ALJ/KIM/tcq

Decision 90 04 022 APR 11 1990

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

ORIGINAL

Application of Pacific Gas and Electric Company, for authority, among other things, to increase its rates and charges for electric and gas service.	Application 88-12-005 (Filed December 5, 1988)
And Related Matter.	I.89-03-033 (Filed March 22, 1989)

Michelle L. Wilson, Roger J. Peters, and Kermit R. Kubitz, Attorneys at Law, for Pacific Gas and Electric Company, applicant.
Donald G. Salow, for Association of California Water Agencies; Steven A. Geringer, for California Farm Bureau Federation; Jeff Fabbri, for Power Users Protection Council; and Frank A. McNulty, Attorney at Law, for Southern California Edison Company; interested parties.
Judith Allen and Philip S. Weismehl, Attorneys at Law, for the Division of Ratepayer Advocates; Steve Linsey, for the Commission Advisory and Compliance Division.

O P I N I O N

This decision in Pacific Gas and Electric Company's (PG&E) general rate case proceeding addresses the issue of whether rates under PG&E's Schedule AG-5 are competitive with alternative fuels which may be available to California's agricultural customers. We initiated this review in PG&E's general rate case decision, Decision (D.) 89-12-057:

> "Given the intricacies of balancing our goals of reaching EPMC with the need to ensure that California's farmers can buy electricity at affordable rates, we believe some further examination of rates within the agricultural

> class is needed. In the short term, we would like to take a closer look at the impact the rate schedules we are adopting will have on customers served under Schedule AG-5. We specifically want to examine whether the rates that result from this decision are in fact competitive with alternative pumping fuels for these customers. To accomplish this, we will hold the record open in this proceeding to take testimony on that specific issue early in 1990. We will leave the scheduling to the ALJ, but the matter must be decided before May 1, 1990, to permit any rate changes to take effect before summer rates begin."

A hearing was held on this matter on February 26 and 27, 1990. PG&E, the Division of Ratepayer Advocates (DRA), the Association of California Water Agencies (ACWA), and Power Users Protection Council (PUPC) presented testimony and filed briefs. The California Farm Bureau Federation (CFBF) filed a brief.

The parties have stipulated for a shorter comment period than is required under our rules absent such an agreement for decisions falling under the provisions of PU Code § 311.

I. Positions of the Parties

A. PG&E

PG&E proposes that no change to the Schedule AG-5's rates be made. In answer to the Commission's query regarding the competitiveness of AG-5 rates with alternative fuels, PG&E states that AG-5 rates are competitive. It takes this position consistent with the results of its cost study. PG&E believes the cost study shows that the pay back period for the purchase of a diesel engine--which it states is the most likely alternative to PG&E services--is too long to encourage bypass. Moreover, PG&E believes future fuel prices will not be low enough to reduce the payback period. PG&E estimates diesel fuel to be priced currently at about $.55 per gallon.

In addition to its cost analysis, PG&E presents arguments that, notwithstanding the cost of converting to diesel, the Commission should not lower AG-5 rates. AG-5 rates should not be lowered, according to PG&E, because the AG-5 revenue requirement is already at marginal cost. D.89-12-057, which adopted the rate, states "any bypass that occurs because the customer's cost is less than the utility's marginal cost is economic bypass, and the Commission has not attempted to deter economic bypass for any customer group."

If the Commission were to change the AG-5 rates, PG&E proposes that the Commission make up any revenue shortfall from other agricultural users. Because many AG-5 customers are likely to operate pumps under other agricultural schedules, allocating revenues from Schedule AG-5 to other schedules would likely increase rather than decrease growers' total electric costs.

B. <u>DRA</u>

DRA believes the Commission should not change the AG-5 rates at this time for reasons similar to those put forth by PG&E. DRA asserts that the AG-5 rates are priced only to recover costs, not additional contribution. Accordingly, to lower the AG-5 rates would require a subsidy from other ratepayers to AG-5 customers.

DRA explains that the Commission has permitted special contract rates for customers who might otherwise bypass the utility system uneconomically. The Commission, according to DRA, has never reduced rates to discourage economic bypass and should not. Economic bypass occurs where a non-utility service is less expensive (in terms of real costs, not just prices) than utility service. In such circumstances, DRA argues, society is better off.

DRA believes some agricultural customers appear to be in a situation where bypass is economic. It opposes artificial means to keep these customers from making a decision that will benefit society. Such Commission action would also impose additional costs on other PG&E ratepayers.

Like PG&E, DRA performed an alternative energy cost study. Using diesel powered engines as the alternative power source, it estimated a range of costs for diesel of $.0611 to $.0928 per kilowatt hour (kWh) depending on hours of use per year. (The average AG-5B rate is about 7.8 cents per kWh).

DRA also estimated the price elasticity of agricultural customers' demand in response to price changes. As a result of its statistical study of 2,848 agricultural customers, DRA found that customers are likely to shift off-peak and on-peak usage in ways which will lower their average rate from 7.8 to 7.5 cents per kWh. DRA therefore believes the rate design established in D.89-12-057 is more competitive than assumed by the decision.

DRA recommends that the Commission consider permitting special contracts for individual customers who might uneconomically bypass PG&E's system. It also urges the Commission to set forth conservation and other demand side management programs for agricultural customers.

C. <u>ACWA</u>

ACWA supports reductions in the AG-5 rates from a range of $.074-$.085 per kWh to a range of $.064-$.075 per kWh. ACWA witness Fred Starrh testified that he converted 43 electric pumps to diesel engines in late 1987 and early 1988. These conversions annually saved his farming operation about $9.80 per acre-foot.

ACWA witness William Taube testified that PG&E's capital cost estimates are too high, understating engine operating life and overstating engine cost. Assuming a customer operates 2000 hours per year, Taube estimates the equivalent diesel engine unit cost to be $.0624/kWh.

ACWA witness Donald Salow opposes PG&E's recommendation to allocate any shortfalls from AG-5 revenue reductions to other agricultural rates and instead suggests the revenue shortfall be entered into the ERAM account.

Salow does not believe the Commission should reduce the AG-5 rates if the rates are set at or below marginal costs. He believes, however, AG-5 rates are above marginal costs, and should therefore be reduced. He asks that the Commission permit ACWA to participate in any marginal cost studies undertaken by PUC staff.

D. PUPC

PUPC argues that the increases in AG-5 rates are contrary to the intent of the rates, which is to prevent bypass. PUPC witness James Crettol testified that electricity rates have escalated significantly over the past two years and that farmers can no longer pay them. Crettol provided a cost analysis to support his view that farmers can make a substantial return on their investments over a ten-year period by using alternate fuels rather than by using electricity.

Crettol's cost study estimated diesel engine capital costs and the variable cost of diesel fuel. Crettol estimated that the cost of diesel engine pumping is 27% less than electricity. PUPC is not recommending a rate reduction of that magnitude because, as Crettol testified, "there is a convenience factor to electricity" which adds a premium to its use.

PUPC argues that with most irrigation systems AG-5 customers cannot shift load, as DRA assumes. Water use is continuous during the summer and wells do not have enough capacity to store water for on-peak use.

E. CFBF

CFBF states that the hearings in this proceeding demonstrate that AG-5 customers can irrigate their farms and ranches less expensively through the use of a diesel engine than through the electric option offered by PG&E.

Like PUPC, CFBF disagrees with DRA's assumption that AG-5 customers are able to shift load from on-peak to off-peak hours. CFBF argues that DRA's price elasticity study was in error because it did not identify actual irrigation needs for proper crop cultivation. According to CFBF, DRA also failed to consider that customers will bypass rather than shift from on-peak to off-peak hours. Finally, CFBF argues that DRA's sample was improper because it included customers who were not on Schedule AG-5.

CFBF states that the introduction of the AG-5 rates in 1987 stemmed some bypass, but rate increases since then have undermined the purpose of the rate schedule. CFBF argues that the Commission could lower AG-5 rates and still set them above marginal costs. The proof that they are above marginal costs, according to CFBF, is that the Commission set them at equal percentage of marginal cost (EPMC) allocation method for the class. CFBF argues that the revenue shortfall from an AG-5 rate reduction should be spread to all customers, not just other agricutural customers, because all customers will receive the benefit of keeping AG-5 customers on the PG&E system.

II. Discussion

We left this proceeding open primarily to determine whether PG&E's AG-5 electric rates are competitive with alternative forms of pump operation. All of the parties presented thoughtful estimates of the cost of alternatives. The cost studies are not perfect, but they provide a reasonable range of estimates for comparing AG-5 rates with the cost of alternatives.

PG&E's cost study estimates that its AG-5 rates are competitive with alternatives. We believe PG&E's methodology uses better theoretical assumptions than those offered by ACWA and PUPC. For example, it recognizes that pay back periods required by investors may be shorter than the life of the equipment. PG&E also correctly states that the costs associated with electrical pumps are generally "sunk" and should therefore not be compared on a dollar-for-dollar basis with new investments in diesel pumping equipment. Whether PG&E's estimates of actual capital costs were reasonable is more difficult to determine. As the parties agreed, customers served under this schedule have varied characteristics, and the costs of alternatives may vary significantly because of different customer requirements or cost assumptions.

In general, the cost studies suggest that bypass may be a very wise choice for some AG-5 customers. The extent to which bypass may be an attractive option may depend in large part on the premium attached to electricity over diesel pumping. To answer our question then, AG-5 rates are competitive for some customers and may not be for others.

D.89-12-057 set AG-5 rates close to marginal costs. Because those rates are so close to marginal costs, reducing them will require other customers to subsidize agricultural customers served under Schedule AG-5. As we stated in D.89-12-057, we do not wish to discourage economic bypass, which represents an efficient use of society's resources. Even proponents of lower AG-5 rates do not recommend that the Commission set AG-5 rates below marginal costs.

Although ACWA and PUPC do not argue that AG-5 rates should be set below marginal costs, ACWA does believe that the marginal costs adopted by the Commission were faulty and should be reconsidered. This proceeding, however, was not left open for the purpose of determining whether the adopted cost studies are proper: that issue has already been decided for the time being. We will not revisit it here. In any event, ACWA and PUPC did not provide evidence to show that AG-5 marginal cost studies are technically flawed.

DRA makes valuable comments regarding conservation efforts and incentives by agricultural customers. The record in this proceeding does not permit us to reach any conclusions regarding the issue of appropriate additional conservation incentives for agricultural customers. We are currently considering the expansion of demand side management alternatives, and encourage the parties to participate in that process.

<u>Findings of Fact</u>

1. D.89-12-057 set AG-5 rates to recover approximately the marginal costs imposed by the class of customers using AG-5 service.

2. Economic bypass benefits society by providing for more efficient use of resources. Lowering utility rates to prevent economic bypass is inefficient and would require a subsidy from other customers.

3. For some PG&E AG-5 customers, bypass may be a viable and economic alternative to PG&E services.

4. The costs of bypass by AG-5 customers depends upon the requirements of individual customers and may therefore vary widely from customer to customer.

<u>Conclusions of Law</u>

1. The Commission should not require PG&E to reduce AG-5 rates below marginal costs or to otherwise change AG-5 schedules.

2. The evidence in this proceeding is inadequate to make findings regarding new conservation programs.

O R D E R

IT IS ORDERED that:

Pacific Gas and Electric Company's AG-5 schedule should not be changed.

This order is effective today.

Dated APR 11 1990, at San Francisco, California.

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

I CERTIFY THAT THIS DECISION
WAS APPROVED BY THE ABOVE
COMMISSIONERS TODAY

Neal J. Shulman

NEAL J. SHULMAN, Executive Director
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