreements with Enhanced Oil Recovery (EOR) customers (D.85-12-102 and D.86-12-009).

b. DRA's protest ignores the benefits that the ratepayers will receive during those periods over the ten year term of this agreement when oil prices are sufficient to allow Mobil to preferentially transport gas. The Commission approved this provision previously in Resolution G-2793, dated June 17, 1988.

c. The question of capacity shortage is not at issue here. SoCal has served all customers pursuant to its authorized tariffs.

d. Concerning ratepayer risk, Section 1.03 of the Contract provides that if the adjusted contract rate "at any time results in a rate of less than the minimum rate acceptable to the CPUC plus 1/2 cents per therm, SoCal has the right to make such minimum rate immediately effective as the transmission charge herein." Therefore, the ratepayer by contractual provision is protected against the risk of transportation revenue shortfall.

e. SoCal's response observes that Resolution G-2876 concerns a different utility, a different customer and a different class of service, Priority 3A. Therefore that resolution does not apply to this contract.

f. DRA compares the negotiated contract transportation rate first to the average transmission rate of 9.220 cents per therm for industrial customers, and then a default cogeneration rate of 7.18 cents per therm. These comparisons are irrelevant. Without a long-term contract, Mobil would be entitled to receive the EOR default rate of 4.569 cents per therm.

g. The price for transportation service under the Contract is not "clearly below or priced well below even the embedded costs." SoCal has recently filed its long-run marginal cost study required by D.88-12-086. SoCal's long-run marginal cost is estimated in the range of 2.6 to 3.4 cents/therm (in constant 1987 dollars) for the period 1991-1999. SoCal claims that the rate provided to Mobil under the Contract is substantially higher than long-run marginal costs.

DISCUSSION

1. The Commission in D.89-10-034 declared that the principal consideration in review of special sales contracts is verification of ratepayer benefits. If such benefits are substantial and convincing, then the contracts should be approved unconditionally. If the benefits are insubstantial or speculative, the contracts should be approved with conditions to protect other ratepayers. Otherwise approval of the contracts should be denied.

2. SoCal points to D.85-12-102 as encouraging long term EOR contracts. In that decision the Commission found that "[a] new interstate pipeline is not needed to serve the EOR market." The Commission is now studying new interstate capacity in Investigation (I.)88-08-018. Although the investigation is incomplete, the validity of the 1985 statement is substantially weakened by today's pipeline conditions and SoCal's own operating experience. The statement should not be used in support of the Contract.

3. Because D.89-10-034 was issued after the filing of Advice No. 1879, SoCal responded to the informational requirements announced in the decision with its filings of October 30 and December 5, 1989. SoCal represents that the

standards set forth in D.89-10-034 are met by the Contract. SoCal's calculation of ratepayer benefits is shown in Attachment A to this Resolution.

4. SoCal's calculations are incorrect for two main reasons. First, the calculation of near term benefits, during the period from the present to the date when new pipeline capacity is available, does not consider the opportunity costs to ratepayers of gas delivered to Mobil. Second, in the long term, when additional capacity is available, SoCal mischaracterizes the marginal cost of transmission capacity.

5. In its October 30 filing and in a recent meeting with Commission staff, SoCal claimed that Mobil's bypass threat is a new pipeline proposed by Wycal, or in the alternative a competing pipeline. Because no decision in I.88-08-018 has yet addressed the need for capacity, there is uncertainty about the date that added capacity will become available. For purposes of this analysis, it is reasonable to assume that new capacity will become available at the beginning of calendar year 1993. This date is consistent with the increase in long run capacity costs shown for 1993 in SoCal's October 30 filing.

6. Absent another bypass threat, short term ratepayer benefits depend on the characterization of the load. If the load is certain to be served by gas, then any discount from default tariff rates is a loss to ratepaters. If the load would appear only if the Contract were signed, then ratepayer benefits would be equal to any net contribution to margin.

7. In the near term the existing SoCal pipeline is capacity constrained. Either low priority customers are being curtailed, or all available capacity above customer requirements is used for injection of gas into storage. Until additional interstate capacity is available even the desired storage rates will likely not be met. The existing pipeline will be full 100% of the time. Therefore, even if the EOR load is "incremental," in the sense that it would not appear unless the Contract is approved, ratepayer benefits are equal to contract revenues less revenues from the pipeline load otherwise served.

8. The opportunity cost to ratepayers is the lost margin that would have been earned from the transportation revenues displaced by the contract quantities. This margin is the lost revenues less the incremental or running costs associated with that quantity. It is reasonable to assume that the running costs for the displaced capacity are similar to those that would be incurred in moving Mobil's contract gas. Thus, we can directly compare the Contract

transportation rate to the rate for the gas it would diplace, in order to determine the net effect on ratepayers if the Contract were approved.

9. The appropriate lost margin depends on the pipeline load lost, not the immediate customer load lost. It is reasonable to assume that any storage gas will eventually be sold to P5 customers to defer actual curtailments. During times of curtailment, it is P5 customers that are first curtailed. Therefore, the net near term ratepayer benefit due to the Mobil contract is at most the Contract rate less the marginal capacity rate for P5 gas, whether that gas is curtailed or stored. The minimum P5 capacity rate is the Tier II rate on SoCal's GT-60 and GN-60 rate schedules, currently 1.479 cents per therm. For example, the first year benefit to ratepayers of approving the Contract is at most the Contract rate of 3.353 cents per therm less 1.479 cents per therm, or 1.874 cents per therm, rather than the 2.774 cents per therm that SoCal has claimed.

10. If Mobil has a credible near term bypass threat, or if all EOR load is incremental as defined herein, then near term ratepayer benefits can be calculated. That analysis is shown in Attachment B to this Resolution, which uses SoCal's data on Contract revenues to calculate benefits correctly.

11. In its December 5 filing SoCal expanded the bypass threat by claiming that Mobil has a credible near term threat of fuel switching to crude oil. Today's price of field crude is approximately $2.00 per decatherm. Spot gas is selling at approximately $2.20 to $2.40 per decatherm, with an attendant transportation cost to Mobil of at least the 1989 average Contract rate of $0.3353 per decatherm. Given Mobil's willingness to burn gas at these prices, the question is whether the added cost of Schedule GT-40 transportation, which now shows a rate of $0.4489 per decatherm, would overcome the air quality and other difficulties associated with burning oil. Even with the current price differential between gas and oil, EOR customers are not burning oil. Would an increased cost of $0.1136 per decatherm make Mobil switch fuel?

12. As long as the price of gas exceeds that of oil, the credibility of the oil bypass threat cannot be evaluated with the facts before us. However, SoCal has the burden to demonstrate the credibility of the oil bypass threat. This threat was only briefly mentioned in SoCal's December 5 filing, without support by Mobil, historical studies of EOR operations in the specific areas covered by the Contract, or any other demonstration.

13. Morover, if the Contract does not yield ratepayer benefits even assuming that near term bypass to oil and long term bypass to Wycal are certain, then the credibility of the oil-Wycal bypass threat need not be determined. It is possible that certain Contract provisions, which allow future rate increases ordered by the Commission, could mitigate long term ratepayer losses, but even so the near term benefits are not adequately supported.

14. Attachment B shows that in circumstances very favorable to Contract approval, near term ratepayer benefits during 1990-1992 are approximately $4.3 million per year.

15. SoCal argues that the short run marginal volumetric cost is the relevant cost standard for determining ratepayer benefits in the long term, when new pipeline capacity will be available. Given present circumstances, SoCal's argument is incorrect. At this time it has not been determined when or how much capacity will be added. Therefore, contracts such as the one with Mobil will affect the ultimate size of that capacity. Our best estimate of what it will cost to build and operate a given amount of new capacity is the long run marginal cost, as was discussed in D.86-12-009. If we were to approve a long run contract that increases the amount of new capacity but whose rates are less than long run marginal cost, then we would be assuring that other ratepayers would have to make up the difference. The result would be a subsidy from other ratepayers to Mobil. As D.86-12-009 states, long run marginal cost is the proper comparison standard.

16. The Contract includes long term rates discounted below long run marginal cost. The only possibility for approval of this long term EOR contract would be that near term benefits exceed long run subsidies. Near term benefits can only be generated by credible bypass to alternate fuel until added pipeline becomes available, or if the load can be shown to be truly "incremental" as used herein.

17. Even under the unproven assumption of near term bypass to oil, Attachment B shows that the Contract fails that standard. Over the life of the Contract ratepayer subsidies average $4.8 million per year. No benefits are available, even if bypass is certain.

18. CACD staff has performed sensitivity studies using Attachment B as a base case. Changing the availability date of added pipeline capacity by up to two years did not produce positive ratepayer benefits. Changing long run marginal capacity cost from SoCal's "base" case to its "low" case produced a similar result.

FINDINGS

1. Until additional pipeline capacity is available on SoCal's interstate system, short run volumetric cost is a reasonable measure of marginal cost, as long as calculation of ratepayer benefits reflects the ratepayer opportunity cost of displaced gas.

2. For present purposes, until additional pipeline capacity is available on its interstate system, it is reasonable to assume that SoCal's existing system will operate at full capacity, whether that capacity serves current customers or is used to inject gas into storage.

3. A reasonable estimate of the minimum short run ratepayer opportunity cost of gas transportation is the Tier II rate on Schedules GT-60 and GN-60, less running costs.

4. D.86-12-009 states the Commission policy that once additional pipeline capacity is available, the floor transmission rate for EOR customers should be long run marginal cost. The policy is reasonable in present circumstances.

5. D.86-12-009 states the Commission policy that at the time they become effective, SoCal's Schedule GT-40 Tier II transportation rates do not exceed long run marginal costs.

6. Although near term field crude oil prices are lower than gas costs, air quality considerations and current EOR practices inhibit choice of oil as EOR fuel. SoCal has not demonstrated the credibility of Mobil's near term threat to burn oil.

7. Even assuming circumstances favorable to approval of the Contract, ratepayers will not benefit by such approval.

8. The Contract should not be approved.

THEREFORE IT IS ORDERED that:

1. Approval of the Gas Transmission Service Contract Between Mobil Natural Gas, Inc. and Southern California Gas Company is denied.

2. This Resolution is effective today.

I certify that this Resolution was adopted by the Public Utilities Commission at the December 20, 1989 continuation of its regular meeting of December 18, 1989. The following Commissioners approved it:

G. MITCHELL WILK
President
FREDERICK R. DUDA
STANLEY W. HULETT
JOHN B. OHANIAN
PATRICIA M. ECKERT
Commissioners

Wesley Franklin
Acting/Executive Director

Resolution G-2891

TABLE 1
SOUTHERN CALIFORNIA GAS COMPANY
SOCALGAS/MOBIL LONG-TERM AGREEMENT
IN CURRENT DOLLARS

Revenues at Long-Term Contract Rates		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Long-Term Contract Rate												
Tier I	c/th	3.700	3.835	4.079	4.283	4.497	4.722	4.958	5.206	5.467	5.740	6.027
Tier II	c/th	3.000	3.150	3.308	3.473	3.647	3.829	4.020	4.221	4.432	4.654	4.887
Contract Escalation Factors												
Authorized Margin	M$	1,253,282	1,403,085	1,504,785	1,616,547	1,713,140	1,811,469	1,922,349	2,088,182	2,221,245	2,340,759	2,535,227
Authorized Margin Change			12%	7%	7%	6%	6%	6%	9%	6%	5%	8%
Maximum Escalation			5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Annual Contract Volume	MMcf	18,250	20,075	21,900	23,725	25,550	25,550	25,550	25,550	25,550	25,550	25,550
Annual Contract Volumes (@1050 BTU factor)	Mth	191,625	210,788	229,950	249,113	268,275	268,275	268,275	268,275	268,275	268,275	268,275
Annual Revenues:												
Tier I	M$	3,545	3,722	3,908	4,104	4,309	4,524	4,751	4,988	5,238	5,500	5,775
Tier II	M$	2,874	3,622	4,437	5,324	6,289	6,603	6,933	7,280	7,644	8,026	8,428
Customer Charge Revenue	M$	6	6	6	6	6	6	6	6	6	6	6
Total Revenues	M$	6,425	7,350	8,351	9,434	10,604	11,134	11,690	12,274	12,888	13,532	14,208
Average Rate	c/th	3.353	3.487	3.632	3.787	3.953	4.150	4.358	4.575	4.804	5.044	5.296 (1)

Estimated Ratepayer Benefits:												
Short-Run Marginal Volumetric Cost	c/th	1.079	1.239	1.376	1.462	1.611	1.788	1.952	2.146	2.286	2.523	2.690 (2)
Contribution to Capacity Costs	c/th	2.274	2.248	2.256	2.325	2.342	2.363	2.405	2.429	2.518	2.521	2.606 (1)-(2)
Estimated Ratepayer Benefits	M$	4,357	4,739	5,187	5,791	6,283	6,338	6,453	6,517	6,756	6,763	6,992
Avg. Ratepayer Benefits Annually	M$	6,016										

Attachment A

TABLE 1 - RECONSTRUCTED
COMMISSION ADVISORY AND COMPLIANCE DIVISION/ADVISORY BRANCH
SOCALGAS/MOBIL LONG-TERM AGREEMENT
IN CURRENT DOLLARS

Revenues at Long-Term Contract Rate:		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Long-Term Contract Rate												
Tier I	c/th	3.700	3.885	4.079	4.283	4.497	4.722	4.958	5.206	5.467	5.740	6.027
Tier II	c/th	3.000	3.150	3.308	3.473	3.647	3.829	4.020	4.221	4.432	4.654	4.887
Contract Escalation Factors:												
Authorized Margin	M$	1,253,282	1,403,085	1,504,785	1,616,547	1,713,140	1,811,469	1,922,349	2,088,182	2,221,245	2,340,759	2,535,227
Authorized Margin Change			12%	7%	7%	6%	6%	6%	9%	6%	5%	8%
Maximum Escalation			5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Annual Contract Volumes	MMcf	18,250	20,075	21,900	23,725	25,550	25,550	25,550	25,550	25,550	25,550	25,550
Annual Contact Volumes	Mth	191,625	210,788	229,950	249,113	268,275	268,275	268,275	268,275	268,275	268,275	268,275
Annual Revenues:												
Tier I	M$	3,545	3,722	3,908	4,104	4,309	4,524	4,751	4,988	5,238	5,500	5,775
Tier II	M$	2,874	3,622	4,437	5,324	6,290	6,603	6,933	7,280	7,643	8,026	8,428
Customer Charge Revenue	M$	6	6	6	6	6	6	6	6	6	6	6
Total Revenues	M$	6,425	7,350	8,351	9,434	10,604	11,134	11,689	12,274	12,888	13,532	14,209
Average Rate	c/th	3.353	3.487	3.632	3.787	3.953	4.150	4.357	4.575	4.804	5.044	5.296
Estimated Ratepayer Benefits:												
Short-Run Marginal Volumetric Cost	c/th	1.079	1.239	1.376	1.462	1.611	1.788	1.952	2.146	2.286	2.523	2.690
Long-Run Marginal Trans Cap. Cost	c/th	0	0	1.27	1.72	3.23	4.99	4.07	4.55	6.23	8.89	8.05
Total Long-Run Marginal Cost	c/th	1.079	1.239	2.646	3.182	4.841	6.778	6.022	6.696	8.516	11.413	10.74
Opportunity Cost to Ratepayers 1/	c/th	1.479	1.656	1.772	1.897	0	0	0	0	0	0	0
Opportunity Revenues	M$	2,834	3,492	4,076	4,724	0	0	0	0	0	0	0
Revenues at "Default Rate"	M$	8,755	10,782	12,615	14,680	16,754	17,717	18,801	20,424	21,725	22,895	24,794
Revenues by Oil/Wycal Bypass 2/	M$	2,834	3,492	4,076	4,724	0	0	0	0	0	0	0
Revenues Under Contract	M$	6,425	7,350	8,351	9,434	10,604	11,134	11,689	12,274	12,883	13,532	14,209
Unavoidable Revenue Impact 3/	M$	(5,921)	(7,290)	(8,539)	(9,956)							
Net Ratepayer Benefits 4/	M$	N/A	3,858	4,276	4,709	(2,383)	(7,050)	(4,466)	(5,690)	(9,959)	(17,086)	(14,604)
Avg. Ratepayer Benefits Annually	M$	(4,839)										

1/ Schedule GT-60, Transportation of Customer-Owned Gas for UEG Service, Tier II
2/ Utility revenues assuming Mobil bypasses to crude oil through 1992, Wycal pipeline thereafter.
Equivalent to assuming that Mobil load will not exist without Contract.
3/ Difference between default revenues and opportunity revenues, meaningful only through 1992.
4/ Through 1992, Contract revenues less opportunity revenues. From 1993 onward, Contract revenues less long-run marginal cost revenues.